Introduction to Research Methods

SAMIH SALAH

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my interest in Islamic Studies within the realm of international relations extends to understanding how ethnicity, political philosophy, and civilizations intersect with Islamic principles in shaping global affairs. I am intrigued by the complex dynamics between various ethnic and religious groups, and how their interactions influence political decision-making and diplomatic relations on an international scale.

Since my time as a political science student at Neelain University in Sudan, I have dreamed of establishing a platform that integrates my interest in Islamic studies within the realm of International Relations. My bachelor's research focused on the evaluation of the Sudanese Islamic movement from 1989 to 2010, while my master's thesis "Islamic view towards International Relations " explored the intersection of ethnicity, political philosophy, and the influence of Islamic principles in shaping global affairs.

SAMIH SALAH – founder of International Relations Network .

ALEX.

14/10/2024

Preface

In late 2019, while serving as a full-time lecturer at the National University of Sudan, I found myself amidst a significant historical event known as the December Revolution. This period of socio-political transformation sparked an idea within me that eventually led to the concept for a book. Despite my limited experience as a university lecturer at the time, my passion for a career in academia propelled me forward.

However, due to the demanding nature of my role and the multitude of subjects I was responsible for, such as Ethnicity and Nationalism in World Politics, Theory of International Relations, Introduction to International Relations Concepts and Theory, and Political Terminologies, I was unable to dedicate sufficient time to writing a complete manuscript.

Nonetheless, the profound impact of the December Revolution and my experiences at the National University of Sudan have left an indelible mark on me. I believe that capturing and sharing these experiences through a book would offer valuable insights, personal reflections, and historical documentation.

Firstly, the author's personal experience of teaching research methods had him witnessed student's struggle to grasp the concepts and relevance of research is a relatable perspective.

The aim of this book is to address this issue by providing a hands-on approach that allows students to actively engage with the material. By encouraging students to participate in practical exercises and mock research, the book seeks to generate interest and foster a deeper understanding of research methodologies.

Secondly, the author acknowledges that research methods can be intimidating and challenging to comprehend. Many existing textbooks approach the subject matter with a high level of complexity, making it difficult for beginners to grasp the fundamental concepts.

In contrast, this book takes a simplified and light-hearted approach. Concepts are explained using examples, and the content is designed to be accessible to those new to research. By presenting research methods in a

more approachable manner, the book aims to alleviate fears and facilitate a more engaging learning experience.
Furthermore, the book recognizes the historical significance of methodology and its evolution over time.
In summary, this book provides a practical and step-by-step guide to conducting research, focusing on engaging students and simplifying complex concepts. It offers a fresh approach to research methods, aimed at making the subject more accessible and enjoyable for beginners. Additionally, it acknowledges the historical significance of methodology, adding depth and context to the content.
The book explores the nature of research as a creative and systematic endeavor to expand knowledge. It involves collecting, organizing, and analyzing information to enhance understanding, often building upon previous work. Research serves various purposes, including exploration, description, and explanation, catering to the researcher's curiosity and desire for knowledge.
Social research is described as a systematic attempt to broaden our understanding of the world using socially accepted methods. It examines people as both subjects and benefactors, contributing to the development of knowledge and addressing societal challenges.
The book emphasizes the importance of a methodological strategy, starting with a research question and making informed decisions accordingly. It introduces three main research strategies: survey research, case study, and experimentation.
Survey research involves collecting standardized information from groups of people, often through questionnaires and structured interviews. Case study focuses on developing detailed knowledge about complex subjects, utilizing various data collection techniques and studying cases in their context. Experimentation measures the effect of one variable on another, typically involving sample selection, variable control, and hypothesis testing.
Overall, this book equips readers with practical tools and techniques to conduct research effectively, while recognizing the historical and methodological significance behind the process.

SAMIH SALAH.

Khartoum ,2019.

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I
Introduction to Research Methods

In a world filled with countless questions, we are constantly seeking answers and striving for improvement. Curiosity and the desire for a better life drive us to explore and understand the challenges that surround us. From the knowledge and insights gained through research, we can address these needs and make meaningful progress.
Research is crucial in satisfying people's needs and addressing their curiosity. It arises from the recognition of problems and the quest for knowledge. Whether it's understanding the causes of diseases like malaria, tackling poverty in African communities, improving education in villages, becoming proficient academicians, harnessing the power of technology, or examining the impact of student phone usage in schools, research allows us to delve deeper into these subjects and find solutions.
This chapter serves as an introduction to the meaning, types, assumptions, characteristics, importance, and process of research.

Its purpose is to equip students and researchers with a foundational understanding of research, enabling them to engage with the subsequent chapters and discussions effectively. By grasping the fundamentals of research, individuals can embark on a journey of discovery and contribute to the advancement of knowledge in their respective fields.

Social research is the systematic analysis of research question by using empirical methods (e.g of tasking, observation, analyzing data). It aims is to make empirically grounded statements that can be generalized or to test such statements. Various approaches can be distinguished as can a number of fields of application (health, education, poverty, etc). various aims can be pursed, ranging from an exact description of phenomena to its explanation or the evaluation of intervention or institution.
The most convenient and simple way to understand the concept of "research" is to deduce it from its etymology, Etymologically, the word research comes from syllabi: the prefix "Re-" which examines carefully or tests carefully. We can say briefly that research is "Examining an issue again and carefully "by asking relevant questions about it in search of answers.

There are several other advanced definitions of research, especially formal research. Some of these definitions are the following: first, research is the systematic search for knowledge about existing phenomena that are unknown to us. When we When faced with the unknown causes of malaria, we engage in research to unravel its mysteries. Similarly, when confronted with the harsh living conditions experienced by African villagers, we conduct research to uncover the underlying reasons. Research, therefore, represents a systematic quest for knowledge about the unknown, enabling us to shed light on various phenomena.

Furthermore, research involves the pursuit of answers to questions that arise in our daily lives. Many of these questions directly impact our everyday existence. For scholars, simplistic answers are inadequate; instead, concrete and well-founded responses are sought. This necessitates the undertaking of research. Consequently, research can be seen as a pursuit of convincing answers rather than merely satisfactory ones to address the inquiries we encounter in our daily lives.

To answer these questions through research, three essential steps are involved. First, we formulate the question itself, thereby identifying the problem at hand. Second, we gather data to address the question, conducting thorough research. Finally, we present the findings obtained from the collected data in a formal report, disseminating our discoveries. These three steps hold significance in social sciences and humanities research, collectively encapsulating the essence of "social research."

Expanding further, Nancy J. Vyhmester, quoting Isaac Felip Azofeifa, provides a comprehensive definition of research that merits attention. According to her, research is a systematic search for adequate information, leading to the acquisition of objective knowledge on a specific topic. Let us explore some key aspects of this definition.

Why is research considered systematic? As per the aforementioned definition, research demands diligent efforts from the researcher to be accomplished. It necessitates rigor and follows clear and logical methods or procedures. Consequently, research is not an easy endeavor; it requires time, energy, and a methodical approach to reach its goals.

What is meant by "adequate information"? According to the definition, adequate information arises from questions or problems that exist within the community. It is not derived solely from personal thoughts or conjecture. This assertion implies that one cannot simply sit at a desk, ponder intriguing questions, devise answers, and present them as research.

While such contemplation is a valuable exercise, it does not constitute genuine research, and the information derived from it is inadequate in this context.
In this chapter we begin our journey into research methods. We start by describing and differentiating basic approaches from applied approaches to research. Chapter one clarifies key concepts and terms that will be used in this textbook, and begins

to answer the fundamental question of "what is research?" We conclude this chapter by examining where research ideas come from.

Research methods encompass a systematic process of inquiry that allows us to gain knowledge about our social world. The key message in the previous statement is that conducting research is a systematic process, meaning there is a correct way or system to approach research. Understanding how to conduct research correctly is crucial not only if you plan to undertake a research project but also in any profession you choose or have chosen to enter. In fact, research is already a part of our everyday lives. Just think about how often you use Google to search for answers. Our collective use of Google for searching is one of the reasons why the company is so successful. Asking questions, trying to understand what is happening and why things occur the way they do, is an inherent part of being human. So, if you already engage in research, why take a course on research methods? Well, while we naturally research things all the time, there are more formal ways of collecting and sharing knowledge. Ultimately, research, in its formal sense, involves active engagement and critical thinking about the world around us. For instance, one might ask, "What psychological characteristics and factors are associated with an increased likelihood of survival during an active crisis?" Applied research can contribute by shaping social life. For instance, a researcher may undertake a study that assists policymakers in changing or creating new policies. Research is applied to influence and shape social life. Basic research can also contribute to sociological theories or knowledge without having a specific application as a goal. For instance, a researcher might conduct a study that modifies an existing theory related to post-traumatic stress disorder. It is important to note, however, that even basic research may eventually be used for some applied purpose. Similarly, while applied

research may not directly address a specific real-world social problem, it can enhance our theoretical understanding of a particular phenomenon.

Based on the definition of research presented earlier, a theory can be conceptualized as an explanatory framework for an established phenomenon, idea, or situation. It represents a robust and lasting explanation that researchers deem to be valid. Fundamentally, a theory comprises tested hypotheses that form the basis for understanding a specific phenomenon, idea, or situation. It encompasses an overarching concept that synthesizes and structures knowledge about the social world. Moreover, these hypotheses are constructed from interconnected concepts. Therefore, concepts can be viewed as the fundamental components of a given theory, providing a basis for analysis and understanding.

Based on the aforementioned definition of research, theory building involves the construction of explanations for existing phenomena or situations using collected data. This process is often referred to as "theory after," indicating that data is collected first, and then a theory is systematically developed based on the analysis of the collected data. Many qualitative researchers employ this approach to build theories from the data they gather. The question of why a theory is built is indeed significant. A theory is constructed when there is no satisfactory or convincing explanation available for a particular topic. In other words, if there already exists a theory that adequately explains a phenomenon, situation, or issue, there is no need to develop a new theory. The purpose of theory building is to fill gaps in understanding and provide a comprehensive framework for explaining and interpreting empirical observations. It aims to advance knowledge by offering fresh insights and contributing to the existing body of theoretical understanding.

Based on the definition of research provided earlier, theory testing involves evaluating the validity of a specific theory using collected data. This approach is often referred to as "theory first." In theory testing, the collected data are utilized to examine the variables that form the hypothesis of the existing theory, determining whether they remain valid or if alternative explanations are necessary. Variables can be understood as operationalized concepts, meaning they represent the measurable

properties of a specific object or phenomenon. Theory testing allows researchers to assess whether a theory withstands current advancements, leading to potential maintenance, modification, or outright rejection of the theory. One of the key elements in a theory is the presence of variables that constitute the hypothesis to be tested. The "language of variables," which is embedded in the hypotheses, is not exclusive to research; it draws upon mathematical and statistical concepts. This explains why many researchers focused on theory testing, typically quantitative researchers, possess a mathematical and statistical background. Therefore, based on the aforementioned definition of research, data collection serves the purpose of either building a theory or testing the validity of an existing theory.

This section provides an overview of different types of research. The categorization of research types can vary depending on the preferences of different research theories. In this book, we categorize research types as descriptive and analytical. Descriptive research aims to provide descriptions of a state of affairs, a phenomenon, or an idea as it exists. The main characteristic of descriptive research is reporting what has happened in a descriptive form. For example, it can describe the frequency of shopping, people's preferences, and the causes of existing events. On the other hand, analytical research focuses on analyzing and interpreting data. After considering the basic types of research, the next step is to think about the research methodology. This methodology guides the overall approach to studying the topic and includes considerations such as constraints, dilemmas, and ethical choices. It is important to differentiate between research methodology and research methods. Research methods refer to the tools used to gather data, such as questionnaires or interviews. When choosing a research methodology, it is essential to understand the difference between qualitative and quantitative research. Qualitative research explores attitudes, behavior, and experiences through methods like interviews or focus groups. It aims to gain in-depth insights from participants, involving fewer people but with longer contact. Under the umbrella of qualitative research, there are various methodologies that can be explored. Quantitative research, on the other hand, generates statistics through large-scale survey research using methods like questionnaires or structured interviews. This type of research reaches a larger number of people but with shorter contact compared to qualitative research. The methodological debate in social

research has revolved around qualitative versus quantitative inquiry, with discussions on which approach is better or more scientific. Each methodology has its specific strengths and weaknesses, and it is important for researchers to acknowledge and address them. It is crucial not to fall into the trap of thinking that one methodology is inherently better than the other. Both qualitative and quantitative research have their merits and depend on the skills, training, and experiences of the researcher. Researchers should follow their instincts and choose the approach they feel comfortable with while considering the preferences of their tutor or supervisor. Action research is considered a methodology rather than a research method. In action research, the researcher collaborates closely with a group of people to improve a particular situation in a practical setting. The researcher acts as a facilitator, working with the group rather than conducting research on them. In conclusion, selecting the appropriate research methodology is crucial for conducting effective research. Researchers should consider the strengths and weaknesses of qualitative and quantitative approaches and choose the one that aligns with their comfort and objectives. Additionally, action research offers a collaborative approach to improving real-world situations.

The central task of social research is driven by scientific curiosity and the aim to generate knowledge. When a new phenomenon, such as a disease, emerges, it is crucial to provide a comprehensive description of its features based on data and analysis of existing theories. This includes examining symptoms, progression, frequency, and other relevant factors. The initial step involves describing the circumstances in which the phenomenon occurs or analyzing the subjective experiences of individuals affected by it. This helps in understanding the contextual effects and the meanings associated with the disease. Subsequently, researchers can search for concrete explanations and test factors that trigger symptoms or the disease itself, as well as identify circumstances or interventions that have specific impacts on its course. Throughout the process of description, understanding, and explanation, the primary objective remains the production of new knowledge and advancing the understanding of the field. The scientific community and scientists themselves are the primary beneficiaries of the research and its outcomes. There is also a growing trend of conducting social research in practical contexts, such as hospitals and schools. In these settings, research questions focus on the practices within these institutions, such as those of teachers, nurses, or physicians.

Alternatively, they may concentrate on specific work conditions, such as hospital routines or teacher-student relationships. The results of applied research in these contexts adhere to the principles of scientific analysis, but their primary aim is to be relevant to the practical field and contribute to problem-solving in real-world settings. Participatory action research represents a special case within practice-oriented research. In participatory action research, the researcher initiates change in the study field not only after the completion of the study but also during the research process itself. For example, in a study of nursing with migrants, participatory action research would involve immediately engaging with the everyday routines of the participants. The information gathered during the research process is then shared back with the participants. This transforms the relationship between the researcher and the participants from a one-way communication (where the interviewees share their views and the researchers listen) to a dialogue (where the interviewees share their views, the researchers listen, and suggestions are made for changing the situation). The researcher-participant relationship shifts from a subject-object dynamic to a relationship between two active subjects. The evaluation of the researcher and their results is no longer solely focused on traditional scientific criteria. Instead, the usefulness of the Research and its outcomes for the participants becomes a primary criterion. Research becomes not only a process of generating knowledge for the researchers but also a process of knowledge, learning, and change for both parties involved.

2.Basis for political and practical decisions

Social research has gained increasing importance as a foundation for practical and political decision-making since the mid-twentieth century. Governments frequently commission regular surveys and reports on various topics such as health, poverty, and the situations of different age groups. While some monitoring efforts summarize existing research and findings in the field, additional studies are often conducted to contribute to these reports, as seen in studies like PISA and HBSC. For instance, the HBSC study collects representative data on adolescents aged 11 to 15 in the population, but it also includes purposefully selected case studies. Case studies are employed when representative data is not available or expected, as they can provide the necessary data foundation. In practical and political contexts, social research serves several purposes:

1. Exploration: It helps to explore issues, fields, and phenomena by providing initial descriptions and insights.

2. Discovery: Social research enables the discovery of new relationships by collecting and analyzing data.

3. Theory development: It provides empirical data and analysis as a basis for developing theories that explain social phenomena.

4. Theory testing: Social research tests existing theories and empirical knowledge to assess their validity and applicability.

5. Evaluation: It documents the effects of interventions, treatments, programs, etc., in an empirically grounded manner.

6. Decision-making: Social research provides empirically informed knowledge, data analysis, and results to support political, administrative, and practical decision-making processes. However, it is essential to acknowledge the limitations of social research. It cannot achieve the goal of developing a single comprehensive theory that explains all aspects of society and its phenomena while withstanding empirical testing. There is also no universal method that can be applied to study all relevant phenomena. Furthermore, social research cannot always provide immediate solutions to urgent problems. Realistic expectations of social research should be maintained, and more attainable goals pursued. One such goal is the development and empirical testing of multiple theories that can explain specific social phenomena. Researchers can continue refining and expanding the range of social science methods available. Social research provides detailed knowledge and insights into relationships that can be utilized to develop solutions for societal problems.

3. **Qualitative & Quotative Research**

Qualitative Research: Qualitative research focuses on developing theories and understanding phenomena. The theory is not tested but rather serves as a starting point for exploration. Case selection is based on the theoretical relevance of the case. Data collection is open-ended, and the analysis of data is interpretative. Generalization is done in a theoretical sense. Quantitative Research: Quantitative research starts with a concept that is theoretically spelled out and then tested empirically. Hypotheses are formulated and tested using standardized data collection methods.

The emphasis is on statistical analysis, and generalization is done in a statistical sense to the population. Common Aspects: Both qualitative and quantitative research involve systematic empirical methods, aim at generalizing findings to other situations and participants, and pursue research questions using planned approaches.
Advantages and Disadvantages: Quantitative research allows for the study of a large number of cases in a relatively short time and provides results that are generalizable. However, it may overlook relevant aspects for participants and the contextual meanings. Qualitative research, on the other hand, provides in-depth understanding but is time-consuming and limited in generalizability. Online Research: With the development of the internet, both qualitative and quantitative research methods can be adapted to online research. This opens up new possibilities for studying virtual communities and conducting research collaboratively. Benefits of Research Methods: Learning and applying research methods can provide new insights, challenge prejudices, and offer concrete links between theory and real-life problems. Working with others and technical devices can be enriching, and empirical research allows for sustained focus on an issue. In summary, qualitative and quantitative research approaches have distinct characteristics and advantages. Both approaches contribute to the understanding of social phenomena and offer opportunities for learning and professional development.

4. The Process of Undertaking Research

Step one: formulating a research problem

The first and most crucial step in the research process is the formulation of a research problem. The research problem serves as your guiding destination, informing both yourself, your research supervisor, and readers about the intended goal of your study. The greater the specificity and clarity in formulating the research problem, the better. This is because everything that follows in the research process, including study design, measurement procedures, sampling strategy, data analysis, and the writing style of your dissertation or report, is significantly influenced by how you formulate the research problem. Consequently, it is essential to thoroughly, carefully, and critically examine it.
The primary purpose of formulating a research problem is to determine the specific aspect you aim to investigate. This section provides detailed

insights into various aspects of formulating a research problem. It is crucial to evaluate the research problem considering factors such as the availability of financial resources, time constraints, and your own expertise and knowledge, as well as that of your research supervisor, in the field of study. Additionally, it is important to identify any gaps in your understanding of the relevant discipline, including statistical knowledge required for analysis. Furthermore, consider whether you possess sufficient knowledge of computers and software if you plan to utilize them in your research.

Step two: conceptualizing a research design

The use of appropriate methods is an exceedingly important aspect of research. Research involves a systematic, controlled, valid, and rigorous exploration and description of unknowns, establishing associations and causation that enable accurate outcome predictions under specific conditions. It also entails identifying gaps in knowledge, verifying existing knowledge, and recognizing past errors and limitations.

The primary function of research design is to elucidate how you will address your research questions. It outlines the specific details of your inquiry, including the study design itself and the logical arrangements you propose to undertake, the measurement procedures, the sampling strategy, the framework for analysis, and the time-frame. It is crucial not to confuse study design with research design. Study design pertains to the design of the study itself, whereas research design encompasses other components that constitute the research process.

The selection of an appropriate research design is pivotal in enabling valid findings, comparisons, and conclusions in any investigation. A flawed design leads to misleading findings and is tantamount to wasting human and financial resources. Within scientific circles, the strength of empirical investigation is primarily assessed based on the adopted research design. Therefore, when selecting a research design, it is important to ensure its validity, feasibility, and manageability.

There is an enormous variety of study designs and you need to be acquainted with some of the most common ones.

Step three: constructing an instrument for data collection

Anything that becomes a means of collecting information for your study is called a "research tool' or a research instrument ', for example observation forms, interview schedules, questionnaires and interview guides.

The construction of research instrument is the first practical step in carrying out the study. you will need to decide how you are going to collect data for the proposed study and then construct research instructed for data collection.

Step four: Selecting a sample

The accuracy of your findings greatly relies on how you select your sample. The primary objective of any sampling design is to minimize, considering cost limitations, the gap between the values obtained from your sample and those prevalent in the study population.

The fundamental principle in sampling is that a relatively small number of units, if selected in a manner that genuinely represents the study population, can provide a significantly high probability of reflecting the true characteristics of the population being studied.

When selecting a sample, you should strive to achieve two key objectives: avoiding bias in sample selection and maximizing precision while optimizing resource allocation.

Sampling designs can be classified into three categories: random/probability sampling designs, non-random/non-probability sampling designs, and mixed sampling designs.

Within the first two categories, there are several sampling strategies and designs. It is important to familiarize yourself with these sampling designs, understanding their strengths and weaknesses, and identifying the situations in which they can or cannot be applied. This knowledge will help you select the most appropriate sampling strategy for your study. The chosen

sampling strategy will influence your ability to generalize findings from the sample to the study population and determine the statistical tests applicable to the data.

In summary, the selection of a sample plays a crucial role in the accuracy of your findings. Understanding different sampling designs and their implications will assist you in making informed decisions and conducting robust research that accurately represents the target population.

Step 5 : writing a research proposal

After completing all the preparatory work, the next step is to consolidate everything in a comprehensive manner that provides sufficient information about your research study. This comprehensive plan is known as a research proposal, and it serves to inform readers, including your research supervisor and others, about your research problem and

how you plan to investigate it. Essentially, a research proposal's primary function is to outline an operational plan for obtaining answers to your research questions. By doing so, it ensures and reassures readers about the validity of the methodology used to obtain accurate and objective answers. It is important to note that universities and other institutions may have varying requirements regarding the style and content of a research proposal. Therefore, it is crucial to familiarize yourself with any specific guidelines provided by your institution. In general, your research proposal should provide the following information about your study to help you, your research supervisor, and reviewers understand the project:

1. Introduction: Clearly state the research problem, its significance, and the rationale behind your study. Explain why it is important to investigate this problem and how it contributes to the existing body of knowledge.
2. Research Questions and Objectives: Clearly formulate the research questions that your study aims to answer. Outline the specific objectives that will guide your investigation.
3. Literature Review: Summarize the relevant literature and studies related to your research topic. Identify gaps, controversies, or limitations in the existing knowledge that your study will address.
4. Methodology: Describe the research design, data collection methods, and analysis techniques you will employ. Justify the appropriateness of the chosen methods and explain how they will help answer your research questions.
5. Ethical Considerations: Discuss any ethical considerations related to your study, such as informed consent, data privacy, and participant protection. Outline the steps you will take to ensure ethical practices throughout the research process.
6. Timeline and Resources: Provide a timeline indicating the key milestones and activities of your research project. Detail the resources, such as funding, equipment, or access to participants, that will be required for successful completion.
7. Expected Findings and Contribution: Discuss the potential outcomes and implications of your study. Explain how your findings will contribute to the field and address the research problem identified.
8. References: Include a list of references cited throughout the proposal, following the appropriate citation style.

It is essential to carefully consider each of these components and present them in a clear and concise manner. A well-written research proposal

demonstrates your understanding of the research problem, your ability to design a rigorous study, and your commitment to ethical research practices.

Reviewing the Literature

The function of the literature review in research

How to carry out a literature search

How to review the selected literature

How to develop theoretical and conceptual framework

How to write a literature review

The place of the literature review in research

One of the essential preliminary tasks when you undertake a research study is to go through the existing literature in order to acquaint yourself with the available body of knowledge in your area of interest . Reviewing the literature review is an integral part of the research process and make a valuable contribution to almost every operational step. It has value even before the first step; that is ; when you are merely thinking about a research question that you may want to find answers to through your research journey . In the initial stages of research it helps you to establish the theoretical roots of your study , clarify your ideas and develop your research methodology . Later in the process, the literature review serves to enhance and consolidate your own knowledge base and helps you to integrate your findings with the existing body of knowledge. since an important responsibility in research is to compare your findings with those of others, it is here that the literature review plays an extremely important role. During the write -up of your report it helps you to integrate your findings with existing knowledge -that is, to either support or contradict earlier research. The higher the academic level of your research, the more important a through integration of your findings with existing literature becomes.

In summary, a literature review has the following functions:

It provides a theoretical background to your study.

It helps you establish the links between what you are proposing to examine and what has already been studied.

It enables you to show how your findings have contributed to the existing body of knowledge in your profession. It helps you integrate your research findings into the existing body of knowledge,

In relation to your own study, the literature review can help in four ways. It can:

Bring clarity and focus to your research problem.
Improve your research methodology;
Broaden your knowledge base in your research area; and
Contextualize your findings.

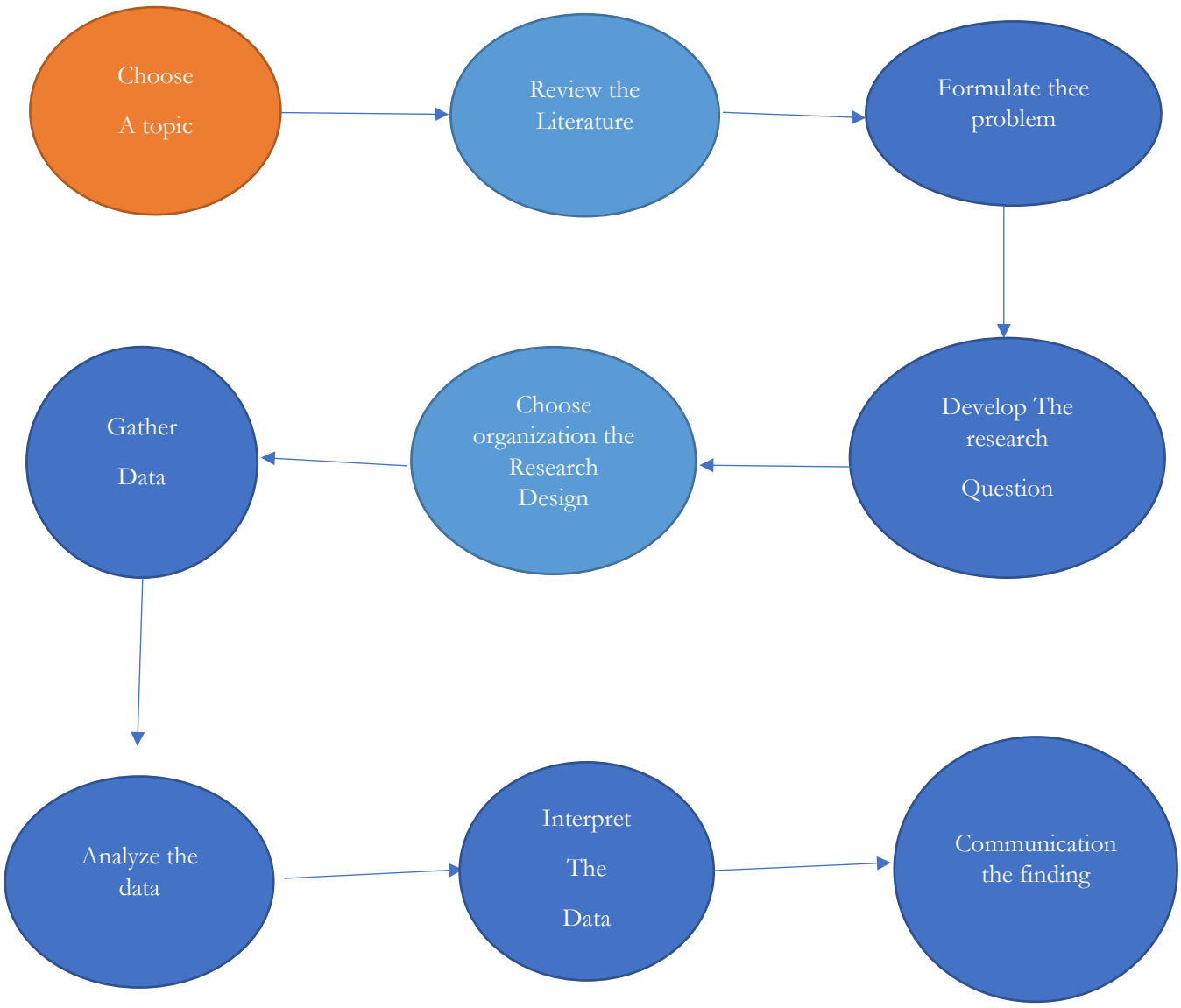


Figure 1.1

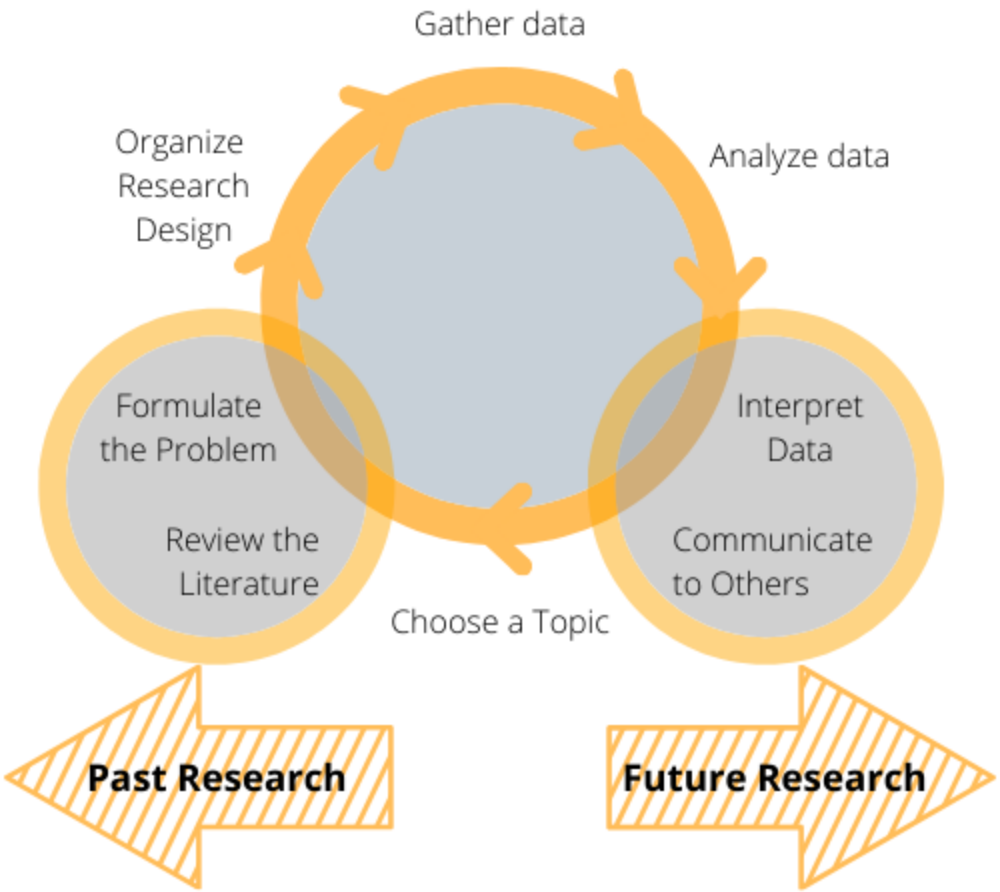

Gather data
Organize
Research
Design
Analyze data
Formulate
the Problem
Review the
Literature
Interpret
Data
Communicate
to Others
Choose a Topic
Past Research
Future Research

Figure 1.2

5. where do research ideas come from?

The origin of research ideas stems from various sources. Researchers draw inspiration from a range of places, such as replicating, clarifying, or challenging previous research, as well as resolving conflicting results. New technology, like the impact of Facebook or Twitter on society, can spark research ideas. Serendipitous findings that pique a researcher's curiosity, anomalies that defy expectations, or the desire to explore further something commonly believed to be known can also drive research. This is sometimes referred to as common sense research, where history, tradition, or the practical needs of a field, such as public safety, provide researchers with problem-solving opportunities.

Research is ubiquitous, arising from agencies seeking to achieve specific goals, concerns about policy changes, or individuals making observations or questioning the world around them. Typically, research begins with broad "why" or "how" questions, but it undergoes an iterative process that requires refinement.

As the motivations behind research projects vary, so do the types of research questions. Research can be exploratory, descriptive, relational, explanatory, or transformative, each with distinct methods and objectives. Therefore, it is crucial to identify the research project's objectives to determine the most appropriate research method. The subsequent step involves formulating a research question, which will be further explored in Chapter 2.

6.Understanding Key Research Concepts and Terms

In this textbook you will be exposed to many terms and concepts associated with research methods, particularly as they relate to the research planning decisions you must make along the way. Figure 1.1 will help you contextualize many of these terms and understand the research process. This general chart begins with two key concepts: ontology and epistemology, advances through other concepts, and concludes with three research methodological approaches: qualitative, quantitative and mixed methods. Research does not end with making decisions about the type of methods you will use; we could argue that the work is just beginning at this point. Figure 1.3 does not represent an all-encompassing list of concepts and terms related to research methods. Keep in mind that each

strategy has its own data collection and analysis approaches associated with the various methodological approaches you choose. Figure 1.1 is intentioned to provide a general overview of the research concept. You may want to keep this figure handy as you read through the various chapters.

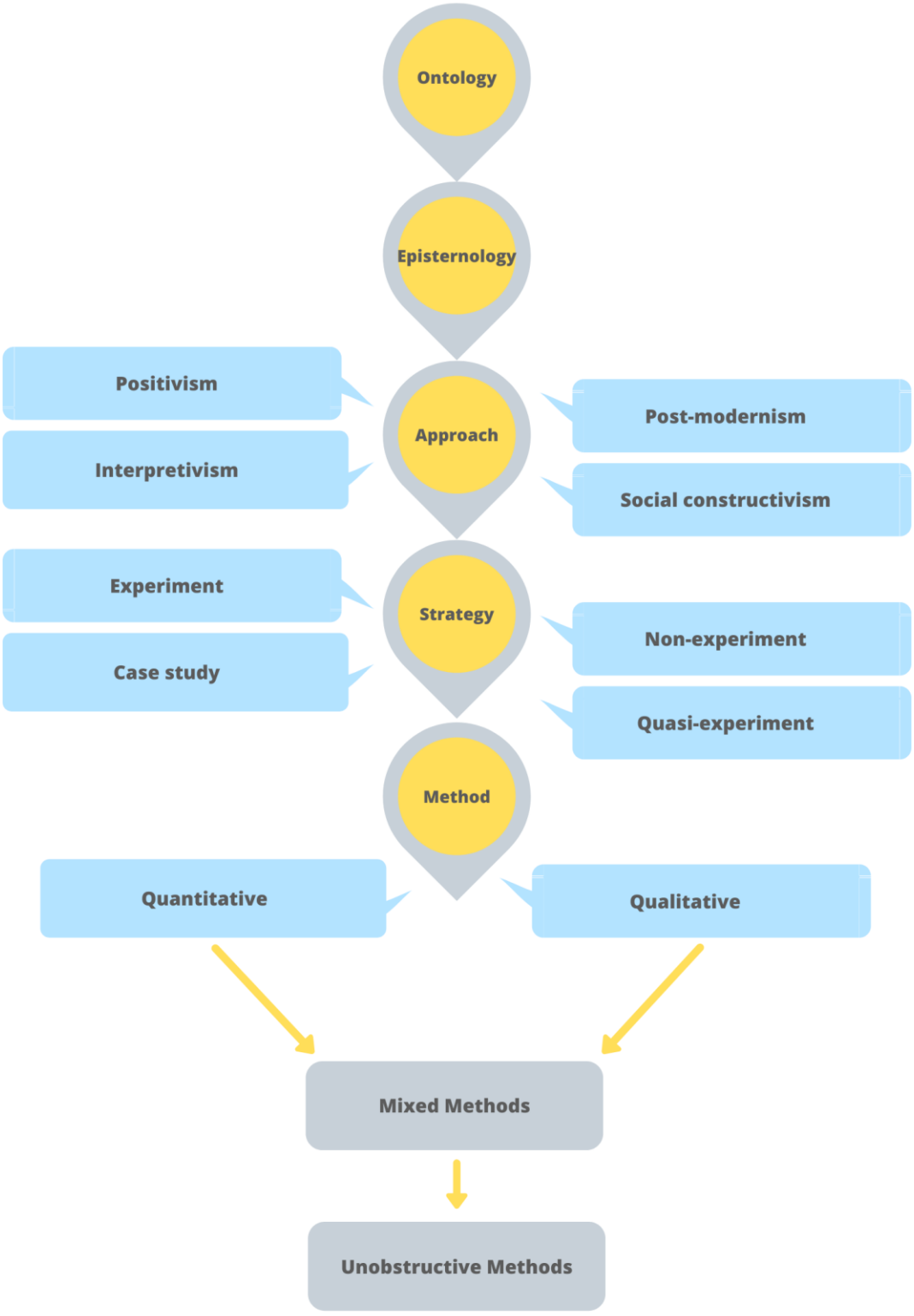

Ontology
Episternology
Positivism
Interpretivism
Approach
Post-modernism
Social constructivism
Experiment
Case study
Strategy
Non-experiment
Quasi-experiment
Method
Quantitative
Qualitative
Mixed Methods
Unobstructive Methods

Figure 1.3

7.Ontology & Epistemology

When contemplating our knowledge and the ways we acquire it, we encounter questions concerning ontology and epistemology. You may have come across these concepts in a philosophy class. However, they are also pertinent to the work of sociologists who engage in research focused on understanding our social world. As sociologists, we typically possess some pre-existing knowledge, and we seek to comprehend different aspects of society. This existing knowledge can be categorized into three fundamental concepts:
1) what exists in our social world.
2) what can be known about the existing social phenomena.
3) the most effective methods for acquiring knowledge about these phenomena (Saylor Academy, 2012).
In the following sections, we will delve into the definitions of ontology and epistemology, providing an illustrative example for each term.

8.Ontology

Ontology, derived from the Greek word meaning "the study, theory, or science of being," focuses on understanding the nature of reality or "what is" (Saunders, Lewis, & Thornhill, 2009). It delves into profound and challenging questions, encompassing topics such as: - The purpose of life: Ontology explores the fundamental question of why we exist and what gives meaning to human existence. - Existence beyond our universe: It investigates the possibility of entities or phenomena that exist outside the boundaries of our known universe. - Categorization: Ontology explores the classification and categorization of entities, phenomena, or concepts based on their inherent characteristics or attributes. - Objective reality: It examines the concept of whether there is an external reality that exists independently of our subjective experiences or perceptions. - The meaning of the verb "to be": Ontology delves into the philosophical and linguistic implications of the verb "to be" and its role in expressing existence, identity, and essence. These questions within ontology invite deep contemplation and philosophical inquiry, acknowledging that they may not have definitive or universally agreed-upon answers. Ontology is

comprised of two aspects: objectivism and subjectivism. Objectivism means that social entities exist externally to the social actors who are concerned with their existence. Subjectivism means that social phenomena are created from the perceptions and actions of the social actors who are concerned with their existence (Saunders, et al., 2009). Figure 1.2 provides an example of a similar research project to be undertaken by two different students. While the projects being proposed by the students are similar, they each have different research questions. Read the scenario and then answer the questions that follow.

Ana and Robert, both Emergency & Security Management Studies (ESMS) students, are embarking on their capstone research projects at the City of Vancouver. However, they encounter a hurdle when they approach the newly appointed senior staff managers in the Emergency Management Department (EMD) to request their participation in separate studies. Ana's research question focuses on understanding the role of City of Vancouver managers in fostering positive community relationships within the EMD. She intends to collect data related to the specific responsibilities and duties of these managers in achieving this objective. On the other hand, Robert's research question explores the impact of the City of Vancouver's corporate culture on the ability of EMD managers to establish positive relationships with the local community. His data collection will involve gathering perceptions regarding corporate culture and its influence on facilitating effective community-emergency management department relationships. However, when Ana and Robert approach the newly appointed managers to request their involvement in the studies, the managers express their reluctance. They explain that despite their specialized academic training and practical work experience in the department, they feel insufficiently acquainted with their new roles and therefore, unable to answer the research questions. As a result, they decline to participate, leaving Ana and Robert concerned about the future of their research projects. In light of this predicament, Ana and Robert decide to seek guidance from their supervisors. They approach their supervisors to discuss the situation and seek advice on the best course of action to take in response to the managers' refusal to participate.

10. Exercise

Before reading about their supervisors' responses, please answer the following questions:
1. Does Ana's research question align with an objectivist or a subjectivist approach?
2. Does Robert's research question align with an objectivist or a subjectivist approach? 3. Based on your answer to question 1, which managers could Ana interview for her research study (new, old, or both)? Why?
4. Based on your answer to question 2, which managers could Robert interview for his research study (new, old, or both)? Why? Answers: Ana's supervisor informs her that her research question is framed for an objectivist approach. The supervisor explains that in her study, the social entity (the City) exists as a reality external to the social actors (the managers).
The formal management structure at the City has remained largely unchanged since the departure of the old managers and the arrival of the new ones. The procedures remain consistent, regardless of who occupies the managerial positions. Therefore, Ana, utilizing an objectivist approach, can argue that the new managers have job descriptions outlining their responsibilities and that they are part of a formal structure with a hierarchical reporting system. She can further argue that this organizational hierarchy, unique to the City, resembles hierarchies found in similar organizations. Consequently, Ana can assert that the new managers will be able to provide insights into their role in fostering positive community relationships. Their responses are likely to be similar to those of the previous managers because the management structure and procedures have not changed significantly. Therefore, Ana can approach the new managers and request their participation in her research study. Robert's supervisor informs him that his research question is designed for a subjectivist approach. In his study, the social phenomena (the impact of corporate culture on the relationship with the community) is created through the perceptions and subsequent actions of the social actors (the managers). The corporate culture at the City continuously influences the process of social interaction, and these interactions shape perceptions of

the relationship with the community, which undergoes constant revision. Therefore, Robert, employing a subjectivist approach, can state that the new managers may have had limited interactions with community members thus far, and may not fully grasp how the corporate culture affects the department's relationship with the community. While it is important to gather the new managers' perspectives, Robert also needs input from the previous managers to capture their perceptions during their tenure. This is because the community-department relationship undergoes ongoing revision, influenced by varying managers' perceptions of corporate culture and its impact on their ability to establish positive community relationships. Therefore, Robert can approach the current managers and request their participation in the study, while also asking the department to reach out to the former managers to determine their willingness to participate. As seen in this example, the research question for each study guides the decision of whether the researcher should adopt a subjective or objective ontological approach. This decision, in turn, influences their research study, including the selection of individuals to interview. Epistemology Epistemology has to do with knowledge.

Rather than dealing with questions about what is, epistemology deals with questions of how we know what is. In sociology, there are many ways to uncover knowledge. We might interview people to understand public opinion about a topic, or perhaps observe them in their natural environment. We could avoid face-to-face interaction altogether by mailing people surveys to complete on their own or by reading people's opinions in newspaper editorials. Each method of data collection comes with its own set of epistemological assumptions about how to find things out (Saylor Academy, 2012). There are two main subsections of epistemology: positivist and interpretivist philosophies. We will examine these philosophies or paradigms in the following sections.

11. Research Paradigms in Social Science

A paradigm refers to a framework or set of ideas that helps us understand and explain a particular subject or phenomenon. It shapes our perspectives, influences what we know and how we acquire knowledge. To illustrate this concept, let's consider the topic of abortion, which elicits different viewpoints. Some individuals perceive abortion as a medical procedure that should be a personal choice for women facing unwanted

pregnancies. Others view it as an act of murder and believe that society should collectively determine when or if abortion is permissible. Each person operates within their own paradigm,shaped by factors such as political beliefs, upbringing, or religion. Paradigms play a significant role in shaping our opinions on various issues. Ethical considerations are crucial in any research or evaluation project. These considerations should be addressed throughout the entire project, from planning and data collection to analysis and dissemination of findings. Two main aspects of ethics apply to social science research: research integrity and the protection of participants. Some research projects require approval from an ethical committee, while others undergo a research governance process. Many research projects, including those conducted as part of university courses or internally funded studies, require researchers to write research proposals. These proposals can be reactive, written in response to specific prompts or research needs. It is essential to recognize that research itself is a process that is shaped by the chosen approach. While research aims to uncover aspects of how the world functions, it is also influenced by the decisions made regarding what, how, where, and when to ask questions. In general, research follows a nine-step process.

A paradigm is a way of viewing the world, a set of ideas that is used to understand or explain something, often related to a specific subject ("Paradigm," 2018). It is a way of framing what we know, what we can know, and how we can know it. To help you understand what a paradigm is, let us think about the various views on abortion. To some, abortion is a medical procedure that should be undertaken at the discretion of each individual woman who might experience an unwanted pregnancy. To others, abortion is murder, and members of society should collectively have the right to decide when, if at all, abortion should be undertaken. Chances are, if you have an opinion about this topic, you are pretty certain about the veracity of your perspective. Then again, the person who sits next to you on the bus may have a very different opinion and yet be equally confident about the truth of his or her perspective. Which of you is correct? You are each operating under a set of assumptions about the way the world does—or at least should—work. Perhaps your assumptions come from your particular political perspective, which helps shape your view on a variety of social issues, or perhaps your assumptions are based on what you learned from your parents or from a religion. Paradigms shape our stances on issues such as this one.

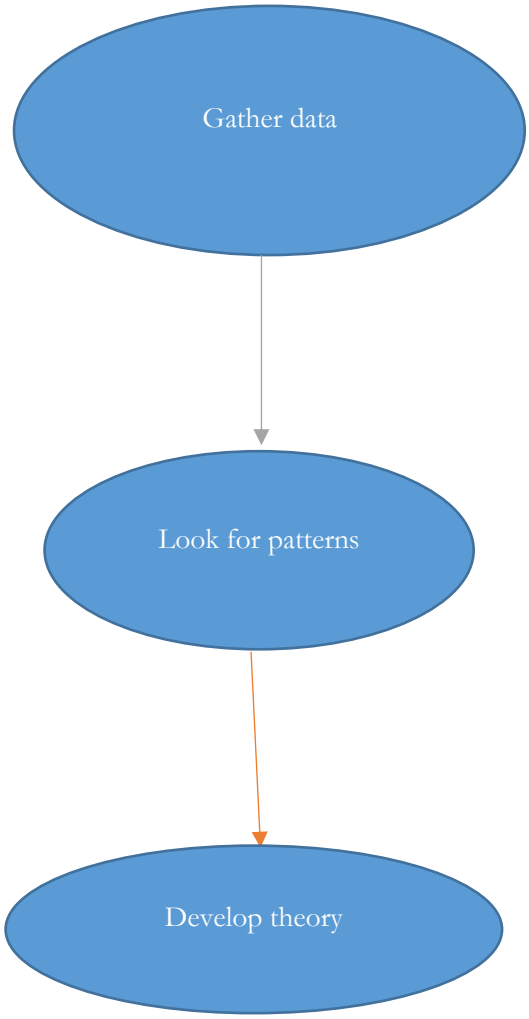
In social science, there are several predominant paradigms, each with its own unique ontological and epistemological perspective. We will look at some of the most common social scientific paradigms that might guide you in starting to think about conducting your research. The first paradigm we will consider, positivism, is probably the framework that comes to mind for many of you when you think of science. Positivism is guided by the principles of objectivity, knowability, and deductive logic. Deductive logic is discussed in more detail in the section that follows. The positivist framework operates from the assumption that society can and should be studied empirically and scientifically. Positivism also calls for a value-free sociology, one in which researchers aim to abandon their biases and values in a quest for objective, empirical, and knowable truth. An Interpretivist paradigm suggests that it is necessary for researchers to understand the differences amongst humans as social actors. The emphasis is on conducting research among people, as opposed to objects. As Saunders et al. observe, the reference to social actors' bears noting. They use the analogy of the theatre, where actors interpret, in a specific way, the parts they play. They relate this to the same way in which people interpret their social roles in relationship and how they then give meaning to those roles. Similarly, people interpret the social roles of others in accordance with their own meanings of those roles. Figure 1.3 provides an example of two students, each from a difference academic field of study, and how they might approach their research in their respective fields.

12. Inductive Approaches to Research

In addition to considering paradigms, researchers must also contemplate whether they will employ an inductive or deductive approach in their work. These two approaches have distinct characteristics but can also complement each other. In the following sections, we will explore the similarities and differences between these approaches.
An inductive approach to research involves the collection of relevant data pertaining to the topic of interest.

Once a significant amount of data has been gathered, the researcher takes a step back from data collection to gain a broader perspective. During this stage, the researcher examines the data for patterns and works towards

developing a theory that can explain those patterns. In essence, the inductive approach involves moving from specific observations to more general propositions or theories about those observations. It entails progressing from data to theory, or from the particular to the general .



Inductive Reasoning

Figure 1.4

13. Deductive Approaches to Research

Researchers employing a deductive approach follow a different sequence compared to inductive research. They begin by selecting a social theory that they find compelling and relevant to their research topic. Subsequently, they proceed to test the implications of this theory using data. In other words, they move from a general level to a more specific one. The deductive approach is often associated with scientific investigation, where the researcher examines previous studies and existing theories related to the phenomenon under study. Based on these theories, hypotheses are formulated and tested using empirical data .

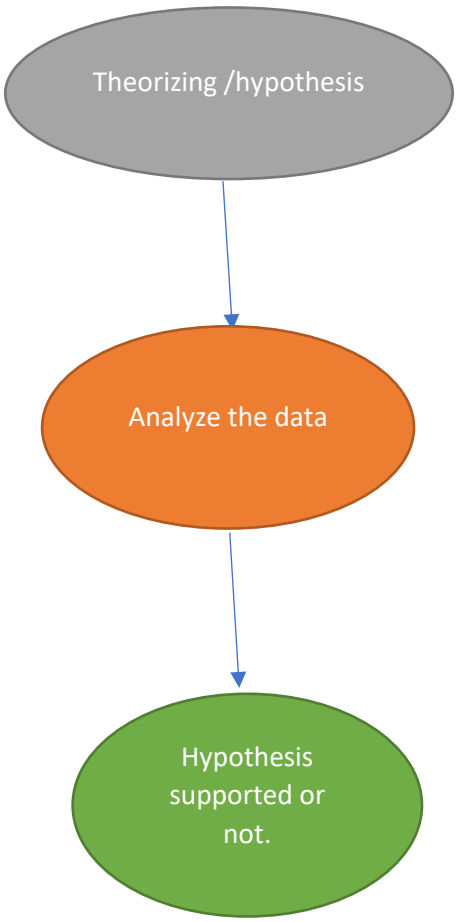


Figure 1.6

14.Inductive or Deductive? Two Approaches with Distinctions

LEARNING OBJECTIVES

1. Explain the inductive approach to research and provide examples.
2. Elaborate on the deductive approach to research and provide examples.
3. Explore the ways in which inductive and deductive approaches can complement each other.

The field of sociology relies on theories to guide and shape research endeavors. Likewise, research serves to structure and enhance theory. For students new to these subjects, the interplay between theory and research becomes apparent when examining the relationships within inductive and deductive approaches. Both approaches heavily depend on theory, yet the nature of the relationship between theory and research varies. Inductive and deductive approaches exhibit distinct characteristics, but they can also mutually reinforce each other. First, let's delve into each approach, highlighting their differences. Following that, we will explore how they can complement one another.

Inductive Approaches and Some Examples

Inductive research involves a researcher collecting relevant data pertaining to their topic of interest. Once a substantial amount of data is gathered, the researcher pauses data collection and takes a step back to gain a holistic view of the data. During this phase, the researcher identifies patterns within the data and aims to develop a theory that can explain these patterns. In essence, the inductive approach involves moving from specific observations to more general propositions about those observations. It entails progressing from data to theory, or from the particular to the general. Figure 1.6 "Inductive Research" provides an overview of the steps involved in conducting research using an inductive approach.

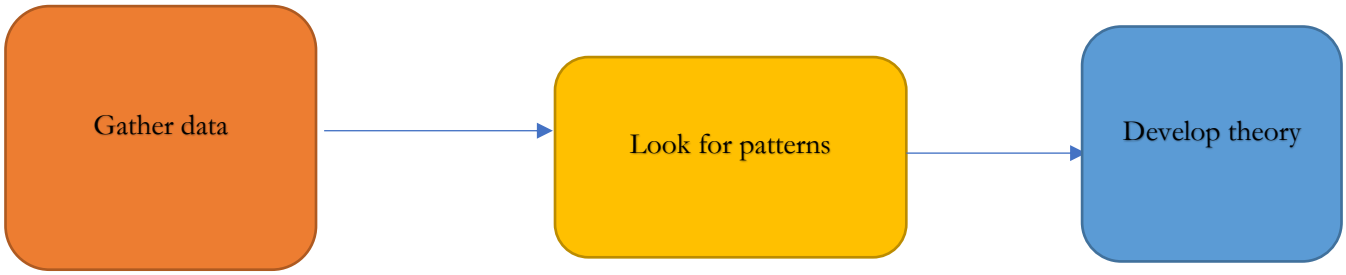


Figure 1.7 Inductive Research

One notable example of inductive research is the study conducted by Katherine Allen, Christine Kaestle, and Abbie Goldberg (2011) on how boys and young men learn about menstruation. The researchers collected written narratives from 23 young men, exploring their experiences with learning about menstruation, their initial thoughts, and their current perspectives on the subject. By analyzing the patterns and themes across these narratives, the researchers developed a comprehensive theory regarding boys' and young men's understanding of menstruation. The study found that sisters play a significant role in shaping boys' early comprehension of menstruation, that it creates a sense of separation between boys and girls, and that young men develop more mature attitudes towards menstruation as they enter adulthood and form romantic relationships. This research exemplifies the inductive approach by starting with specific observations and constructing a general theory based on the patterns identified in the collected data.

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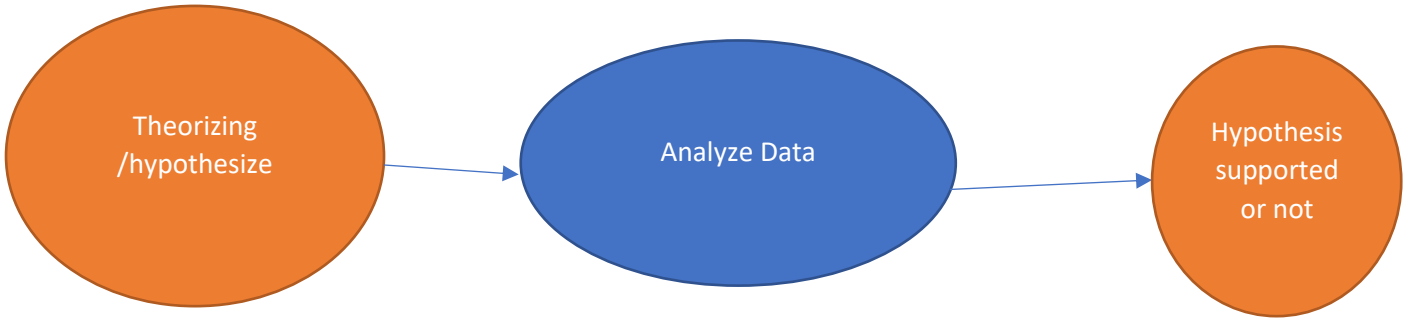
Another example of inductive research is the study conducted by Kristin Ferguson and colleagues (2011) on enhancing empowerment and leadership among homeless youth in agency and community settings. The researchers collected

empirical data through focus groups with 20 young people residing in a homeless shelter. By analyzing the data, they aimed to gain insights into effectively addressing the needs of homeless youth. Based on their analysis, Ferguson and her colleagues developed a set of recommendations for applied interventions targeting this population. Additionally, they formulated hypotheses that could guide future investigations on the topic. While the researchers did not test these hypotheses in their study, their work provided a foundation for further research and concluded with a set of testable hypotheses, which is typically where deductive investigations begin. This study exemplifies the inductive approach by starting with specific data and generating recommendations and hypotheses for future research.

Deductive Approaches and Some Examples

Researchers who engage in exploratory research are typically in the initial stages of investigating their topics. Such projects are undertaken when the researcher wishes to assess the viability of conducting a more comprehensive study and gain an understanding of the subject matter. Exploratory research is particularly useful when there is limited prior research conducted on the subject. In such cases, the researcher may choose to conduct exploratory work to determine the appropriate data collection methods, approach research participants effectively, or identify suitable research questions. Additionally, researchers driven by personal curiosity about a specific topic may also undertake exploratory research. Conducting exploratory research is often an essential first step in satisfying the researcher's curiosity, comprehending the phenomenon under study, and gaining insights into research participants, all of which

contribute to the design of a subsequent larger study. For specific examples, please refer to (1.8 Figure) .



General level of focus → analyses data → specific level of focus .

In a study by Ryan King and colleagues (2009) on US law enforcement responses to hate crimes, the researchers hypothesized that areas with a stronger history of racial violence would exhibit less vigorous law enforcement responses. They developed this hypothesis based on prior research and existing theories. To test their hypothesis, they analyzed data on states' lynching histories and hate crime responses. The results of their study provided support for their hypothesis, highlighting the influence of historical racial violence on contemporary law enforcement actions.

Another deductive study conducted by Melissa Milkie and Catharine Warner (2011) focused on the impact of different classroom environments on the mental health of first-grade children. Drawing from previous research and theories, the researchers hypothesized that negative classroom features, including a lack of basic supplies and inadequate heating, would be associated with emotional and behavioral problems among children. Through their empirical analysis, they found evidence supporting their hypothesis, underscoring the importance of considering children's mental health outcomes alongside academic performance in educational policymaking.

These deductive studies exemplify how researchers begin with existing theories and hypotheses derived from prior research, and then proceed to collect and analyse data to test their hypotheses. The findings from such studies contribute to our understanding of various social phenomena and can inform policy and practice in relevant domains.

EXERCISES

1. For a hilarious example of logic gone awry, check out the following clip from Monty Python and Holy Grail: Do the townspeople take an inductive or deductive approach to determine whether the woman in question is a witch? What are some of the different sources of knowledge (recall Chapter 1 "Introduction") they rely on?

2. Think about how you could approach a study of the relationship between gender and driving over the speed limit. How could you learn about this relationship using an inductive approach? What would a study of the same relationship look like if examined using a deductive approach? Try the same thing with any topic of your choice. How might you study the topic inductively? Deductively?

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II
ETHICS IN RESEARCH

Learning Objectives

• Define the term human participants, in terms of research.
• Explain how history has now defined a moral imperative for ethics in Research.
• List ethical principles that must underpin all research.
• Describe why ethics review boards came into existence and explain their role in the research process.
• Discuss the importance and implications of researcher integrity.

The National Council on Ethics in Human Research (NCEHR) is a Canadian national agency that was established in 1989 with the primary objective of promoting and enhancing the protection and well-being of human research participants.

The NCEHR plays a crucial role in ensuring that researchers in Canada adhere to ethical guidelines and standards when conducting studies involving human participants. Its overarching goal is to safeguard the rights, welfare, and dignity of individuals involved in research endeavours. To achieve its mission, the NCEHR has a range of key objectives:

1. Establishing Ethical Standards: The NCEHR develops comprehensive guidelines and ethical frameworks that serve as a reference for researchers, providing them with clear principles and values to guide their research involving human participants.
2. Reviewing Research Protocols: The NCEHR conducts thorough reviews of research protocols to assess their ethical implications. Through this process, the agency ensures that proposed studies meet the necessary ethical requirements and protect the rights and well-being of participants.
3. Education and Training: The NCEHR offers educational resources, training programs, and guidance to researchers, ethics review boards, and other stakeholders involved in research. These initiatives aim to enhance understanding and compliance with ethical principles in studies involving human participants.
4. Collaborating with Ethics Review Boards: The NCEHR collaborates closely with research ethics review boards across Canada to promote consistency and adherence to ethical standards. This collaborative effort

ensures that research studies undergo comprehensive ethical review and receive appropriate approval.
Through its activities and initiatives, the NCEHR contributes to the ethical conduct of research involving human participants in Canada. By safeguarding the rights and well-being of individuals who contribute to scientific knowledge through their participation in research studies, the agency plays a vital role in maintaining the integrity and trustworthiness of the research enterprise

2. Research on Human Participants: An Historical Look

It is crucial to reflect on the historical context of unethical research practices to understand the focus on ethical research today. Throughout history, there have been instances of disturbing human experiments conducted without adequate regulation or intervention. One significant event that led to a heightened awareness of ethical research was the Nuremberg Trials held in 1946. These trials involved war criminals, including doctors, who were charged with crimes against humanity for conducting medical experiments on concentration camp inmates. The trials resulted in the creation of the Nuremberg Code in 1949, which established principles to guide research involving human participants. In the field of psychology, Stanley Milgram's obedience experiments in the 1960s raised ethical concerns. Participants were deceived into thinking they were administering electric shocks to others, causing emotional distress. Another example is Laud Humphreys, a sociology graduate student who conducted research on anonymous sexual encounters in public restrooms (tearoom trade) without disclosing his identity as a researcher. He collected personal information from participants and faced controversy over the ethical implications of his actions. These and other landmark examples, such as the Stanford Prison Experiment and the case of Russell Ogden and Simon Fraser University, have contributed to the ongoing discussions and developments in research ethics. It is important to learn from these historical cases to ensure that research involving human participants is conducted ethically and respects the rights and well-being of individuals involved.

3. Institutional Research Review Boards (IRBs)

Institutions that receive federal support for research, such as universities, hospitals, and nonprofit research organizations, rely on Institutional Review Boards (IRBs) to safeguard the rights and well-being of research participants, including both humans and non-human animals. IRBs consist of members from diverse disciplines, such as sociology, economics, education, social work, and communications. They may also include representatives from relevant community organizations like prisons, hospitals, or treatment centers.

The membership diversity within IRBs is crucial to ensure a knowledgeable and experienced panel that can thoroughly consider the complex ethical issues that may arise in research involving human and non-human animal participants. Researchers planning studies involving human participants must submit their research proposals to IRBs for review and approval before initiating the research. Even student researchers need to have their proposed work reviewed and approved by the IRB, with some exceptions made for classroom projects that remain confined to the classroom and aren't shared outside.

Despite the vital role IRBs play in upholding ethical standards, they aren't always popular or appreciated among researchers. Some researchers argue that IRBs primarily focus on reviewing biomedical and experimental research, which isn't common in sociology. Sociological research, particularly qualitative research, often has an exploratory and open-ended nature, posing challenges for IRB review. IRB members typically expect detailed information in advance regarding the participants, observation locations and times,

participant recruitment approaches, specific interview questions, and the researcher's predicted findings. Providing this level of detail, especially for studies involving long-term participant observation in large and dynamic groups, can be frustrating or even unfeasible for the researcher.

It is important to note that IRBs do not aim to discourage researchers from studying controversial topics or utilizing sound data collection techniques. However, these concerns may unintentionally lead researchers to avoid certain topics or methods. Rather than eliminating IRBs, which

serve a necessary and important function in research ethics, the solution lies in promoting education and awareness among IRB members about the diverse range of research methods and topics covered by sociologists and other social scientists. This can foster a better understanding and appreciation for the specific needs and characteristics of social scientific research.

4. Guiding Ethical Principles

Apart from IRBs, various institutions have established ethical principles to guide research involving human participants. While the following ethical principles originate from the Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada (2005), they have been widely adopted by researchers across different disciplines worldwide. These principles encompass a shared set of ethical standards, values, and aspirations within the global research community

Ethical Principles for Research with Human Participants: 1. Respect for Human Dignity: This principle serves as the foundation of modern research ethics. It aims to safeguard the physical, psychological, and cultural integrity of individuals.

2. Respect for Free and Informed Consent: Individuals are considered to have the right to make independent and informed decisions. Researchers have an obligation to ensure that research participants have made voluntary choices to participate, with full awareness of the research's nature, and have given informed consent.

3. Respect for Vulnerable Individuals: Researchers are ethically bound to uphold strong obligations towards vulnerable individuals, such as those with diminished competence or decision-making capacity (e.g., children, institutionalized individuals). These obligations encompass human dignity, compassion, solidarity, fairness, and protection against abuse, exploitation, or discrimination. Special procedures must be developed to safeguard the rights of vulnerable individuals. 4. Respect for Privacy and Confidentiality: Privacy and confidentiality standards are fundamental to preserving human dignity. These standards protect personal information, including its access, control, and dissemination. Researchers must

prioritize the rights of participants to privacy, confidentiality, and anonymity.
5. Respect for Justice and Inclusiveness: Justice is closely linked to fairness and equity. It involves ensuring the fair distribution of research benefits and burdens. On one hand, no segment of the population should bear an unfair burden from research harms. On the other hand, no segment should be neglected or discriminated against in terms of benefiting from research outcomes.
6. Balancing Harms and Benefits: Modern research necessitates that the potential harms of research do not outweigh the anticipated benefits. 7. Minimizing Harm: Researchers have a responsibility to avoid, prevent, or minimize harm to others. Research participants should not be exposed to unnecessary risks, and their involvement should be essential for achieving scientifically and socially significant objectives that cannot be attained without their participation.
8. Maximizing Benefit: Researchers are obligated to maximize overall benefits for research participants, individuals, and society. In most research endeavours, this entails generating outcomes that benefit society and advance knowledge.

These ethical principles provide a framework for conducting research with human participants, emphasizing the importance of safeguarding their rights, well-being, and dignity, while ensuring fairness and maximizing societal benefits.

5. A Final Word about the Protection of Research Participants

While reliability focuses on consistency, validity concerns shared understanding. When you hear the word "alcoholic," what image comes to mind? Are you confident that the image you envision aligns with the image others have in mind? If not, then we may face a validity issue. To achieve validity, we must ensure that our measures accurately capture the meaning of our concepts. Let's revisit the first potential measure of alcoholism discussed in the section on reliability.
Initially, we considered measuring alcoholism by asking research participants the question: **"Have you ever had a problem with alcohol?"** However, we realized that this may not be the most reliable approach since individuals' responses could significantly vary depending on their current emotional state. Moreover, this measure of alcoholism

lacks validity. What exactly constitutes "a problem" with alcohol? For some, it could be a single regrettable or embarrassing moment resulting from excessive consumption. For others, the threshold for a "problem" might be different; perhaps an individual has had numerous embarrassing drunken incidents but still manages to fulfill daily responsibilities, and thus does not perceive themselves as having a problem. Due to the substantial variation in what each respondent considers problematic, our measure of alcoholism is unlikely to yield useful or meaningful results if our objective is to objectively understand the prevalence of alcoholism among our research participants.

Here's another example: Suppose our interest lies in understanding an individual's commitment to a healthy lifestyle. Many would agree that engaging in regular exercise is indicative of a healthy lifestyle, so we could measure it by counting the number of times a person visits their local gym each week. Initially, this might appear to be a reasonable measure. However, if the respondent's gym includes activities unrelated to fitness, such as tanning beds, flirting, or sauna sessions, these activities are not reliable indicators of healthy living. Therefore, recording the frequency of gym visits may not be the most valid approach to measure an individual's dedication to a healthy lifestyle. Using this measure would not provide a true indication of a person's commitment to healthy living, thus failing to measure our intended target. In the social sciences, causality is often not as straightforward as A causing B in classical experiments. Frequently, other variables may co-occur with A and/or B, causing both A and B. Therefore, researchers must ensure their studies have internal validity, meaning they genuinely test the phenomenon they aim to investigate. There are several threats to internal validity, such as history, maturation, testing, regression to the mean, selection biases, and instrumentation. Researchers can control for these threats through experimental design, including the use of control or comparison groups. Researchers also strive for external validity, which means they want their study to be applicable to other situations and contexts beyond the current project. They aim for their findings to reflect real-world environments where the phenomena occur and to demonstrate that their results are not due to chance. External validity does not necessarily depend on the representativeness of the sample but rather on the nature of the phenomenon under study and the research objectives.

At its core, validity relies on social agreement. One effective way to ensure the validity of your measures is to discuss them with others. To illustrate, think of validity as you would a portrait. Some portraits accurately depict the person they aim to represent, while others, like caricatures or stick drawings, are less precise. While a portrait may not capture every detail of a person's appearance, what matters is how closely it approximates the intended representation. The same principle applies to the validity of measures. No measure can be exact, but some measures are more accurate than others.

6.Summary

Research is serious business. Not only must the conduct of research be undertaken in a manner such that it abides by society's ethical standards, researchers must personally have a strong set of moral standards. Researchers must ensure that their participants (human and animal) are treated ethically, and that, in the case of human participants, their confidentiality is maintained. They must also apply ethical principles in the design of their studies, as well as the collection, analysis and presentation of the data. Overall, an ethic of research involving both human and animal participants should include two essential components:
1) the selection and achievement of morally acceptable ends, and;
2) morally acceptable means to the ends. The first component is directed at defining acceptable ends in terms of the benefits of the research for a given set of participants, for associate groups, and for the purposes of advancing knowledge. The second component is directed at ethically appropriate means of conducting research.

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CHAPTER III
DEVELOPING A RES EARCH QUESTION

Learning Objectives

• Differentiate between normative and empirical knowledge.
• Explain the differences between exploratory, descriptive, and explanatory research.
• Describe the characteristics of a researchable question.
• Describe a hypothesis.
• Identify the difference between qualitative, quantitative and mixed methods.
• Explain the concept of triangulation.

It is important to ensure that you choose a research topic that interests you, because this will make it much easier for you to develop an effective and researchable research question. In the first part of this chapter, we will consider aspects you must consider as you think about the research topic you would like to explore. We will also examine the characteristics and components of an effective research question. The chapter concludes by introducing you to the three main methodological approaches to conducting research: quantitative, qualitative and mixed methods.

3.1 Normative Versus Empirical Statements

When it comes to research questions, sociologists emphasize two important concepts: normative statements and empirical statements. Normative statements are evaluative and subjective, while empirical statements are informative and based on facts. Let's examine two statements and determine which one is normative and which one is empirical.

1. "Canada has one of the best science programs in the world."
2. "In 2015, Canada ranked 4th overall in science education performance of 15-year-old high school students in a study conducted by the Organization for Education Cooperation and Development (OECD, 2015)."

If you concluded that the first statement is normative and the second statement is empirical, you are correct. Normative statements express an opinion or judgment, while empirical statements rely on real-world observations and data. Although normative statements can underlie or influence empirical statements, sociologists primarily focus on answering empirical questions that can be addressed through real-world experiences.

3.2 Exploration, Description, Explanation

As you can see, there is much to think about and many decisions to be made as you begin to define your research question and your research project. Something else you will need to consider in the early stages is whether your research will be exploratory, descriptive, or explanatory. Each of these types of research has a different aim or purpose, consequently, how you design your research project will be determined in part by this decision. In the following paragraphs we will look at these three types of research.

Exploratory research Researchers conducting exploratory research are typically at the early stages of examining their topics. These sorts of projects are usually conducted when a researcher wants to test the feasibility of conducting a more extensive study; he or she wants to figure out the lay of the land with respect to the particular topic. Perhaps very little prior research has been conducted on this subject. If this is the case, a researcher may wish to do some exploratory work to learn what method to use in collecting data, how best to approach research participants, or even what sorts of questions are reasonable to ask. A researcher wanting to simply satisfy his or her own curiosity about a topic could also conduct exploratory research. Conducting exploratory research on a topic is often a necessary first step, both to satisfy researcher curiosity about the subject and to better understand the phenomenon and the research participants in order to design a larger, subsequent study.

Sometimes the goal of research is to describe or define a particular phenomenon. In this case, descriptive research would be an appropriate strategy. A descriptive may, for example, aim to describe a pattern. For example, researchers often collect information to describe something for the benefit of the general public. Market researchers rely on descriptive research to tell them what consumers think of their products. In fact, descriptive research has many useful applications, and you probably rely on findings from descriptive research without even being aware that that is what you are doing.

3.3 Developing a Researchable Research Question

After thinking about what topics interest you, identifying a topic that is both empirical and sociological, and deciding whether your research will be exploratory, descriptive, or explanatory, the next step is to form a research question about your topic. For many researchers, forming hypotheses comes after developing one's research question. However, for now, we will just think about research questions. So then, what makes a good research question? Let us first consider some practical aspects. A good research question is one that:

1. you are interested in;
2. you have resources (money, technology, assistance, etc.) to answer;
3. offers you access to the data you need (human, animal or numerical/ file data);
4. is operationalized appropriately; and
5. has a specific objective (anything from explaining something to describing something)? A good research question also has some specific characteristics:

1. It is generally written in the form of a question.
2. It is well-focused. 3. It cannot be answered with a simple yes or no. 4. It should have more than one plausible answer. 5. It considers relationships amongst multiple concepts. Generally speaking, your research question will guide whether your research project is best approached with quantitative, qualitative, or mixed methods, or other1 approaches.

3.4 hypotheses

The passage you provided offers a comprehensive overview of the process of hypothesis formulation and testing in research. It emphasizes that researchers may conduct research with or without specific predictions, and the purpose can be either to explore a topic and generate hypotheses or to test specific hypotheses. Hypotheses are statements that describe a researcher's expectations about the anticipated findings, often focusing on the expected relationship between variables. To develop a hypothesis, researchers need to understand the distinctions between independent and dependent variables, as well as units of observation and units of analysis. Hypotheses are typically derived from theories and explain how an independent variable is expected to influence one or more dependent variables. Researchers who take a deductive
approach formulate hypotheses based on the theories that guide their study.
If the theory accurately represents the phenomenon under investigation, the hypotheses should align with the observed real-world outcomes. Researchers may hypothesize that a relationship between variables will have a specific direction, implying that changes in one variable will cause corresponding changes in another. For example, in the case of studying the relationship between age and support for marijuana legalization, the hypothesis "age is negatively related to support for marijuana legalization" suggests that as people age, their likelihood of supporting marijuana legalization decreases. This hypothesis implies an inverse relationship between age and support for legalization. It's important to note that researchers rarely claim to have proven their hypotheses. Instead, they use the term "supported" or "not supported" to describe the alignment between their findings and the hypotheses. This cautious approach acknowledges the possibility of new evidence or alternative interpretations that may emerge. Researchers may also discuss null hypotheses, which predict no relationship between the variables being studied. Rejecting the null hypothesis indicates that there is some form of relationship between the variables. In quantitative research, the focus is often on empirically testing hypotheses derived from theory. This involves collecting numerical data and analyzing it statistically to examine the relationships between variables. On the other hand, qualitative research takes a different approach. Qualitative researchers may start with

general expectations or vague ideas but aim to develop or construct theories rather than test specific hypotheses. Qualitative research can contribute to theory development, and quantitative researchers can subsequently test hypotheses drawn from those theories. Both quantitative and qualitative research approaches are valuable for understanding the social world and play significant roles in hypothesis development and testing.

3.5 Quantitative, Qualitative, & Mixed Methods Research Approaches In the realm of research, qualitative and quantitative approaches stand out as the most frequently employed methods by researchers. Although these approaches are often portrayed as mutually exclusive, the reality is far more intricate. While some researchers may adhere strictly to one approach or the other, most acknowledge the benefits and utility of integrating both methods through mixed methods research. By combining qualitative and quantitative elements, researchers can attain a more comprehensive understanding of their research questions. In the upcoming sections, we will delve into quantitative, qualitative, and mixed methodological approaches to conducting research.

Quantitative Research Approaches In the realm of research, qualitative and quantitative approaches stand out as the most frequently employed methods by researchers. Although these approaches are often portrayed as mutually exclusive, the reality is far more intricate. While some researchers may adhere strictly to one approach or the other, most acknowledge the benefits and utility of integrating both methods through mixed methods research. By combining qualitative and quantitative elements, researchers can attain a more comprehensive understanding of their research questions. In the upcoming sections, we will delve into quantitative, qualitative, and mixed methodological approaches to conducting research. Table 2.3 serves to synthesize and highlight the disparities between quantitative and qualitative research approaches. Qualitative Research Approaches On the flip side of research approaches lies the qualitative approach, which is commonly perceived as the antithesis of the quantitative approach. Qualitative researchers are often characterized as phenomenologists or researchers focused on the human experience. In any research endeavor, it is essential to consider the fundamental aspects of human existence, such as thoughts, emotions, and

subjective experiences, as perceived by the participants. Instead of adopting a realist perspective that posits a singular reality or truth, qualitative researchers tend to embrace a constructionist perspective that views knowledge as actively constructed rather than objectively discovered. This perspective acknowledges the existence of multiple realities, influenced by individual perspectives. In qualitative research, it is crucial for the researcher to delve into the reasons behind, the mechanisms of, and the target audience affected by a particular phenomenon. These aspects are often unobservable, as they encompass the internal thoughts, emotions, and experiences of individuals. Moreover, these aspects are contingent upon personal interpretations rather than external researcher interpretations. Consequently, the notion of a neutral or objective outsider, as seen in the quantitative approach, is challenged. Instead, the qualitative approach tends to prioritize the understanding of processes. Genuine comprehension, rather than mere predictive information, is derived from grasping the actions and interpreting the meaning behind those actions.

3.6Mixed-Methods Research Approaches

Increasingly, researchers combine both approaches, and take a mixed methods approach. Mixed methods research represents more of an approach to examining a research problem than a methodology. Mixed methods are characterized by a focus on research problems that require: an examination of real-life contextual understandings, multi-level perspectives, and cultural influences; an intentional application of rigorous quantitative research assessing magnitude and frequency of constructs, and rigorous qualitative research exploring the meaning and understanding of the constructs; and an objective of drawing on the strengths of quantitative and qualitative data gathering techniques to formulate a holistic interpretive framework for generating possible solutions or new understandings of the problem. (from Adjei, n.d.) Researchers who favour mixed methods believe that the approach can be the most effective at getting to "the truth" or at least "a truth." However, some argue against mixing these approaches. They contend that the fundamentally different beliefs about knowledge and its creation or discovery with the various approaches hampers one's ability to get at the truth. However, some of the most highly regarded social scientific

investigations combine approaches in an effort to gain the most complete understanding of their topic possible. Using a combination of multiple and different research strategies is called triangulation.

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CHAPTER IV
MEASUREMENT AND UNITS OF ANALYSIS

LEARNING OBJECTIVES

•Differentiate between validity and reliability. • Explain the difference between internal and external validity. • Examine the difference between a variable and an attribute.

• Define and provide examples for each of the four level of measurement: nominal, ordinal, interval, ratio.

• Explain the difference between the independent and dependent variable.

• Describe an extraneous variable and explain how it can threaten research findings.

• Discuss what is meant by a rival plausible explanation.

• Explain what a hypothesis is and in what situations creating a hypothesis is a suitable approach.

How can we ensure the quality of our measures? Without some form of assurance regarding the quality of our measures, we cannot be confident that our findings hold any significance, or at the very least, that they convey the intended meaning. In the realm of social science, when researchers measure concepts, their objective is to attain reliability and validity in their measures. These two dimensions of measurement quality are the primary focus of the initial section in this chapter. We will first delve into reliability and subsequently explore validity. For the purpose of this section, let's envision that our interest lies in measuring the concepts of alcoholism and alcohol intake. What are some potential challenges that may arise when attempting to measure these concepts, and how can we address and overcome them?

4.1 Reliability

To begin, let's imagine a scenario where a researcher aims to assess alcoholism by posing a simple question: "Have you ever had a problem with alcohol?" At first glance, it might seem reasonable to assume that individuals who identify as alcoholics would answer affirmatively. So, this appears to be an effective way to identify the target group, right? Well, not necessarily. Consider how you or people you know might respond to this question. Would your answers differ after a night of heavy drinking compared to the day before? Could a teetotaler's current headache from a single glass of wine influence their response the following morning? How would the same person answer before consuming any alcohol? In each of these instances, if the responses from the same individual vary under different circumstances, it suggests a potential reliability issue with our measurement of alcoholism. Reliability in measurement pertains to consistency. A reliable measure ensures that if the same measure is consistently applied to the same person, the result will be the same each time. One common challenge regarding reliability in social scientific measures is memory. When we ask research participants to recall aspects of their past behaviors, it is crucial to simplify and streamline the recollection process for them. Continuing with the topic of alcohol consumption, if we inquire about respondents' daily intake of wine, beer, and liquor over the past three months, how likely are we to receive accurate responses? Unless individuals maintain a journal documenting their consumption, inaccuracies are bound to occur in their answers. Conversely, if we ask individuals to report the number of drinks they have consumed within the past week, we might obtain more accurate responses. Reliability can still be a concern even when we rely on individuals to report their behaviors accurately. Let's consider another example. Suppose a field researcher wishes to observe how alcohol consumption influences interactions in public settings. She decides to conduct observations at a local pub, noting the number of drinks patrons consume and how their behavior changes with varying intake. However, what if the researcher needs to use the restroom and misses three shots of tequila consumed by the person next to her during that brief absence?

The reliability of her measure of alcohol intake, counting the number of drinks she observes patrons consuming, hinges on her ability to witness every instance of drink consumption. If she is unlikely to observe each occurrence, then her method for measuring this concept may lack reliability.

4.2 Validity

While reliability focuses on consistency, validity concerns shared understanding. When you hear the word "alcoholic," what image comes to mind? Are you confident that the image you envision aligns with the image others have in mind? If not, then we may face a validity issue. To achieve validity, we must ensure that our measures accurately capture the meaning of our concepts. Let's revisit the first potential measure of alcoholism discussed in the section on reliability. Initially, we considered measuring alcoholism by asking research participants the question: "Have you ever had a problem with alcohol?" However, we realized that this may not be the most reliable approach since individuals' responses could significantly vary depending on their current emotional state. Moreover, this measure of alcoholism lacks validity. What exactly constitutes "a problem" with alcohol? For some, it could be a single regrettable or embarrassing moment resulting from excessive consumption. For others, the threshold for a "problem" might be different; perhaps an individual has had numerous embarrassing drunken incidents but still manages to fulfill daily responsibilities, and thus does not perceive themselves as having a problem. Due to the substantial variation in what each respondent considers problematic, our measure of alcoholism is unlikely to yield useful or meaningful results if our objective is to objectively understand the prevalence of alcoholism among our research participants. Here's another example: Suppose our interest lies in understanding an individual's commitment to a healthy lifestyle. Many would agree that engaging in regular exercise is indicative of a healthy lifestyle, so we could measure it by counting the number of times a person visits their local gym each week. Initially, this might appear to be a reasonable measure. However, if the respondent's gym includes activities unrelated to fitness, such as tanning beds, flirting, or sauna sessions, these activities are not reliable indicators of healthy living. Therefore, recording the frequency of gym visits may not be the most valid approach to measure an individual's

dedication to a healthy lifestyle. Using this measure would not provide a true indication of a person's commitment to healthy living, thus failing to measure our intended target. In the social sciences, causality is often not as straightforward as A causing B in classical experiments. Frequently, other variables may co-occur with A and/or B, causing both A and B. Therefore, researchers must ensure their studies have internal validity, meaning they genuinely test the phenomenon they aim to investigate. There are several threats to internal validity, such as history, maturation, testing, regression to the mean, selection biases, and instrumentation. Researchers can control for these threats through experimental design, including the use of control or comparison groups. We will revisit the topic of internal validity in Chapter 6. Researchers also strive for external validity, which means they want their study to be applicable to other situations and contexts beyond the current project. They aim for their findings to reflect real-world environments where the phenomena occur and to demonstrate that their results are not due to chance. External validity does not necessarily depend on the representativeness of the sample but rather on the nature of the phenomenon under study and the research objectives. At its core, validity relies on social agreement. One effective way to ensure the validity of your measures is to discuss them with others. To illustrate, think of validity as you would a portrait. Some portraits accurately depict the person they aim to represent, while others, like caricatures or stick drawings, are less precise. While a portrait may not capture every detail of a person's appearance, what matters is how closely it approximates the intended representation. The same principle applies to the validity of measures. No measure can be exact, but some measures are more accurate than others.

4.3 Complexities in Measurement

You should now have an idea about how to assess the quality of your measures. But measurement is a complex process, and some concepts are more complex than others. Measuring a person’s political party affiliation, for example, is less complex than measuring her or his sense of alienation. In this section we will consider some of these complexities in measurement. First, we will examine the various levels of measurement that exist, and then we will consider a couple of strategies for capturing the complexities of the concepts we wish to measure. Levels of

measurement When social scientists measure concepts, they sometimes use the language of variables and attributes. A variable refers to a grouping of several characteristics. Attributes are those characteristics. A variable's attributes determine its level of measurement. There are four possible levels of measurement; they are nominal, ordinal, interval, and ratio.
At the nominal level of measurement, variable attributes meet the criteria of exhaustiveness and mutual exclusivity. This is the most basic level of measurement. Relationship status, gender, race, political party affiliation, and religious affiliation are all examples of nominal-level variables. For example, to measure relationship status, we might ask respondents to tell us if they are currently partnered or single. These two attributes pretty much exhaust the possibilities for relationship status (i.e., everyone is always one or the other of these), and it is not possible for a person to simultaneous occupy more than one of these statuses (e.g., if you are single, you cannot also be partnered). Therefore, this measure of relationship status meets the criteria that nominal-level attributes must be exhaustive and mutually exclusive. One unique feature of nominal-level measures is that they cannot be mathematically quantified. We cannot say, for example, that being partnered has more or less quantifiable value than being single (note we are not talking here about the economic impact of one's relationship status— we are talking only about relationship status on its own, not in relation to other variables). Ordinal measurement Unlike nominal-level measures, attributes at the ordinal level can be rank ordered, though we cannot calculate a mathematical distance between those attributes. We can simply say that one attribute of an ordinal-level variable is more or less than another attribute. Ordinal-level attributes are also exhaustive and mutually exclusive, as with nominal-level variables. Examples of ordinal-level measures include social class, degree of support for policy initiatives, television program rankings, and prejudice. Thus, while we can say that one person's support for some public policy may be more or less than his neighbour's level of support, we cannot say exactly how much more or less. Interval measurement At the interval level, measures meet all the criteria of the two preceding levels, plus the distance between attributes is known to be equal. IQ scores are interval level, as are temperatures. Interval-level variables are not particularly common in social science research, but their defining characteristic is that we can say how much more or less one attribute differs from another. We cannot, however, say with certainty what the ratio of one attribute is in

comparison to another. For example, it would not make sense to say that 50 degrees is half as hot as 100 degrees. Ratio measurement Finally, at the ratio level, attributes are mutually exclusive and exhaustive, attributes can be rank ordered, the distance between attributes is equal, and attributes have a true zero point. With these variables, we can say what the ratio of one attribute is in comparison to another. Examples of ratio-level variables include age and years of education. We know, for example, that a person who is 12 years old is twice as old as someone who is six years old.

4.4 Units of Analysis and Units of Observation

Another point to consider when designing a research project, and which might differ slightly in qualitative and quantitative studies, has to do with units of analysis and units of observation. These two items concern what you, the researcher, actually observe in the course of your data collection and what you hope to be able to say about those observations. Table 3.1 provides a summary of the differences between units of analysis and observation. Unit of Analysi A unit of analysis is the entity that you wish to be able to say something about at the end of your study, probably what you would consider to be the main focus of your study. Unit of Observation A unit of observation is the item (or items) that you actually observe, measure, or collect in the course of trying to learn something about your unit of analysis. In a given study, the unit of observation might be the same as the unit of analysis, but that is not always the case. Further, units of analysis are not required to be the same as units of observation. What is required, however, is for researchers to be clear about how they define their units of analysis and observation, both to themselves and to their audiences. More specifically, your unit of analysis will be determined by your research question. Your unit of observation, on the other hand, is determined largely by the method of data collection that you use to answer that research question. To demonstrate these differences, let us look at the topic of students' addictions to their cell phones. We will consider first how different kinds of research questions about this topic will yield different units of analysis. Then we will think about how those questions might be answered and with what kinds of data. This leads us to a variety of units of observation.

If I were to ask, "Which students are most likely to be addicted to their cell phones?" our unit of analysis would be the individual. We might mail

a survey to students on a university or college campus, with the aim to classify individuals according to their membership in certain social classes and, in turn, to see how membership in those classes correlates with addiction to cell phones. For example, we might find that students studying media, males, and students with high socioeconomic status are all more likely than other students to become addicted to their cell phones. Alternatively, we could ask, "How do students' cell phone addictions differ and how are they similar? In this case, we could conduct observations of addicted students and record when, where, why, and how they use their cell phones. In both cases, one using a survey and the other using observations, data are collected from individual students. Thus, the unit of observation in both examples is the individual. But the units of analysis differ in the two studies. In the first one, our aim is to describe the characteristics of individuals. We may then make generalizations about the populations to which these individuals belong, but our unit of analysis is still the individual. In the second study, we will observe individuals in order to describe some social phenomenon, in this case, types of cell phone addictions. Consequently, our unit of analysis would be the social phenomenon. Another common unit of analysis in sociological inquiry is groups. Groups, of course, vary in size, and almost no group is too small or too large to be of interest to sociologists. Families, friendship groups, and street gangs make up some of the more common micro-level groups examined by sociologists. Employees in an organization, professionals in a particular domain (e.g., chefs, lawyers, sociologists), and members of clubs (e.g., Girl Guides, Rotary, Red Hat Society) are all meso-level groups that sociologists might study. Finally, at the macro level, sociologists sometimes examine citizens of entire nations or residents of different continents or other regions. A study of student addictions to their cell phones at the group level might consider whether certain types of social clubs have more or fewer cell phone-addicted members than other sorts of clubs. Perhaps we would find that clubs that emphasize physical fitness, such as the rugby club and the scuba club, have fewer cell phone-addicted members than clubs that emphasize cerebral activity, such as the chess club and the sociology club. Our unit of analysis in this example is groups. If we had instead asked whether people who join cerebral clubs are more likely to be cell phone-addicted than those who join social clubs, then our unit of analysis would have been individuals. In either case, however, our unit of observation would be individuals. Organizations are yet another

potential unit of analysis that social scientists might wish to say something about. Organizations include entities like corporations, colleges and universities, and even night clubs. At the organization level, a study of students' cell phone addictions might ask, "How do different colleges address the problem of cell phone addiction?" In this case, our interest lies not in the experience of individual students but instead in the campus-to-campus differences in confronting cell phone addictions. A researcher conducting a study of this type might examine schools' written policies and procedures, so his unit of observation would be documents. However, because he ultimately wishes to describe differences across campuses, the college would be his unit of analysis. Social phenomena are also a potential unit of analysis. Many sociologists study a variety of social interactions and social problems that fall under this category. Examples include social problems like murder or rape; interactions such as counselling sessions, Facebook chatting, or wrestling; and other social phenomena such as voting and even cell phone use or misuse. A researcher interested in students' cell phone addictions could ask, "What are the various types of cell phone addictions that exist among students?" Perhaps the researcher will discover that some addictions are primarily centred on social media such as chat rooms, Facebook, or texting, while other addictions centre on single-player games that discourage interaction with others. The resultant typology of cell phone addictions would tell us something about the social phenomenon (unit of analysis) being studied. As in several of the preceding examples, however, the unit of observation would likely be individual people. Finally, a number of social scientists examine policies and principles, the last type of unit of analysis we will consider here. Studies that analyze policies and principles typically rely on documents as the unit of observation. Perhaps a researcher has been hired by a college to help it write an effective policy against cell phone use in the classroom. In this case, the researcher might gather all previously written policies from campuses all over the country, and compare policies at campuses where the use of cell phones in classroom is low to policies at campuses where the use of cell phones in the classroom is high.

In sum, there are many potential units of analysis that a sociologist might examine, but some of the most common units include the following: 1. Individuals

2. Groups 3. Organizations 4. Social phenomena. 5. Policies and principles.

4.5 Independent and Dependent Variables

When one variable causes another variable, we have what researchers call independent and dependent variables. In the example where gender was found to be causally linked to cell phone addiction, gender would be the independent variable (IV) and cell phone addiction would be the dependent variable (DV). An independent variable is one that causes another. A dependent variable is one that is caused by the other. Dependent variables depend on independent variables. If you are struggling to figure out which is the dependent and which is the independent variable, there is a little trick, as follows: Ask yourself the following question: Is X dependent upon Y. Now substitute words for X and Y. For example, is the level of success in an online class dependent upon time spent online? Success in an online class is the dependent variable, because it is dependent upon something. In this case, we are asking if the level of success in an online class is dependent upon the time spent online. Time spent online is the independent variable.

4.6 Rival Plausible Explanations

Similar to the threats posed by extraneous variables, a rival plausible explanation (RPE) is an alternative factor that may account for the results you observed in your research, other than what you might have been expecting. Threats to internal validity are considered RPEs. While it is true that most RPEs can be eliminated through careful research design (Palys & Atchison, 2014), it is important to acknowledge that some cannot. For example, imagine that you plan a research project to study a downtown Vancouver community's level of satisfaction with a safe injection centre that has been operating for a year in the community. You carefully design and plan your research project to eliminate threats to internal validity. Your research includes a mail-out survey to every community household registered on the Province of British Columbia's most recent voters' list. You also mail the survey to all community businesses. Shortly after your survey is mailed out there is a serious violent incident at the safe injection centre. A client has attacked and seriously injured a staff member at the clinic, but he was able to disappear from the clinic without being

apprehended. This individual is still on the loose. How do you think this incident will affect the members of the community and the local businesses? How might this incident affect how your survey participants fill out the survey, as it relates to their feelings related to the centre? How might their survey answers differ, had the survey taken place before this incident, when there had been no such incidents? It is quite likely that this event will impact or "colour" the responses of your participants. In other words, there is now a strong likelihood that you have an RPE as to why the research participants have reacted negatively to the safe injection center. RPEs are serious, and while it is true that careful research design can eliminate threats to internal validity, the incident as outlined in the previous paragraph demonstrates how an RPE can sink a research project. As a researcher you spent a lot of time designing and planning your research, but essentially the findings are null, in this case, because you are not getting the true feelings of the community. Their feelings will have been negatively influenced by this recent incident. The researcher must decide how significant and how likely it is that the RPE influenced the results, in order to decide whether or not to scrap the research project. While the preceding is an example of a blatant RPE, some are less obvious. Researchers must always consider the likelihood that an RPE explains the results of their findings when analyzing data. Less blatant RPEs (i.e. weather, postal strikes, a new government policy, recent media attention to an incident related to your research) must be discussed in the limitations section of the research finding.

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CHAPTER V
THE LITERATURE REVIEW

Learning Objectives

Describe a literature review and explain its purpose.
- Describe the steps in undertaking a literature review.
- Write a literature review.
- Identify acceptable sources to include in your literature review.
- Apply the five 'C's of writing a literature review.
- Compare a literature review, an essay and an annotated bibliography.
- Explain the importance of APA referencing and list some of the sources for getting assistance with APA referencing. In this chapter, we will focus on writing a literature review. As part of this focus we will concentrate on four key aspects, as follows:

1. The purpose behind a literature review and where it fits in the research process;
2. The difference between a literature review, an essay, and an annotated bibliography.
3. The special aspects that distinguish a literature review from other styles of academic writing.
4. The way to conduct a literature review and is the importance of reviewing previous research studies. If you have never written a literature review, and even if you have, this chapter will provide valuable information for you.

Understanding how to write a literature review is important because it is quite likely that you will have to do another one at some point in your academic and/or professional career.

5.1 What is involved in writing a literature review

Research – to discover what has been written about the topic; Critical Appraisal – to evaluate the literature, determine the relationship between the sources and ascertain what has been done already and what still needs to be done; and Writing – to explain what you have found. Generally

speaking, it is helpful to think of the literature review as a funnel. One starts with a broad examination of the research related to the issue, working down to look at more specific aspects of the issue, which leads to the gap or the specific issue that your research will address. How to undertake a literature review The first step in undertaking a literature review is to conduct a library search of academic research that has been done on your topic. This can be done electronically, or if you are close to a library, you can go in and use their computers to find electronic and print holdings. You can also use Google Scholar for your search. In some cases, research conducted outside academia can serve as an important research source for your literature review. Indeed, such research can have important practical implications, as opposed to academic research which usually (although not always) tends toward theoretical applications. However, it is important to understand who funded the research you review, in addition to the perspective and the purpose of the research. This is becoming an issue in Canada as universities and colleges increasingly turn to industry for research funding grants https://www.cbc.ca/news/canada/ edmonton/transalta-coal-report-1.4752314. As part of this first step there are a few more some things to be thinking about as you review the literature: Who are the various researchers who have studied this topic? Who are the most prolific researchers/writers on this topic? Has a specific researcher or team of researchers been identified as pioneers or leaders in this field of study?

How have the various researchers defined key terms that are relevant to your topic? Have the definitions of any of the key terms evolved over time? What are the different theories that have been examined and applied to this topic? How, if at all, have the various theories applied to this topic evolved over time? What methodologies have been used to study this topic? Have the methodologies evolved over time? In addition to thinking about these questions, you should be taking notes during this process. It canbe helpful to keep these notes in an Excel file, e.g., your notes should include the following information: If the article is empirical, write down the results of the research study in one or two sentences of your own words, e.g., “people who are between ages 18 – 35 are more likely to own a smart phone than those in an age range above or below.” It is also a good idea to take note of the methods, research design, number of

participants, and details of the sample used in the study. Sometimes, you may even want to write down the names of the statistical procedures used to analyze the data or even some of the statistics, depending on your assignment. If the article is a review of previous research, look for the main points. It may be helpful to read or skim the whole article, look away, and ask yourself what you felt was the main idea. Write down any limitations or gaps you notice, anything that seems to contradict something you read elsewhere, or just anything that you think is important or interesting (Adjei, n.d.). When reading through your sources, remember that you are looking for the "big picture," not a collection of random, separate articles (an annotated bibliography). You are also not trying to prove a point (an essay). You are looking for common themes and patterns in the research as a whole. You are also looking to see how the various pieces of research are linked, if at all. As part of this process, you also want to identify research gaps or areas that require further research related your topic (Adjei, n.d.). In this regard, you cannot be expected to be an expert on your topic. A suggestion for finding gaps is to read the conclusion section of the academic journal articles and conference proceedings your search has uncovered. Researchers often identify gaps in the research in their conclusion. They may even suggest areas for future research. However, remember, if a researcher suggested a gap 10 years ago, it is likely that the gap has now been addressed. To find a gap, look at the most recent research your literature review has uncovered (within 2-3 years of the current date). At this point in your search of the literature, you may realize that your research question needs to change or adapt. This is a fairly common occurrence, since when you first develop a research question, you cannot be sure what the status of the research area is until you undertake your review of the literature related to this topic. Finally, it is worth mentioning that it is very likely you will not include all of the resources you have read in your literature review. If you are asked to include 20 resources in your literature review, e.g., expect to read approximately 30.

5.2 Acceptable sources for literature reviews

Following are a few acceptable sources for literature reviews, listed in order from what will be considered most acceptable to less acceptable sources for your literature review assignments:
1. Peer reviewed journal articles.
2. Edited academic books.
3. Articles in professional journals.
4. Statistical data from government websites.
5. Website material from professional associations (use sparingly and carefully). The following sections will explain and provide examples of these various sources.

Peer reviewed journal articles (papers)

A peer reviewed journal article is a paper that has been submitted to a scholarly journal, accepted, and published. Peer review journal papers go through a rigorous, blind review process of peer review. What this means is that two to three experts in the area of research featured in the paper have reviewed and accepted the paper for publication. The names of the author(s) who are seeking to publish the research have been removed (blind review), so as to minimize any bias towards the authors of the research (albeit, sometimes a savvy reviewer can discern who has done the research based upon previous publications, etc.). This blind review process can be long (often 12 to 18 months) and may involve many backs and forth edits on the behalf of the researchers, as they work to address the edits and concerns of the peers who reviewed their paper. Often, reviewers will reject the paper for a variety of reasons, such as unclear or questionable methods, lack of contribution to the field, etc. Because peer reviewed journal articles have gone through a rigorous process of review, they are considered to be the premier source for research. Peer reviewed journal articles should serve as the foundation for your literature review. The following link will provide more information on peer reviewed journal articles. Make sure you watch the little video on the upper left-hand side of your screen, in addition to reading the material at the followingwebsite:
http://guides.lib.jjay.cuny.edu/c.php?g=288333&p=1922599

Edited academic books

An edited academic book is a collection of scholarly scientific papers written by different authors. The works are original papers, not published elsewhere ("Edited volume," 2018). The papers within the text also go through a process of review; however, the review is often not a blind review because the authors have been invited to contribute to the book. Consequently, edited academic books are fine to use for your literature review, but you also want to ensure that your literature review contains mostly peer reviewed journal papers.

Articles in professional journals

Articles from professional journals should be used with caution for your literature review. This is because articles in trade journals are not usually peer reviewed, even though they may appear to be. A good way to find out is to read the "About Us" section of the professional journal, which should state whether or not the papers are peer reviewed. You can also find out by Googling the name of the journal and adding "peer reviewed" to the search.

Website material from professional associations

Material from other websites can also serve as a source for statistics that you may need for your literature review. Since you want to justify the value of the research that interests you, you might make use of a professional association's website to learn how many members they have, for example. You might want to demonstrate, as part of the introduction to your literature review, why more research on the topic of PTSD in police officers is important. You could use peer reviewed journal articles to determine the prevalence of PTSD in police officers in Canada in the last ten years, and then use the Ontario Police Officers´ Association website to determine the approximate number of police officers employed in the Province of Ontario over the last ten years. This might help you estimate how many police officers could be suffering with PTSD in Ontario. That number could potentially help to justify a research grant down the road.

But again, this type of website- based material should be used with caution and sparingly.

5.3 The Five 'C's of Writing a Literature Review

To help you frame and write your literature review, think about these five c's (Callahan, 2014):

1. Cite the material you have referred to and used to help you define the research problem that you will study.
2. Compare the various arguments, theories, methods, and findings expressed in the literature.For example, describe where the various researchers agree and where they disagree. Describe the similarities and dissimilarities in approaches to studying related research problems.
3. Contrast the various arguments, themes, methods, approaches, and controversies apparent and/or described in the literature. For example, describe what major areas are contested, controversial and/or still in debate.
4. Critique the literature. Describe which arguments you find more persuasive and explain why. Explain which approaches, findings, and methods seem most reliable, valid, appropriate, and/or most popular and why. Pay attention to the verbs you use to describe what previous researchers have stated (e.g., asserts, demonstrates, argues, clarifies, etc.).
5. Connect the various research studies you reviewed. Describe how your work utilizes, draws upon, departs from, synthesizes, adds to or extends previous research studies.

5.4 The Difference between a Literature Review and an Essay

So, now that you know what a literature review is and how to write it, it is important to understand how a literature review is different from an essay. First of all, it is necessary to point out that many students struggle with understanding the difference between a literature review and an essay. This is particularly so because a student can use the exact same resources to create a literature review or an essay; however, what is different about the two is where the emphasis in the writing is placed (Thomas 2012). A literature review focuses on everything that has been written about a particular topic, theory, or body of research. It is focused on the research and the researchers who have undertaken research on

your topic. In contrast, an essay focuses on proving a point. It does not need to provide an extensive coverage of all of the material on the topic. In fact, the writer chooses only those sources that prove the point. Most professors will expect to see you discuss a few different perspectives from the materials that run contrary to the point you are trying to make. For example, suppose you want to write an essay about the negative effects of shiftwork on nurses. You would gather material to show that shiftwork negatively affects nurses, and the various ways it affects nurses. Now in this case, you might find the odd research paper that states shiftwork has no effect – although this seems unlikely because it has been extensively documented to have a negative effect. However, in an essay you are focused on providing information on your topic and proving your point.

5.5 The Difference Between a Literature Review and an Annotated Bibliography

An annotated bibliography is a third type of academic writing that can confuse students who are attempting to write a literature review. An annotated bibliography provides all of the reference details of a bibliography, but it goes one step further and provides a short (approximately 150 words) description of the reference. An annotated bibliography is not to be confused with a bibliography, which is a list of journal articles, books, and other resources that someone has utilized in writing. The bibliography provides a list of all resources that someone used to write a research paper and, unlike a reference list, includes references that may not appear in the body of the paper. No doubt you have had to create many bibliographies in your academic studies. Here is a link to a website where you can learn more about annotated bibliographies and also to see a sample of an annotated bibliography: Annotated Bibliographie.

5.6 APA Referencing (from JIBC Online Library)

As part of creating a social science focused literature review, you will be required to provide a reference list of all of the sources that appear in your paper. The American Psychological Association (APA) has developed a style of referencing that is widely accepted in the social sciences. Specifically, APA referencing is a set of rules for writing and referencing (citing) your sources. The purpose of referencing your sources is to give credit where credit is due (i.e., someone else´s work) and to ensure that you avoid being accused of plagiarism (i.e., putting forth someone else´s work as your own). The current version of the APA manual in use is the 6th edition. You can get everything you need regarding APA referencing at the following link: American Psychological Association Reference.

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CHAPTER VI
DATA COLLECTION STRATEGIES

Learning Objectives

• Differentiate between the various data collection strategies for experimental, non-experimental and experimental research.
• Differentiate the experimental and the control group.
• Define random assignation and explain its importance in an experiment.
• Explain how internal validity can be affected by research design.

Researchers have a variety of data collection strategies to choose from. Selecting the appropriate data collection strategy is a crucial decision for the researcher. If an unsuitable strategy is chosen, it is probable that the researcher will be unable to address the research question(s) effectively. In the upcoming sections, we will explore three types of data collection strategies: experiments, quasi-experiments, and non-experimental approaches.

6.1 Experiments

An experiment is a data collection method designed to test hypotheses in controlled conditions, often within a laboratory setting, with the aim of minimizing threats to internal validity. While experiments are more commonly used in psychology than sociology, understanding their principles and procedures is valuable for all social scientists, whether they plan to employ this methodology or simply wish to comprehend findings based on experimental designs. Experiments employ different designs, but in a classic experiment, the impact of a stimulus is examined by comparing two groups: an experimental group exposed to the stimulus and a control group that does not receive the stimulus. The control group, also known as the comparison group, is treated identically to the experimental group in all aspects, except it does not receive the independent variable. The purpose of the control group is to account for alternative explanations. Most experiments occur in controlled environments such as laboratories. In an experiment, the researcher tests the effects of an independent variable on a dependent variable. Since the

focus is on the effects of the independent variable, the researcher measures participants on the dependent variable before (pre-test) and after (post-test) administering the independent variable or stimulus. Random assignment, where one group is equivalent to the other, is often employed in these experiments and is further explored in the subsequent section on "Random Assignment." It is important to note that social science research typically takes place in natural settings, leading researchers to utilize quasi-experimental designs rather than experimental designs. Similar to experiments, quasi-experiments involve manipulating the independent variable. A more detailed discussion of quasi-experimental research is presented in section 6.3 on "Quasi-Experimental Research." Students in research methods classes often use the term "experiment" to describe all kinds of empirical research projects, but in social scientific research the term has a unique meaning and should not be used to describe all research methodologies. In general, designs considered to be "true experiments" contain three key features: 1. Independent and dependent variables. 2. Pretesting and post-testing. 3. Experimental and control groups.

Example 1

In a study on PTSD, a total of 100 police officers from the Winnipeg Police Department were included as participants and randomly assigned to either an experiment group or a control group. To assess their levels of PTSD, all participants, regardless of their group assignment, underwent an identical pre-test. The results of the pre-test revealed no significant differences in reported symptoms related to PTSD between the experiment and control groups. Subsequently, participants in the experiment group were instructed to watch a video showcasing scenic travel routes in Manitoba, while the control group did not receive any specific stimulus. Afterward, both groups underwent a post-test to reevaluate their reported symptoms associated with PTSD. Upon analyzing the post-test scores, the researchers discovered that individuals who were exposed to the experimental stimulus (the video on car accidents) reported greater symptoms of PTSD compared to those in the control group. As you can see from Example 1, the dependent variable is reported levels of PTSD symptoms (measured through the pre- and post-test) and the independent variable is visual exposure to trauma (video).

Ask yourself: Is the reported level of PTSD symptoms dependent upon visual exposure to trauma (as depicted through the video)? Table 6.1 depicts the design of the study from example 1, above.

Example 2

As part of a comprehensive study on depression, participants were randomly assigned to either an experiment group or a control group. To assess their levels of depression, all participants underwent a pre-test. The results of the pre-test indicated no significant differences in depression between the experiment and control groups. Subsequently, participants in the experiment group were instructed to read an article that highlighted the severity and pervasiveness of prejudice against their racial group. After the intervention, depression scores were measured during the post-test phase. The researchers discovered that individuals who received the experimental stimulus (the article emphasizing prejudice against their racial group) reported greater levels of depression compared to those in the control group .

6.2 Random assignation

Random assignation as previously mentioned, one of the characteristics of a true experiment is that researchers use a random process to decide which participants are tested under which conditions.

Random assignation is a powerful research technique that addresses the assumption of pre-test equivalence – that the experimental and control group are equal in all respects before the administration of the independent variable (Palys & Atchison, 2014). Random assignation is the primary way that researchers attempt to control extraneous variables across conditions. Random assignation is associated with experimental research methods. In its strictest sense, random assignment should meet two criteria. One is that each participant has an equal chance of being

1 McCoy, S. K., & Major, B. (2003). Group identification moderates emotional responses to perceived prejudice. Personality and Social Psychology Bulletin, 29(8), 1005-1017.

assigned to each condition (e.g., a 50% chance of being assigned to each of two conditions). The second is that each participant is assigned to a condition independently of other participants. Thus, one way to assign participants to two conditions would be to flip a coin for each one. If the

coin lands on the heads side, the participant is assigned to Condition A, and if it lands on the tails side, the participant is assigned to Condition B. For three conditions, one could use a computer to generate a random integer from 1 to 3 for each participant. If the integer is 1, the participant is assigned to Condition A; if it is 2, the participant is assigned to Condition B; and, if it is 3, the participant is assigned to Condition C. In practice, a full sequence of conditions—one for each participant expected to be in the experiment—is usually created ahead of time, and each new participant is assigned to the next condition in the sequence as he or she is tested.

However, one problem with coin flipping and other strict procedures for random assignment is that they are likely to result in unequal sample sizes in the different conditions. Unequal sample sizes are generally not a serious problem, and you should never throw away data you have already collected to achieve equal sample sizes. However, for a fixed number of participants, it is statistically most efficient to divide them into equal-sized groups. It is standard practice, therefore, to use a kind of modified random assignment that keeps the number of participants in each group as similar as possible. One approach is block randomization. In block randomization, all the conditions occur once in the sequence before any of them is repeated. Then they all occur again before any of them is repeated again. Within each of these "blocks," the conditions occur in a random order. Again, the sequence of conditions is usually generated before any participants are tested, and each new participant is assigned to the next condition in the sequence. When the procedure is computerized, the computer program often handles the random assignment, which is obviously much easier. You can also find programs online to help you randomize your random assignation. For example, the Research Randomizer website will generate block randomization sequences for any number of participants and conditions (Research Randomizer). Random assignation is not guaranteed to control all extraneous variables across conditions. It is always possible that, just by chance, the participants in one condition might turn out to be substantially older, less tired, more motivated, or less depressed on average than the participants in another condition. However, there are some reasons that this may not be a major concern. One is that random assignment works better than one might expect, especially for large samples. Another is that the inferential

statistics that researchers use to decide whether a difference between groups reflects a difference in the population take the "fallibility" of random assignment into account. Yet another reason is that even if random assignment does result in a confounding variable and therefore produces misleading results, this confound is likely to be detected when the experiment is replicated. The upshot is that random assignment to conditions—although not infallible in terms of controlling extraneous variables—is always considered a strength of a research design. Note: Do not confuse random assignation with random sampling. Random sampling is a method for selecting a sample from a population; we will talk about this in Chapter 7.

6.3 Nonexperimental Research Nonexperimental research is research that lacks manipulation of an independent variable and/or random assignment of participants to conditions. While the distinction between experimental and nonexperimental research is considered important, it does not mean that nonexperimental research is less important or inferior to experimental research (Price, Jhangiani & Chiang, 2015).

When to use nonexperimental research

Often it is not possible, feasible, and/or ethical to manipulate the independent variable, nor to randomly assign participants to conditions or to orders of conditions. In such cases, nonexperimental research is more appropriate and often necessary. Price, et al. (2015) provide the following examples that demonstrate when the research question is better answered with non-experimental methods:

1. The research question or hypothesis contains a single variable rather than a statistical relationship between two variables (e.g., How accurate are people's first impressions?).
2. The research question involves a non-causal statistical relationship between variables (e.g., is there a correlation between verbal intelligence and mathematical intelligence?).

3. The research question involves a causal relationship, but the independent variable cannot be manipulated, or participants cannot be randomly assigned to conditions or orders of conditions (e.g., Does

damage to a person's hippocampus impair the formation of long-term memory traces?).
4. The research question is broad and exploratory, or explores a particular experience (e.g., what is it like to be a working mother diagnosed with depression?)

As demonstrated above, it is the nature of the research question that guides the choice between experimental and non-experimental approaches. However, this is not to suggest that a research project cannot contain elements of both an experiment and a non-experiment. For example, nonexperimental studies that establish a relationship between two variables can be explored further in an experimental study to confirm or refute the causal nature of the relationship (Price, Jhangiani & Chiang, 2015).

In social sciences it is often the case that a true experimental approach is inappropriate and unethical. For example, conducting a true experiment may require the researcher to deny needed treatment to a patient, which is clearly an ethical issue. Furthermore, it might not be equitable or ethical to provide a large financial or other reward to members of an experimental group, as can occur in a true experiment. There are three types of non-experimental research: cross-sectional, correlational, and observational. In the following sections we explore each of three types of nonexperimental research.

6.4 Cross sectional research

Cross-sectional research is a type of non-experimental research. We employ cross sectional research methods when we want to compare two or more pre-existing groups of people. The independent variable is not manipulated, nor is there random assignation of participants to the groups. An example would be a researcher who wants to compare the memory ability of people who regularly eat a balanced diet, according to the Canada Food Guide 2019, versus those who do not. As it would not be ethical to randomly assign participants to the unhealthy eating group, we would be required to compare pre-existing groups of healthy and non-healthy eaters; however, it is important to note that there is a danger of introducing a selection bias to the research, because the groups may differ

in other ways. For example, the healthy food eating group may also be more likely to exercise and get more sleep, both of which increase memory function. We would not know then what the effect of healthy eating is, in isolation, upon memory ability, because there may be other variables (e.g. exercise, sleep) that factor into memory ability.

Correlational research is a type of non-experimental research in which the researcher is interested in the relationship between variables; however, the researcher does not attempt to influence the variables (in contrast to experimental research where the researcher manipulates the variables) (Siegle, 2015). Relationships between variables can be visualized with the aid of a graph known as a scatterplot diagram. Scatterplots provide information on two dimensions. The first dimension demonstrates the direction of relationship: linear, curvilinear, or no relationship. Linear relationships can be positive or negative. A positive relationship or correlation is demonstrated through a rise from left to right, while a negative correlation falls from left to right (Palys & Atchison, 2014). Here is a short video that effectively demonstrates positive relationships and no relationship: Direction of Scatterplots. The second dimension related to scatterplots is that they can provide an indication of the magnitude or strength of the relationship. The strongest of relationships are evidenced when all points in a scatterplot graph fall along the same straight line (known as the regression line). The next strongest of relationships are evidenced by a little bit of dispersion around the line; however, if one were to draw an oval close to the line all points would be captured within the oval. The more dispersed the points (i.e., the points do not adhere as closely to the line), the weaker the relationship (Palys & Atchison, 2014). Near the beginning of the 20th century, Karl Pearson developed a method to statistically measure the strength of relationships between variables. This method, known as the Pearson Product-moment Correlation Coefficient (Pearson's r), was developed to measure the strength of linear relationships only. There are two aspects to Pearson's r: The first is the direction, represented by a sign (+ or -). A plus sign (+) indicates a positive or a directional relationship, while a negative sign (-) indicates a negative or aninverse relationship. The second aspect is a number, where a zero represents no linear relationship, and a 1.0 represents a perfect linear relationship. A 1.0 is represented on a scatterplot whenever the point lies on the same straight line. For these purposes, we will not delve further

into how to compute a correlational coefficient; however, there are many online and library statistical resources if you wish to seek more information on this measure.

6.5 Observational Research

Observational research seeks to explore an aspect of the world, for a variety of purposes (Patton, 2015). While that opening sentence may seem a bit vague, many of us, on a regular basis, undertake observational research, without thinking about. For example, imagine yourself undecided as to which airport security line you should take. You might stand back for a second to see which one appears to have the least number of people in line, which one appears to be moving the fastest, or which one appears to have less children in line. You use your observations to help you decide which line you should take, as you are a bit pressed for time. From a research perspective, undertaking observational research, is usually one aspect of an overriding research project. It is rarely a stand-alone method of data collection. For example, perhaps you are interested in nutrition in high school cafeterias. You would likely distribute a questionnaire to students regarding their normal cafeteria choices. You might also do some student interviews; however, your research would not be complete without standing back and watching the food choices students make in the cafeteria. In this example, you would not want the students to know you are watching them, because they may make different choices than they normally would, due to your presence (see section on Section 8.6 re social desirability bias). When your research participants do not know they are being observed, such as the high school nutrition example, it is known as covert research. Of course, observing in a covert fashion has ethical challenges (e.g. not securing participants consent to be observed). In contrast to covert observation, when participants know and give their approval (usually, although not always) this is known as overt observation. According to Patton (2015), there are three aspects of observer involvement: strictly as an observer, strictly as a participant, or as both observer (covert and overt) and participant. One of the most infamous covert participant observational studies is that of Humphreys (1970). The study involved covert observation of homosexual encounters in public washrooms. Humphreys published his findings in a book that later went on to win the C. Wright Mills Award, one of the

most prestigious book awards for sociological research and writing. Today, the awarding of this award to Humphreys is almost as controversial as the study itself. If you are interested in learning more about observational research, Patton (2015) provides an excellent in-depth discussion of this method.

6.6 Quasi Experiments

Under certain conditions, researchers often turn to field experiments, also known as quasi-experiment. These conditions usually occur when it is not possible to randomly assign participants to treatment and control groups (White & Sabarwal, 2014). Rather, selection to a group is by the participants, the researcher, or both the participant and the researcher (White & Sabarwal, 2014). In a quasi-experiment, the independent variable is manipulated and similar to an experiment, it tests causal hypothesis (Campbell & Stanley, 1963). Quasi-experiments allow researchers to infer causality by using the logic behind the experiment in a different way; however, there are three criteria that must be satisfied for causality to be inferred: 1. The independent variable (X) comes before the dependent variable (Y) in time. 2. X and Y are related to each other (i.e., they occur together). 3. The relationship between X and Y aren't explained by other causal agents (Crump, Price, Jhangiani, Chiang, & Leighton, 2017).

In a quasi-experiment the researcher identifies a comparison group that is as similar as is possible to the treatment group, as it relates to baseline (pre-intervention) characteristics. There are techniques for reducing selection bias when creating a comparison group. These techniques are regression discontinuity design and propensity score matching (White & Sabarwal, 2014); available at https://www.unicef-irc.org/publications/pdf/brief_8_quasi experimental%20design_eng.pdf for more detail on these techniques.

6.7 **Internal Validity**

In the preceding sections we reviewed three types of research: cross-sectional, correlational, and observational. It is important to note that when it comes to internal validity, they are not considered equal. You will recall in Chapter 20, Validity, we briefly discussed internal validity. To recap, internal validity is the extent to which the study design supports the conclusion that changes to the independent variable were responsible for the observed changes in the dependent variable. Of the three types of research (experimental, non-experimental, and quasi-experimental), experimental research usually has the highest internal validity. This is because it addresses directional and third variable problems through manipulation and controlling for extraneous variables through random assignment (Crump et al., 2017). As Crump et al claim, if the average score on the dependent variable changes across conditions, it is likely that these changes are the result of the independent variable. On the other hand, correlational research is said to have the lowest internal validity. This is because if the average score on the dependent variable changes across conditions, it could be because of the independent variable. However, there could be other reasons, e.g., the direction of causality is reversed, or there is a third variable causing the differences in both the independent and dependent variables (Crump et al., 2017). Quasi experimental research is considered in the middle of the two other types of research when it comes to internal validity. This is because the independent variable is manipulated in quasi-experimental research; however, the lack of random assignment and experimental control can create other problems. Quasi-experimental research is the most common methodological approach utilized in social sciences research.

6.8 **summary**

In the preceding sections we reviewed three types of research: cross-sectional, correlational, and observational. It is important to note that when it comes to internal validity, they are not considered equal. You will recall in Chapter 20, Validity, we briefly discussed internal validity. To recap, internal validity is the extent to which the study design supports the conclusion that changes to the independent variable were responsible for

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CHAPTER VII
SAMPLING TECHNIQUES

Learning Objectives

• Differentiate between the population and the sample.
• Describe the difference between homogenous and heterogeneous samples.
• Differentiate between probabilistic and non-probabilistic sampling.
• Explain what is meant by representativeness and generalizability.
• Discuss sampling error, and differentiate between a random sampling error and a system sampling error.
• Explain the importance of knowing the who, the how, and the why for the purpose of sampling. All research projects involve gathering specific data from specific sources in specific places at specific times (Palys & Atchison, 2014). Also known as sampling, the necessity of sampling occurs because we simply cannot gather all data from all sources at all places and all times. In other words, we must make choices when we design our research projects. This chapter focuses on sampling techniques as another level of choice to be made by the researcher.

7.1 Sampling

Sampling is the process of selecting observations that will be analyzed for research purposes. To put it another way, sampling has to do with selecting some subset of one's group of interest and drawing conclusions from that subset. Sampling is an integral part of any research project. The question is not if you will sample, but how you will sample. The answer to that question usually is dependent on the methods you use and the objectives of the study. Sampling can apply to people or objects, and is most important when these people or objects (your units of analysis) are heterogeneous (have different characteristics). If people (or objects) are homogeneous, or the same in terms of a specific characteristic of study, any sample will do, since everyone you sampled would be the same on that characteristic. However, when there is diversity or heterogeneity, sampling becomes highly relevant to the study, since a researcher will want to ensure that his/her sample reflects that variability in the population. How we sample and whom we sample shapes the sorts of conclusions we are able to draw.

7.2 Population versus Sampling

If you had all the money and resources in the world, you could potentially sample the whole population. However, money and resources usually limit sampling, and furthermore all members of a population may not actually be identifiable in a way that allows you to sample. As a result, researchers take a sample, or a subgroup of people (or objects) from the population and study that instead of the population. In social scientific research, the population is the cluster of people, events, things, or other phenomena in which you are most interested. It is often the "who" or "what" that you want to be able to say something about at the end of your study. Populations in research may be rather large, such as "the Canadian people," but typically they are more focused than that. For example, a large study, for which the population of interest really is the Canadian people, will likely specify which Canadian people, such as adults over the age of 18 or citizens or legal residents. One of the most surprising and often frustrating lessons students of research methods learn is that there is a difference between one's population of interest and one's study sample. While there are certainly exceptions,

more often than not, a researcher's population and the sample are not the same. A sample is the cluster of people or events, for example, from or about which you will actually gather data. Some sampling strategies allow researchers to make claims about populations that are much larger than their actual sample with a fair amount of confidence. Other sampling strategies are designed to allow researchers to make theoretical contributions rather than to make sweeping claims about large populations. We will discuss both types of strategies later in this chapter. As mentioned previously, it is quite rare for a researcher to gather data from their entire population of interest. This might sound surprising or disappointing until you think about the kinds of research questions that sociologists typically ask. For example, suppose we wish to answer the following research question: "How do men's and women's college experiences differ, and how are they similar?" Would you expect to be able to collect data from all college students across all nations from all historical time periods? Unless you plan to make answering this research question your entire life's work (and then some), the answer is probably

"no." So then, what is a researcher to do? Does not having the time or resources to gather data from every single person of interest mean having to give up your research interest? Absolutely not. It just means having to make some hard choices about sampling, and then being honest with yourself and your readers about the limitations of your study based on the sample from whom you were able to actually collect data. Click on this link to help you better understand how to get from the theoretical population (to whom you want to generalize) to your sample (who will actually be in your study) https://www.socialresearchmethods.net/kb/sampterm.php Now having said this, there are certainly times when it is possible to access every member of the population. This happens when the population is small, accessible, and willing to participate, or the researcher has access to relevant records. For example, suppose that a university dean wants to analyse the final graduating scores for all students enrolled in the university's health sciences program, for 2015 to 2019. The dean wants to know if there is a trend toward an average increase in final graduating scores in health sciences, over this time period, as she suspects. Since the dean is only interested in her particular university and only those students who graduated from health sciences from 2015 to 2019, she can easily use the whole population. In this case, the population is the records of final graduating scores for all students enrolled in the university's health sciences program from 2015 to 2019.

To summarize, we use sampling when the population is large and we simply do not have the time, financial support, and/or ability (i.e. lack of laboratory equipment) to reach the entire population. In the following table you will find some examples of a population versus a sample, and the type of research methodology that might lead such a study. Do not worry about the methodology column now, as you have most likely not yet read the applicable chapters. Make a note to yourself and return to this table after reading Chapters 8 through 13.

7.3 Probabilistic and NonProbabilistic Sampling Techniques

What constitutes an appropriate sample depends upon the research question(s), the research objectives, the researcher's understanding of the phenomenon under study (developed through the literature review), and practical constraints (Palys & Atchison, 2014). These considerations will influence whether the researcher chooses to employ probabilistic or non-probabilistic sampling techniques. Probabilistic sampling techniques are employed to generate a formal or statistically representative sample. This technique is utilized when the researcher has a well-defined population to draw a sample from, as is often the case in quantitative research. This fact enables the researcher to generalize back to the broader population (Palys & Atchison, 2014). On the other hand, a non-probabilistic sampling technique is the method of choice when the population is not created equal and some participants are more desirable in advancing the research project´s objectives. Non-probability sampling techniques are the best approach for qualitative research. Because the researcher seeks a strategically chosen sample, generalizability is more of a theoretical or conceptual issue, and it is not possible to generalize back to the population (Palys & Atchison, 2014).

As previously mentioned, probability sampling refers to sampling techniques for which a person's (or event's) likelihood of being selected for membership in the sample is known. You might ask yourself why we should care about a study element's likelihood of being selected for membership in a researcher's sample. The reason is that, in most cases, researchers who use probability sampling techniques are aiming to identify a representative sample from which to collect data. A representative sample is one that resembles the population from which it was drawn in all the ways that are important for the research being conducted. If, for example, you wish to be able to say something about differences between men and women at the end of your study, you must make sure that your sample doesn't contain only women. That is a bit of an oversimplification, but the point with representativeness is that if your population varies in some way that is important to your study, your sample should contain the same sort of variation. While there is a formula to help you determine the sample size you will need to ensure representativeness, one of the easiest

ways to do this is through an online sample size calculator. The calculator will do the work for you and tell you the minimum number of samples you will need in order to meet the desired statistical limitations (see https://www.calculator.net/sample-size-calculator.html) Obtaining a representative sample is important in probability sampling because a key goal of studies that rely on probability samples is generalizability. In fact, generalizability is perhaps the key feature that distinguishes probability samples from nonprobability samples. Generalizability refers to the idea that a study's results will tell us something about a group larger than the sample from which the findings were generated. In order to achieve generalizability, a core principle of probability sampling is that all elements in the researcher's target population have an equal chance of being selected for inclusion in the study. In research, this is the principle of random selection. Random selection is a mathematical process that must meet two criteria. The first criterion is that chance governs the selection process. The second is that every sampling element has an equal probability of being selected (Palys & Atchison, 2014).

The core principle of probability sampling is random selection. If a researcher uses random selection techniques to draw a sample, he or she will be able to estimate how closely the sample represents the larger population from which it was drawn by estimating the sampling error. Sampling error is the degree to which your sample deviates from the population's characteristics. It is a statistical calculation of the difference between results from a sample and the actual parameters of a population. It is important to ensure that there is a minimum of sampling error (your sample needs to match the diversity of the population as closely as possible.) Sampling error comes from two main sources – systemic error and random error. Random error is due to chance, while systemic error means that there is some bias in the selection of the sample that makes particular individuals more likely to be selected than others. Here is an example to more fully explain the difference between a random and systemic error.

Example:
Random and systemic errors Consider the study of playground conditions for elementary school children. You would need a sampling frame (or list from which you sample) and select from that. Random sampling error would occur by chance and could not be controlled, but systemic error would be possible. Let us say that the list is designed in such a way that every 5th school is a private school. If you were to randomly sample every 5th school on the list, you would end up with a sample exclusively from private schools! Sampling error just means that an element of the population is more likely to be selected for the sample than another (in this case, the private schools are more likely to be sampled than the public schools). Why is this discussion of error important? The use of the right techniques for sampling gives researchers the best chances at minimizing sampling error, and thus the strongest ability to say their results are reflective of the population. Research is done to benefit society in some way, so it is important that research results reflect what we might expect to see in society. Sample size also impacts sampling error. Generally, the bigger the sample, the smaller the error. However, there is a point of diminishing returns where only small reductions in error occur for increases in size. Cost and resources usually also prohibit very large samples, so ultimately the sample size is dependent upon a variety of factors, of which sampling error is only one Probability sampling techniques. There are a variety of probability samples that researchers may use. For our purposes, we will focus on four: simple random samples, systematic samples, stratified samples, and cluster samples (see Table 6.1 for a summary of these four techniques). Simple random samples are the most basic type of probability sample, but their use is not particularly common. Part of the reason for this may be the work involved in generating a simple random sample. To draw a simple random sample, a researcher starts with a list of every single member, or element, of his or her population of interest. This list is sometimes referred to as a sampling frame. Once that list has been created, the researcher numbers each element sequentially and then randomly selects the elements from which he or she will collect data. To randomly select elements, researchers use a table of numbers that have been generated randomly. There are several possible sources for obtaining a random number table. Some statistics and research methods textbooks offer such tables as appendices to the text.

Perhaps a more accessible source is one of the many free random number generators available on the Internet. A good online source is the website Stat Trek (https://stattrek.com/), which contains a random number generator that you can use to create a random number table of whatever size you might need. As you might have guessed, drawing a simple random sample can be quite tedious. Systematic sampling techniques are somewhat less tedious but offer the benefits of a random sample. As with simple random samples, you must be able to produce a list of every one of your population elements. Once you have done that, to draw a systematic sample you would simply select every kth element on your list. But what is "k", and where on the list of population elements does one begin the selection process? The symbol "k" is your selection interval or the distance between the elements you select for inclusion in your study. To begin the selection process, you would need to figure out how many elements you wish to include in your sample. Let us say you want to interview 25 students from the Law program at your college or university. You do some research and discover that there are 150 students currently registered in the program. In this case, your selection interval, or k, is 6. To arrive at 6, simply divide the total number of population elements by your desired sample size. To determine where on your list of population elements to begin selecting the names of the 25 students you will interview, select a random number between 1 and k, and begin there. If we randomly select 3 as our starting point, we would begin by selecting the third student on the list and then select every sixth student from there.

There is one clear instance in which systematic sampling should not be employed. If your sampling frame has any pattern to it, you could inadvertently introduce bias into your sample by using a systemic sampling strategy. This is sometimes referred to as the problem of periodicity. Periodicity refers to the tendency for a pattern to occur at regular intervals. For example, suppose you want to observe how people use the outdoor public spaces in your city or town and you need to complete your observations within 28 days. During this time, you wish to conduct four observations on randomly chosen days. To determine which days you will conduct your observations, you will need to determine a selection interval. As you will recall from the preceding paragraphs, to do so you must divide your population size – in this case 28 days – by your desired sample size, in this case 4 days. This formula leads you to a selection interval of 7. If

you randomly select 2 as your starting point and select every seventh day after that, you will wind up with a total of 4 days on which to conduct your observations. But what happens is that you are now observing on the second day of the week, being Tuesdays. As you have probably figured out, that is not such a good plan if you really wish to understand how public spaces in your city or town are used. Weekend use probably differs from weekday use, and that use may even vary during the week.

In cases such as this, where the sampling frame is cyclical, it would be better to use a stratified sampling technique. In stratified sampling, a researcher will divide the study population into relevant subgroups and then draw a sample from each subgroup. In this example, you might wish to first divide your sampling frame into two lists: weekend days and weekdays. Once you have your two lists, you can then apply either simple random or systematic sampling techniques to each subgroup.

Stratified sampling is a good technique to use when, as in the example, a subgroup of interest makes up a relatively small proportion of the overall sample. In the example of a study of use of public space in your city or town, you want to be sure to include weekdays and weekends in your sample. However, because weekends make up less than a third of an entire week, there is a chance that a simple random or systematic strategy would not yield sufficient weekend observation days. As you might imagine, stratified sampling is even more useful in cases where a subgroup makes up an even smaller proportion of the study population, say, for example, if you want to be sure to include both male and female perspectives in a study, but males make up only a small percentage of the population. There is a chance that simple random or systematic sampling strategy might not yield any male participants, but by using stratified sampling, you could ensure that your sample contained the proportion of males that is reflective of the larger population.

7.4 Who Sampled, How Sampled, and for What Purpose?

If you have taken an introductory psychology or sociology class at a large university, probably you have been a participant in someone's research. Social science researchers on college campuses have a luxury that researchers elsewhere may not share—they have access to many

(presumably) willing and able human guinea pigs. But that luxury comes at the cost of sample representativeness. One study of top academic journals in psychology found that over two-thirds (68%) of participants in studies published by those journals were based on samples drawn in the United States (Arnett, 2008). Further, the study found that two-thirds of the work that derived from US samples published in the Journal of Personality and Social Psychology were based on samples made up entirely of American undergraduates taking psychology courses. These findings certainly beg the question: what do we actually learn from social scientific studies and about whom do we learn it? That is exactly the concern raised by Henrich, Heine, and Norenzayan (2010), authors of the article "The Weirdest People in the World?" In their article, Henrich et al. point out that behavioural scientists very commonly make sweeping claims about human nature based on samples drawn only from WEIRD (Western, educated, industrialized, rich, and democratic) societies, and often based on even narrower samples, as is the case with many studies relying on samples drawn from college classrooms. As it turns out, many robust findings about the nature of human behaviour when it comes to fairness, cooperation, visual perception, trust, and other behaviours, are based on studies that excluded participants from outside the United States, and sometimes excluded anyone outside the college classroom (Begley, 2010). This raises questions about what we really know about human behaviour as opposed to U.S. resident or U.S. undergraduate behaviour. Of course, not all research findings are based on samples of WEIRD folks like college students. But even then, it would behoove us to pay attention to the population on which studies are based and the claims that are being made about to whom those studies apply. In the preceding discussion, the concern is with researchers making claims about populations other than those from which their samples were drawn. A related, but slightly different, potential concern is sampling bias. Bias in sampling occurs when the elements selected for inclusion in a study do not represent the larger population from which they were drawn. For example, a poll conducted online by a newspaper asking for the public's opinion about some local issue will certainly not represent the public since those without access to computers or the internet, those who do not read that paper's website, and those who do not have the time or interest will not answer the question. Another thing to keep in mind is that, just because a sample may be representative in all respects that a researcher

thinks are relevant, there may be relevant aspects that didn't occur to the researcher when she was drawing her sample. So how do you know when you can count on results that are being reported? While there might not be any magic or always-true rules you can apply, there are a couple of things you can keep in mind as you read the claims researchers make about their findings. First, remember that sample quality is determined only by the sample actually obtained, not by the sampling method itself. A researcher may set out to administer a survey to a representative sample by correctly employing a random selection technique, but if only a handful of the people sampled actually respond to the survey, the researcher will have to be very careful about the claims he can make about his survey findings. Second, researchers may be drawn to talking about implications of their findings as though they apply to some group other than the population actually sampled.

Though this tendency is usually quite innocent, it is all too tempting a way to talk about findings; consumers of those findings have a responsibility to be attentive to this sort of (likely unintentional) bait and switch. Third, keep in mind that a sample that allows for comparisons of theoretically important concepts or variables is certainly better than one that does not allow for such comparisons. In a study based on a non-representative sample, for example, we can learn about the strength of our social theories by comparing relevant aspects of social processes.

6.8 Summary

Researchers simply do not have the resources to draw data from all sources, at all times, and in all places. Therefore, they must make important decisions regarding their sources. This chapter has focused on sampling methods, including the most popular probabilistic and non-probabilistic techniques. It concluded by discussing the importance of thinking about who is sampled, when, how, and for what purposes, as well as the importance of ensuring the sample actually reflects the population. The next step in the research process is to determine which data collection methods are best to help you answer you research questions. Data collection is the focus of the next chapter.

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CHAPTER VIII
DATA COLLECTION METHODS: SURVEY RESEARCH

Learning Objectives

• Define survey research.
• Differentiate between a survey and a questionnaire.
• Identify the strength and weakness of survey research.
• Distinguish between the various types of surveys.
• Identify the various ways to administer a survey, and understand the limitations of each survey method of administration.
• Describe the characteristics of an effective survey question.
• Describe the characteristics of an effective survey. In this chapter we will cover the collection of research data through the survey methods. It is most likely that you have participated in a survey at one time or another; accordingly, you probably have a fairly good idea of what a survey is. However, constructing a good survey requires more technique than meets the eye. Survey design takes a great deal of thoughtful planning, and often many rounds of revision, to get it just right, but it is worth the effort. As you will learn in this chapter, there are many benefits to choosing survey research as your method of data collection; specifically: what a survey is, what the benefits and drawbacks of this method are, how to construct a survey, and what to do with survey data once you have it in hand.

8.1 SURVEY RESEARCH: WHAT IS IT AND WHEN SHOULD IT BE USED?

Survey research is a quantitative method whereby a researcher poses a set of predetermined questions to an entire group or sample of individuals. Survey research is an especially useful approach when a researcher aims to describe or explain features of a very large group or groups. This method may also be used as a way of quickly gaining some general details about a population of interest, to help prepare for a more focused, in-depth study using time-intensive techniques such as in-depth interviews or field research. In this case, a survey may help a researcher identify specific individuals from whom or locations from which to collect

additional data. As is true of all methods of data collection, survey research is better suited to answering some kinds of research question than others.

8.2 UNDERSTANDING THE DIFFERENCE BETWEEN A S UR VE Y AND A QUESTIONNAIRE

Before we move on to look at the strengths and weaknesses of survey research, we will take a step back to make sure you understand the difference between the concepts of surveys and questionnaires. Both surveys and questionnaires use a series of questions to gather information, however the purpose of the research and the treatment of the data after it is collected distinguish a questionnaire from a survey, e.g.:

• A questionnaire is a set of written questions used for collecting information for the benefit of one single individual.

• A survey is a process of gathering information for statistical analysis to the benefit of a group of individuals (a research method).

• A questionnaire does not aggregate data for statistical analysis after the data is collected, whereas survey responses are aggregated to draw conclusions. A questionnaire is the set of questions that are used to gather the information, whereas a survey is a process of collecting and analysing data. If the collected data will not be aggregated and is solely for the benefit of the respondent, then that is a questionnaire. If the data being collected with be aggregated and used for analytical purposes that is a survey (McKay, 2015). Sometimes questionnaire data is aggregated; it then becomes a survey, sometimes without the participant's knowledge. For example, the bank where you filled in a loan application aggregates the data from all loan applications in the year 2017 and presents the information to shareholders in aggregated form at its 2018 annual general meeting. The bank has taken questionnaire data and aggregated it into survey data.

8.3 Pros and Cons of Survey Research

Survey research, as with all methods of data collection, comes with both strengths and weaknesses. The following sections will examine both.

Strengths of survey method

Researchers employing survey methods to collect data enjoy a number of benefits. First, surveys are an excellent way to gather lots of information from many people, and they are relatively cost effective. Related to the benefit of cost effectiveness is a survey's potential for generalizability. Because surveys allow researchers to collect data from very large samples for a relatively low cost, survey methods lend themselves to probability sampling techniques, which we discussed in Chapter 7 "Sampling". Of all the data-collection methods described in this text, survey research is probably the best method to use when you hope to gain a representative picture of the attitudes and characteristics of a large group. Survey research also tends to be a reliable method of inquiry. This is because surveys are standardized; the same questions, phrased in exactly the same way, are posed to participants. Other methods, such as qualitative interviewing, which you will learn about in Chapter 10 "Qualitative Data Collection Methods", do not offer the same level of consistency that a quantitative survey offers. One strength of survey methodology is its potential to produce reliable results. This is not to say that all surveys are always reliable. A poorly-phrased question can cause respondents to interpret its meaning differently, which can reduce that question's reliability. The versatility of survey research is also an asset. Surveys are used by all kinds of people in all kinds of professions. The versatility offered by survey research means that understanding how to construct and administer surveys is a useful skill to have for all kinds of jobs. For example, lawyers often use surveys in their efforts to select juries. Social service and other organizations (e.g., churches, clubs, fundraising groups, and activist groups) use them to evaluate the effectiveness of their efforts. Businesses use them to learn how to market their products. Governments use them to understand community opinions and needs, and politicians and media outlets use

surveys to understand their constituencies. The following are benefits of survey research:

1. Cost-effectiveness.
2. Generalizability.
3. Reliability.
4. Versatility.

Weaknesses of survey method

As with all methods of data collection, survey research also comes with a few drawbacks. First, while one might argue that surveys are flexible in the sense that they can ask any number of questions on any number of topics, the fact that the survey researcher is generally stuck with a single instrument for collecting data (the questionnaire) means that surveys could also be described as inflexible. For example, suppose you mail a survey out to 1,000 people and then discover, as responses start coming in, that your phrasing on a particular question seems to be confusing a number of respondents. At this stage, it is too late to change the question for the respondents who have not yet returned their surveys (however, if you conduct a pilot study first, you should avoid such a situation). When conducting in-depth interviews, on the other hand, a researcher can provide respondents further explanation if they are confused by a question, and can tweak their questions as they learn more about how respondents seem to understand them. Validity can also be a problem with surveys. Survey questions are standardized; thus, it can be difficult to ask anything other than very general questions that a broad range of people will understand. Because of this, survey results may not be as valid as results obtained using methods of data collection that allow a researcher to more comprehensively examine the topic being studied. Potential drawbacks to survey research include:

1. Inflexibility; and
2. Validity.

8.4 Types of Surveys

Surveys come in many varieties in terms of both time—when or with what frequency a survey is administered—and administration—how a

survey is delivered to respondents. This section will examine types of surveys that exist in terms of both time and administration. With regards to time, there are two main types of surveys: cross-sectional and longitudinal. Cross- sectional surveys are those that are administered at just one point in time. These surveys offer researchers a sort of snapshot in time, and give you an idea about how things are for your respondents at the particular point in time that the survey is administered. One problem with cross-sectional surveys is that the events, opinions, behaviours, and other phenomena that such surveys are designed to assess do not generally remain stagnant. Therefore, generalizing from a cross-sectional survey can be tricky; perhaps you can say something about the way things were in the moment that you administered your survey, but it is difficult to know whether things remained that way for long afterwards. Cross-sectional surveys have many important uses; however, researchers must remember what they have captured by administering a cross-sectional survey: a snapshot of life at the time the survey was administered. One way to overcome this occasional problematic aspect of cross-sectional surveys is to administer a longitudinal survey. Longitudinal surveys enable a researcher to make observations over some extended period of time. There are several types of longitudinal surveys, including trend, panel, and cohort surveys. We will discuss all three types here, along with another type of survey called retrospective. Retrospective surveys fall somewhere in between cross-sectional and longitudinal surveys. The first type of longitudinal survey is called a trend survey. Researchers conducting trend surveys are interested in how people's inclinations change over time, i.e., trends. The Gallup opinion polls are an excellent example of trend surveys. You can read more about Gallup on their website: http://www.gallup.com/Home.aspx. To learn about how public opinion changes over time, Gallup administers the same questions to people at different points in time. The second type of longitudinal study is called a panel survey. Unlike in a trend survey, the same people participate in a panel survey each time it is administered. As you might imagine, panel studies can be difficult and costly. Imagine trying to administer a survey to the same 100 people every year for, 5 years in a row. Keeping track of where people live, when they move, and when they die, takes resources that researchers often do not have. When those resources are available, however, the results can be quite powerful. Another type of longitudinal survey is a cohort survey. In a cohort survey,

a researcher identifies some category of people that are of interest and then regularly surveys people who fall into that category. The same people do not necessarily participate from year to year, but all participants must meet whatever categorical criteria fulfill the researcher's primary interest. Common cohorts that may be of interest to researchers include: people of particular generations or those who were born around the same time period; graduating classes; people who began work in a given industry at the same time; or perhaps people who have some specific life experience in common. All three types of longitudinal surveys permit a researcher to make observations over time. This means that if the behaviour or other phenomenon that interests the researcher changes, either because of some world event or because people age, the researcher will be able to capture those changes.

Finally, retrospective surveys are similar to other longitudinal studies in that they deal with changes over time but, like a cross-sectional study, they are administered only once. In a retrospective survey, participants are asked to report events from the past. By having respondents report past behaviours, beliefs, or experiences, researchers are able to gather longitudinal-like data without actually incurring the time or expense of a longitudinal survey. Of course, this benefit must be weighed against the possibility that people's recollections of their pasts may be faulty. When or with what frequency a survey is administered will determine whether your survey is cross-sectional or longitudinal. While longitudinal surveys are certainly preferable in terms of their ability to track changes over time, the time and cost required to administer a longitudinal survey can be prohibitive. As you may have guessed, the issues of time described here are not necessarily unique to survey research. Other methods of data collection can be cross-sectional or longitudinal—these are really issues of research design. We have placed our discussion of these terms here because they are most commonly used by survey researchers to describe the type of survey administered. Another aspect of survey administration deals with how surveys are administered and we will examine that next .

8.5 Administration of Surveys

Surveys vary not just in terms of when, but also how they are. One common way to administer surveys is in the form of self-administered questionnaires, in which a research participant is given a set of questions, in writing, to which he or she is asked to respond. Hard copy self-administered questionnaires may be delivered to participants in person or via regular mail. Perhaps you have taken a survey that was given to you in person. If you are ever again asked to complete a survey in a similar setting, it might be interesting to note how your perspective on the survey and its questions could be shaped by the knowledge you are gaining about survey research in this chapter. Researchers may also deliver surveys in person by going from door to door and either asking people to fill them out right away or making arrangements for the researcher to return to pick up completed surveys. Though the advent of online survey tools has made door-to-door delivery of surveys less common. If you are not able to visit each member of your sample personally to deliver a survey, you might consider sending your survey through the mail. While this mode of delivery may not be ideal (imagine how much less likely you would be to return a survey that did not come with the researcher standing on your doorstep waiting to take it from you), sometimes it is the only available or the most practical option. This may not be the most ideal way of administering a survey because it can be difficult to convince people to take the time to complete and return the survey. Often survey researchers who deliver their surveys via mail provide some advance notice to respondents about the survey, to get people thinking about and preparing to complete it. They may also follow up with their sample a few weeks after their survey has been sent out. This can be done not only to remind those who have not yet completed the survey to please do so but also to thank those who have already returned the survey. Most survey researchers agree that this sort of follow-up is essential for improving mailed surveys' return rates (Babbie, 2010). Online surveys are pretty common today. They are relatively cheap, and may be quicker than knocking on doors or waiting for mailed surveys to be returned. To deliver a survey online, a researcher may subscribe to a service that offers online delivery, or use some free delivery. SurveyMonkey offers both free and paid online survey services (http://www.surveymonkey.com). One

advantage to using a service like SurveyMonkey, aside from the already mentioned advantages of online delivery, is that results can be provided to you in formats that are readable by data analysis programs such as SPSS, Systat, and Excel. This saves you the step of having to manually enter data into your analysis program, as you would if you administered your survey in hard copy format. Many of the suggestions provided for improving the response rate on a hard copy questionnaire apply to online questionnaires as well. One difference, of course, is that the sort of incentives one can provide in an online format differ from those that can be given in person or sent through the mail. But this does not mean that online survey researchers cannot offer completion incentives to their respondents. Incentives can include a gift card or having your name entered into a draw for prize. Sometimes surveys are administered by having a researcher actually pose questions directly to respondents rather than having respondents read the questions on their own. These types of surveys are a form of interview. In Chapter 10 "Qualitative Data Collection Approaches" we will examine interviews of the survey (or quantitative) type as well as qualitative interviews. Interview methodology differs from survey research in that data are collected via a personal interaction. Because asking people questions in person comes with guidelines and concerns that differ from those associated with asking questions on paper or online, we reserve our discussion of those guidelines and concerns for Chapter 10. Whatever delivery mechanism you choose, keep in mind that there are pros and cons to each of the options described here. While online surveys may be faster and cheaper than mailed surveys, can you be certain that every person in your sample will have the necessary computer hardware, software, and internet access in order to complete your online survey? On the other hand, mailed surveys may be more likely to reach your entire sample, but also more likely to be lost and not returned. The choice of the best delivery mechanism depends upon a number of factors, including your resources, the resources of your study participants, and the time you have available to distribute surveys and wait for responses. Understanding the characteristics of your study's population is key to identifying the appropriate mechanism for delivering your survey.

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CHAPTER VIII
ANALYSIS OF SURVEY DATA.

Learning Objectives

• Identify the different types of analysis for survey data.
• Define univariate analysis.
• Identify the three measures of central tendency.
• Define bivariate analysis.
• Explain what a contingency table is and how it is used.

This open-source text is primarily focused on designing research, collecting data, and becoming a knowledgeable and responsible consumer of research. We will not spend as much time on data analysis, or what to do with our data once we have designed a study and collected it. However, we will spend some time in each of our data-collection chapters describing some important basics of data analysis that are unique to each method. Entire textbooks have been written entirely on data analysis. In fact, if you have ever taken a statistics class, you already know much about how to analyze quantitative survey data. For these purposes, we will go over a few basics that can get you started as you begin to think about turning all those completed surveys into findings that you can share.

9.1 FROM COMPLETED SURVEYTO ANALYZABLE DATA

It can be very exciting to receive those first few completed surveys back from respondents. Hopefully you After collecting a handful of completed questionnaires, your initial excitement may turn into a sense of overwhelm. Dealing with data can be both enjoyable and daunting. The objective of data analysis is to transform large amounts of information into manageable and meaningful chunks. Let's explore the process of data analysis for survey researchers. Ideally, you would receive a significant number of completed, readable, and usable surveys. The response rate is determined by dividing the number of completed surveys received by the number of surveys distributed. For instance, if you distributed 100 surveys to your sample and received around 75 fully completed surveys, your response rate would be 75% (75 divided by 100). While response rates

vary, and there is no consensus on what constitutes a good rate, most survey researchers would consider a 75% response rate to be good or even excellent. Numerous studies have been conducted on how to improve survey response rates. We have discussed some suggestions earlier, such as personalizing surveys, enhancing credibility by providing study details and researcher contact information, partnering with respected organizations, sending pre-survey notices and post-survey reminders, and including small tokens of appreciation, like a one-dollar bill, with mailed surveys. One major concern with response rates is the potential for non-response bias, where the survey results may be biased by the characteristics of those who chose to respond. For example, if only individuals with strong opinions on the survey topic return their surveys, the findings may not accurately represent the overall population or may limit the claims that can be made about the data patterns. Regardless of the response rate, survey researchers face the challenge of condensing their data into manageable and analyzable segments. Quantitative methods, such as survey research, offer an advantage in describing large amounts of data through numerical representation. To condense completed surveys into analyzable numbers, a codebook needs to be created. A codebook is a document that explains how the survey researcher has translated the data from words into numerical values. An excerpt from a codebook related to a survey on older workers conducted by Saylor Academy (2012) is shown in Table 9.1, "Codebook excerpt from survey of older workers." The table demonstrates the conversion of response options into numerical values and assigns a short variable name to each question. These shortened names are useful when entering data into a computer program for analysis.

For those who will be conducting manual data entry, there probably is not much to be said about this task that will make you want to perform it other than pointing out the reward of having a database of your very own analyzable data. We will not get into too many of the details of data entry, but we will mention a few programs that survey researchers may use to analyze data once it has been entered. The first is SPSS, or the Statistical Package for the Social Sciences (http://www.spss.com/). SPSS is a statistical analysis computer program designed to analyze just the sort of data quantitative survey researchers collect. It can perform everything from very basic descriptive statistical analysis to more complex inferential

statistical analysis. SPSS is touted by many for being highly accessible and relatively easy to navigate (with practice). Excel, which is far less sophisticated in its statistical capabilities, is relatively easy to use and suits some researchers' purposes just fine.

In analyzing data, it is important to differentiate between aggregate data and disaggregating data. Aggregate data refers to numerical or non-numerical information that is(1) collected from multiple sources and/or on multiple measures (variables or individuals) and (2) compiled into data summaries or summary reports to examine trends or statistical analysis. On the other hand, disaggregate data breaks down aggregated data into component parts or smaller units of data.

9.2 Identifying Patterns

Data analysis is about identifying, describing, and explaining patterns. Univariate analysis is the most basic form of analysis that quantitative researchers conduct. In this form, researchers describe patterns across just one variable. Univariate analysis includes frequency distributions and measures of central tendency. A frequency distribution is a way of summarizing the distribution of responses on a single survey question. Table 9.2 presents the frequency distribution for just one variable from the Saylor Academy (2012) older worker survey. Table 8.2 presents an analysis of the item mentioned first in the codebook excerpt given earlier, on respondents' self-reported financial security.

As you can see in the frequency distribution on self-reported financial security, more respondents reported feeling "moderately secure" than any other response category. We also learn from this single frequency distribution that fewer than 10% of respondents reported being in one of the two most secure categories. Another form of univariate analysis that survey researchers can conduct on single variables is measures of central tendency. Measures of central tendency tell us what the most common, or average, response is on a question. Measures of central tendency can be taken for any level variable for ordinal-level variables. Finally, the measure of central tendency used for interval- and ratio-level variables is the mean. To obtain a mean, one must add the value of all responses on a given variable and then divide that number of the total number of responses. In

the previous example of older workers' self-reported levels of financial security, the appropriate measure of central tendency would be the median, as this is an ordinal-level variable. If we were to list all responses to the financial security question in order from lowest dollar value to highest dollar value, the middle point in that list is the median. For these purposes, we will pretend that there were only 10 responses to this question.
Table9.3, Distribution of responses and median value on workers' financial security", the value of response to the financial security question is noted, and the middle point within that range of responses is highlighted. To find the middle point, we simply divide the number of valid cases by two. The number of valid cases, 10, divided by 2 is 5, so we are looking for the 5th value on our distribution to discover the median. As you will see in Figure9.3, Distribution of responses and median value on workers' financial security", that median value is $128,000.

We can learn a lot about our respondents simply by conducting univariate analysis of measures on our survey. We can learn even more, of course, when we begin to examine relationships among variables. Either we can analyze the relationships between two variables, called bivariate analysis, or we can examine relationships among more than two variables. This latter type of analysis is known as multivariate analysis. Bivariate analysis allows us to assess co-variation among two variables. This means we can find out whether changes in one variable occur together with changes in another. If two variables do not co-vary, they are said to have independence. This means simply that there is no relationship between the two variables in question. To learn whether a relationship exists between two variables, a researcher may cross-tabulate the two variables and present their relationship in a contingency table. A contingency table shows how variation on one variable may be contingent on variation on the other. Let's take a look at a contingency table.

You can check the tables in https://pressbooks.bccampus.ca/jibcresearchmethods/front-matter/about-this-book/

You will see in Table 9.4 that a couple of the financial security response categories have been collapsed from five to three Researchers sometimes collapse response categories on items such as this in order to make it easier to read results in a table. You will also see that the variable "gender" was placed in columns and "financial security" is displayed in rows. Typically, values that are contingent on other values are placed in rows (a.k.a. dependent variables), while independent variables are placed in columns. This makes it pretty simple to compare **independent** variable across categories. Reading across the top row of our table, we can see that around 44% of men in the sample reported that they are not financially secure while almost 52% of women reported the same. In other words, more women than men reported that they are not financially secure. You will also see in the table that the total number of respondents for each category of the independent variable is in the table's bottom row. This is also standard practice in a bivariate table, as is including a table heading describing what is presented in the table. Researchers interested in simultaneously analyzing relationships among more than two variables conduct multivariate analysis. If we hypothesized that financial security declines for women as they age but increases for men as they age, we might consider adding age to the preceding analysis. To do so would require multivariate, rather than bivariate, analysis. We will not go into detail here about how to conduct multivariate analysis of quantitative survey items, but we will return to multivariate analysis in Chapter 16 "Reading and Understanding Social Research".

You can check the tables in https://pressbooks.bccampus.ca/jibcresearchmethods/front-matter/about-this-book/

Summary

Chapter 9 has focused on the analysis of quantitative data associated with survey data. It is not the intention of this introductory chapter to delve too deeply into quantitative analysis. As such, this chapter has focused briefly on univariate data analysis. If you are interested in learning more about the analysis of quantitative survey data, we encourage you to take some courses in statistics. The quantitative data analysis skills you will gain in a statistics class could serve you quite well, should you find yourself seeking employment one day.

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CHAPTER X
QUALITATIVE DATA COLLECTION & ANALYSIS METHODS

Learning Objectives

• Describe the circumstances under which it is suitable to use the interview technique for data collection. • Explain semi-structured interview
• Identify the characteristics of an open-ended question.
• Describe an interview guide.
• Identify the challenges associated with interviewing.
• Explain what a focus group is and identify the situations where conducting a focus group is valuable.
• Describe when it is appropriate to utilize videography as a data collection method.
• Identify the pros and cons of videography as a data collection method.
• Explain what a code is and describe the coding process.
• Describe the differences between inductive and deductive coding.
• Describe the two types of inductive coding (descriptive and interpretive) and compare those to the two deductive coding (open and focused/axial coding) techniques.
List the various steps involved in analyzing qualitative data.
• Describe an oral history.
• Identify the strengths and weaknesses of qualitative

10.1 Interview Research Interviewing is a qualitative research technique and a valuable skill. Interviews are used by market researchers to learn how to sell their products; journalists use interviews to get information from a whole host of people, from VIPs to random people on the street. From the social scientific perspective, interviews are a method of data collection that involves two or more people exchanging information through a series of questions and answers. The questions are designed by a researcher to elicit information from interview participant(s) on a specific topic or set of topics. Typically interviews involve an in-person meeting between two people, an interviewer and an interviewee. But as you will discover in this chapter, interviews need not be limited to two people, nor must they occur in person.

10.2 When should qualitative data collection be used?

Interviews are an excellent way to gather detailed information. They also have an advantage over surveys. For example, with a survey, if a

participant's response sparks some follow-up question in your mind, you generally do not have an opportunity to ask for more information. In an interview, however, because you are talking with your study participants in real time, you can ask that follow-up question. As such, interviews are a useful method to use when you want to know the story behind responses you might receive in a written survey. Interviews are also useful when the topic you are studying is rather complex, when whatever you plan to ask requires lengthy explanation, or when your topic or answers to your questions may not be immediately clear to participants who may need some time or dialogue with others in order to work through their responses to your questions. Also, if your research topic is one about which people will likely have a lot to say or will want to provide some explanation or describe some process, interviews may be the best method for you. Interview research is especially useful when the following are true:
1. You wish to gather very detailed information.
2. You anticipate wanting to ask respondents for more information about their responses.
3. You plan to ask a question that requires a lengthy explanation, such as about the participants' lived experience or recollections (i.e. emotional, psychological, physical, intellectual, cultural, racial, etc.).
4. The topic you are studying is complex or may be confusing to respondents.
5. Your topic involves studying processes. Qualitative interview techniques and considerations Qualitative interviews are sometimes called intensive or in-depth interviews. These interviews are semi- structured—the researcher has a particular topic about which he or she would like to hear from the respondent, but questions are open-ended and may not be asked in exactly the same way or in exactly the same order to each and every respondent. In in-depth interviews, the primary aim is to hear from respondents in their own words what they think is important about the topic at hand, . In this section, we will examine how to conduct interviews that are specifically qualitative in nature, analyze qualitative interview data, and use some of the strengths and weaknesses of this method.

10.3 Conducting Qualitative Interviews

Qualitative interviews often resemble conversations rather than formal interviews for participants. However, the researcher guides the conversation with the aim of gathering information. A key distinction between qualitative and quantitative interviewing lies in the use of open-ended questions in qualitative interviews. Open-ended questions do not provide predefined answer options, requiring participants to generate their own responses using their own words, phrases, or sentences.

In preparing for a qualitative interview, the researcher typically develops an interview guide in advance. This guide consists of a list of topics or questions that the interviewer intends to cover during the interview. While the guide serves as a framework, it is flexible and subject to adjustments based on the flow of the conversation. Think of the interview guide as a daily agenda or to-do list—while it outlines the desired items to cover, it's not necessary to address everything or follow a rigid sequence. The course of the interview may be influenced by emerging events or the participant's input.

Interview guides should outline issues the researcher considers important. However, since participants are encouraged to provide answers in their own words and raise relevant points, each interview may progress differently. This dynamic nature is what makes in-depth interviewing exciting yet challenging. Skilled interviewers must ask questions, actively listen to respondents, and discern when to follow up, transition, or allow participants to speak freely without interruption.

Interview guides can take different formats. Some researchers create two versions: a brief outline with topic headings for reference during the interview and a detailed version with questions under each topic for preparation and practice. By using the outline during the interview, researchers can better focus on listening to participants. An excessively detailed guide can be cumbersome to navigate and may give the impression that the interviewer prioritizes their own questions over the participant's answers.

To construct an interview guide, it is recommended to begin with brainstorming, listing all relevant topics and questions without restrictions. Then, the list can be refined by eliminating redundant items

and categorizing similar questions and topics together. It is also advisable to consult scholarly literature for insights into questions asked in studies on similar topics. Sensitive or potentially controversial questions should not be placed at the beginning of the interview to allow participants to ease into the process and feel comfortable. Seeking feedback from friends, family, and professors can provide valuable guidance and suggestions.

When formulating specific questions, it is advisable to avoid yes-or-no inquiries, or if included, follow them up with additional questions. Participants should be encouraged to provide more information. Instead of using "why" as a follow-up question, which may appear confrontational, it is recommended to ask for more details or ask participants to elaborate on their response. Leading questions should also be avoided, opting for neutral phrasing that allows participants to express their thoughts openly. Keeping questions open-ended is crucial to allow participants to share information in their own words and manner.

After constructing the interview guide, the interviewer must decide how to collect and maintain the provided information. Audio recording is a commonly used method as it allows the researcher to focus on the interaction rather than note-taking. However, some participants may be uncomfortable with recording, or the sensitivity of the subject may warrant alternative approaches, such as extensive note-taking. Practice interviews in advance, ideally with friends similar to the target sample, can help refine the interview questions and the interviewer's approach.

In addition to constructing the interview guide, interviewers should consider factors such as the interview location and creating a comfortable environment for participants. These considerations apply to both qualitative and quantitative interviews and are further discussed in Chapter 11 "Issues to Consider for All Interview Types."

10.4 Other Qualitative Data Collection Methods

In the following sections we will look at some traditional (e.g., focus groups) and not-so-traditional (oral & research histories, and videography) data collection techniques often associated with interviews and qualitative research methods. F ocus groups

When multiple respondents participate in an interview at the same time, this is referred to as a focus group interview. Occasionally more than one interviewer may be present as well. Focus groups can be an excellent way to gather information because topics or questions that had not occurred

to the researcher may be brought up by other participants in the group. Having respondents talk with and ask questions of one another can be an excellent way of learning about a topic; not only might respondents ask questions that had not occurred to the researcher, but the researcher can also learn from respondents' body language around and interactions with one another. There are some unique ethical concerns associated with collecting data in a group setting. Oral histories

An oral history is a less traditional form of data collection that can take the form of an interview. Its purpose is to record, in writing, material that might otherwise be forgotten by those who are unlikely to create a written record or produce archival materials (Fontana & Frey, 2003; Reinharz, 1992). It involves interviewing people about their past to ensure that their history is not lost and is therefore available to future generations (Palys & Atchison, 2014). History is broadly defined as everything that happened before this moment in time (Palys & Atchison, 2014). The fact that we do not know everything about history has not prevented historians from studying what has happened in the past. Indeed, the only way to study history is to examine the artifacts that remain. When we speak about artifacts, it is not just those we can tangibly see, touch and/or taste. It also includes other types of artifacts, such as oral histories. Generally, there are two types of oral histories: Aboriginal oral histories and oral history in research.

In the following sections we will briefly examine both of these methods (Palys & Atchison, 2014). Palys and Atchison (2014) attempt to explain oral history in research by an analogy to a box that contains historical facts. As they explain, the box is filled with items that have been placed there by historians who have taken the time to document them and place them in the box. However, it is the selection of some items and not others that Palys and Atchison refer to as "one of the tragedies of history." They say this because interesting and important facts will remain outside our realm of knowledge, due to the fact that someone did not place those facts into the box (p. 156). In addition to what issues go into the box, there is also the issue of power and access to the box. As Palys and Atchison (2014) observe, some people have better access to the box than others. For example, governments, the wealthy, the powerful, the upper classes of society, and the educated all have more ease of access to the box than others. Similarly, throughout the course of history, men have had better access to the box than women. Consequently, when we read historical

accounts from, e.g., 17th century England, we are reading historical accounts from the points of view of the wealthy, the upper classes, the powerful, the educated, and the males of that time period. The historical accounts of the poor, the lower classes, females, those without power, and the uneducated often did not make it into the box. The University of Toronto has an excellent website with an emphasis on primary sources and more than 2,700 collections of oral histories in English from around the world (see https://guides.library.utoronto.ca/c.php?g=250737&p=2676118).

Aboriginal oral histories

European and non-Aboriginal peoples' reliance on written documentation and written archival material has led to the assumption that the lack of written documentary evidence related to the history of Aboriginal people means there is "no history" (see Wolfe, 1982). On the contrary, Aboriginal cultures have been quite successful in preserving their history, despite their reliance upon oral histories. Indeed, each new generation was tasked with accurately remembering and preserving the historical stories passed down from previous generations (Palys & Atchison, 2014). The accuracy of the oral history rests on two facts. First, the memories were not merely recollections of stories. Rather, they were the lived memorialization and verbatim accounts that were repeated throughout the ages. Second, the stories are shared in the context of the potlatch (feast) system, where each speaker provides a recounting of the history of his or her clan, including the clan´s territories and the way its crests and songs were acquired. As Palys and Atchison (2014) note, anyone attending these feasts could challenge the presented oral history, and, as such, this public sharing of a clan´s history helped to preserve the histories. Consequently, it is not uncommon to find that the oral histories told today are much the same as those recorded by anthropologists at the turn of the 20th century (Palys & Atchison, 2014).

Videography

Like an interview, videography can be an effective means for collecting data, both during researcher/ participant interviews and during focus groups. However, videography can also be employed to collect data in more natural settings and, therefore, is a popular tool for those

undertaking ethnographic studies (Asan & Montangue). While videography has been under-utilized, mainly due to confidentiality and privacy issues, it has many benefits as a data collection tool (Asan & Montangue, 2015). It can accurately record events, enable researchers to verify their observations through multiple raters, and permit the researcher to repeatedly review the video record. It is particularly valuable for measuring performance (Seagull & Guerlain, 2003) and verifying self-reported behaviours against observed behaviours (Asan & Montangue, 2015). Researchers have also used videography to capture more detailed data, such as body language and gazing direction (see Kumarapeli & Lusignan, 2013; Leong, Koczan, de Lusignan & Sheeler, 2006). Effectively using videography to collect data requires the careful construction of effective research questions, and the identification of the type of data required. Both of these steps will inform the study design (Asan & Montangue, 2015) and are primary considerations at the outset of any study. Choosing to employ videography to collect data also requires knowledge of cameras, including the various types of cameras, the various levels of quality and functions, and positioning of cameras–things that appear easy but are crucial to ensuring that the video has captured what you wanted (see Asan & Montangue, 2015). Asan and Montangue (2015) developed a series of helpful steps to ensure a successful video study. See Table 10.1 Table 10.1 Steps for a successful video study (adapted from Asan & Montangue, 2015

Conceptualizing the study

1. Choose an appropriate research question that can be answered by video data.
2. Identify the potential time frame of the study.
3. Decide on the scope of the data collection.
4. Decide on any additional data collection instruments, such as interviews and surveys.
5. Decide on the required number of personnel for data collection.
6. Decide how to link the data from video recording with other interview and survey data.
7. Choose method to analyze the data (quantitative, qualitative, or mixed methods).

Legal and Ethical issues

1. Ensure that the study meets with ethical guidelines for human participant's research.
2. Describe all details of the procedure of the study.
3. Comply with all legal requirements for recording in real environments.
4. Obtain legal consent for video recording.
5. Ensure all privacy and confidentiality issues related to the preservation of participants' identification, and identifiable video data storage are addressed. 6. Complete and comply with all local regulations regarding eligibility for human subject research.
7. Submit IRB application and gain final approval in order to start the project. Participants and Sampling
1. Determine the number of participants you need.
2. Determine the unit of analysis and sampling frame that will most effectively help answer your research question (e.g.: Do you need a certain number of participants? How will you recruit your participants? Will you randomly recruit the participants or will they have certain eligibility requirements, such as people within a certain age range? Will participants be paid?).
3. Inform all participants about the benefits and risks of your study.
4. Conduct the recruitment as planned in the IRB.
5. Get informed consent from all people who agree to participate in the study.

6. Decide on all technical specifications of the equipment you need.
7. Choose an appropriate high-quality camera or cameras.
8. Choose the best audio recording style (built into camera or separate).
9. Determine the camera layout of the room; get the best angle to ensure a clear view of the participants.
10. Establish a protocol for recording the interactions.
11. Maximize the captured area by adjusting the camera angle.
12. Create protocols to link the data.
13. Sync the audio and video data for the analysis.
14. Determine protocols for storing video recordings.
15. Secure the hard drives for privacy protection.
16. Back up the data.
17. Train all researchers, camera persons, interviewers, and other members of the research team. Data analysis Review the quality of all data. Identify the software you will be using to analyze the data. Clearly distinguish the research questions and analyze accordingly. Create coding

schemes to analyze the video based on the variable of interest. Conduct a pilot run/trial analysis after collecting the data from a smaller sample to prevent potential mismatch. One of the most significant concerns related to collecting data via video is confidentiality of the participants. Most institutional research ethics boards require that researchers outline how they will ensure participant confidentiality. Outlining how video data will be collected, how it will be stored, who will have access to it, and at what point and how it will be destroyed, are important considerations for all researchers. Assan and Montangue (2015) outline a variety of pros and cons for those wishing to collect data via video.

10.5 Analysis of Qualitative Interview Data

The initial step in analysing qualitative interview data typically involves obtaining transcripts of the conducted interviews. This can be accomplished by either taking meticulous notes during the interview or preferably recording the interview and subsequently transcribing it. Transcribing entails creating a written version of the recorded conversation by playing back the recording and typing out every word spoken, while also indicating the speaker for each word. Ideally, a verbatim transcription is preferred, capturing the precise words expressed during the interview. If feasible, it is also advantageous to include nonverbal responses in the written transcription, such as gestures, tone of voice, and relevant contextual information like timing, location, or emphasized words by the participants. Given the availability of time, it is advisable for the researcher who conducted the interviews to personally transcribe them. By doing so, they can also capture associated nonverbal behaviors and interactions that may contribute to the analysis but are not solely captured through audio recording. Participants may convey emotions through eye rolls, tears, or gestures that carry significant meaning. However, these nonverbal cues cannot be recorded, thus emphasizing the value of recalling and documenting these details in writing during the transcription process. The primary objective of analysis is to extract inferences, lessons, or conclusions by condensing extensive data into more manageable and comprehensible information. When examining qualitative interview data, researchers often employ an inductive approach. This involves carefully reading through the interview transcripts multiple times to identify codes, which serve as concise representations of complex issues or ideas. Coding, the process of

identifying codes in qualitative data, aids in data management and reduction. Coding can be either deductive or inductive. Deductive coding is employed when researchers have predetermined interests and use them to identify relevant passages, quotes, images, or scenes, resulting in preliminary codes (descriptive coding). These initial codes are then expanded upon, with finer distinctions made within each coding category (interpretative coding). Pattern coding may also be utilized to identify associations. Conversely, inductive coding begins with the identification of general themes and ideas that emerge from the data. This process, known as open coding, requires multiple analyses. Commonalities across the identified categories or themes during open coding are observed, and codes are developed based on the analyzed material. This may involve further elaboration of a category or the merging of specific descriptive categories into one another. The subsequent step in the analysis process is focused or axial coding. At this stage, themes or categories identified during open coding are consolidated or refined. The researcher reviews the notes taken during open coding, identifies related themes or categories, and potentially merges some of them. Each collapsed or merged theme or category is assigned a name or code, and passages of data that align with each named category or theme are identified. This process entails reading through the transcripts multiple times and may involve writing concise definitions or descriptions for each code, imparting meaning to the data and facilitating the discussion of findings and their implications. Although the process of reading through extensive transcript pages multiple times may seem arduous and time-consuming, getting started with the coding process can often be the most challenging part. If you encounter difficulties in identifying themes during the open coding stage, it can be helpful to pose questions about your data. The answers to these questions should provide insights into the types of themes or categories you are encountering (Saylor Academy, 2012). Lofland and Lofland (1995, p. 2001) suggest a set of questions that prove useful when coding qualitative data. These questions include:

1. What is the topic, unit, or aspect represented by this instance?
2. . What question about a topic does this data item suggest?
3. What kind of answer or proposition does this data item suggest in response to a question about a topic? Asking yourself these questions while examining data passages can assist in identifying and naming potential themes and categories.

10.6 Qualitative Coding, Analysis, and Write up: The How to Guide

The main goal of analysis is to extract inferences, lessons, or conclusions from extensive data and condense it into more manageable and understandable information. When analyzing qualitative interview data, researchers often employ an inductive approach. This involves carefully reading through the interview transcripts multiple times to identify codes, which serve as concise representations of complex issues or ideas. Coding, the process of identifying codes in qualitative data, aids in data management and reduction. Coding can be either deductive or inductive. Deductive coding is used when researchers have predetermined interests and use them to identify relevant passages, quotes, images, or scenes, resulting in preliminary codes (descriptive coding). These initial codes are then expanded upon, with finer distinctions made within each coding category (interpretative coding). Pattern coding may also be utilized to identify associations. On the other hand, inductive coding starts with the identification of general themes and ideas that emerge from the data. This process, known as open coding, requires multiple analyses. Commonalities across the identified categories or themes during open coding are observed, and codes are developed based on the analyzed material. This may involve further elaboration of a category or merging specific descriptive categories into one another. The next step in the analysis process is focused or axial coding. At this stage, themes or categories identified during open coding are consolidated or refined. The researcher reviews the notes taken during open coding, identifies related themes or categories, and potentially merges some of them. Each collapsed or merged theme or category is assigned a name or code, and passages of data that align with each named category or theme are identified. This process involves reading through the transcripts multiple times and may include writing concise definitions or descriptions for each code, giving meaning to the data and facilitating the discussion of findings and their implications. While the process of reading through extensive

transcript pages multiple times may seem daunting and time-consuming, getting started with the coding process can often be the most challenging part. If you encounter difficulties in identifying themes during the open coding stage, it can be helpful to pose questions about your data. The answers to these questions should provide insights into the types of themes or categories you are encountering. Lofland and Lofland (1995, p. 2001) suggest a set of questions that prove useful when coding qualitative data. These questions include:

1. What is the topic, unit, or aspect represented by this instance?
2. What question about a topic does this data item suggest?
3. What kind of answer or proposition does this data item suggest in response to a question about a topic? Asking yourself these questions while examining data passages can assist in identifying and naming potential themes and categories. The example of "Interview coding" in Table 10.3 is derived from research conducted by Saylor Academy (2012), where she presents two codes that emerged from her inductive analysis of transcripts from interviews with child-free adults. Table 10.3 includes a concise description of each code and a selection of interview excerpts from which each code was derived.

Step 4: Analysis and Write-up

serves as an effective organizational tool for analysis and can greatly assist with the write-up of qualitative data analysis. To begin the analysis process, the researcher should discuss the different categories and provide descriptions of the associated concepts. During this phase, the researcher will also describe the themes that emerged from the axial coding process, which is the second step.

When presenting the data in the write-up, there are several approaches to consider:

1) presenting it as a narrative or story,
2) using a metaphor to illustrate the findings,
3) comparing and contrasting different aspects,
4) examining relationships among concepts or variables.
5) utilizing counting. However, it is important to note that counting alone should not be used as a standalone qualitative data analysis method in the write-up, as it does not capture the richness of the collected data. Counting can be used to state the number of participants

or how many participants discussed a specific theme or category. Nevertheless, the researcher must provide a deeper level of analysis by highlighting participants' words, including direct quotes from their interviews, to demonstrate the validity of the identified themes.
Here are some links to demonstrations of other methods for coding qualitative data:
- https://www.youtube.com/watch?reload=9&v=phXssQBCDls
- https://www.youtube.com/watch?v=lYzhgMZii3o
- http://qualisresearch.com/DownLoads/qda.pdf
When writing up the analysis, it is recommended to "identify" participants using numbers, alphabetical letters, or pseudonyms (e.g., Participant #3 stated...). This approach indicates that data is drawn from all participants. In quantitative analysis, when dealing with data from 400 participants, the data for all 400 participants would be presented assuming they all answered a specific question. In quantitative results, it is common to include a notation such as "n=400" to indicate the number of participants who answered a particular research question. Assigning participant numbers, letters, or pseudonyms serves a similar purpose in qualitative analysis.

10.7 Strengths and Weaknesses of Qualitative Interviews

As discussed previously, qualitative interviews provide a valuable approach for gathering in-depth information. This method allows researchers to delve deeply into a specific topic, surpassing the capabilities of other research methods. Participants have the opportunity to offer detailed insights that may
not be achievable through survey research alone. Furthermore, qualitative interviews enable participants to express themselves in their own words and from their unique perspectives, rather than being limited to predefined response options. These interviews are particularly advantageous when studying social processes or seeking to understand the underlying mechanisms behind various phenomena.
An often overlooked advantage of conducting qualitative interviews in person is the ability for researchers to make additional observations beyond what participants verbally report. Nonverbal cues, such as body language, as well as the context of the interview, including the choice of time and location, can provide valuable data to researchers.

Similar to quantitative survey research, qualitative interviews rely on participants' ability to accurately recall details about their lives, circumstances, thoughts, opinions, or behaviors. However, conducting qualitative interviews is time-consuming and can incur costs. The process involves developing an interview guide, selecting a sample, conducting the interviews, and transcribing the recorded conversations, which is a labor-intensive task even before the coding process begins. It is common practice to provide participants with a monetary incentive or a token of appreciation due to the extended time commitment required compared to completing a closed-ended questionnaire. Additionally, conducting qualitative interviews can be emotionally demanding. Researchers should be mindful of their own emotional capacity to listen to stories that may be difficult or sensitive in nature.

Summary

This chapter has focused on collecting and analyzing qualitative data. We explored some of the more traditional methods, such as interviews and focus groups, for collecting qualitative data. We also explored less popular methods such as oral histories and videography. Analyzing qualitative data requires time and commitment. If possible, the researcher who undertakes the analysis and write-up of the data should complete the transcription, in order to be totally immersed in the data. Time spent in these processes should result in a study that produces valuable, in-depth data that numbers alone (i.e., quantitative methods) cannot explain.

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CHAPTER XI
QUANTITATIVE INTERVIEW TECHNIQUES & CONSIDERATIONS

Learning Objectives

• Describe a standardized interview.
• Explain how quantitative interviews differ from qualitative interviews.
• Explain how to analyze quantitative interview data.
• Identify the main issues that qualitative and quantitative interviewers should consider.
• Describe the options that interviewers have for balancing power between themselves and interview participants.
• Describe and define rapport.
• Define the term, "probe", and describe how probing differs in qualitative and quantitative interviewing.

Quantitative interviews are similar to qualitative interviews in that they involve some researcher/respondent interaction; however, the process of conducting and analyzing findings from quantitative interviews differs in several ways from that of qualitative interviews. Each approach comes with its own unique set of strengths and weaknesses. We will explore these differences in the following sections.

11.1 CONDUCTING QUANTITATIVE INTERVIEWS

Much of what we learned in the previous chapter on survey research applies to quantitative interviews as well. In fact, quantitative interviews are sometimes referred to as survey interviews because they resemble survey-style question-and-answer formats. They might also be called standardized interviews. The difference between surveys and standardized interviews is that questions and answer options are read to respondents in a standardized interview, rather than having respondents complete a survey on their own. As with surveys, the questions posed in a standardized interview tend to be closed-ended. There are instances in which a quantitative interviewer might pose a few open-ended questions

as well. In these cases, the coding process works somewhat differently than coding in-depth interview data. We will describe this process in the following section.

In quantitative interviews, an interview schedule is used to guide the researcher as he or she poses questions and answer options to respondents. An interview schedule is usually more rigid than an interview guide. It contains the list of questions and answer options that the researcher will read to respondents. Whereas qualitative researchers emphasize respondents' roles in helping to determine how an interview progresses, in a quantitative interview, consistency in the way that questions and answer options are presented is very important. The aim is to pose every question-and-answer option in the very same way to every respondent. This is done to minimize interviewer effect, or possible changes in the way an interviewee responds based on how or when questions and answer options are presented by the interviewer.

Quantitative interviews may be recorded, but because questions tend to be closed-ended, taking notes during the interview is less disruptive than it can be during a qualitative interview. If a quantitative interview contains open-ended questions, recording the interview is advised. It may also be helpful to record quantitative interviews if a researcher wishes to assess possible interview effect. Noticeable differences in responses might be more attributable to interviewer effect than to any real respondent differences. Having a recording of the interview can help a researcher make such determinations.

Quantitative interviewers are usually more concerned with gathering data from a large, representative sample. Collecting data from many people via interviews can be quite laborious. In the past, telephone interviewing was quite common; however, growth in the use of mobile phones has raised concern regarding whether or not traditional landline telephone interviews and surveys are now representative of the general population (Busse & Fuchs, 2012). Indeed, there are other drawbacks to telephone interviews. Aside from the obvious problem that not everyone has a phone (mobile or landline), research shows that phone interview respondents were less cooperative, less engaged in the interview, and more likely to express dissatisfaction with the length of the interview than were face-to-face respondents (Holbrook, Green, & Krosnick, 2003, p. 79). Holbrook et al.'s research also demonstrated that telephone respondents were more suspicious of the interview process and more

likely than face-to-face respondents to present themselves in a socially desirable manner.

11.2 ANALYSIS OF QUANTITATIVE INTER V I EW DATA

As with the analysis of survey data, analysis of quantitative interview data usually involves coding response options numerically, entering numeric responses into a data analysis computer program, and then running various statistical commands to identify patterns across responses. Chapter 10 describes the coding

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process for quantitative data. But what happens when quantitative interviews ask open-ended questions? In this case, responses are typically numerically coded, just as closed-ended questions are, but the process is a little more complex than simply giving a "no" a label of 0 and a "yes" a label of 1.

In some cases, quantitatively coding open-ended interview questions may work inductively, as described in Chapter 10. If this is the case, rather than ending with codes, descriptions of codes, and interview excerpts, the researcher will assign a numerical value to codes and may not utilize verbatim excerpts from interviews in later reports of results. With quantitative methods the aim is to be able to represent and condense data into numbers. The quantitative coding of open-ended interview questions is often a deductive process. The researcher may begin with an idea about likely responses to his or her open-ended questions and assign a numerical value to each likely response. Then the researcher will review participants' open-ended responses and assign the numerical value that most closely matches the value of his or her expected response.

11.3 STRENGT

11.3 STRENGTHS AND WHS AND WEAKNESSES OF QUANTITATIVE INTERVIEWSEAKNESSES OF QUANTITATIVE INTERVIEWS

Quantitative interviews offer several benefits. The strengths and weakness of quantitative interviews tend to be couched in comparisons to those of administering hard copy questionnaires. For example, response rates tend to be higher with interviews than with mailed questionnaires (Babbie, 2010). Quantitative interviews can also help reduce respondent confusion.

If a respondent is unsure about the meaning of a question or answer option on a questionnaire, he or she probably will not have the opportunity to get clarification from the researcher. An interview, on the other hand, gives the researcher an opportunity to clarify or explain any items that may be confusing.

As with every method of data collection we have discussed, there are also drawbacks to conducting quantitative interviews. Perhaps the largest, and of most concern to quantitative researchers, is interviewer effect. While questions on hard copy questionnaires may create an impression based on the way they are presented, having a person administer questions introduces many additional variables that might influence a respondent. However, the interviewer's best efforts to be as consistent as possible with quantitative data collection are key. Interviewing respondents is also much more time consuming and expensive than mailing questionnaires. Consequently, quantitative researchers may opt for written questionnaires over interviews on the grounds that they will be able to reach a large sample at a much lower cost than were they to interact personally with each and every respondent.

11.4 ISSUES TO CONSIDER FOR ALL INTERVIEW TYPES

While quantitative interviews resemble survey research in their question/answer formats, similarly to qualitative interviews, the researcher actually interacts with her or his subjects. The fact that the researcher interacts with his or her subjects creates a few complexities that deserve attention. We will examine some of those in the following sections. Power First and foremost, interviewers must be aware of and attentive to the power differential between themselves and interview participants. The interviewer sets the agenda and leads the conversation. While qualitative interviewers aim to allow participants to have some control over which or to what extent various topics are discussed, the researcher is in charge (at least that will be the perception of most respondents). As the researcher, you are asking someone to reveal things about themselves that they may not typically share with others. Also, you are generally not reciprocating by revealing much or anything about yourself. All these factors shape the power dynamics of an interview. A number of excellent pieces have been written dealing with issues of power in research and data collection. An interesting paper by Karniell-Miller, Strier, and Pessach (2009) examines the power relationship from an ethics perspective. As demonstrated in Table 11.1, they draw from decades of

research to describe a variety of ways to balance power in research in the three phases of research: before, during and after.

However, Karniell-Miller et al., (2009) warn that permitting participants to play a significant role in the research can lead to a variety of ethical challenges, such as the loss of the researcher´s right to intellectual and academic freedom, and/or the oversimplification of theoretical constructs that may arise from the research.

Another way to balance the power differential between yourself and your interview participants is to make the intent of your research very clear to the subjects. Share with them your rationale for conducting the research and the research question(s) that frame your work. Be sure that you also share with subjects how the data you gather will be used and stored. Also, be sure that participants understand how their privacy will be protected including who will have access to the data you gather from them and what procedures, such as using pseudonyms, you will take to protect their identities. Many of these details will be covered by your institutional review board's informed consent procedures and requirements, but even if they are not, as researchers, we should be attentive to the ways in which sharing information with participants can help balance the power differences between ourselves and those who participate in our research.

As Saylor Academy (2012) observes, when it comes to handling the power differential between the researcher and participants, there are no easy answers and no general agreement as to the best approach for handling the power differential. It is nevertheless an issue for researchers to note when conducting any form of research, particularly those that involve interpersonal interactions and relationships with research participants.

Location, location, location

One way to balance the power between researcher and respondent is to conduct the interview in a location of participants' choosing, where they will feel most comfortable answering questions. Interviews can take place in any number of locations: respondents' homes or offices, researchers' homes or offices, coffee shops, restaurants, public parks, or hotel lobbies, to name just a few possibilities. While it is important to allow respondents to choose the location that is most convenient and comfortable for them, it is also important to identify a location where there will be few distractions. For example, some coffee shops and restaurants are so loud

that recording the interview can be a challenge. Other locations may present different sorts of distractions. For example, the presence of children during an interview can be distracting for both the interviewer and the interviewee. On the other hand, the opportunity to observe such interactions could be invaluable to your research (depending upon the topic). As an interviewer, you may want to suggest a few possible locations, and note the goal of avoiding distractions, when you ask your respondents to choose a location.

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Of course, the extent to which a respondent should be given complete control over choosing a location must also be balanced by accessibility of the location to you, the interviewer, and by safety and comfort level with the location. While it is important to conduct interviews in a location that is comfortable for respondents, doing so should never come at the expense of your safety.

Researcher-respondent relationship

Finally, a unique feature of interviews is that they require some social interaction, which means that, to at least some extent, a relationship is formed between interviewer and interviewee. While there may be some differences in how the researcher/respondent relationship works, depending on whether your interviews are qualitative or quantitative, one essential relationship element is the same: respect. A good rapport between you and the person you interview is crucial to successful interviewing. Rapport is the sense of connection you establish with a participant. Palys and Atchison (2014) define rapport as the development of a bond of mutual trust between the researcher and the participant. They add that it is the basis upon which access is given to the researcher and valid data are collected.

Saylor Academy (2012) draws attention to the fact that some misguided researchers have attempted to develop rapport with their participants to a level that the participant believes the relationship is closer than it is. She warns against this and suggests that the key is respect. At its core, the interview interaction should not differ from any other social interaction in which you show gratitude for a person's time and respect for a person's humanity. It is crucial that you, as the interviewer, conduct the interview in a way that is culturally sensitive. In some cases, this might mean educating yourself about your study population and even receiving some training to help you learn to communicate effectively with your research

participants. Do not judge your research participants; you are there to listen to them, and they have been kind enough to give you their time and attention. Even if you disagree strongly with what a participant shares in an interview, your job as the researcher is to gather the information being shared with you, not to make personal judgments about it. A research paper by Ryan and Dundon (2008) provides a variety of strategies for building rapport with the research participants in a respectful manner. Case Research Interviews- Eliciting Superior Quality Data.

The questions you ask respondents should indicate that you have actually heard what they have said. Active listening means that you will probe the respondent for more information from time to time throughout the interview. A probe is a request for more information. Both qualitative and quantitative interviewers probe respondents, though the way they probe usually differs. In quantitative interviews, probing should be uniform. Often quantitative interviewers will predetermine what sorts of probes they will use.

In some ways qualitative interviews better lend themselves to following up with respondents and asking them to explain, describe, or otherwise provide more information. This is because qualitative interviewing techniques are designed to go with the flow and take whatever direction the respondent establishes during the interview. Nevertheless, it is worth your time to come up with helpful probes in advance of an interview, even in the case of a qualitative interview. You certainly do not want to find yourself stumped or speechless after a respondent has just said something about which you'd like to hear more. This is another reason that practicing your interview in advance with people who are similar to those in your sample is a good idea.

Summary

Many of the considerations related to quantitative interviews are similar to those of qualitative interviews. While both types of interviews involve some researcher/ respondent interaction, the process of conducting the interview, and collecting and analyzing the findings, differ in a few key ways.

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CHAPTER XII

FIELD RESEARCH A QUA LITATIVE RESEARCH TECHNIQUE

Learning Objectives

• Define field research.
• Define ethnography.
• Explain the conditions under which it is appropriate to undertake field research.
• Identify the pros and cons of field research.
• Explain what is meant by "getting in" in the context of field research If we wanted to know who conducts more of the housework in households, how could we find the answer? One way might be to interview people and simply ask them. That is exactly what Arlie Hochschild did in her study of "the second shift", her term for the work that goes on in the home after the day's work for pay is completed. Hochschild (1989) interviewed 50 heterosexual, married couples with children to learn about how they did, or did not, share the work of the second shift. Many of these couples reported to her that they shared the load of the second shift equally, sometimes dividing the house into areas that were "her" responsibility and those that were "his." Hochschild was not satisfied with just people's personal accounts of second-shift work. She chose to observe 12 of these couples in their homes as well, to see for herself just how the second shift was shared. What Hochschild discovered was that even those couples who claimed to share the second shift did not have as equitable a division of duties as they had professed. For example, one couple who told Hochschild during their interview that they shared the household work equally had explained that the wife was responsible for the upstairs portion of the house and the husband took responsibility for the downstairs portion. Upon conducting observations in this couple's home, however, Hochschild discovered that the upstairs portion of the house contained all the bedrooms and bathrooms, the kitchen, the dining room, and the living room, while the downstairs included a storage space and the garage. This division of labour meant that the woman actually carried the weight of responsibility for the second shift. Without a field research component to her study, Hochschild might never have uncovered these and other truths about couples' behaviours and sharing (or not sharing) of household duties. Overall, there are two reasons for doing research in the field. The first is that from a qualitative perspective, behaviour only

has meaning in the context in which it occurs. Therefore "in context" is the only place where the behaviour can accurately be observed (Palys & Atchison, 2014). The second is that, if the reason we undertake field research is to understand behaviour, then field research is the most relevant and valid option because it enables the duplication of "in context" conditions that influence behaviour, and provides the behaviour with its meaning (Palys & Atchison, p. 11).

12.1 Field Research: What it is?

Field research is a qualitative method of data collection aimed at understanding, observing, and interacting with people in their natural settings. In the context of research, observation is more than just looking. It involves looking in a planned and strategic way with a purpose (Palys & Atchison, 2014, p. 189). As such, when social scientists talk about being in "the field," they are talking about being out in the real world and involved in the everyday lives of the people they are studying. Sometimes researchers use the terms ethnography or participant observation to refer to this method of data collection; the former is most commonly used in anthropology, while the latter is used commonly in sociology. For our purposes, we will use two main terms: field research and participant observation. You might think of field research as an umbrella term that includes the myriad activities that field researchers engage in when they collect data: they participate; they observe; they usually interview some of the people they observe; and they typically analyze documents or artifacts created by the people they observe. Researchers conducting participant observation vary in the extent to which they participate or observe. Palys and Atchison (2014, p. 198) refer to this as the "participant-observer continuum," ranging from complete participant to complete observer. This continuum is demonstrated in Figure 12.1. However, these researchers, as to do other researchers, question whether a researcher can be at the "complete observer" end of the continuum. Rather, they contend, it is increasingly acknowledged that, even as an observer, the researcher is participating in what is being studied and therefore cannot really be a complete observer.

Indeed, it is important to acknowledge that there are pros and cons associated with both aspects of the participant/observer's role. For example, depending upon how fully researchers observer their subjects (as opposed to participating), they may miss important aspects of group interaction and may not have the opportunity to fully grasp what life is like for the people they observe. At the same time, sitting back and observing may grant researchers opportunities to see interactions that they would miss, were they more involved. Ethnography is not to be confused with ethnomethodology. Ethnomethodology will be defined and described in Chapter13 Participation has the benefit of allowing researchers a real taste of life in the group that they study. Some argue that participation is the only way to understand what it is that is being investigated. On the other hand, fully immersed participants may find themselves in situations that they would rather not face but from which cannot excuse themselves because they have adopted the role of a fully immersed participant. Further, participants who do not reveal themselves as researchers must face the ethical quandary of possibly deceiving their subjects. In reality, much field research lies somewhere near the middle of the observer/participant continuum. Field researchers typically participate to at least some extent in their field sites, but there are also times when they may strictly observe.

12.2 Field Research: When is it Appropriate?

Field research is well equipped to answer "how" questions. Whereas survey researchers often aim to answer "why" questions, field researchers ask how the processes they study occur, how the people they spend time with in the field interact, and how events unfold. Table 12.1 "Field Research Examples" presents a few examples of the kinds of questions field researchers have asked in past projects along with a brief summary of where and what role those researchers took in the field. The examples presented in Table 12.1 "Field Research Examples" by no means represent an exhaustive list of the variations of questions field researchers

have asked, or of the range of field research projects that have been conducted over the years, but they do provide a snapshot of the kinds of work win which sociological field researchers engage.

12.3 The Pros and Cons of Field Research

Field research allows researchers to gain firsthand experience and knowledge about the people, events, and processes that they study. No other method offers quite the same kind of close-up lens on everyday life. This close-up on everyday life means that field researchers can obtain very detailed data about people and processes, perhaps more detailed than they can obtain using any other method. Additionally, field research is an excellent method for understanding the role of social context in shaping people's lives and experiences. It enables a greater understanding of the intricacies and complexities of daily life. Field research may also uncover elements of people's experiences or of group interactions of which we were not previously aware. This, in particular, is a unique strength of field research. With other methods, such as interviews and surveys, we certainly cannot expect a respondent to answer a question to which they do not know the answer or to provide us with information of which they are not aware. And because field research typically occurs over an extended period of time, social facts that may not be immediately revealed to a researcher, but that are discovered over time, can be uncovered during the course of a field research project.

The major benefits of field research are: 1. It yields very detailed data. 2. It emphasizes the role and relevance of social context. 3. It can uncover social facts that may not be immediately obvious, or of which research participants may be unaware. On the other hand, the fact that field researchers collect very detailed data does come at a cost. Because a field researcher's focus is so detailed, it is, by necessity, also somewhat narrow. Field researchers simply are not able to gather data from as many individuals as, say, a survey researcher can reach. Indeed, field researchers generally sacrifice breadth in exchange for depth. Related to this point is the fact that field research is extremely time intensive. Field research can also be emotionally taxing. It requires, to a certain extent, the development of a relationship between a researcher and her participants. However, if interviews and field research both require relationship development, you might say that interviews are more like casual dating while field research

is more like a full-blown, committed marriage. The relationships you develop as a field researcher are sustained over a much longer period than the hour or two it might take you to conduct an interview. Not only do the relationships last longer, but they are also more intimate. On the plus side, these relationships can be very rewarding (and yield the rich, detailed data noted as a strength in the preceding discussion). But, as in any relationship, field researchers experience not just the highs but also the lows of daily life and interactions. And participating in day-to-day life with one's research subjects can result in some tricky ethical quandaries (see Chapter 2 "Ethics in Research" for a discussion of some of these quandaries). It can also be a challenge if your aim is to observe as "objectively" as possible. Finally, documentation can be challenging for field researchers. Whereas survey researchers provide questionnaires for research participants to complete, and interviewers have recordings, field researchers generally have only themselves to rely on for documenting what they observe. This challenge becomes immediately apparent upon entering the field. It may not be possible to take field notes as you observe, nor will you necessarily know which details to document or which will become the most important details to have noted. And when you take notes after some observation, you may not recall everything exactly as you saw it when you were there. The weaknesses of field research include that:
1. it may lack breadth; gathering very detailed information means being unable to gather data from a very large number of people or groups.
2. it may be emotionally taxing .
3. documenting observations may be more challenging than with other methods.

12.4 Getting In and Choosing a Site When embarking on a field research project, there are two major aspects to consider. The first is where to observe and the second is what role you will take in your field site. Your decision about each of these will be shaped by a number of factors, over some of which you will have control and others you will not. Your decision about where to observe and what role to play will also have consequences for the data you are able to gather and how you analyze and share those data with others. We will examine each of these contingencies in the following subsections. Your research question might determine where you observe, by, but because field research often works inductively, you may not have a totally focused question before you begin your

observations. In some cases, field researchers choose their final research question once they embark on data collection. Other times, they begin with a research question but remain open to the possibility that their focus may shift as they gather data. In either case, when you choose a site, there are a number of factors to consider. These questions include: 1. What do you hope to accomplish with your field research? 2. What is your topical/substantive interest? 3. Where are you likely to observe behaviour that has something to do with that topic? 4. How likely is it that you will actually have access to the locations that are of interest to you? 5. How much time do you have to conduct your participant observations? 6. Will your participant observations be limited to a single location, or will you observe in multiple locations? Perhaps the best place to start, as you work to identify a site or sites for your field research, is to think about your limitations. One limitation that could shape where you conduct participant observation is time. Field researchers typically immerse themselves in their research sites for many months, sometimes even years. As demonstrated in Table 12.1 "Field Research Examples", other field researchers have spent as much or even more time in the field. Do you have several years available to conduct research, or are you seeking a smaller-scale field research experience? How much time do you have to participate and observe per day? Per week? Identifying how available you'll be in terms of time will help you determine where and what sort of research sites to choose. Also think about where you live and whether travel is an option for you. Some field researchers move to live with or near their population of interest. Is this something you might consider? How you answer these questions will shape how you identify your research site. Where might your field research questions take you? In choosing a site, also consider how your social location might limit what or where you can study. The ascribed aspects of our locations are those that are involuntary, such as our age or race or mobility. For example, how might your ascribed status as an adult shape your ability to conduct complete participation in a study of children's birthday parties? The achieved aspects of our locations, on the other hand, are those about which we have some choice. In field research, we may also have some choice about whether, or the extent to which, we reveal the achieved aspects of our identities. Finally, in choosing a research site, consider whether your research will be a collaborative project or whether you are on your own. Collaborating with others has many benefits; you can cover

more ground, and therefore collect more data, than you can on your own. Having collaborators in any research project, but especially field research, means having others with whom to share your trials and tribulations in the field. However,

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collaborative research comes with its own set of challenges, such as possible personality conflicts among researchers, competing commitments in terms of time and contributions to the project, and differences in methodological or theoretical perspectives (Shaffir, Marshall, & Haas, 1979). When considering something that is of interest to you, consider also whether you have possible collaborators. How might having collaborators shape the decisions you make about where to conduct participant observation? This section began by asking you to think about limitations that might shape your field site decisions. But it makes sense to also think about the opportunities—social, geographic, and otherwise—that your location affords. Perhaps you are already a member of an organization where you would like to conduct research. Maybe you know someone who knows someone else who might be able to help you access a site. Perhaps you have a friend you could stay with, enabling you to conduct participant observations away from home. Choosing a site for participation is shaped by all these factors—your research question and area of interest, a few limitations, some opportunities, and sometimes a bit of being in the right place at the right time. Choosing a role As with choosing a research site, some limitations and opportunities beyond your control might shape the role you take once you begin your participant observation. You will also need to make some deliberate decisions about how you enter the field and who you will be once you are in. In terms of entering the field, one of the earliest decisions you will need to make is whether to be overt or covert. As an overt researcher, you enter the field with your research participants having some awareness about the fact that they are the subjects of social scientific research. Covert researchers, on the other hand, enter the field as though they are full participants, opting not to reveal that they are also researchers or that the group they've joined is being studied. As you might imagine, there are pros and cons to both approaches. A critical point to keep in mind is that whatever decision you make about how you enter the field will affect many of your subsequent experiences in the field. As an overt researcher, you may experience some trouble establishing rapport at first.

Having an insider at the site who can vouch for you will certainly help, but the knowledge that subjects are being watched will inevitably (and understandably) make some people uncomfortable and possibly cause them to behave differently than they would, were they not aware of being research subjects. Because field research is typically a sustained activity that occurs over several months or years, it is likely that participants will become more comfortable with your presence over time. Overt researchers also avoid a variety of moral and ethical dilemmas that they might otherwise face. As a covert researcher, "getting in" your site might be quite easy; however, once you are in, you may face other issues. Some questions to consider are: 1. How long would you plan to conceal your identity? 2. How might participants respond once they discover you've been studying them? 3. How will you respond if asked to engage in activities you find unsettling or unsafe? Researcher, Jun Li (2008) struggled with the ethical challenges of "getting in" to interview female gamblers as a covert researcher. Her research was part of a post-doctoral fellowship from the Ontario Problem Gambling Research Centre to study female gambling culture. In response to these ethical aspects, she changed her research role to overt; however, in her overt role female gamblers were reluctant to "speak their minds" to her (p. 100). As such, she once again adjusted her level of involvement in the study to one who participated in female gambling culture as an insider and observed as an outsider. You can read her interesting story at the following link: https://nsuworks.nova.edu/tqr/vol13/iss1/8. Beyond your own personal level of comfort with deceiving participants and willingness to take risks, it is possible that the decision about whether or not to enter the field covertly will be made for you. If you are conducting research while associated with any federally funded agency (and even many private entities), your institutional review board (IRB) probably will have something to say about any planned deception of research subjects. Some IRBs approve deception, but others look warily upon a field researcher engaging in covert participation. The extent to which your research site is a public location, where people may not have an expectation of privacy, might also play a role in helping you decide whether covert research is a reasonable approach. Having an insider at your site who can vouch for you is helpful. Such insiders, with whom a researcher may have some prior connection or a closer relationship than with other site participants, are

called key informants. A key informant can provide a framework for your observations, help translate what you observe, and give you
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important insight into a group's culture. If possible, having more than one key informant at a site is ideal, as one informant's perspective may vary from another's. Once you have made a decision about how to enter your field site, you will need to think about the role you will adopt while there. Aside from being overt or covert, how close will you be to participants? In the words of Fred Davis (1973), [12] who coined these terms in reference to researchers' roles, "will you be a Martian, a Convert, or a bit of both"? Davis describes the Martian role as one in which a field researcher stands back a bit, not fully immersed in the lives of his subjects, in order to better problematize, categorize, and see with the eyes of a newcomer what's being observed. From the Martian perspective, a researcher should remain disentangled from too much engagement with participants. The Convert, on the other hand, intentionally dives right into life as a participant. From this perspective, it is through total immersion that understanding is gained. Which approach do you feel best suits you? In the preceding section we examined how ascribed and achieved statuses might shape how or which sites are chosen for field research. They also shape the role the researcher adopts in the field site. The fact that the authors of this textbook are professors, for example, is an achieved status. We can choose the extent to which we share this aspect of our identities with field study participants. In some situations, sharing that we are professors may enhance our ability to establish rapport; in other field sites it might stifle conversation and rapport-building. As you have seen from the examples provided throughout this chapter, different field researchers have taken different approaches when it comes to using their social locations to help establish rapport and dealing with ascribed statuses that differ from those of their "subjects Whatever role a researcher chooses, many of the points made in Chapter 11 "Quantitative Interview Techniques" regarding power and relationships with participants apply to field research as well. In fact, the researcher/researched relationship is even more complex in field studies, where interactions with participants last far longer than the hour or two it might take to interview someone. Moreover, the potential for exploitation on the part of the researcher is even greater in field studies, since relationships are usually closer and lines between research and personal or off-the-record interaction may be

blurred. These precautions should be seriously considered before deciding to embark upon a field research project Field notes The aim with field notes is to record your observations as straightforwardly and, while in the field, as quickly as possible, in a way that makes sense to you. Field notes are the first—and a necessary—step toward developing quality analysis. They are also the record that affirms what you observed. In other words, field notes are not to be taken lightly or overlooked as unimportant; however, they are not usually intended for anything other than the researcher's own purposes as they relate to recollections of people, places and things related to the research project. Some say that there are two different kinds of field notes: descriptive and analytic. Though the lines between what counts as description and what counts as analysis can become blurred, the distinction is nevertheless useful when thinking about how to write and how to interpret field notes. In this section, we will focus on descriptive field notes. Descriptive field notes are notes that simply describe a field researcher's observations as straightforwardly as possible. These notes typically do not contain explanations of, or comments about, those observations. Instead, the observations are presented on their own, as clearly as possible. In the following section, we will define and examine the uses and writing of analytic field notes more closely. Analysis of field research data Field notes are data. But moving from having pages of data to presenting findings from a field study in a way that will make sense to others requires that those data be analyzed. Analysis of field research data is the focus in this final section of the chapter. From description to analysis Writing and analyzing field notes involves moving from description to analysis. In Section 12.4 "Field Notes", we considered field notes that are mostly descriptive in nature. In this section we will consider analytic field notes. Analytic field notes are notes that include the researcher's impressions about his observations. Analyzing field note data is a process that occurs over time, beginning at the moment a field researcher enters the field and continuing as interactions happen in the field, as the researcher writes up descriptive notes, and as the researcher considers what those interactions and descriptive notes mean.

Often field notes will develop from a more descriptive state to an analytic state when the field researcher exits a given observation period, with messy jotted notes or recordings in hand (or in some cases, literally on hand), and sits at a computer to type up those notes into a more readable

format. We have already noted that carefully paying attention while in the field is important; so is what goes on immediately upon exiting the field. Field researchers typically spend several hours typing up field notes after each observation has occurred. This is often where the analysis of field research data begins. Having time outside of the field to reflect upon your thoughts about what you have seen and the meaning of those observations is crucial to developing analysis in field research studies. Once the analytic field notes have been written or typed up, the field researcher can begin to look for patterns across the notes by coding the data. This will involve the iterative process of open and focused coding that is outlined in Chapter 10, "Qualitative Data Collection & Analysis Methods." As mentioned in Section 12.4 "Field Notes", it is important to note as much as you possibly can while in the field and as much as you can recall after leaving the field because you never know what might become important. Things that seem decidedly unimportant at the time may later reveal themselves to have some relevance. As mentioned in Chapter 10, analysis of qualitative data often works inductively. The analytic process of field researchers and others who conduct inductive analysis is referred to as grounded theory (Glaser & Strauss, 1967; Charmaz, 2006).

The goal when employing a grounded theory approach is to generate theory. Its name not only implies that discoveries are made from the ground up but also that theoretical developments are grounded in a researcher's empirical observations and a group's tangible experiences. Grounded theory requires that one begin with an open-ended and open-minded desire to understand a social situation or setting and involves a systematic process whereby the researcher lets the data guide her rather than guiding the data by preset hypotheses. As exciting as it might sound to generate theory from the ground up, the experience can also be quite intimidating and anxiety-producing, since the open nature of the process can sometimes feel a little out of control. Without hypotheses to guide their analysis, researchers engaged in grounded theory work may experience some feelings of frustration or angst. The good news is that the process of developing a coherent theory that is grounded in empirical observations can be quite rewarding, not only to researchers, but also to their peers, who can contribute to the further development of new theories through additional research, and to research participants who may appreciate getting a bird's-eye view of their every day.

Summary

This chapter focused on a qualitative research method known as field research. It involves participant observation, interviewing, and document or artifact analysis. Field research can gather very detailed data; however, as such, field researchers often sacrifice breadth for depth as it relates to their findings.

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CHAPTER XIII
UNOBTRUSIVE RESEARCH: QUALITATIV AND QUANTITATIVE APPROACHES

Learning Objectives

• Define unobtrusive research methods and explain when it is suitable to employ this type of research method.
• Outline the benefits and the drawbacks of using unobtrusive research methods.
• Define the Hawthorne effect.
• Explain the difference between primary and secondary data sources.
• Explain the various methods for conducting unobtrusive research.
• Describe some of the advantages and disadvantages of analyzing other people's data.
• Describe three measures of reliability in unobtrusive research.
• Define ethnomethodology and conversation analysis. Unobtrusive research refers to methods of collecting data that do not interfere with the subjects under study (because these methods are not obtrusive). Both qualitative and quantitative researchers use unobtrusive research methods. Unobtrusive methods share the unique quality that they do not require the researcher to interact with the people he or she is studying. It may seem strange that sociology, a discipline dedicated to understanding human social behaviour, would employ a methodology that requires no interaction with human beings. However, humans create plenty of evidence of their behaviours: they write letters to the editor of their local paper; they create various sources of entertainment for themselves, such as movies and televisions shows; they consume goods; they walk on sidewalks; and they lie on the grass in public parks. All these activities leave something behind: printed papers, recorded shows, trash, and worn paths. These are all potential sources of data for the unobtrusive researcher. Sociologists interested in history are likely to use unobtrusive methods, which are also well suited to comparative research. Historical comparative research is "research that focuses either on one or more cases over time (the historical part) or on more than one nation or society at

one point in time (the comparative part)" (Esterberg, 2002, p. 129). While not all unobtrusive researchers necessarily conduct historical, comparative, or even some combination of historical and comparative work, unobtrusive methods are well suited to such work. In this chapter, we will examine content analysis as well as analysis of data collected by others. Both types of analysis use data that do not require direct interaction with human subjects, but the particular type and source of data for each type of analysis differs. We will explore these similarities and differences in the following sections, after we look at some of the pros and cons of unobtrusive research methods. As is true of the other research types we have examined thus far, unobtrusive research has both strengths and weaknesses.

13.1 Strengths of Unobtrusive Research

Researchers who seek evidence of what people actually do, as opposed to what they say they do in survey and interview research, might wish to consider using unobtrusive methods. Field researchers may also claim this advantage over interview and survey research, but field researchers cannot be certain about what effect their presence in the field may have on the people and the interactions that they observe. While unobtrusive research projects, like all research projects, face the risk of introducing researcher bias into the work, researchers employing unobtrusive methods do not need to be concerned about the effect of the research on their subjects. This effect, known as the Hawthorne effect, is not a concern for unobtrusive researchers because they do not interact directly with their research participants. In fact, this is one of the major strengths of unobtrusive research. Another benefit of unobtrusive research is that it can be relatively low-cost compared to some of the other methods we have discussed. Because participants are generally inanimate objects as opposed to human beings, researchers may be able to access data without having to worry about paying participants for their time (though certainly travel to or access to some documents and archives can be costly). Unobtrusive research is also forgiving. What this means is that it is far easier to correct mistakes made in data collection when conducting unobtrusive research than when using any of the other methods described in this text. Imagine what you would do, for example, if you realized at the end of conducting 50 in-depth interviews that you had accidentally omitted two critical questions from your interview guide. What are your

options? Re-interview all 50 participants? Try to figure out what they might have said based on their other responses? Reframe your research question? Scratch the project entirely? Obviously none of these options is ideal. The
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same problems arise if a mistake is made in survey research. For field researchers, the consequences of "messing up" during data collection can be even more disastrous. Imagine discovering after tagging along on a political candidate's campaign that you needed to re-do aspects of the field research. In many cases, such as this one, that simply is not an option. The campaign is over, and you would need to find a new source of data. Fortunately for unobtrusive researchers, going back to the source of the data to gather more information or correct some problem in the original data collection is a relatively straightforward prospect. Finally, unobtrusive research is well suited to studies that focus on processes that occur over time. While longitudinal surveys and long-term field observations are also suitable ways of gathering such information, they cannot examine processes that occurred decades before data collection began, nor are they the most cost-effective ways to examine long-ranging processes. Unobtrusive methods, on the other hand, enable researchers to investigate events and processes that have long since passed. They also do not rely on retrospective accounts, which may be subject to errors in memory, as some longitudinal surveys do.

13.2 Weaknesses of Unobtrusive Research

While there are many benefits to unobtrusive research, this method also comes with a unique set of drawbacks. Because unobtrusive researchers analyze data that may have been created or gathered for purposes entirely different from the researcher's aim, problems of validity sometimes arise in such projects. It may also be the case that data sources measuring whatever a researcher wishes to examine simply do not exist. This means that unobtrusive researchers may be forced to tweak their original research interests or questions to better suit the data that are available to them. Finally, it can be difficult in unobtrusive research projects to account for context. In a field research project, for example, the researcher is able to see what events lead up to some occurrence and observe how people respond to that occurrence. What this means for

unobtrusive research is that while it can be difficult to ascertain why something occurred, we can gain a good understanding of what has occurred. The weaknesses of unobtrusive research include the following: 1. There may be potential problems with validity. 2. The topics or questions that can be investigated are limited by data availability. 3. It can be difficult to see or account for social context. The strengths of unobtrusive research include the following: 1. There is no possibility for the Hawthorne effect. 2. The method is cost effective. 3. It is easier in unobtrusive research than with other methods to correct mistakes. 4. Unobtrusive methods are conducive to examining processes that occur over time or in the past.

13.3 Unobtrusive Methods

This section focuses on how to gather data unobtrusively and what to do with those data once they have been collected. A variety of ways exist for gathering data unobtrusively. For these purposes we will focus on three: content analysis, physical trace, and archival methods.

Content analysis One way of conducting unobtrusive research is to analyze texts. Texts come in all formats. At its core, content analysis addresses the questions of "Who says what, to whom, why, how, and with what effect?" (Babbie, 2010, pp. 328–329). Content analysis is a type of unobtrusive research that involves the study of human communications. Another way to think of content analysis is as a way of studying texts and their meaning. Here we use a more liberal definition of text than you might find in your dictionary. The text that content analysts investigate includes such things as actual written copy (e.g., newspapers, letters, and communiques) and content that we might see or hear (e.g., speeches or other performances). Content analysts might also investigate more visual representations of human communication, such as television shows, advertisements, or movies. Content analysis can also be an effective way to investigate policy change over time. For example, Sheppard and Fennell (2019) utilized a content analysis approach to examine public sector tourism policies from around the world over a time span of approximately 30 years. In their research, they were looking for evidence of growing concern for the environment and welfare of animals used in the tourism experience (e.g., beasts of burden, racing, fighting, competitions, hunting, guides, captivity/entertainment, etc.).

data. In other words, the data is original. In contrast, secondary sources, are those that have already been analyzed. The distinction between primary and secondary sources is important for many aspects of social science, but it is especially important to understand when conducting content analysis. Less frequently, a content analysis can involve the analysis of secondary sources. In those instances where secondary sources are analyzed, the researcher's focus is usually on the process by which the original analyst or presenter of data reached his conclusions, or the choices that were made in terms of how and in what ways to present the data.

Sometimes students new to research methods struggle to grasp the difference between a content analysis of secondary sources and a review of literature, which was discussed in Chapter 5 "The Literature Review". With a review of literature, researchers analyze secondary materials to try to understand what we know and what we do not know about a particular topic. The sources used to conduct a scholarly review of the literature are typically peer-reviewed sources, written by trained scholars, published in some academic journal or press, and based on empirical research that has been conducted using accepted techniques of data collection for the discipline (scholarly theoretical pieces are included in literature reviews as well). These sources are reviewed in order to arrive at some conclusion about our overall knowledge about a topic. Findings are generally taken at face value

A content analysis of scholarly literature would raise questions not raised in a literature review. A content analyst might examine scholarly articles to learn something about the authors (e.g., who publishes what, and where?); publication outlets (e.g., how well do different journals represent the diversity of the discipline?); or topics (e.g., how has the popularity of topics shifted over time?). A content analysis of scholarly articles would be a study of the studies, as opposed to a review of the studies. For example, Sheppard and Fennell wanted to understand whether tourism policy demonstrated a growing concern over time for animal welfare. The researchers conducted their content analysis of different policies from around the world, looking for words that were associated with concern

for animal welfare. Occurrences of these words were counted. In this example, the researchers were not aiming to summarize the content of the tourism policies; rather, they were attempting to learn something about how the policies had evolved over time to demonstrate concern for animals, if at all.

Content analysis can be qualitative or quantitative, and often researchers will use both strategies to strengthen their investigations. In qualitative content analysis the aim is to identify themes in the text being analyzed, and to identify the underlying meaning of those themes. Quantitative content analysis, on the other hand, involves assigning numerical values to raw data so that it can be analyzed using various statistical procedures. Sheppard and Fennell used both qualitative and quantitative approaches in their content analysis. They utilized quantitative approaches by counting the occurrences of words that they considered to be associated with concern for the welfare of animals impacted by tourism. They also used qualitative approaches by drawing blocks of text or sentences into their analysis of the various policies to demonstrate how the policies indicated or did not indicate concern for animal welfare. We will elaborate on how qualitative and quantitative researchers collect, code, and analyze unobtrusive data in the final portion of this section.

One of the most significant challenges related to content analysis is the potential to reproduce the data (Krippendorff, 2004a, p. 215). Krippendorff (2004b) suggests that an agreement coefficient can be utilized as an indicator of reliability. He explains the relationship between agreement and reliability, stating that agreement is what we measure, while reliability is what we wish to inform from the measurement. While beyond our purposes here, Krippendorff (2004b) compares seven different agreement coefficients and makes recommendations for testing reliability in content analysis. See Section 13.4 below for suggestions on improving reliability in content analysis.

Physical trace

Content is not the only sort of data that researchers can collect unobtrusively. Unobtrusive researchers might also be interested in analyzing the evidence that humans leave behind that tells us something about who they are or what they do. This kind evidence includes the physical traces left by humans and the material artifacts that tell us something about their beliefs, values, or norms. Fire and police will

examine scenes for "trace" evidence such as fingerprints, fire starter or retardant, DNA etc. to help solve the mystery of what happened. From a medical point of view, trace evidence can be used to assist paramedics and doctors to determine what has happened – whether there is bruising, cuts, pupil dilation, etc.

There are two types of physical traces: erosion and accretion. Erosion refers to the wearing away, or removal, of material because of a physical activity (e.g., a worn foot path). On the other hand, accretion is the building up of material because of physical activity (e.g., a pile of garbage) (Palys & Atchison, 2014).

One challenge with analyzing physical traces and material artifacts is that you generally do not have access to the people who left the traces or created the artifacts that you are analyzing. (And if you did find a way to contact them, in so doing, your research would no longer qualify as unobtrusive!) It can be especially tricky to analyze the meanings of these materials if they come from a historical or cultural context other than your own. Situating the traces or artifacts you wish to analyze both in their original contexts and in your own is not always easy, and can lead to problems related to validity and reliability. How do you know that you are viewing an object or physical trace in the way that it was intended to be viewed? Do you have the necessary understanding or knowledge about the background of its original creators or users to understand where they were coming from when they created it?

While physical traces and material artifacts make excellent sources of data, analyzing their meaning takes more than simply trying to understand them from your own contextual position. You must also be aware of who caused the physical trace or created the artifact, when they created it, why they created it, and for whom they created it. Answering these questions will require accessing materials in addition to the traces or artifacts themselves. It may require accessing historical documents or, if it is a contemporary trace or artifact, perhaps another method of data collection such as interviews with its creators.

Archival measures

Archival measures are hard copy documents or records, including written or tape-recorded material, photographs, newspapers, books, magazines, diaries, and letters. Webpages are also a source of archival measures and can include documents, images, videos, and audio files, in addition to written materials (Palys & Atichison, 2014). While one might state that

archival measures are just another form of accretion measure, because they are the products of human activity; however, they are defined separately due to significant differences and also the vast quantity of materials that are classified as archival measures.

There are many benefits to using archival measures. For example, they enable a researcher to look at historical evidence, providing an indication of social processes. As such, archival measures gel well with longitudinal studies. However, one thing to consider is that the sources one may be interested in as it relates to archival measures were not created with the goal in mind for a researcher to review them. As a result, the reasons for the documents' creation, and what may have influenced the content of the document, should be given consideration and critical thought. In some cases, researchers will use data from previous studies to assess the material from another angle. Survey data are frequently used in this way by researchers. Issues like memory fade, telescoping and the like, which influence how people respond to questions in a survey, remain an issue for researchers doing secondary analysis, regardless of how good the questions are.

Another advantage of archival methods is that the researcher can look at all relevant records, or the entire "population," assuming the records have been digitized. In such cases, the researcher does not need to worry about choosing a representative sample. Rather, the researcher can analyse all of the relevant records (the entire population) with the use of a computer

13.4 Analyzing Others' Data

One advantage (or disadvantage, depending on which parts of the research process you most enjoy) of unobtrusive research is that you may be able to skip the data collection phase altogether. Whether you wish to analyze qualitative or quantitative data sources, there are a number of free data sets available to social researchers. This section introduces you to several of those sources. Many sources of quantitative data are publicly available in Canada from Statistics Canada (Stats Can) (see: https://www.statcan.gc.ca). For example, the General Social Survey (GSS) covers a broad range of topics. The website for the GSS can be found at https://www.statcan.gc.ca/eng/survey/household/4501. Stats Can also provides workshops, training, webinars, and conferences across Canada, that are available to interested Canadians for a fee. Unfortunately

for qualitative researchers, far fewer sources of free, publicly available qualitative data exist. This is slowly changing, however, as technical sophistication grows and it becomes easier to digitize and share qualitative data. Despite comparatively fewer sources than for quantitative data, there are still a number of data sources available to qualitative researchers whose interests or resources limit their ability to collect data on their own. The Murray Research Archive Harvard, housed at the Institute for Quantitative Social Science at Harvard University, offers case histories and qualitative interview data (https://murray.harvard.edu/). The Global Feminisms project at the University of Michigan offers interview transcripts and videotaped oral histories focused on feminist activism; women's movements; and academic women's studies in Brazil, China, India, Nicaragua, Poland, Russia and the United States (see https://globalfeminisms.umich.edu/). Keep in mind that the resources mentioned here represent just a snapshot of the many sources of publicly available data that can be accessed easily via the web. Table 13.1 "Sources of Publicly Available Data" summarizes the data sources discussed in this section.

13.5 Reliability in Unobtrusive Research

This final section of the chapter investigates a few particulars related to reliability in unobtrusive research projects, especially as it relates to stability, reproducibility, and accuracy that warrant our attention. These particulars have to do with how and by whom the coding of data occurs. Stability refers to the extent to which the results of coding vary across different time periods. If stability is a problem, it will reveal itself when the same person codes the same content at different times and comes up with different results. Coding is said to be stable when the same content has been coded multiple times by the same person with the same result each time. If you discover problems of instability in your coding procedures, it is possible that your coding rules are ambiguous and need to be clarified. Ambiguities in the text itself might also contribute to problems of stability. While you cannot alter your original textual data sources, simply being aware of possible ambiguities in the data as you code may help reduce the likelihood of problems with stability. It is also possible that problems with stability may result from a simple coding error, such as inadvertently jotting a 1 instead of a 10 on your code sheet.

Reproducibility, sometimes referred to as intercoder reliability (Lombard, Snyder-Duch, & Campanella Bracken, 2010), is the extent to which one's coding procedures will result in the same results when the same text is coded by different people. Cognitive differences among the individuals coding data may result in problems with reproducibility, as could ambiguous coding instructions. Random coding errors might also cause problems. One way of overcoming problems of reproducibility is to have coders code together, at the same time.

Finally, accuracy refers to the extent to which one's coding procedures correspond to some pre-existing standard. This presumes that a standard coding strategy has already been established for whatever text you are analyzing. It may not be the case that official standards have been set; however, perusing the prior literature for the collective wisdom on coding in your particular area is time well spent. Scholarship focused on similar data or coding procedures will no doubt help you to clarify and improve your own coding procedures.

13.6 Ethnomethodology and Conversation Analysis

Though not unique methods of data collection per se, ethnomethodology and conversation analysis are unique enough, and prominent enough in sociology, that they warrant some dedicated attention in this text. Ethnomethodology Ethnomethodology is a term that was developed by the sociologist Harold Garfinkel in his 1967 publication, Studies in Ethnomethodology. According to Heritage (1984, p. 4), Garfinkel developed the term to encompass a range of phenomena that are associated with how members of society utilize mundane knowledge and reasoning. Today, ethnomethodology is defined as the study of the ordinary: the routine and the details of everyday reality (Patton, 2015; Saylor Academy, 2012). It is different from ethnography (see Chapter12) in that ethnography is a research method, while ethnomethodology is an alternative approach that seeks to describe the methods humans utilize to create social order (Heritage, 1984). An ethnomethodologist investigates how people construct, prolong, and maintain their realities (Saylor Academy, 2012). It asks the question, how do people make sense of their everyday activities in order to behave in socially acceptable ways (Patton, 2015)? Ethnomethodology's emphasis on the everyday, and on ordinary people's methods for producing order in their social worlds, is perhaps its

most distinctive characteristic (Saylor Academy, 2012). Conversation analysis Conversation analysis is a more formal approach to ethnomethodology (Schutt, 2012). It arose from the fact that some categories (i.e., the meaning of gender), are socially constructed terms that lead to verbal interaction (Schutt, 2006). Specifically, it is a qualitative method for organizing and analyzing the details of conversation (Schutte, 2006). Similar to ethnomethodology, conversation analysis focuses on how reality is constructed, as opposed to what it is. Conversation analysis is premised on three points: 1. Interaction is sequentially organized, and talk can be analyzed in terms of the process of social interaction rather than motives or social status. 2. Contributions to action are contextually oriented. Interaction both shapes and is shaped by the social context of that interaction. The preceding processes are inherent in the details of the interaction, and therefore, no details can be dismissed as being disorderly, accidental or irrelevant (Gubrium & Holstein, 2000; Heritage, 1984, p. 241).

Summary

Chapter 13 focused on unobtrusive research, which enables researchers to gather data without interfering or interacting with the research subjects. Unobtrusive methods can be utilized in both qualitative and quantitative research methodologies. Overall, it is a cost-effective manner of undertaking research, however, it can suffer from validity issues, data availability, and the challenge of accounting for the social context in which the data was produced.

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CHAPTER XIV
THE RESEARCH PROPOSAL

Learning Objectives

• Describe what a research proposal is.
• Discuss the goals of a research proposal.
• List the various components of a research proposal.
• Identify the 15 steps of writing a research proposal.

In this chapter, we will focus on the components of writing an effective research proposal. We will begin by discussing what a research proposal is, what its goals are, and the various components of a research proposal. We will also examine a 15-step approach to writing a research proposal.

14.1 What are the Goals of a Research Proposal?

The research proposal has a set of specific goals: 1. To present and justify the need to study a research problem. 2. To present a practical way in which the proposed research study should be undertaken. 3. To demonstrate that the design elements and procedures being set forth to study the research problem meet with the governed standards within the predominant discipline in which the problem resides. Regardless of the research problem being investigated and the methods chosen to study that problem, all research proposals must address the following questions: 1. What do you plan to accomplish? Be clear and succinct in defining the research problem and what it is you are proposing to research. 2. Why do you want to do it? In addition to detailing your research design, you must also conduct a thorough review of the literature and provide convincing evidence that the topic is worthy of study. Be sure you answer the "so what?" question. 3. How are you going to do it? Make sure that what you propose to do is doable. In other words, make sure you have the time, the resources and, most importantly, the stamina to undertake what you are proposing to do.

14.2 Writing the Research Proposal

As with writing any academic paper, research proposals are generally organized in the same manner across most social science disciplines. The length of a research proposal depends upon the audience for whom the

research proposal is being prepared. For example, research proposals being prepared for a doctoral degree will have higher expectations and will likely run approximately 25 pages, excluding appendices and references. On the other hand, a research proposal being prepared for undergraduate level research might run approximately 10 pages, excluding appendices and references. Before starting the writing process, a good place to start is to ask yourself a series of questions: 1. What do I want to study? 2. Why is the topic important? 3. In what ways is this topic significant within my particular field of study? 4. What problems will this research help to solve (i.e., social, cultural, safety, environmental, economic, business, and/or governance issues)? 5. How does it build upon and go beyond previous research on this topic? 6. What exactly should I plan to do? 7. Can I get it done in the time and with the resources available to *me?*

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Citations and references As with any scholarly research paper, you must cite the sources you used in composing your research proposal. In a research proposal, this can take two forms: a reference list or a bibliography. A reference list lists the literature you referenced in the body

of your research proposal. All references in the reference list must appear in the body of the research proposal. Remember, it is not acceptable to say "as cited in …" As a researcher you must always go to the original source and check it for yourself. Many errors are made in referencing, even by top researchers, and so it is important not to perpetuate an error made by someone else. While this can be time consuming, it is the proper way to undertake a literature review. In contrast, a bibliography, is a list of everything you used or cited in your research proposal, with additional citations to any key sources relevant to understanding the research problem. In other words, sources cited in your bibliography may not necessarily appear in the body of your research proposal. Make sure you check with your instructor to see which of the two you are expected to produce. Overall, your list of citations should be a testament to the fact that you have done a sufficient level of preliminary research to ensure that your project will complement, but not duplicate, previous research efforts. For social sciences, the reference list or bibliography should be prepared in American Psychological Association (APA) referencing format. Usually, the reference list (or bibliography) is not included in the word count of the research proposal. Again, make sure you check with your instructor to confirm.

Summary

Research proposals take a lot of time to prepare, even after one has undertaken the literature review. As the research proposal serves as the map for your research study, it is critical to take your time in researching, thinking, and writing your research proposal. At the end of the day, you want to leave the readers of your research proposal feeling, "Wow, this is an exciting idea and I cannot wait to see how it turns out!" To help you make sure your research proposal is clearly and logically written, here are some common mistakes to avoid: Failure to develop a coherent and persuasive argument for undertaking the proposed research. Failure to be concise; not making the purpose clear and being "all over the map." Failure to cite landmark (significant) pieces of work in your literature review. Failure to set forth the contextual boundaries of your research (i.e., time, place, people, etc.). Failure to stay focused on the research problem (i.e., going off on unrelated tangents). Sloppy or imprecise

writing, including grammatical mistakes. Too much detail on minor issues, and not enough detail on major issues.

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