2 HOW TO CONDUCT ETHICAL RESEARCH

LEARNING GOALS

By the end of this chapter, you will be able to do the following:

2.1 Explain why you should care about ethical research.

2.2 Compare differences between two research philosophies: utilitarian and deontological.

2.3 Follow ethical standards in planning the purpose and study.

2.4 Execute ethical research that considers the rights of participants.

2.5 Consider special ethical requirements when conducting research in field settings.

2.6 Follow ethical standards in reporting your results.

2.7 Implement ethical standards when conducting research with online participants.

2.8 Enforce research ethics to prevent misconduct.

2.9 Apply your own ethical beliefs when considering ethical challenges and dilemmas.

IMPORTANCE OF ETHICAL RESEARCH

A key aspect of becoming a researcher is knowing the ethical guidelines that guide our work and what you should do to ensure the highest ethical standards in your research. Why? Of course, it is the right thing to do. But you will benefit from conducting ethical research because such research is more trustworthy, credible, and helpful.

Let's rewind to the middle of the 20th century to give you some history behind research ethics. At the end of World War II, the Allies responded to Nazi atrocities in concentration camps trials with The Nuremberg Trials. From these trials came the **Nuremberg Code**, which includes a **ten-point statement** delimiting permissible medical experimentation on human participants:[1]

1. **Voluntary consent** is essential
2. The results of any **experiment** must be for the greater good of society
3. Human experiments should be based on previous animal experimentation
4. Experiments should be conducted by avoiding physical/mental suffering and injury
5. No experiments should be conducted if it is believed to cause death/disability

6. The risks should never exceed the benefits
7. Adequate facilities should be used to protect **research participants**
8. Experiments should be conducted only by qualified scientists
9. Participants should be able to end their participation at any time
10. The scientist in charge must be prepared to terminate the experiment when injury, disability, or death is likely to occur

Still, interest in research ethics was virtually non-existent until the 1970s.[2] Practices such as deceiving participants, invading their privacy, and having little regard for participant confidentiality were common. This was not limited to social science research—there were also unethical studies in other fields. An alarming example is **The Tuskegee Syphilis Study**, which enrolled African Americans in a biomedical experiment on the long-term effects of untreated syphilis without their knowledge. As the public became aware of such studies in the late 1960s, legislators responded with the National Research Act establishing the **Institutional Review Boards** (IRBs) and spurring the interest in ethics we have today.

Ethical considerations now play a vital role in research by minimizing harm to participants, researchers, and the public. As current and future researchers, we must uphold these ethical guidelines and ensure they permeate our work's design, execution, analyses, and reporting. It is our responsibility to guarantee that our research is based on sound ethical standards that both protect the rights of research participants and the reputation of social and behavioral science as a field.

IRBs remain the presiding authority over institutions receiving federal funding for human participant research. We also have ethical codes[3] issued by professional organizations to offer protection mechanisms and prevent ethical violations. But what issues should you consider to ensure you adhere to ethical standards? This chapter will walk you through it, from planning to executing and reporting.

We will begin by defining ethics and explaining the basic concepts. Next, we go through how to plan ethical research and what you should consider when recruiting and selecting research participants. After that, you will learn how to execute ethical research once you have recruited your participants. This is where we cover participants' rights to **informed consent**: privacy, **confidentiality** and **anonymity**, **protection from deception**, and **debriefing**. It is also where we discuss field settings, which have special considerations for conducting ethical research. After discussing recruitment and execution, we focus on how to avoid unethical behaviors in reporting your results, implement best-in-kind ethical practices, and address ethical dilemmas and challenges while conducting the research. We will look at Amazon **Mechanical Turk** (MTurk) as a case study so you can see how to do this on one of the most popular online platforms for conducting research. The following section discusses research ethics enforcement, detailing how to prevent misconduct and resolve complaints. The chapter finishes with a case study that illustrates how ethical dilemmas play out in research. For this, we consider a methodological approach known for using deception to study sensitive topics: the **bogus pipeline**.

RESEARCH ETHICS: DEFINITION AND TWO APPROACHES

Interestingly, there are two approaches to ethics used in research, and how to decide what constitutes ethical research will depend on which one you follow.[4] The root of "**ethics**" comes from the Greek word *ethos*, which refers to one's character or disposition. Today, ethics is a branch of

philosophy concerned with moral behavior. The study of ethics involves evaluating behavior in terms of right or wrong according to principles or guidelines.[5] Ethics consists of considering how people should act, judgments of those actions (e.g., right versus wrong, good versus bad), and rules for justifying actions.[6] So applied to the particular context of research, ethics focuses on providing guidelines for conducting, reviewing, and evaluating research. It also establishes enforcement mechanisms to ensure ethical standards are not violated. But this can be done in multiple ways, and they do not always agree.

Two main perspectives are used in determining whether research-related actions are ethical. The **utilitarian** perspective deems actions as ethical if they are likely to involve more benefits than harm and provide the greatest good for the largest number of individuals. Thus, utilitarians often conduct a cost/benefit analysis when faced with ethical dilemmas. For example, the American Psychological Association's (APA) Ethical principles of psychologists and code of conduct[7] espouse this philosophy. On the other hand, the **deontological approach** emphasizes strict adherence to universal rules of moral behavior regardless of the consequences of actions. For example, moral principles such as "do not tell a lie" and "always keep your promises" must be consistently followed. Thus, research involving deception or withholding information from participants is unethical, according to this perspective, even if the benefits of such research greatly outweigh the potential costs to research participants.

HOW TO PLAN ETHICAL RESEARCH

Table 2.1 summarizes recommendations for planning ethical research. This section will teach you that ethical considerations start before you begin your study. First, you should be capable of competently executing the proposed research.[8] Those who do not have the skills or expertise to conduct a particular study should be supervised by someone who does; otherwise, participants may be harmed, and results may be invalid. Next, you should know the relevant ethical guidelines[9] and federal and state legislation. These guidelines and laws can assist with designing an ethically sound study. Ignorance is not seen as a legitimate reason for unethical behavior arising from research, and certifications confirming your knowledge in this area may be required. For example, organizations such as **The Collaborative Institutional Training Initiative** (CITI Program) provide research ethics training and certifications at colleges and universities, healthcare institutions, technology and research organizations, and governmental agencies.[10]

After evaluating technical competence and knowledge of ethical guidelines, you must design a sound research study. Ethics and scientific quality are closely related: low-quality research designs are less likely to be ethically acceptable.[11] Furthermore, well-designed research will lead to accurate conclusions, which may help the populations it applies to. Thus, you need a good research design based on theory and previous work, using appropriate methods and samples.[12]

Finally, it would be best if you determined the ethical acceptability of your study. If you agree with a utilitarian perspective, benefits to participants, society, and science (e.g., increased knowledge) must outweigh costs and potential risks to research participants (e.g., wasted time, invasion of privacy, psychological or physical harm). In cases where participants are at risk (e.g., personality measures that unintentionally reveal personal information or cognitive ability measures that cause anxiety), steps must be taken to minimize potential harm (e.g., debriefing). You should obtain input from others who have a more impartial viewpoint. This can include peers, potential participants, or other similar sources regarding the ethical acceptability of your study.

TABLE 2.1 ■ Summary of Recommendations for Planning Ethical Research

Ethical Due Diligence
• Consider ethical issues before you even begin to conduct your study
• Evaluate your competence in conducting the research
• Become familiar with relevant ethical guidelines
• Design a sound research study
• Determine the ethical acceptability of your study
• Consider the costs of not conducting the research
• Evaluate if there are physical or psychological risks to participants
• Have your research approved by an institutional review board (IRB)
Recruiting and Selecting Research Participants
1. ***University Participant Pools***
• Consider that offering extra credit for participation can be perceived as coercive
• Keep in mind that asking your students to participate in your research may be perceived as coercive
• Justify participation by explaining that it involves a learning experience and a way to enhance, not hurt, grades
If students are minors:
• Obtain parental consent in addition to the minors' agreement
• Explain the purpose and requirements of the study to parents
• Get parents' consent to allow their child to participate
• Explain the nature of the research to minors in an age-appropriate manner
• Obtain their agreement to participate
• Highlight that participation is voluntary and can be terminated at any time
• Ensure minors do not feel coerced to participate because their parents have consented
2. ***Volunteers***
• Determine if inducements are excessive
• Be careful when studying traditionally discriminated or exploited populations
• Avoid falsely advertising what your study can realistically do
• Do not unnecessarily raise the expectations of participants

Importantly and often overlooked, you must consider the costs of *not* conducting the research. Discarding a research idea that has the potential to benefit many others in meaningful ways because it involves some ethical concerns (e.g., not informing participants of the exact nature of the study) may not resolve ethical problems. Still, it may instead exchange one ethical dilemma for another.[13]

Suppose you choose to move forward with the study after determining its ethicality. In that case, you must adequately evaluate participants' physical or psychological risks to set up precautions that address and minimize the risks. This is done while designing and conducting the research (these risks are discussed in more detail later). As mentioned earlier, if you are affiliated with an institution that receives federal funding, you must have your research approved by an institutional review board (IRB) before it can be conducted. IRBs evaluate the research in comparison to designated ethical standards.

Recruiting and Selecting Research Participants

An essential part of planning your research study is determining if you can access participants and how you might do it. Again, ethical considerations are involved, particularly around the two types of participants we discuss in this section: (a) university student participant pools and (b) volunteers in general (e.g., employees, job applicants).

University Participant Pools

Historically, college students are the most frequently sampled group in social and behavioral science research in the United States[14] and elsewhere (e.g., Canada[15]; Australia[16]). This is because they are accessible. However, using university human participant pools creates ethical challenges. One concern involves the extent to which results from this sample can generalize to other populations, which is a broader question of ethicality that pertains to the actual benefit for the general public. But on top of this, many have argued that requiring student participation in research studies as part of the course they are taking may be **coercive**[17] because it restricts two essential participant rights: the freedom to refuse to participate and, in some cases, the freedom to withdraw without penalty. This is seen as coercive in a few ways. First, typically, students lose credit or have their grades lowered if they do not participate. Second, although alternatives to participation may be offered, they often need to be more attractive (e.g., writing an essay instead). Third, even offering extra credit for research participation can be perceived as coercive if students need the credit to raise or maintain their grades. Finally, students invited to participate in their instructor's research may believe their grades will be negatively affected if they disagree.

But is participation in a study coercive? Many have argued that coercive class requirements exist, such as examinations and term papers, but these are not considered unethical because their educational value justifies them.[18] Thus, participation may be justified if research involves a learning experience and a way to enhance rather than hurt grades.[19]

A final consideration regarding university participant pools is that they may include minors (i.e., individuals under 18). Special precautions must be taken with minors because they may not be mature enough or legally able to consent.[20] They may need help to weigh the risks of participation and may be unduly pressured by those with authority over them (e.g., faculty members, teaching assistants). To ensure the ethical treatment of minors, you should obtain parental consent in addition to the minors' agreement.[21] First, you should explain the purpose and requirements of the study to the parents or guardians and get their consent to allow the child to participate. Next, you should explain the nature of the research to minors in an age-appropriate manner, obtain agreement to participate, and tell minors that participation is voluntary and can be terminated at any time. You should also ensure minors are not coerced into participating because their parents have consented.

Volunteers

Using **volunteers** may seem like an obvious way to avoid coercing people into participation, but, as with college students, inducements may still exert subtle coercion.[22] While offering inducements such as monetary compensation increases participation rates and may seem appropriate to offer in exchange, ethical issues are raised when participants feel they cannot afford to refuse. For example, an inducement of $20 may be more coercive to part-time employees than full-time employees because the former may be unable to afford to refuse payment. To determine if inducements are excessive, you can offer the incentive to potential participants involving a varying amount of risk. If they acknowledge that they would participate even when considerable risk is involved, you will conclude that the inducement is probably too strong.[23]

You must also be careful when studying populations that have been exploited (e.g., African Americans and Latinx who have been exposed to discrimination in hiring practices or women who have been subjected to sexual harassment). A common issue is that ethnic minorities are underrepresented in research[24] or not treated with cultural sensitivity.[25] Another consideration is around what your research can offer exploited groups. For example, suppose you attract participants by promising to improve these groups' conditions. In that case, you must also consider the possibility that you may not be able to deliver on this promise: you may not find the results you anticipated, or you may find results that do not benefit the individuals studied and may pose harm to them. Thus, you must be careful to advertise what your study can do and not unnecessarily raise participants' expectations. Overall, there are particular precautions you should take when studying exploited groups, and the recruitment process must be thoughtful in reflecting this. For example, actively involving members of those groups in your research as assistants or co-investigators may help identify issues of concern to these groups.

HOW TO EXECUTE ETHICAL RESEARCH

Table 2.2 summarizes recommendations for executing your research following ethical standards. First, you must protect participants' rights from physical and psychological harm, whether your study is in laboratory or field settings. Although social and behavioral science research rarely involves physical and mental harm, it can happen. For instance, you might design experiments with various levels of stress (e.g., participants are told they have failed an employment test or are allowed to steal) or physical discomfort (e.g., physical ability tasks). In other cases, unanticipated harm can arise. For example, some participants may become upset when reading questions about their childhood on a pre-employment biodata questionnaire. Thus, taking every precaution to protect participants from harm includes weighing the ethics to ensure the benefits outweigh any potential harm; thoughtfully recruiting participants; and, if harm is determined to be ethically appropriate to obtain benefits, ensuring there are no other options for research methods that could get similarly helpful information without the potential for harm. In addition to protecting participants from harm, you must also protect their other rights. These rights include informed consent, **privacy**, **confidentiality**, **protection from deception**, and **debriefing**. For each of these rights, there are several steps that you should take to ensure that they are not violated in the conduct of your research. Much of the following discussion is based on existing codes and guidelines from the *Ethical Principles in the Conduct of Research with Human Participants*[26]; *Ethics for Psychologists: A Commentary on the APA Ethics Code*[27]; and *Planning Ethically Responsible Research: A Guide for Students and Internal Review Boards*.[28]

TABLE 2.2 ■ Summary of Recommendations for Executing Ethical Research

Ethical Due Diligence
● Take precautions to protect participants from harm
● Determine whether harm intentionally invoked is justified
● Ensure you respect all participants' rights
Participants' Rights
Right to Informed Consent and Informed Consent Form
● Provide all necessary information about the study at an appropriate reading level
● Ensure information is short
● Include an informed consent that covers (at a minimum): **a.** Description of the research **b.** Ability to decline or withdraw participation without negative consequences **c.** Information on conditions that might influence willingness to participate **d.** Additional information (e.g., participants should receive a paper or electronic version of the consent form)
Right to Privacy
● Respect participants' right to control the amount of information they reveal
● Avoid giving unwanted information, withholding information, or releasing information
Right to Confidentiality and Anonymity
● Allow participants to decide to whom they will reveal personal information
● State how participants' identities will be protected
● Decide whether participants are to be anonymous
● Use code names or numbering systems and destroy identifying information promptly
● Inform participants about limitations in confidentiality
Right to Protection from Deception
● Determine whether deception is justified (deception should be a last resort)
● Consider feasible alternatives
● Demonstrate that the value of the research outweighs the harm imposed on participants
● Inform participants and fully debrief them about the deception
Right to Debriefing
● Set aside time at the end of the study to debrief participants
● Include information about previous research, how the current study might add to this knowledge, how results might apply to other settings, and the importance of the research
● Gather input from participants and answer any questions they may have
● If the research involved deception, ensure that debriefing consists of both: **a.** *Dehoaxing:* explain the deception **b.** *Desensitizing:* help participants deal with new insights they received about themselves

Right to Informed Consent and Informed Consent Form

Social and behavioral science research often uses methods that do not require consent. This includes gathering data from **anonymous surveys**, observing people in natural settings (**naturalistic observation**), and examining existing data (**archival data**). Consent is also not required from individuals who behaviorally refuse to participate (i.e., by not responding to a recruitment advertisement). However, excepting the above circumstances, informed consent is required by law for all research conducted at institutions receiving federal funding for research on humans.

Potential **participants** must be provided with information about the study before deciding whether or not to participate. Study information can be communicated verbally or in writing, and participants should be asked to provide verbal or written consent (i.e., a signature) before beginning the study. The process of providing this information and receiving consent from the participant is known as informed consent. This information should be provided at an appropriate reading level and be short.[29] In addition, you must ensure that you answer any questions participants have after receiving the information and that they know whom to contact if they have questions or concerns about the research.

Participants signing a consent form should retain a paper or electronic copy. But note that while obtaining signed consent is essential for research involving many risks, it may only sometimes be necessary or appropriate. In addition, there are instances in which a participant's signature could harm the participants.[30] For example, individuals participating in a study examining how they conduct white-collar crime (e.g., embezzlement) would admit their guilt by participating, so it is best not to reveal their identity by receiving their signature. In these situations, however, participants still need to give consent and receive a copy of the consent form, even though they would not be required to sign it.

I have included a template for a consent form as an example. This form was created specifically for a study using MTurk participants (Amazon's MTurk is an online platform that allows you to recruit research participants), but it can be easily adapted for use in other contexts and with different types of participants.

Example: Sample Template of Consent Form for MTurk Research

The purpose of this study is to learn about (goal of the study). Your task is to (action that MTurkers will be performing).

To participate, you must be at least 18 years of age and have at least (number of years) of full-time work experience (minimum 35 hours per week). Your participation should take about (estimated time of competition of the Human Intelligence Task or HIT) minutes and you must complete it in one sitting.

Although it may not directly benefit you, this study may benefit society by improving our knowledge of (study's practical implications). There are no risks for participating in this study beyond those associated with normal computer use.

If you complete the study satisfactorily, you will receive (compensation per HIT) to compensate you for your participation. You will be paid via Amazon's payment system. Please note that this study contains several checks to make sure that participants are finishing the tasks honestly and completely. In accordance with the policies set by Amazon Mechanical Turk, we may reject your work if you do not complete the HIT correctly or if you do not follow the relevant instructions.

Please understand that your participation is voluntary, and you have the right to withdraw your consent or discontinue participation at any time without penalty. To stop, click on the "Return HIT" button, or close your browser window.

Your responses will be confidential and can be identified only by your Amazon Worker ID number, which will be kept confidential and will not appear in any reports or publications of this study. All your responses, including responses to demographic information (e.g., age, employment), will only be analyzed and reported at a group level. You may print this form for your records.

If you have questions about this research study or your participation, please contact (researcher posting the MTurk HIT), Department of (name of the department) at (name of university) by telephoning (researchers' phone number) or by email at (researchers' email). You may also contact (name of university) Office of Human Research with any questions about your rights as a participant in this study or any concerns or complaints by calling (phone number). This research and its procedures have been approved by (name of university)'s Institutional Research Board.

IRB Approval Number: (IRB number)

Thank you very much for your participation.

By clicking the "I consent" button below, you indicate that you are 18 years of age or older, that you have read and understood the description of the study, and that you agree to participate.

Source: Aguinis, Villamor, & Ramani (2021, Appendix G). Reproduced with permission.

Now that we have reviewed informed consent let's examine the issues the procedures should cover.

Description of the Research

This description should include the purpose of the study, what is expected of participants (e.g., tasks, time involved, inducements), and the importance or implications of the research. While you must describe the research, you do not have to disclose hypotheses or other information that would bias participants' responses or influence their behavior in the study. Still, enough information should be given so potential participants can decide if they wish to participate. Further, suppose it is necessary to withhold information about the study (i.e., deception). In that case, participants should be informed and assured that a full explanation will be provided at the end of the study.

Ability to Decline or Withdraw Participation Without Negative Consequences

Please remind participants of this right from the start, especially when students take part for class credit and might feel they have no right to withdraw. Likewise, participants may feel they have little right to withdraw when the researcher is in a position of authority (e.g., human resources manager, supervisor) or, as discussed earlier when study inducements are used (e.g., money or class credit). If you conduct research in organizational settings, you must prevent employees from perceiving that their employment status will be at risk if they do not participate. In addition, when you have authority over potential participants, using a third party to recruit participants may alleviate the pressure to participate.[31] Finally, some advocate that participants have a right to whatever benefits they were promised (e.g., money) if they withdraw due to feeling misinformed or misunderstanding the nature of the research study.[32]

Information on Conditions That Might Influence Willingness to Participate

This refers to providing a list of possible risks involved in the study, such as stress, physical exertion, and anxiety, and allowing participants to decide if they wish to be subjected to these risks. In addition to potential risks, participants should be informed of the benefits they can expect from participating. Benefits to participants may include scientific knowledge, learning or practice (e.g., mock job interviews), and inducements.

Right to Privacy

Participants have a right to privacy, which comes in different forms. First, the informed consent should contain any information participants might need to know when deciding to participate; specifically, it should describe the type of information that will be solicited from them. The study may ask for more sensitive information than potential participants would feel comfortable giving, and they should know what is being asked upfront. The right to privacy is also violated when participants are given unwanted information (e.g., graphic details of an incident involving sexual harassment between a supervisor and his direct report), when information that would normally be used to make decisions is withheld, or when information is released to unauthorized parties (e.g., a supervisor is shown the results of a study and uses it to make employment decisions). Finally, participants' right to privacy is upheld by their freedom to refuse to participate or withdraw once research has begun.

Right to Confidentiality and Anonymity

Participants have the right to decide who sees their personal information, and by guaranteeing participants' confidentiality, you may be able to obtain more cooperation and open and honest responses.[33] Researchers often promise confidentiality in exchange for participation, and ethical codes bind them to respect it.[34] Confidentiality differs from privacy in that it refers to data rather than individuals. At the same time, privacy concerns how the individual interacts with the study, and confidentiality refers to who interacts with identified data.

As with other rights, information regarding confidentiality should be given in informed consent. It should state how participants' identities will be protected and how unauthorized disclosures will be prevented. This entails information about who will access research data, how records will be maintained, and whether participants will remain anonymous.

If you decide the participants are to be anonymous, follow through by ensuring that no identifying information will be gathered (e.g., name, social security number, employee number). Ideally, you will want to guarantee anonymity because participants are likelier to participate and be honest when they know the results cannot be linked to them individually. Unfortunately, research often requires identifying information to link participants' data to another data set (e.g., supervisory ratings of performance, personnel records). In these cases, you can substitute code names or numbering systems and immediately destroy identifying information. Information describing this process, or others taken to protect their confidentiality, should be communicated in informed consent.

Further, it would be best to inform participants about confidentiality limitations. Exceptions to confidentiality are made when the participants may seem likely to endanger others' well-being. This would occur, for example, if an employee reveals to the researcher that "he just bought a gun and will teach his supervisor a lesson for giving him a low-performance rating."

Right to Protection from Deception

If you are considering deception, you must assess the feasibility of alternatives and the cost/benefit analysis to determine whether deception is justified. In these considerations

and your application to the IRB, you must demonstrate that the value of the research outweighs the harm imposed on participants and the topic cannot be studied in any other way. If the deception is warranted and the study approved, you must address the fact that participants who may not be comfortable with this type of design have the right to opt out of participating. Of course, there are obvious challenges with informing participants that they will be deceived while maintaining the integrity of a study involving deception. To address this, communicate through informed consent that they might receive incomplete or misleading information about the research condition. If participants choose to complete the study, you are responsible for fully debriefing them afterward. Fortunately, debriefing seems to eliminate the adverse effects of deceptive research on participants.[35] Debriefing is covered in more detail below.

Although deception is the only possible way to study specific research topics, you should consider potential drawbacks. For example, some have argued that deception does not respect participants' rights, dignity, or privacy. However, steps are often taken and enforced by IRBs to ensure that participants' rights are upheld. Another potential drawback is the possibility of eliciting distrust in social and behavioral science research due to deception. However, on a perhaps more positive note, research has indicated that participants usually do not perceive deception as unethical.[36]

Overall, deception should only be used as a last resort. Examples of deception include using confederates posing as research participants, withholding information, producing false beliefs or assumptions, giving participants false feedback to determine how they react, or not paying the amount agreed upon before a study to examine participant reactions.

Right to Debriefing

After the study is completed, debriefing must take place to inform participants of the research purpose. Debriefing is the primary method used to ensure that participants receive the scientific knowledge that is often promised as a benefit of participating. Debriefing also removes any harmful effects brought on by the study, leaving participants with a sense of dignity and a perception that their time was not wasted.[37]

You should set aside time at the study's end to debrief participants individually if the research is sensitive. Debriefing should include information about previous research, how the current study might add to this knowledge, how study results might be applied to other settings, and the importance of this type of research. This time can also be used to gather input from participants and answer any questions they may have. For example, this might be an opportunity to ask participants what they thought of the study or why they responded or behaved the way they did. This is also an excellent time to collect the names and email addresses of those who wish to receive a copy of the study's findings. When conducting research within organizations, you should discuss the findings with study participants and any implications. Finally, if the research involved deception, debriefing should consist of both dehoaxing and desensitizing.

Dehoaxing

Dehoaxing refers to explaining the deception and removing any misinformation provided to participants as a part of the deception to alleviate any resulting negative emotions or feelings.[38] For example, a study may give falsely negative performance feedback to a participant despite good performance. Instead, the participant should be told that they received made-up negative performance feedback because the study aimed to examine their reactions and that their performance was good.

Desensitizing

Desensitizing entails helping participants deal with new insights they received about themselves due to their responses or actions in the study and removing any harm resulting from participation (e.g., hostile feelings towards those giving negative feedback[39]). Discussing feelings with participants and explaining their normal reactions can accomplish this goal.

SPECIAL CONSIDERATIONS FOR CONDUCTING ETHICAL RESEARCH IN FIELD SETTINGS

As discussed above, there are many ethical concerns to consider when conducting research. However, it may be challenging to resolve these ethical issues when research is conducted in field settings. This is particularly important to review because some have recently noted that ethical responsibilities in **field research** are a neglected topic.[40] Table 2.3 summarizes recommendations for conducting ethical research in field settings.

Most of these ethical concerns arise from navigating conflicting expectations from the organizations involved in the research,[41] such as in corporate, not-for-profit organizations, small businesses, or school settings. Indeed, you have your expectations and guidelines concerning research, while organizations, leaders, and employees may hold very different beliefs. An example might be when a researcher collaborates with an organization to develop a new measure of integrity using employee participants. The researcher may see it as selecting the most appropriate future job candidates. Alternatively, management may perceive it as a way, unbeknownst to employees, to weed out current employees who may be stealing. The researcher may argue that using research results violates participants' confidentiality. At the same time, management may counter that it will benefit the organization's bottom line to identify and terminate dishonest individuals. Thus, it is recommended that you clearly define your role when doing research in field settings and openly and honestly address conflicts between ethical norms with the organization before conducting the research. For example, have you been hired as a consultant by the organization's top leadership team?

Other ethical concerns revolve around the participants' rights that we discussed earlier. Participants' rights may be violated in organizational settings[42] due to a perception that research participation is simply part of the job. Indeed, some have argued that organizations are coercion systems, making it challenging to protect participants' rights as delineated by research ethics guidelines.[43] Thus, participants may feel pressured to participate in research studies sponsored

TABLE 2.3 ■ Summary of Special Considerations for Conducting Ethical Research in Field Settings

Ethical Due Diligence
• Clearly define your role when doing research in field settings
• Openly and honestly address conflicts between ethical norms with the organization before conducting the research
• Ensure the well-being of research participants (*committed-to-participant* approach)
• Follow applicable ethics codes and make it known to the organization that you will not violate ethical principles

by their employers.[44] In addition, you may not have sufficient control over the research to guarantee the ethical treatment of participants. Nevertheless, you have an ethical obligation to ensure the well-being of research participants in all settings. This is called a **committed-to-participant approach**, exemplified in a study examining the effects of different coping methods on diastolic blood pressure.[45] This study informed participants engaging in coping strategies likely to lead to high blood pressure about the risks of this behavior and recommended appropriate lifestyle changes. Thus, the researchers collected data to further their study aim, provided health improvement tools to participants, and created opportunities for organizations to benefit from healthier employees.

In sum, if organizations request that you act unethically, you must follow applicable ethics codes. You should make this known to the organization and reach a compromise that does not involve a violation of ethical principles.

HOW TO REPORT RESEARCH RESULTS ETHICALLY

Ethical considerations do not end with collecting data. This section discusses how to avoid ethical violations that can occur while writing up the research findings and submitting papers for publication. These violations include misrepresenting results, **censoring**, **plagiarism**, **unjustified authorship credit**, and refusing to provide data for replication. Table 2.4 contains a summary of the recommendations described next.

TABLE 2.4 ■ Summary of Recommendations for Reporting Research Results Ethically

Ethical Due Diligence
● Avoid ethical violations resulting from reporting research results unethically
Reporting Violations to Avoid
Misrepresentation of Research Results
● Honestly and accurately report results and not falsify, distort, or omit findings
● Never record data without being blind to the hypotheses or participants' treatment condition
● Avoid errors in data entry or data analyses and take immediate action to correct them
Censoring
● Honestly report data that contradict previous research, hypotheses, or beliefs
● Provide detailed reports of your methodology, data analyses, findings, and study limitations
Plagiarism and Authorship (Mis)Credit
● Avoid taking credit for work that is not yours (i.e., plagiarism)
● Prevent taking more credit than deserved (i.e., authorship order)
● Avoid self-plagiarism (making minor modifications to studies previously published)
Data Sharing
● Provide data when is requested by other researchers for reproducibility and replication

Misrepresentation of Research Results

To avoid misrepresenting research results, you must honestly and accurately report results and not falsify, distort, or omit findings. A classic case of manufacturing research results was Sir Cyril Burt's research on the inheritance of intelligence. See the Example box "Misrepresentation of Research Results: The Case of Sir Cyril Burt."

Example: Misrepresentation of Research Results: The Case of Sir Cyril Burt

Sir Cyril Burt conducted studies on twins and found substantial evidence of genetic influences on intelligence.[46] His findings were not questioned, but after he died in 1971, it was discovered that much of his data had been fabricated. In addition, co-authors listed in various research studies were fictitious. Although severe cases like this one appear to be the exception rather than the norm, falsifying data can have serious detrimental effects by providing false information as the basis for subsequent research. Less extreme forms of misrepresentation may include recording data without being blind to the hypotheses or participants' treatment conditions, which can lead to researcher bias. Other misrepresentations may occur due to errors in data entry or data analyses.[47] If honest data entry or analysis mistakes are found, immediate steps should be taken to correct them. For example, the website www.retractionwatch.org documents the many published articles that have been withdrawn due to errors and ethical violations, many of which were produced intentionally.

Censoring

Censoring data is especially prevalent when results reflect negatively on the organizations where the data were collected and that same organization has hired a researcher. However, failing to report data contradicting previous research, hypotheses, or beliefs is unethical.[48] In addition, you should provide detailed reports of your methodology, data analyses, findings, and study limitations so that other researchers, and research consumers (e.g., managers and policy-makers), can evaluate the research and determine its value and applicability. Likewise, not reporting findings of unpublished data, especially if the methods were sound, could be considered unethical because these findings may provide useful information.

Plagiarism and Authorship (Mis)Credit

You must avoid taking credit for work that is not yours (i.e., plagiarism) or taking more credit than deserved (i.e., first authorship when your contributions to a project were minimal). Plagiarism involves putting one's name on another's work, using a large part of someone else's work without citing it, or claiming others' ideas as one's own.[49] All these acts are considered stealing. The work of others must be acknowledged through direct quotations or citations so that readers understand the source of the information.[50] In addition, you should avoid self-plagiarism. This refers to making minor modifications to previously published studies to publish them again in another journal, which is considered unacceptable if data are published as original. However, data can be republished by another source if a previous publication is acknowledged. It is important to avoid self-plagiarism because this practice gives the impression that more evidence is available on a particular topic or view than there is.

Determining **authorship** credit can involve ethical concerns, primarily since most universities evaluate researchers in terms of their publications to assess a scholar's credibility, status, employment, promotions, and tenure.[51] Indeed, the American Psychological Association (APA) Ethics Committee stated that the most common problem regarding research was the determination of authorship credit.[52] The APA guidelines state that authorship credit should only be given to those who substantially contribute to the research effort. Thus, contributions involving conceptualization of the research idea, research design, data analysis, interpretation, and writing up the study would deserve credit. Seniority, status, power, and routine tasks such as data entry or typing would not, although minor contributions should be noted in a footnote or the acknowledgments section. Further, contributions made in the context of paid employment (e.g., research assistant) may deserve authorship credit if the contributions are substantial.[53]

After determining who should be included as an author, it is necessary to consider which name should come first. This person should have contributed the most in ideas, design, analyses, writing, and so forth. Significantly, this decision should be based on actual contributions and not merely reflect status or power.

Power differentials between authors are particularly salient between faculty and students. Unfortunately, studies on ethical concerns in research have found that authorship issues are increasingly salient among research projects by faculty and students.[54] Moreover, the APA ethical guidelines assert that a student should be named the first author of any article based mostly on their thesis or dissertation. However, some authors have pointed out instances where this may need to be revised.[55] Ethical issues arise when faculty or higher-status individuals take first-author credit they have yet to earn and when students are given unearned credit.[56] Giving students or others undeserved research credit misrepresents expertise and abilities and gives them an unfair advantage in employment, promotions, and tenure. A study using hypothetical vignettes involving authorship decisions found that faculty members were likelier than students to give authorship credit to the student in the scenario.[57]

Researchers should use the following steps to prevent ethical problems regarding authorship credit. First, the order of authorship, as well as the contributions expected of each, should be discussed early in the project.[58] Note that early agreements about authorship may need to be revised as the project progresses, responsibilities shift, or obligations still need to be fulfilled (e.g., missed deadlines). Initial disagreements on authorship order can be addressed using a point system in which more critical contributions are assigned more points. Authorship decisions follow point totals in this procedure, where the researcher with the most points becomes the first author.[59] Finally, third parties should be consulted if an agreement cannot be reached.[60]

Data Sharing

A final ethical issue regarding reporting research results involves the retention and provision of data. Replication protects against dishonesty, and data should be provided when other researchers request them for reproducibility and replication. Of course, as the earlier content of this chapter suggests, rigorous data take much work to come by. But, researchers are not obligated to share their data sets so others can conduct new studies. If a researcher requests existing data to replicate the study, the data should not be used for conducting new research on existing data. Exceptions to providing data are made if confidentiality would be violated or if data are owned by the organization in which they were collected. Most professional organizations and journals recommend that data be retained for five years after publication.

Example: Data Sharing

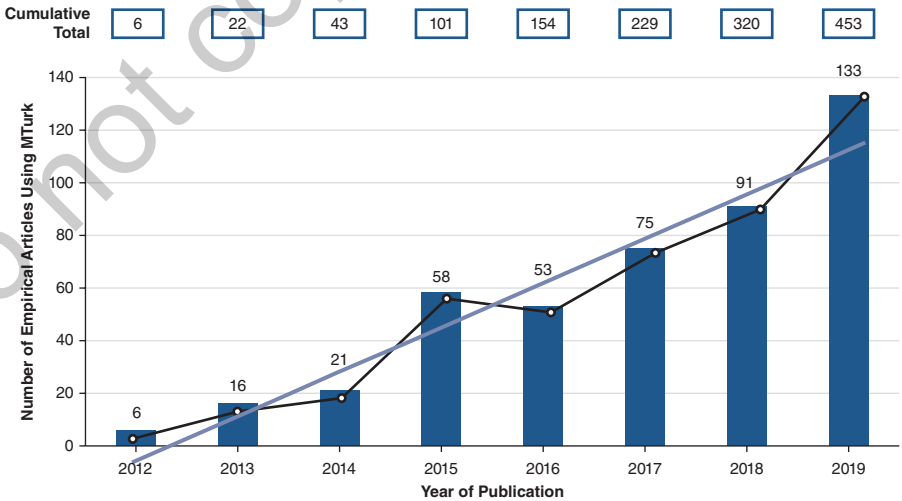
Unfortunately, numerous social and behavioral science researchers do not comply with the data-sharing principle. For example, a study reviewed articles on assessing test fairness published over three decades in leading management and industrial/organizational psychology journals. As part of their review, these researchers contacted 88 authors to solicit descriptive statistic information not reported in their articles. Of these, 65 responded saying that they did not have access to the source data, four indicated that they still possessed the source data but could not access them for various reasons (e.g., the senior author was on sabbatical leave), three authors indicated that they still possessed the source data but did not share the requested information, and 12 did not respond in any manner to three email requests sent to valid and current addresses. In short, fewer than five percent had access to their data and were willing to share descriptive statistic information not published in their original articles.[61]

APPLIED METHODS: ETHICAL RESEARCH CASE STUDY – THE USE OF MTURK

While we have described students and volunteers as the most common samples, a growing group is becoming the most used in social and behavioral science research: MTurk. The following case study examines ethical challenges associated with this sample population.

MTurk is a crowdsourcing website that hosts a wide-ranging array of digital tasks, uploaded by entities such as researchers and employers, for users to complete in exchange for monetary compensation. Web-based research using Amazon's Mechanical Turk (MTurk) has increased tenfold over the last decade, making it the most frequently used online data collection method.[62] For example, as shown in Figure 2.1, in management research alone, the use of MTurk has increased by over 2,117% in recent years, rising from 6 papers to 133 between 2012 – 2019.

FIGURE 2.1 ■ Changes in the Number of Empirical Articles Published in Human Resource Management and Organizational Behavior (HRM/OB) Journals (2005–2019) That Used Mechanical Turk (MTurk) to Collect Data to Test Hypotheses or Validate Scales



Source: Adapted from Aguinis, Villamor, & Ramani (2021, Appendix C). Reproduced with permission.

The reaction among researchers is a mixture of excitement and concern. There is excitement about the practical and logistical benefits of using MTurk, but despite its popularity, concerns call into question the ethicality of research based on MTurk.[63] The ethical challenges are (1) self-misrepresentation, (2) non-naiveté, (3) growth of MTurker communities, and (4) perceived researcher unfairness. Table 2.5 describes these four challenges in more detail.

So, what can you do to ensure that your research is based on the highest ethical standards when using MTurk or other online platforms? Table 2.6 summarizes the recommendations described below. While some of these best practices also apply to non-MTurk studies (online and in-person research), Table 2.6 's checklist focuses on mitigating ethical concerns when using MTurk.

Planning

Decide Qualifications for Screening MTurkers

Formulating study-appropriate protocols to screen MTurkers helps address ethical threats posed by self-misrepresentation, and MTurker non-naiveté. First, to address self-misrepresentation, there is a need to be explicit about the qualifications (e.g., age, experience, race) relevant to the study. Then, rather than explicitly listing desired qualifications, which can motivate self-misrepresentation, one can evaluate MTurkers using a screener study: pay everyone who participates, eliminate those who do not match desired criteria, and invite those who meet the qualifications/pass the screener to participate in the focal study.[64] This technique is beneficial when attempting to recruit unique populations (e.g., participants who identify as LGBTQ+[65]). Second, regarding MTurker non-naiveté, one must decide whether to use only highly qualified MTurkers (i.e., "Master Workers") who have considerable experience as an MTurker and therefore greater familiarity with common manipulations, attention check techniques, and experimental tasks and questions.[66] Alternatively, one can employ screening questions to gauge MTurker's familiarity with the research participant, **stimuli**, and, if applicable, manipulations.

TABLE 2.5 ■ Ethical Challenges in Conducting Research Using Amazon Mechanical Turk (MTurk)

Ethical Challenge	Description
1. Self-misrepresentation	MTurkers may misrepresent self-reported demographic, personality, and other characteristics to meet a study's eligibility criteria. Estimates of the percentage of MTurkers who engage in such practices range from 10-13% to 24%-83%. The most misrepresented characteristics are income (38.2%), education (31.3%), age (22.6%), family status (14.8%), and gender (6.6%).
2. MTurker non-naiveté	MTurk's software does not track participant exposure to studies that examine particular topics or that use the same stimuli or manipulation. However, 10% of MTurkers account for over 40% of completed studies, and many "specialize" in studies that examine specific topics or are conducted by the same researchers. Many MTurkers are familiar with experimental settings and tasks or research materials, which can, on average, reduce effect size estimates by up to 40%.
3. Growth of MTurker communities	61% of MTurkers interact with other participants regarding their experience. Thus, MTurkers often know a study's purpose or the manipulations used.
4. Perceived researcher unfairness	In addition to concerns about the fairness of procedures used to make compensation decisions, ethical issues that cause MTurkers to perceive researchers as unfair include a lack of a process to communicate with researchers, unavailability of disability access features, and inaccurately stated time requirements. Furthermore, participants who feel treated unfairly can share their experiences in MTurker communities, leading to punitive actions such as a boycott of subsequent studies by that researcher.

Source: Adapted from Aguinis, Villamor, & Ramani (2021). Reproduced with permission.

TABLE 2.6 ■ Best-Practice Recommendations for Ensuring Ethical Research When Using Amazon Mechanical Turk (MTurk)

Stage of Study	Recommendation	Question(s) to be Addressed (Do you...)	Ethical Challenges from Table 2.5 Addressed by Recommendation
Planning	**1.** Decide qualifications used to screen MTurkers	• ... decide the qualifications (e.g., age, experience, race) relevant to the study? • ... evaluate MTurkers using a screener study, and eliminate those who do not match desired criteria before allowing the MTurker to participate in the focal study? • ... determine a priori if they will only consider MTurkers from native-English-speaking countries (based on their IP addresses) or establish measurement equivalence across native and non-native English speakers? • ... decide if they will only use highly qualified MTurkers (i.e., "Master Workers") or employ screening questions to gauge MTurker familiarity with the research participant, stimuli, and, if applicable, manipulations?	• Self-misrepresentation • MTurker non-naiveté
	2. Formulate compensation rules	• ... pay U.S. minimum wage (approx. $7.25 per hour) when drawing on U.S. samples? • ... consider criteria (if any) used to refuse payment to MTurkers and explain it in the consent form? • ... use a consent form including details on compensation rules (see pages 30–31 for a customizable template)?	• Perceived researcher unfairness
	3. Design an ethical survey to gather responses	• ... require MTurkers to complete an informed consent form, including a "Captcha" verification? • ... require MTurkers to provide their MTurk ID and maintain a reference database of past participants? • ... use at least two attention checks? • ... include a qualitative open-ended question? • ... include "quit study" and "contact researcher" options on each study page?	• Self-misrepresentation • Perceived researcher unfairness
	4. Craft the MTurk post or HIT (i.e., "Human Intelligence Task")	• ... provide a detailed description of the study, accurate estimated time commitment, what MTurkers will be asked to do, and specify compensation rules? • ... avoid cues that might provide MTurkers with signals about the study's aims or that might motivate MTurkers to further engage in self-misrepresentation?	• Self-misrepresentation

Stage of Study	Recommendation	Question(s) to be Addressed (Do you...)	Ethical Challenges from Table 2.5 Addressed by Recommendation
Execution	**5.** Launch the study, monitor responses, and respond to concerns	● ... conduct a pilot test of the study that includes an open-ended question requesting feedback, with a minimum of 10 to 30 participants? ● ... monitor MTurker communities to gauge MTurkers reactions to the study? ● ... respond promptly to any questions or concerns raised by participants?	● Growth of MTurker communities ● Perceived researcher unfairness
	6. Screen data	● ... screen data promptly using at least two or more tools (e.g., MTurker self-reports of the response effort, answers to attention checks, response patterns and response times, statistical tools that evaluate inter-item correlations and respondent consistency within each measure and help identify potential outliers, IP address, and open qualitative question) to estimate likely percentage of unusable responses? ● ... adjust the number of potential participants to achieve desired sample size?	● Growth of MTurker communities
	7. Approve or deny compensation for completed responses	● ... approve or deny compensation for completed responses within 24 to 48 hours of the MTurker completing the study? ● ... specify the reason for rejecting compensation?	● Perceived researcher unfairness

Source: Adapted from Aguinis, Villamor, & Ramani (2021). Reproduced with permission.

Formulate Compensation Rules

Clear rules regarding compensation help address the threat posed by the challenge of perceived researcher unfairness (see Table 2.5). Higher MTurker pay is linked to better performance on research tasks.[67] The recommendation is to pay a fair wage concerning the tasks required of the MTurker,[68] typically the minimum wage, when drawing on samples from the United States (U.S.).[69] In addition, you should decide a priori what criteria (if any) will be used to refuse payment to MTurkers,[70] and the payment schedule. Moreover, establishing codes of conduct, monitoring procedures, and penalties for fraudulent or untruthful reporting may help deter deceitful behavior, as levying economic penalties for violations can affect MTurkers' honesty.[71] These norms should be made explicit and shared with participants in the consent form. Recall that this chapter includes a template you can adapt for your studies.

Design an Ethical Survey to Gather Responses

You can follow the next steps to design an MTurk survey that complies with ethical standards and addresses the self-misrepresentation and perceived researcher unfairness challenges.

MTurkers Should Complete an Informed Consent Form.[72] In addition to a consent form (see the template on pages 30-31), researchers should include a "**CAPTCHA**" verification at the beginning of the survey to thwart web robots—a "Completely Automated Public Turing Test to tell Computers and Humans Apart" that discerns human responses from web robots.[73] This is done by having respondents correctly answer a set of challenges (e.g., identify pictures and type in words) to proceed. In addition, it is useful to include procedures designed to capture an MTurkers' **IP address** and use features that prevent the same MTurker from completing the study more than once (i.e., avoiding "ballot box stuffing").[74]

Require MTurkers' IDs. It is helpful to require MTurkers to provide your MTurk ID and maintain a reference database of past participants. This helps identify MTurkers who attempt self-misrepresentation to qualify for a particular study.[75]

Use Attention Checks. It is helpful to use **attention checks**. While more is preferable, a minimum of two such checks should be employed.[76] Types of attention checks include instructed items that direct MTurkers to complete or abstain from a particular action, bogus items that ask MTurkers to answer obvious or ridiculous questions, self-reports of effort, and questions on which all or almost all respondents should provide the same response.[77] Specifically, for MTurk, it is necessary to include at least one open-ended question as an attention check to help address MTurker's inattention and vulnerability to web robots.[78] Using such items does not negatively affect data quality as long as items used are developed explicitly for this purpose, as opposed to being drawn from other sources or created ad-hoc.[79]

Include Options to "Quit Study" and "Contact Researcher."Including these options on each study page (as applicable) allows MTurkers to exit the study or ask questions, thereby addressing the threat posed by the challenge of perceived researcher unfairness.[80]

Craft the MTurk task or HIT (i.e., "Human Intelligence Task")

The last action of the planning stage is designing the **HIT** or job posting that MTurkers will see. Because one of the main complaints by MTurkers is that the HIT description and instructions need to be clarified,[81] the description should include details about the study. For example, details should include an accurate estimated time commitment, what MTurkers will be asked to do, and compensation rules.[82] At the same time, you must be careful to avoid cues that might provide MTurkers with signals about the study's aims, or motivate MTurkers to engage in self-misrepresentation.

Execution

Launch the Study, Monitor Responses, and Respond to Concerns

Pilot tests can be useful in refining the study before it goes out on a large scale. It is useful to administer a pilot test to a minimum of 10 to 30 participants, including an open-ended question requesting feedback.[83] Their feedback and responses will help you to ensure study instructions are clear and to identify and rectify potential data quality or programming problems before the data are collected. Once the study is launched, you can monitor MTurker communities (e.g., Turker Nation, MTurk Crowd) to gauge any reactions, check if pertinent information is being shared, and respond promptly to any questions or concerns raised by participants.[84] Together, these steps help address the threat posed by the growth of MTurker communities and perceived researcher unfairness.

Screen Data

Screening MTurk data promptly helps estimate the likely percentage of unusable responses. This information informs the number of potential participants needed to achieve the required sample size. Unusable responses can usually be attributed to careless or insufficient effort responding (IER) or fraudulent and duplicate efforts. Available tools can be used to screen data for careless or IER. These include MTurker self-reports of effort, such as self-reported carelessness, rushed responding, skipping instructions, answers to attention checks, response times, and statistical tools that analyze answer choice response patterns.[85] Let's go through each in turn.

MTurkers who score higher on self-reports of response effort or fail to comply with directed questions are likelier to engage in careless responding or IER.[86] Thus, participant responses can be compared to those of other MTurkers before deciding to include or exclude them. When evaluating response times, a best practice is to exclude participants

who complete the task in less than one or two seconds per item. Finally, the most effective statistical tools that can be employed include the **long-string index** (in which participant response patterns in choosing the same response for multiple items are analyzed for frequency and length, and a threshold is developed based on the data to indicate potentially invalid responses[87]) and **within-session response consistency** (which calculates the level of similarity in a participant's responses to items they have rated twice, and excludes responses that score below 0.25[88]). At least two of the recommendations should be used to screen data.[89]

Regarding fraudulent or duplicate efforts, the most commonly used method is to examine IP addresses and delete duplicates. However, the growing popularity of virtual private servers (VPS) that conceal the IP address of the device used to access the MTurk study makes it harder to rely solely on this screening procedure. Furthermore, if multiple MTurkers use the same device, their IP addresses will be the same, which can cause you to omit legitimate responses mistakenly. Accordingly, in addition to employing IP address screening (e.g., using software packages for R and Stata[90]), it is useful to examine the answer to the open-ended attention check question included in the study[91] before deciding to include or omit a particular response. Overall, these steps help address ethical threats posed by the challenges of the growth of MTurk communities.

Approve or Deny Compensation for Completed Responses

Based on data screening and using a priori rules, one can approve or deny compensation within 24 to 48 hours of the MTurker completing the study.[92] You can also specify the reason for rejecting compensation.[93] These steps help address the threat posed by perceived researcher unfairness.

HOW TO ENFORCE ETHICAL RESEARCH

Ethical guidelines regarding research are provided by professional organizations,[94] various state and federal laws, and state licensing boards. Yet, misconduct still occurs despite efforts to enforce ethical guidelines by IRBs, peers, and ethics committees in professional organizations and universities. So, this section first defines ethical misconduct and examines the prevalence of this behavior. It then discusses ways to prevent unethical treatment of participants, deter scientific misconduct, and resolve ethical complaints that arise in research.

Definition and Prevalence of Research Misconduct

As described earlier, ethical misconduct can occur in the planning, participant recruitment and selection, execution, and reporting stages of the research process. However, researchers have typically focused on studying ethical misconduct during the reporting stage. This is often labeled **scientific misconduct**.

Most scientific misconduct can be attributed to the intense pressure many researchers feel to have to find notable results that they can publish—the "publish or perish" pressures of academia given that publications are usually associated with important rewards (e.g., receiving an offer for a faculty position after earning a doctorate, receiving a promotion from assistant to associate and then to full professor).[95] Charles Babbage distinguished between three types of scientific misconduct: trimming, cooking, and forging.[96] **Trimming** is how much you edit or select data to eliminate inconsistent findings (e.g., omitting outliers and data dropping). **Cooking (the data)** refers to altering it to support researchers' hypotheses or expected outcomes. Finally, forging involves

falsifying data instead of collecting data. These are in addition to the other types of scientific misconduct that have already been mentioned throughout this chapter (e.g., plagiarism, censoring conflicting data). These instances of misconduct, especially forging, have severe implications for science. Falsified research that enters the literature base, influences subsequent research, and is applied to organizational settings can cause irreparable harm because empirical findings did not substantiate the applications. Thus, it is critical to take steps to prevent and handle cases of scientific misconduct.

Example: Prevalence of Research Misconduct

Although extreme cases of misconduct may be rare, some do occur. For example, a survey of doctorate students and faculty in chemistry, microbiology, engineering, and sociology revealed that 43 percent of the students and 50 percent of the faculty had direct knowledge of acts of scientific misconduct.[97] These included falsifying results, plagiarism, withholding research results from competitors, and unjustified authorship credit. Unfortunately, the survey also found that 53 percent of students and 26 percent of faculty were unlikely to report or address the misconduct because they feared the consequences of doing so. This finding was supported by a survey of interns and faculty, which found that fear of retaliation was the primary reason for not reporting ethical violations.[98] Finally, researchers have noted that researchers' hesitancy in reporting ethical violations more generally (not just scientific misconduct) might be due to their close ties with colleagues and institutions; acting against them may result in negative repercussions.[99] However, they noted that this hesitancy in reporting could also result from simply lacking an understanding of ethical codes of conduct.

Preventing Misconduct

So, what can you do to prevent misconduct and not be involved in these scandals? There are several precautions that you can take. Here are four of the most critical ones.

Familiarize Yourself with Codes of Ethics

All researchers involved in a study must familiarize themselves with ethics codes and the guidelines that apply to their specific area of research. As mentioned at the beginning of this chapter, ignorance is not a legitimate excuse for ethical violations. Thus, you should periodically read ethical guidelines and understand how they apply to your research.

Obtain IRB Approval

IRBs assess potential risks and ethical concerns in human participant research. They also ensure that researchers follow procedures such as using informed consent to protect research participants' rights.[100] Thus, IRBs aim to guarantee that the potential benefits of research to participants, society, and science outweigh any risks or harm participants may incur. All institutions receiving federal funding for research (e.g., universities) must establish IRBs, and all research, including human participants, must pass your scrutiny. However, research may be exempt from IRB approval if it (a) examines certain educational practices, (b) uses tests, surveys, or interviews of a non-sensitive nature, (c) observes public behavior, or (d) analyzes archival data. Further, an

expedited review is possible for research entailing minimal risk to participants. When evaluating research for approval, IRBs assess whether risks have been minimized, benefits outweigh the risks to participants, participants are selected, and informed consent will be obtained and documented. Despite their laudable purpose, IRBs have sustained criticism due to perceptions of inconsistency across institutions and overemphasis on policing researchers rather than protecting participants' rights.[101]

Participate in Replication Projects

A third mechanism to prevent ethical misconduct is through the replication of research. Replication determines whether previous findings can be duplicated and helps uncover errors and misconduct.[102] This is meant to deter unethical behavior in research. Unfortunately, replication is not common. Replication studies are not likely to be published, and onerous financial requirements are associated with large-scale replications. Also, many factors besides misconduct could explain the discrepant findings. Therefore, replication is not presently as effective in deterring unethicality as it could be.

Secure Feedback from an Expert in Your Area of Research

Peer review is critical to research and guards against error and misconduct. Peer review is just what it sounds like: fellow research experts review the work before publication. They check for quality in the theory, methodology, data analysis, conclusions, and overall paper. It is a necessary step in the publication process but can also be utilized early on. Journal reviewers often anonymously provide feedback on the research while screening for errors and ethical violations. While you will always get feedback from reviewers, if you know an expert in your area, you can also ask for feedback on each research step to ensure that you follow all the ethical standards that may apply to your research. In this case, the review process would not need to be anonymous.

The journal review process is typically anonymous to maintain objectivity in the knowledge development process. Authors are not told who reviews their papers, so relational tensions do not hinder using feedback effectively. Similarly, the author's identity is not disclosed to reviewers to reduce reviewer bias. If a reviewer knows the identity of the paper's authors, merely having this knowledge may influence how they interpret the work. Other steps to reduce potential bias include having multiple reviewers for one paper. This creates a platform for considering more than one point of view when evaluating a study. As a result, the feedback provided to authors is typically more comprehensive, and decisions about their work are made from multiple points of view. The final decision about whether the work will be accepted falls to the editor, who considers each reviewer's feedback and any subsequent revisions that authors have applied to their manuscripts when resubmitting the paper. Thus, between the authors' anonymity, having multiple reviewers, and leaving the final decision to the journal's editor, several mechanisms are in place with the peer-reviewed publication that helps reduce reviewer bias.

Although peer review is supposed to reduce ethical misconduct from the authors, it can often produce additional ethical concerns. For instance, despite the anonymity, reviewers can sometimes discern whose work they are reading and are more likely to accept work submitted by well-known names in the field. And then, there are intentional violations of ethicality: reviewers may steal ideas from studies they review, use their findings before the study is published, or unduly criticize work from authors researching similar topics to prevent them from publishing. This allows the reviewer to publish their work first and beat their peers for research funding.[103]

HOW TO RESOLVE ETHICS COMPLAINTS

The vulnerability of research to ethical violations may be disheartening, but we have discussed ways to prevent error and misconduct. Now we will discuss ways to address it once it has occurred. The first step is informal resolution, which does not involve formal procedures.[104] This should be used for minor violations and in situations where misconduct results from a lack of knowledge or sensitivity,[105] and it should not be used when serious ethical violations have occurred. Suppose a successful informal resolution cannot be achieved. In that case, the violation should be reported to the Ethics Committee or your relevant professional organization (e.g., American Psychological Association, American Sociological Association, Academy of Management, American Educational Research Association; International Political Science Association; National Association of Social Workers, National Economic Association, etc.). Those accused of ethical violations must cooperate fully with the agency reviewing the complaint. They will be asked to provide timely communication and adhere to any sanctions imposed for violations. The agency reviews the claim and sanctions those found guilty of violating ethical standards. Remember that frivolous complaints with the sole intention of harming another do not protect the public and are considered unethical.

Agencies can only hold accountable those who are members of the agency. But, both members and non-members of professional organizations can file complaints to its ethics committee. The committee may also file a complaint (i.e., ***sua sponte*** complaint). After the committee receives the complaint, the first step is typically for the Chair of the Ethics Committee to review it. They will determine whether there is sufficient evidence of a violation. If there is no cause for investigation, the complaint is dismissed. If evidence shows the alleged actions occurred, a formal case is opened, the investigation begins, and the accused cannot resign from the organization to avoid the charges. The accused is sent a charge letter and is given a chance to review and rebut the evidence provided against them.

A committee can impose one of several sanctions in response to ethical violations of differing severity. A reprimand is sufficient for minimal violations unlikely to harm others or the field. Censure is used when the violation is likely to cause some harm to others. It entails informing the violator that they committed an ethical violation and warning them that they are prohibited from making further violations.[106] The offenders are expelled from the organization for violations likely to cause substantial harm (although there are very few expulsions each year[107]). As an alternative to expulsion, the committee may offer stipulated resignation. The violator is allowed to resign on certain conditions. The violator is allowed to resign on certain conditions – for example, that the violation must be disclosed publicly for a certain period during which the violator is not allowed to reapply for membership. Further, stipulated resignation may require violators to be supervised, attend educational or training programs, seek treatment, or be placed on probation.

APPLIED METHODS: CASE STUDY – DEALING WITH ETHICAL DILEMMAS WHEN USING DECEPTION

Now let's explore and contextualize the ethical considerations we learned by considering a controversial method, the bogus pipeline.

The bogus pipeline (BPL) is a clever methodology[108] to decrease socially desirable responses in self-reported behaviors and opinions. Researchers show participants the BPL,

a seemingly complex machine with several systems and electronic components. They tell the participants it is an infallible lie detector. Of course, the device is fake and cannot detect lies, but the researchers invest considerable resources in seemingly sophisticated equipment and time-consuming procedures to convince study participants otherwise. In effect, participants are deceived into thinking they are facing an authentic, sophisticated, and accurate lie detector, which may motivate them to provide more honest self-reports on sensitive research (e.g., racism and sexism,[109] cigarette[110] and marijuana[111] smoking, and alcohol consumption[112]).

Researchers have been enthusiastic about the effectiveness of the BPL procedure in collecting sensitive information. Meta-analytic reviews of the BPL literature[113] reflect an increased interest in and implementing the BPL. But there are some hesitations, too. First, some questioned the use of the BPL from an ethical standpoint shortly after the technique was introduced.[114] Using the BPL raises ethical issues beyond those present in more typical deception studies[115] in several ways. For example, in more typical deception studies, you may mislead participants by omission.[116] In contrast, using the BPL goes beyond passive concealment of the truth; researchers are actively lying to participants about the purpose of the study and the "lie detector's" nature and effectiveness. Additionally, participants in BPL studies may feel coerced into revealing sensitive personal information, including illegal behaviors. This means the information gathered in studies using the BPL may be self-incriminating, which poses a special threat to participants. Third, if study participants feel coerced into disclosing information they would otherwise avoid for their psychological well-being, they may experience significant distress. For example, participants may suddenly face truths about themselves (e.g., extreme racial prejudice) that they had previously denied to maintain psychological balance.[117] The typical deception research does not raise participants' awareness of these sensitive issues. Fourth, many BPL studies use samples of children instead of college students or adults, and children may be particularly susceptible to psychological harm. Finally, participants in BPL studies may feel coerced into providing the information requested (e.g., alcohol ingestion behavior) and effectively lose the freedom to avoid answering the question.

Given this background about the BPL, use the following debate between two researchers to consider the issues addressed in this chapter about planning, executing, and reporting ethical research.

A: Are there any practical benefits of using the BPL?

B: Certainly—there is a demonstrated need for the BPL, and there are practical benefits too. Due to social desirability, we need self-report information on various behaviors and attitudes that are hard to get information on. Think about things like cigarette smoking, drug, and alcohol consumption, and numerous variables such as racism,[118] interpersonal attraction,[119] and attitude change[120]— we need to know about it, and this information is used for research and interventions. Think about the utilitarian perspective: "good" is whatever produces the most benefit for the greatest number of people. We cannot know their antecedents, consequences, and correlations unless we use measures that capture these behaviors.

A: Of course, I agree that knowledge production is important, but your answer does raise questions about deception. And actually, I am taking a utilitarian perspective, too—except I am thinking of the damage caused to the research profession due to routinely lying to participants. This far outweighs the gains we make in knowledge,[121] mainly because correlations do not constitute strong evidence. So it is not worth giving researchers a reputation for routinely lying to find out interesting information. Plus, the BPL goes beyond the usual types of study deception since it involves lying to study participants about purposes and procedures.

B: That is an interesting comment, but it seems based on speculation. Are there any data showing that BPL procedures damage the profession, indicating how much damage is being done? Also, have you seen the empirical research on deception in general? It suggests that study participants are pretty accepting of deception procedures. They

do not perceive them as aversive, undesirable, or unacceptable.[122] Plus, if any damage resulted from using the BPL (a question that needs to be empirically investigated), participants will likely understand why deception was necessary after proper debriefing.[123] There is evidence to back this up, too. For example, some researchers reported anecdotal data that participants in their BPL study were not distressed after being debriefed.[124] In another study, participants who had participated in a BPL experiment were just as willing to recommend the study to a friend as participants in an experiment with a much milder degree of deception,[125] like reading fake newspaper articles). And still, others said that participants were "amused by the deception!"[126] So I do not think the data available thus far suggest much "damage" done.

A: I am not convinced. Several studies have found that deceived experiment participants show lower trust,[127] lower compliance, and higher negativistic behavior,[128] even in the presence of debriefing procedures. Also, seminal work revealed that debriefing was not as effective as initially thought in mitigating negative attitudes caused by deceptive methodology.[129]

B: Sure, I am familiar with that work. But any damage the BPL might be doing to the profession (as opposed to other deceptive procedures used to conduct research[130]) must be measured and quantified before deciding if the damage is large or small. The truth is that we need to find out whether those results generalize to the BPL. While that is certainly an interesting hypothesis to be tested, it's an interesting question until we gather evidence. On the other hand, the benefit of using the BPL in research *is* empirically supported[131]: The effect size across many studies is almost half a standard deviation! So, we do know that using the BPL yields more veracious self-reports. But, again, this is quantified and empirically tested: there is a benefit to using the BPL.

A: We will get to the benefits issue, but first, can we agree that measuring the damage it may do before using the BPL is necessary? Let's leave it at this: would you want your children to be participants in these procedures? And would you feel comfortable telling your children's elementary school class that your job is to "lie to people so that they tell the truth about smoking"?

B: But think of the lives that can be saved and how much lower healthcare costs would be from not having to treat cancers and other diseases caused by smoking. And beyond that, think of the theories that valid self-reported information on these behaviors and attitudes will allow us to discover! Can some deception outweigh the fact that teenagers may quit smoking, thus preventing future health problems? Can't the potentially harmful effects of using the BPL be mitigated by a good debriefing procedure explaining why deception was needed? These empirical questions could be investigated before we write the procedure off as unethical. Similar studies regarding deception, in general, have been conducted in the past.

A: You're not wrong, but can we at least agree that the BPL should not be used when no demonstrated benefits exist?

B: Absolutely. Using the BPL to detect alcohol drinking and marijuana smoking is ineffective[132] if these behaviors are not considered socially undesirable. So, in this case, there is no reason why the BPL should yield more valid self-reports than regular paper-and-pencil questionnaires. But, again, you are correct that empirical evidence indicates no benefits to using the BPL in some areas, and in those cases, I agree that it does not make sense to use it. Regular self-reports are just as valid here.

A: Okay, so let me ask you this: given what we know about using the BPL in detecting smoking behavior, why not use self-reports without the BPL in these studies? We can predict with some degree of accuracy what the difference in scores will be from using self-reports alone versus self-reports accompanied by the BPL. You could add or multiply the obtained results by a constant. This would effectively avoid the ethical disadvantages.

B: It is an interesting idea, but we can only use this adjustment for aggregate data. For example, we could measure self-reported prejudice and then use an adjustment factor like the one you described to compute the number of respondents the BPL would have classified as "prejudiced." The problem is that we cannot use this to correct individual scores. So, it is a good solution, and we could utilize it in some areas, such as smoking. If we are interested in the number of smokers in a specific group (such as a high school), we could use self-report measures alone, make the appropriate adjustment, and then decide whether the number of smokers is large enough to warrant an intervention program. On the other hand, we cannot use this adjustment for further research because correlations are informative when examining individual scores on some socially undesirable variable with their scores on other variables. This would require individually "corrected" scores, which are unavailable with the method you describe.

A: Hmm. Okay, back to basic research. Your statements favoring the BPL assume that getting undistorted data about particular behaviors and attitudes is important. But is the juice worth the squeeze, so to speak? The value of pure information relative to the costs may not be worth it if we offer potentially ineffective treatment to smokers who might refuse. I am going to use a "slippery slope" argument here. Suppose the use of the BPL and deception, in general, continues. In that case, we will be unable to find the causes and correlates of anything because people will not trust researchers enough to provide good data.[133]

B: I see your slippery slope argument, and I raise a repeat answer: whether participants distrust research due to the BPL has yet to be specifically tested.

A: Since you believe that conducting more studies seems to be the solution for everything, let's do a study comparing "bogus information" with "real information." Given that we can get some of this information using "real lie detectors," such as biochemical measures like the number of carbon monoxide particles in saliva, we can compare BPL self-reports with the biochemical indicators. Of course, tests are imperfect, but they are more ethical than deception-based self-reports.

B: A review of methods to detect smoking behavior described several imperfect biological markers available, such as carbon monoxide and thiocyanate. However—and again, I am drawing on a utilitarian perspective—there are two arguments against using biochemical indicators. First, the BPL is less expensive to administer than biochemical markers. While biochemical markers like carbon monoxide can be assessed by collecting expired air samples from everyone, and thiocyanate can be measured by collecting saliva samples, these procedures require specialized equipment. Second and more importantly, you may use these indicators to (imperfectly) measure drug use, but there are no such things as biochemical markers to measure attitudes and prejudice. If these biological markers existed, years of research on measuring attitudes could have been spared!

Summary and Conclusion

B: We have covered much ground. We can summarize our basic positions now. First, I stand by the belief that the BPL can and should be used unless there are clear, empirically-based risks that outweigh the procedure's benefits.

A: And we should start with the assumption that the BPL procedure is inherently problematic because of ethical principles, including veracity, fidelity, privacy, and respect for autonomy. The BPL poses several ethical issues beyond more typical studies using deception. We didn't have a chance to review them before, so let me list them now. In BPL studies, (a) experimenters actively lie to participants, (b) the information

gathered is personal and often self-incriminating, (c) participants could be forced to recognize truths about themselves (like prejudice) that may be psychologically destabilizing, (d) samples usually include children, and (e) participants effectively lose the ability to withdraw voluntarily from the experiment (by actions like providing false information). So, these unique ethical issues come with using the BPL and should not be used unless imperative. And this imperative need would have to be fully justified.

B: Yes, I appreciate you bringing all those to the fore before we wrap up. My arguments rest on some empirical assumptions, and we have agreed that more research is necessary before we can continue a productive discussion about these concerns. To recap, research needs to address several questions, including (a) Does using the BPL cause damage to the profession? (b) Can the harmful effects of the BPL be mitigated by debriefing? and (c) Will detecting smokers and offering them treatment increase the likelihood that they will accept treatment, or that they would benefit from it? Some of these questions have been posed regarding deception in general[134] rather than regarding the BPL.

A: Agreed, and I would add to that list a couple of additional questions: (a) Has the BPL led to any theoretical advances that might outweigh even minimal risks? and (b) What programs have been developed, or how many people have stopped smoking, as a result of using the BPL?

B: So, we agree that more research is necessary.

A: Yes, but let's acknowledge that more empirical data will not magically solve our disagreements. There are fundamental value questions that underlie our positions. So, even if we obtain information that the BPL has minimal costs, I would still say that my value on autonomy and privacy is greater than the value of new theory. And I am guessing you would disagree.

B: Correct, I would. I might be more willing to infringe on the rights of participants because I place more value on knowledge than on certain amounts and types of potential participant harm.

A: We will have to agree to disagree, then. All I would ask is that as we do the necessary research, we stay honest about our values and obligations. That is the only way we are going to move forward.

B: Indeed. Continuing debate from both utilitarian and deontological perspectives will create a better outcome and therefore is necessary from a utilitarian perspective!

A: I see what you did there. From a deontological perspective, an honest debate is also the right thing to do. These questions are not easily resolved, but I am glad we have begun the discussion.

We could summarize this debate in the following way. From most deontological (duty-based) perspectives, lying to study participants is wrong and never ethically justified. From this perspective, the ethics of the BPL and other deceptive techniques rest on the outcome of philosophical debates. This is outside the scope of much applied social and behavioral science. However, from a utilitarian (consequence-based) perspective, ethicality is determined by empirical consideration based on a cost-benefit analysis that determines whether the potential benefits may outweigh the potentially detrimental consequences of using the BPL. To conduct such an analysis, empirical evidence must be gathered regarding the benefits and costs of using the BPL.

This chapter has provided the tools to apply ethical standards in designing, carrying out, and reporting your research. Chapter 3 will focus on designing and implementing research that makes a sound theoretical contribution.

DISCUSSION QUESTIONS

1. Why should you care about ethical research?
2. What are the differences between the two research philosophies (utilitarian perspective and deontological approach)?
3. Can you explain the differences among research participant types and what ethical standards you should consider when recruiting and selecting each type of participant?
4. How can you ensure that you respect all participants' rights (e.g., right to informed consent, right to privacy, right to confidentiality and anonymity, right to protection from deception, right to debriefing) when executing your research?
5. Why should you consider special ethical requirements when conducting research in field settings? What are they?
6. How can you assess whether you have reported your results following the ethical standards of your field, thereby avoiding all potential problems related to reporting results?
7. What ethical recommendations must be implemented when using online participants (e.g., MTurk) and should also be considered when recruiting traditional samples (e.g., students)?
8. How can you ensure you report your results ethically to avoid misconduct?
9. What is your takeaway from the debate about the use of deception? Would you use deception, and the BPL in particular? Why or why not? On what side of the debate do you stand and why?

KEY TERMS

anonymity
anonymous survey
archival data
attention check
authorship
bogus pipeline (BPL)
CAPTCHA
censoring
coercive
committed-to-participant approach
confidentiality
cooking (the data)
debriefing
Dehoaxing
deontological approach
desensitizing
ethics
Human Intelligence Task (HIT)
informed consent
Institutional Review Board (IRB)
IP Address
long-string index
Mechanical Turk (MTurk)
naturalistic observation
Nuremberg Code
participants
plagiarism
Right to Confidentiality and Anonymity
Right to Debriefing
Right to Protection from Deception

Right to Privacy
scientific misconduct
stimuli
sua sponte
ten-point statement
The Collaborative Institutional Training Initiative
trimming
Tuskegee Syphilis Study
unjustified authorship credit
utilitarian perspective
Voluntary consent
within-session response consistency

NOTES

This chapter is based to a large extent on the following sources:

Aguinis, H., & Handelsman, M. M. (1997a). Ethical issues in the use of the bogus pipeline. *Journal of Applied Social Psychology*, *27(7)*, 557–573. https://doi.org/10.1111/j.1559-1816.1997.tb00647.x

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