Handbook of Research Methods in Industrial and Organizational Psychology

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CHAPTER TWO

Ethics in Research

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Since the 1970s interest in ethical issues regarding organizational research has grown. As a result of these concerns, ethical codes (see, e.g., American Psychological Association (APA), 1992a) were implemented as a means to prevent and offer protection mechanisms regarding ethical violations in psychological research. As industrial and organizational (I-O) psychologists we are obligated to uphold these ethical guidelines and ensure that they permeate the design, conduct, analyses, and reporting of our research. We have the responsibility of guaranteeing that our research is based on sound ethical standards to protect the rights of research participants and the reputation of I-O psychology as a field.

The purpose of this chapter is to raise awareness of, and discuss guidelines for, ethical issues arising in organizational research. First, we define ethics and briefly review its history. Next, we discuss ethical considerations during research planning, followed by ethical concerns when recruiting and selecting study participants. Then, we offer advice on how to conduct research in a manner that respects participants' rights and how to report research results in an ethical manner. Next, we discuss enforcement mechanisms and the process of investigating and providing sanctions for unethical conduct. Finally, we touch on what we believe are emerging ethical issues facing I-O psychology researchers, including using the Internet to conduct research, the prevalence of ethical codes around the world, and designing studies that investigate ethical issues empirically.

Ethics: Definition and Brief History

The word "ethics" is derived from the Greek *ethos*, which means one's character or disposition. Today, ethics refers to a branch of philosophy concerned with how people should act, judgments about those actions (e.g., right versus wrong, good versus bad), and developing rules for justifying actions (Kitchener, 2000). Ethics evaluates behavior

in terms of right or wrong according to principles or guidelines (Koocher and Keith-Spiegel, 1998). In the context of research, ethics focuses on providing guidelines for researchers, reviewing and evaluating research, and establishing enforcement mechanisms to ensure ethical research.

Interest in ethics of research was essentially non-existent until the 1960s, despite widespread use of deception, invasion of participants' privacy, and lack of confidentiality in research (Kimmel, 1996). However, in the 1960s the public became aware of bio-medical studies (e.g., the study on the long-term effects of untreated syphilis conducted in Tuskegee, Alabama) that were unethical in nature. These historical studies, in addition to legislation such as the National Research Act, which established institutional review boards for institutions receiving federal funding for human subject research, led to peaked interest in the consideration of ethics in research in the 1970s through to the present (see McGaha and Korn (1995) for an excellent review of the history of ethics in research). At the start of the new century, ethics plays an important role in regulating research in I-O psychology by minimizing harm to participants, collaborators, and the general public.

Two perspectives are often taken to analyze whether actions related to research are ethical. First, the utilitarian perspective deems actions as ethical if they are likely to involve more benefits than harm, have consequences that are positive, and provide the greatest good for the greatest number of individuals (see Aguinis and Handelsman, 1997a). Thus, utilitarians often conduct a cost/benefit analysis when faced with ethical dilemmas (e.g., Aguinis and Handelsman, 1997b; Aguinis and Henle, 2001). The APA's Ethical principles of psychologists and code of conduct (1992a) espouses this philosophy. Second, the deontological approach emphasizes strict adherence to universal rules of moral behavior regardless of the consequences of actions (see Aguinis and Handelsman, 1997a). Moral principles such as "do not tell a lie" and "always keep your promises" must be followed at all times regardless of the consequences. Thus, research involving deception or withholding information is unethical according to this perspective even if the benefits of such research greatly outweigh the potential costs to research participants. In sum, determining what is ethical in conducting research will depend on which philosophy is followed (Schlenker and Forsyth, 1977). This chapter examines ethics in research mainly from a utilitarian perspective, because it is this that has heavily influenced the ethical standards guiding our field.

Ethical Considerations in Planning Research

Before conducting a study, researchers must evaluate their competence to conduct the research, their knowledge of ethical guidelines, soundness of the research design, and ethical acceptability of their study. First, they should be capable of competently carrying out the proposed research (Sieber, 1992). 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 invalid results obtained. Next, researchers should be familiar with the relevant ethical guidelines (e.g., APA, 1987, 1992a) and with federal and state legislation. These guidelines and laws can assist with designing a study that is

ethically sound. Further, ignorance of them is not a legitimate reason for unethical behavior arising from research.

After evaluating technical competence and knowledge of ethical guidelines, researchers must design a sound research study. Rosenthal (1994) asserted that ethics and the scientific quality of a study are closely related, in that low-quality research designs are less likely to be ethically acceptable. Poorly designed research will lead to inaccurate conclusions, which may hurt the populations to which it is applied. Thus, researchers need to have a good research design based on theory and previous work, use appropriate methods to test their hypotheses, and sample from applicable populations (National Commission for the Protection of Human Subjects in Biomedical and Behavioral Research, 1978).

Finally, researchers must determine the ethical acceptability of their study. This is typically done through cost/benefit analyses. 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 information, cognitive ability measures that cause anxiety, only one group is given valuable training), steps must be taken to minimize potential harm (e.g., debriefing). Researchers should obtain input from peers, potential participants, or other similar sources regarding the ethical acceptability of their study to obtain a more impartial viewpoint. Importantly, and often overlooked, researchers also need to consider the costs of *not* conducting the research. Discarding a research idea that has the potential to benefit many others in important ways because it involves some ethical concerns (e.g., not informing participants of the exact nature of the study) may not resolve ethical concerns, but may instead exchange one ethical dilemma for another (Rosnow, 1997). In addition, researchers need to evaluate if there are physical or psychological risks to participants, so that proper precautions can be taken when designing and conducting the research (these risks are discussed in more detail later). Finally, researchers affiliated with an institution that receives federal funding must have their 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

Recruiting participants for research studies deserves ethical consideration. Historically, college students have frequently been sampled for psychological research in the United States (Sieber and Saks, 1989) and elsewhere (e.g., in Canada: Lindsay and Holden, 1987; in Australia: Diamond and Reidpath, 1992). To determine if this holds true specifically for I-O psychology, we reviewed subject pools used in empirical studies concerning I-O psychology published in the *Journal of Applied Psychology* from April 1998 through April 2000. Results indicated that published studies included samples drawn from populations of employees or job applicants (61 percent), as well as students (35 percent), and 4 percent of the studies used both employees and students.

Accordingly, next we discuss ethical issues in the use of university student subject pools as well as volunteers in general (e.g., employees, job applicants).

University subject pools

University human subject pools cause ethical concerns in addition to the usual concerns about generalizability. While students may perceive that participation in research is useful (Christensen, 1988; Fisher and Fyrberg, 1994), many have argued that requiring student participation in research studies for introductory psychology courses may be coercive (Carroll, Schneider, and Wesley, 1985; McCord, 1991). Making research participation a course requirement restricts students' freedom to refuse to participate and, in some cases, their freedom to withdraw without penalty. Typically, students lose credit or have their grades lowered if they do not participate and, although alternatives to participation may be offered, they are often unattractive (e.g., essays) and make participation practically mandatory. Even offering extra credit for research participation can be perceived as coercive if students need the credit to raise or maintain their grades. Finally, researchers who ask students taking their classes to participate in their research may be perceived as coercive because students may believe that their grades will be negatively affected if they do not participate.

It has been argued that there are many class requirements that are coercive, such as examinations and term papers, which are not considered unethical, but are justified by their educational value (Dalziel, 1996). Thus, if research participation involves a learning experience as well as a way to enhance, not hurt, grades, participation may be justified (Keith-Spiegel and Koocher, 1985). A primary way researchers can ensure students obtain educational benefits from participation is through debriefing. Debriefing is discussed more thoroughly in a later section. Briefly, it involves providing research participants with information about the design, procedures, and purposes of the study so that they can understand firsthand what research involves, have a knowledge base to draw on later when designing their own research, and be able to compare and critique different studies in which they participate (Dalziel, 1996).

A final consideration regarding university subject pools is that they may include minors (i.e., individuals under the age of 18). Special precautions need to be taken with minors because they may not be mature enough or legally able to give consent (Sieber, 1992). They may not be able to weigh the risks of participation and may be unduly pressured by those with authority over them (e.g., faculty researchers). To ensure the ethical treatment of minors, researchers should obtain parental consent in addition to minors' agreement (Kimmel, 1996). Researchers 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, the nature of the research should be explained to minors in an age-appropriate manner, agreement to participate obtained, and minors should be told that participation is voluntary and can be terminated at any time. Researchers should take steps to ensure that minors do not feel coerced into participating just because their parents have consented. For a summary of potential research risks for minors at various ages, readers are referred to Thompson (1990).

Volunteers

Using only volunteers in research has been advocated as a technique to avoid coercion in participation. Similar to the use of university subject pools, there are ethical issues to consider when using volunteers. Subtle coercion may still exist as a result of inducements on offer (Kimmel, 1996). While offering inducements (e.g., money) increases participation rates, ethical issues are raised when participants feel they cannot afford to pass up the incentive. For example, offering $20 to part-time employees to participate in research study may be more coercive than offering the same inducement to full-time employees because the former may not be able to refuse the payment owing to their more precarious financial situation. Indeed, Korn and Hogan (1992) found students were more willing to participate in studies for larger incentives, such as $10 or 5 percent of total possible grade points. To determine if inducements are excessive and, thus, coercive, Diener and Crandall (1978) advise offering the incentive to potential participants for studies involving a varying amount of risk, and if they acknowledge that they would participate even when there is considerable risk involved, the inducement is too strong.

Researchers must also be careful when studying populations that have been discriminated against (e.g., African Americans exposed to discrimination in hiring practices) or exploited (e.g., women subjected to sexual harassment). Often, ethnic minorities are underrepresented in research (Fisher, 1993) or they are not treated with cultural sensitivity (Gil and Bob, 1999). In addition, researchers promising to improve the conditions of these exploited groups through their research must consider the possibility of finding results contrary to what they promised, or results that do not benefit, or even have the potential to hurt, the individuals studied. Thus, researchers must be careful to avoid falsely advertising what their study can realistically do and must not unnecessarily raise the expectations of participants (Kimmel, 1996). In sum, researchers should take precautions when studying exploited groups. To do this, it may be beneficial to actively seek minorities to assist with research (as assistants or co-investigators) to help identify issues of concern to particular minority groups (Gil and Bob, 1999).

In conclusion, researchers must be cautious of the recruitment and selection procedures they use to attract research participants; they need to evaluate any inducements offered to prevent participants from feeling coerced into participating. Researchers may be able to increase the diversity and willingness to participate of their sample by using some of the recruitment strategies recommended by Rosenthal and Rosnow (1975), such as explaining to potential participants the importance of the research, making the request for participation non-threatening, offering a small gift for considering participation, and avoiding experimental tasks that may be stressful.

Conducting Research

When conducting research, both in laboratory and field settings, great care must be taken to uphold participants' right to be protected from physical and psychological

harm. Although organizational research rarely involves physical and psychological harm, it can happen. For instance, researchers may design experiments with various levels of stress (e.g., participants are told they have failed an employment test, or are given an opportunity to steal) or physical discomfort (e.g., physical ability tests). In addition, unanticipated harm can arise. For instance, some participants may become upset reading questions about their childhood on a pre-employment personality test. Researchers must take precautions to protect participants from harm, and must determine whether harm intentionally invoked is justified in terms of the benefits of the research or whether other research methods could be used to obtain information without causing harm.

In addition to the overall goal of protecting participants from harm, researchers also have the obligation to protect other rights of participants. Next, we briefly review the rights to informed consent, privacy, confidentiality, protection from deception, and debriefing. For each of these rights, we describe steps that should be taken to ensure that they are not violated in the conduct of research. For a more detailed discussion of participant rights, readers are referred to the *Ethical Principles in the Conduct of Research with Human Participants* (APA, 1987); *Ethics for Psychologists: A Commentary on the APA Ethics Code* (Canter, Bennett, Jones, and Nagy, 1994); and *Planning Ethically Responsible Research: A Guide for Students and Internal Review Boards* (Sieber, 1992).

Right to informed consent

Informed consent is required by law for all research conducted at institutions receiving federal funding for research on humans. Information about the study must be provided in such a way that potential participants are able to understand and determine if they wish to participate (e.g., appropriate reading level, short and concise form; Mann, 1994). Consideration must be given to the content of informed consent procedures, which should cover, at a minimum, the five following issues (Canter et al., 1994; Sieber, 1992).

First, a description of the research should be given. This statement 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 researchers are required to describe the research, they do not have to disclose hypotheses or other information that would bias participants or influence their behavior in the study, but enough information should be given so that potential participants can decide if they wish to participate. Further, if it is necessary to withhold information about the study (i.e., deception), participants should be informed and assured that a full explanation will be provided at the end of the study.

Second, participants must be guaranteed the right to decline or withdraw participation at any time during the study without negative consequences. Researchers should remind participants of this right from the start, especially in situations where students are taking part for class credit and may feel that they have no right to withdraw. Likewise, participants may not feel they have the right to withdraw when the researcher is in a position of authority (e.g., human resources manager, supervisor) or, as discussed earlier, inducements are used (e.g., money, class credit). I-O psychologists conducting research in organizational settings must prevent employees from perceiving that their

employment status will be at risk if they do not participate. In situations where the researcher has authority over potential participants, using a third party to recruit participants may alleviate the pressure to participate (APA, 1987).

Third, participants must be informed of the consequences of withdrawing from the study once it has begun. This is important if the receipt of inducements is tied to completion of the study. Korn (1988) advocated that participants have a right to whatever benefits they were promised (e.g., money) if they were misinformed or if they misunderstood the nature of the research study.

Fourth, informed consent should acknowledge any conditions that might influence participants' willingness to take part in the research. This refers to providing a list of possible risks involved in participating in the research 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 realistically expect from participating. Benefits to participants may include scientific knowledge, learning or practice (e.g., mock job interviews), and inducements.

Fifth, researchers should describe how confidentiality or anonymity will be guaranteed (this is discussed in detail in the following section), answer any questions participants have after reading the consent form, and inform them of who they can contact if they have questions or concerns about the research. Participants should sign the consent form and retain a copy of it.

While obtaining signed informed consent is important for research involving many risks, it may not be necessary in all situations, especially when participants can behaviorally refuse to participate. This is particularly relevant for I-O psychology because research often includes anonymous surveys, naturalistic observation, and archival data. In cases where participants can refuse to take part by hanging up the phone or not returning a mailed survey, a brief description providing the information required in the informed consent form is sufficient. Signed consent is also not necessary in situations where it could harm participants (Sieber, 1992). For instance, individuals agreeing to participate in a study on white-collar crime (e.g., embezzlement) would be admitting their guilt by participating, so it is best not to reveal their identity, which a signed consent form would do. In these situations, however, participants still need to give consent, and should receive a copy of the consent form, but they would not be required to sign it.

Right to privacy

Researchers must respect participants' right to control the amount of information they reveal about themselves. How much they reveal, and the sensitivity of this information, may affect their willingness to participate. The right to privacy is violated when participants are given unwanted information (e.g., graphic details of an incident involving sexual harassment between a supervisor and subordinate), 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 this to make employment decisions; Sieber, 1992). Participants' right to privacy is upheld by their freedom to refuse to take part or to withdraw once research has begun. As

described above, informed consent tells participants about the type of information that will be solicited from them, which can be used to determine whether or not to take part.

Right to confidentiality

Participants should have the right to decide to whom they will reveal personal information. Confidentiality differs from privacy because it refers to data (i.e., not individuals). That is, confidentiality refers to decisions about who will have access to research data, how records will be maintained, and whether participants will remain anonymous. Researchers often promise confidentiality in exchange for participation, and ethical codes bind them to respect it (Bok, 1982). Issues of confidentiality should be resolved in the informed consent procedures by stating how participants' identity will be protected and how unauthorized disclosures will be prevented. Researchers need to decide whether participants are to be anonymous and, if so, to ensure that no identifying information will be gathered (e.g., name, social security number, employee number).

Ideally, researchers will want to guarantee anonymity because participants are more likely to participate and be honest when they know the results cannot be linked to them individually. Unfortunately, I-O research often requires identifying information to link participants' data to another data set (e.g., supervisory ratings of performance, personnel records). In these cases, code names or numbering systems can be used and identifying information promptly destroyed after coding has taken place. Further, researchers need to inform participants about limitations in confidentiality. That is, exceptions to confidentiality are made when the participants may be likely to endanger others' well-being (e.g., employee during an interview reveals to the researcher that he just bought a gun and is going to teach his supervisor a lesson for giving him a low performance rating). Informed consent should tell participants if they are to remain anonymous, if identifying information is going to be requested, what steps are to be taken to protect their confidentiality, whether coding will be used, and when identifying information will be destroyed. By guaranteeing participants' confidentiality, researchers may be able to obtain more cooperation and open and honest responses (Boruch and Cecil, 1979; Singer, 1984; Singer, von Thurn, and Miller, 1995).

Right to protection from deception

If researchers are considering the use of deception, they must determine if it is justified through a cost/benefit analysis and consider the feasibility of alternatives to deception (Fisher and Fyrberg, 1994). Researchers must demonstrate that the value of the research outweighs the harm imposed on participants and cannot be studied in any other way (e.g., role playing, surveys). Although researchers may use deception under these circumstances, participants must still be informed about the conditions of the research that may affect their willingness to participate, such as physical or psychological harm. In addition, informed consent should tell participants that they might not be given

full information about the study, or be given misleading information. Researchers have the responsibility of fully debriefing participants about the deception (this is discussed in more detail below), why it had to be used, and take steps to undo any harm or mistrust resulting from the deception. Fortunately, debriefing seems to eliminate the negative effects of deceptive research on participants (Holmes, 1976a; Smith and Richardson, 1983).

Although some research topics may only be studied through the use of deception, given their low base rate, sensitive nature, and participants' reluctance to disclose honest information, there are serious drawbacks to the technique. It has been argued that deception does not respect participants' rights, dignity, privacy, and freedom to decline participation, and may result in participants being suspicious of psychological research (Aguinis and Handelsman, 1997a). However, steps are often taken by researchers and enforced by IRBs to ensure that participants' rights are upheld. Further, research has indicated that participants usually do not perceive deception as unethical (Aguinis and Henle, 2001; Collins, Kuhn, and King, 1979; Smith and Berard, 1982; Sullivan and Deiker, 1973; Wilson and Donnerstein, 1976).

Deception should only be used as a last resort. Examples of deception include using confederates, withholding information, and producing false beliefs or assumptions. Examples of deception in I-O research include giving participants false feedback to determine how they react to negative feedback, or not paying the amount agreed upon before a study to examine reactions to pay inequity.

Right to debriefing

After the study is completed, debriefing must take place to inform participants of the research purpose, to remove any harmful effects brought on by the study, and to leave participants with a sense of dignity and a perception that their time was not wasted (Harris, 1988). Debriefing is the primary method used to ensure that participants receive scientific knowledge that is often promised as a benefit of participating in research. Researchers should set aside time at the end of the study to debrief participants as a group or individually if the research is sensitive in nature. Debriefing should include information about previous research (i.e., what is known in this particular research area), how the current study might add to this knowledge, how the results of the study might be applied to organizational 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. Participants can be asked what they thought of the study, why they responded or behaved the way they did, and so forth. Further, names and addresses of those who wish to receive a copy of the study's finding can be collected at this time. If research is conducted within organizations, researchers should discuss the findings with study participants and any implications.

Finally, if the research involved deception, debriefing should consist of both dehoaxing and desensitizing. According to Holmes (1976a), 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 (e.g., tell participants

that their performance feedback was not really negative, but made up). Desensitizing entails helping participants deal with new insights they received about themselves as a result of their responses or actions in the study and removing any harm resulting from participation (e.g., hostile feeling towards those giving negative feedback; Holmes, 1976b). Discussing feelings with participants and explaining to them that their reactions are normal can accomplish this goal.

Special considerations for conducting research in I-O settings

As discussed above, there are many ethical concerns to be taken into consideration when conducting research. However, it may be particularly difficult to resolve these ethical issues when research is conducted in I-O settings. Unfortunately, the APA's ethical guidelines do not specifically address I-O research. In addition, documents specific to I-O psychology (such APA, 1981; London and Bray, 1980; and Lowman, 1998) emphasize ethical issues in the practice, but not in research of our field. Indeed, Wright and Wright (1999) have recently noted that the ethical responsibilities of organizational researchers is a neglected topic.

Mirvis and Seashore (1979) proposed that most ethical concerns in I-O research arise from researchers' multiple and conflicting roles within the organization that research is being conducted. Indeed, researchers have their own expectations and guidelines concerning research, while organizations, managers, and employees may hold a very different set of beliefs. For example, a researcher may view the purpose of a concurrent validation study of an integrity test as a necessary step to justify its use for selecting applicants. 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 this use of the research results violates participants' confidentiality, while management may counter that it will benefit the organization's bottom line to identify and terminate dishonest individuals. Mirvis and Seashore (1979) recommended that researchers clearly define their roles when doing research in organizations and openly and honestly address conflicts between ethical norms of the researchers and the organizations before conducting the research.

Participant rights such as informed consent, confidentiality, and privacy may be violated in organizational settings (Harvey, 1994) due to a perception that research participation is simply part of the job. Indeed, Mirvis and Seashore (1979) argued that organizations are systems of coercion, which make protecting participants' rights, as delineated by the APA's ethical guidelines, difficult. Thus, participants may feel pressured to participate in research studies sponsored by their employer (O'Neill, 1990). In addition, researchers may not have sufficient control over the research to guarantee the ethical treatment of participants. Nevertheless, they have an ethical obligation to ensure the well-being of multiple research participants in organizational settings. Wright and Wright (1999) call this a "committed-to-participant" approach. They exemplified this approach in a study that had examined the effects of different methods of coping behavior on diastolic blood pressure (Wright and Sweeney, 1990). The researchers informed participants who were engaging in coping methods likely to lead to high blood

pressure about the risks of this behavior, and recommended appropriate lifestyle changes. Thus, the researchers were able to collect data, participants were warned about risky behaviors, and organizations will hopefully reap the benefits by having fewer employees engaging in risky behavior. In sum, when organizations request researchers to act in an unethical manner (e.g., reveal the names of individuals providing supervisory evaluations even though participants were promised confidentiality), researchers' obligations to follow applicable ethics codes should be made known to organizations and a compromise that does not involve a violation of the code should be sought.

Reporting Results

Researchers have a duty to communicate the results of their work in an ethical manner. By building on previous findings, our research can grow and inform our practice. Thus, ethical considerations do not end with the collection of data, but continue when we write up our research findings and submit them for publication. In this section we discuss ethical violations resulting from reporting research results, including misrepresentation of results, censoring, plagiarism, unjustified authorship credit, and refusing to provide data for replication.

Misrepresentation of research results

To avoid misrepresentation of research results, researchers must honestly and accurately report results, and not falsify, distort, or omit findings. A classic case involving falsifying research results was Sir Cyril Burt, a British psychologist studying the inheritance of intelligence. He conducted studies on twins and found substantial evidence of genetic influences on intelligence (for a more detailed description of this incident, see Kimmel, 1996). His findings were not questioned, but after his death in 1971 it was discovered that much of his research had been fabricated and co-authors listed on various research studies were fictitious. Although serious cases like this one appear to be the exception rather than the norm, falsifying data can have detrimental effects on I-O psychology as a science. Subsequent research will be led astray if it is based on false information. Less extreme forms of misrepresentation may include recording data without being blind to the hypotheses or participants' treatment condition, errors in data entry, or errors in data analyses (Rosenthal, 1994). If honest errors in data entry or analysis are found, steps should be taken immediately to correct them.

Censoring

Censoring data is especially salient when the results obtained reflect negatively on the organizations in which the data were collected. However, failing to report data that contradict previous research, hypotheses, or beliefs is deemed unethical (Rosenthal, 1994).

Instead, researchers should provide detailed reports of their methodology, data analyses, findings, and study limitations so that other researchers and organizational practitioners can evaluate the research and determine its value and applicability. Likewise, not reporting findings of unpublished data, especially if the methods used were sound, could be considered unethical because these findings may provide useful information (ibid.).

Plagiarism and authorship credit

Researchers should also be careful to avoid taking credit for work that is not theirs (i.e., plagiarism) or taking more credit than deserved (i.e., first authorship). First, 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 (Elliott and Stern, 1997). All of 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 (Canter et al., 1994). In addition, researchers should avoid self-plagiarism. This refers to making minor modifications to studies previously published so as to publish them again in another outlet, which is considered unacceptable if the data are published as original, even though they have been previously published. However, data can be republished by another source as long as 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 really is (ibid.).

Second, determining authorship credit can involve ethical concerns, especially since number of publications is typically used to establish credibility, status, employment, promotions, and tenure in higher education institutions (Costa and Gatz, 1992). Indeed, the APA Ethics Committee (1993) stated that the most common problem regarding research was the determination of authorship credit. The APA guidelines state that authorship credit should only be given to those who substantially contribute to the research effort. Thus, conceptualization of the research idea, research design, data analysis, interpretation, writing up the study, and so forth would deserve credit, while seniority, status, power, and routine tasks such as data entry or typing would not. These minor contributions should, however, be noted in a footnote or in the acknowledgments section. Further, contributions made in the context of paid employment (e.g., research assistant) also deserve authorship credit if the contributions were substantial (Fine and Kurdek, 1993). After determining who should be included as an author, it is necessary to consider which name should come first. This should be the person who has contributed the most in terms of ideas, design, analyses, writing, and so forth. Importantly, this decision should be based on actual contributions made and should not merely reflect status or power.

Power differentials between authors are particularly salient between faculty and students. Unfortunately, studies soliciting comments or critical incidents involving ethical concerns in research have found that authorship issues are increasingly salient among research projects by faculty and students (Goodyear, Crego, and Johnston, 1992; Keith-Spiegel and Koocher, 1985; Von Glinow and Novelli, 1982). Moreover, the APA ethical guidelines assert that a student should be named as first author on any article that is

based mostly on his or her thesis or dissertation, although some authors have pointed out instances where this may not be appropriate (e.g., Shadish, 1994). Ethical issues do not arise only when faculty or higher status individuals take first author credit they have not earned, but also when students are given unearned credit (Fine and Kurdek, 1993). Giving students or others undeserved research credit misrepresents their expertise and abilities and may give them an unfair advantage in employment, promotions, and tenure. Evidence of this practice was given by Costa and Gatz (1992), who used hypothetical vignettes involving authorship decisions and found faculty members were more likely than students to give authorship credit to the student in the scenario.

In conclusion, to prevent ethical problems arising when determining authorship credit, the following steps should be taken. First, the order of authorship should be discussed early in the project as well as what contributions are expected of each contributor (Koocher and Keith-Spiegel, 1998). If this cannot be agreed upon, Winston (1985) recommended a weighting procedure to determine whether authorship is warranted and the order of authors. With this procedure, points are given to contributions in terms of their importance, and the researcher with the most points becomes the first author. Also, early agreements about authorship may need to be revised as the project progresses and responsibilities shift or obligations are not fulfilled (e.g., missed deadlines). Finally, if an agreement cannot be reached, third parties should be consulted (Fine and Kurdek, 1993; Goodyear et al., 1992).

Data sharing

A final ethical issue regarding reporting research results involves the retention and provision of data when they are requested by other researchers for replication. Replication acts as a safeguard against dishonesty. However, the purpose for requesting existing data should be for reanalysis to verify reported findings and not for conducting new research on existing data (Canter et al., 1994). If the research is published in an APA journal, data must be retained for five years after publication. Exceptions to providing data are made if confidentiality would be violated or if data are owned by the organization in which they were collected.

Unfortunately, it seems that numerous organizational researchers do not comply with the data sharing principle. Aguinis, Beaty, Boik, and Pierce (2000) conducted a review of articles assessing differential prediction in the *Academy of Management Journal*, the *Journal of Applied Psychology*, and *Personnel Psychology* between 1969 and 1998. As part of their review, they 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, 4 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), 3 authors indicated that they still possessed the source data but did not actually 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 5 percent of authors contacted had access to their data and were willing to share descriptive statistic information not published in their original articles.

Enforcing Ethics

Ethical guidelines regarding psychological research are provided by the APA (1992a), various state and federal laws, and state licensing boards. Despite efforts by the APA's Ethics Committee, IRBs, and peers to enforce these ethical guidelines, misconduct still occurs. In this section we define ethical misconduct and examine the prevalence of this behavior, discuss ways to prevent unethical treatment of participants, how to deter scientific misconduct, and how to resolve ethical complaints that arise in research.

Definition and prevalence of misconduct

Ethical misconduct can occur in the planning (e.g., lack of knowledge of ethical guide-lines and inappropriate research supervision), participant recruitment and selection (e.g., recruiting participants through the use of coercion), execution (e.g., violating particip-ants' right to informed consent), and reporting (e.g., plagiarism) stages of the research process. However, researchers have typically focused on studying ethical misconduct during the reporting stage, what is often labeled scientific misconduct.

Most scientific misconduct can be attributed to a strong pressure to find notable results (Koocher and Keith-Spiegel, 1998). Charles Babbage distinguished between three types of scientific misconduct: trimming, cooking, and forging (see Kimmel, 1996 for a more detailed description). Trimming is the extent to which researchers edit or select data to eliminate inconsistent findings (e.g., omitting outliers, data dropping). Cooking the data refers to altering it to support researchers' hypotheses or expected outcomes. Finally, forging involves falsifying data instead of conducting actual experiments and collecting data. Other types of scientific misconduct have been mentioned throughout this chapter (e.g., plagiarism, censoring conflicting data, careless data collection or ana-lysis). These instances of misconduct, especially forging, have serious implications for I-O psychology as a science. Falsified research enters into the literature base, influencing subsequent research, and may be applied to organizational settings and cause irreparable harm because the applications were not substantiated by empirical findings. Thus, steps must be taken to prevent and handle cases of scientific misconduct.

Although extreme cases of misconduct may be rare, some do occur. 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 know-ledge of acts of scientific misconduct (Swazey, Anderson, and Lewis, 1993). 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. Holaday and Yost (1993) supported this finding in their survey of psychology interns and faculty, which found fear of retaliation was the primary reason for not reporting ethical violations.

Finally, regarding ethical misconduct in general, and not just scientific misconduct, Biaggio, Duffy, and Staffelbach (1998) noted that the hesitancy of psychologists to

report ethical violations may exist because it involves actions against colleagues or institutions to which they are closely linked, and this may result in potentially negative repercussions. However, they also noted the possibility that hesitancy in reporting ethical misconduct could simply result from a lack of understanding of ethical codes of conduct.

Preventing misconduct

There are several precautions that can be taken to prevent ethical misconduct from occurring. First, I-O psychology researchers have a duty to familiarize themselves with the APA's ethics code as well as the specific guidelines applying to I-O psychologists. Ignorance is not a legitimate excuse for ethical violations. Thus, researchers should periodically read ethical guidelines and understand how they apply to their research.

Second, IRBs are used to assess potential risks and ethical concerns in research using human subjects and ensure precautions such as informed consent are taken to protect research participants' rights (Tanke and Tanke, 1982). Thus, the purpose of IRBs is to guarantee that 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 subjects must pass their 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, 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 fairly selected, and informed consent will be obtained and documented. In spite of their laudable purpose, IRBs have sustained criticism due to perceptions of inconsistent use and application of standards between IRBs in different institutions and their overemphasis on policing researchers rather than protecting participants' rights (Rosnow, Rotheram-Borus, Ceci, Blanck, and Koocher, 1993).

A third mechanism to prevent ethical misconduct includes replication of research. Replication determines whether previous findings can be duplicated and helps uncover errors as well as misconduct (Kimmel, 1996). Knowledge that others will check the results of research is intended to act as a deterent to unethical behavior in research. Unfortunately, replication is not often done for a variety of reasons (e.g., replication studies are not likely to be published, difficult financial requirements associated with large-scale replications), and even if they are done and different results are obtained, many factors besides misconduct could explain the results.

Finally, peer review of research by those knowledgeable of the research topic can also guard against error and misconduct. Before research is published in journals, it undergoes peer review of its theory, methodology, data analysis, conclusions, and quality. Reviewers, often anonymously, provide feedback on the research and screen for errors and ethical violations. Although peer review is supposed to reduce ethical misconduct, it can often result in ethical concerns of their own. Reviewers may be biased toward

research with statistically significant findings and work submitted by well-known names in the field. Unethical reviewers may also steal ideas from studies they have reviewed, use the findings before the study is published, or unduly criticize the work of those researching similar topics in an effort to publish before them or beat them out for research funding (Kimmel, 1996). However, anonymity of the authors, multiple reviewers, and the final decision being made by the journal's editor are used to help reduce reviewer bias.

Resolving ethics complaints

When researchers believe an ethical violation has occurred, the first step is informal resolution (APA, 1992a). This should be used for minor violations and situations where misconduct is a result of lack of knowledge or sensitivity (Hare-Mustin and Hall, 1981) and it should not be used when serious ethical violations have occurred. If a successful informal resolution cannot be achieved, the violation should be reported to the APA Ethics Committee or to State ethics committees. Those accused of ethical violations are required to cooperate fully with the agency reviewing the complaint by providing timely communication and adhering to any sanctions imposed for violations. These agencies review the claim and provide sanctions to those found guilty of violating ethical standards. Keep in mind that frivolous complaints with the sole intention of harming another instead of protecting the public are considered unethical.

Members as well as non-members can file complaints to the APA Ethics Committee, or the committee may decide to initiate a complaint (i.e., *sua sponte* complaint). Complaints by APA members must be filed within one year of the violation or its discovery, while non-members have up to five years to file a complaint (for more details on procedures for resolving ethical complaints, see APA, 1992b). The Chair of the Ethics Committee and the Director of the Ethics Office review complaints to determine whether there is sufficient evidence of a violation. If there is not cause for investigation, the complaint is dismissed. If cause does exist (i.e., alleged actions, if proved, would involve an ethical violation), a formal case is opened, the investigation begins, and the accused is not allowed to resign from the APA to avoid the charges. The accused is sent a charge letter and given a chance to review all the evidence provided against him or her.

If it is determined that an ethical violation has occurred, the Committee can impose one of several sanctions of increasing severity. Reprimand is sufficient for violations that are minimal and unlikely to result in harm to others or the field of psychology. Censure is used when the violation is likely to cause some harm to others and entails informing the violator that they committed an ethical violation and that they are prohibited from making further violations (Hare-Mustin and Hall, 1981). For violations that are likely to cause substantial harm, expulsion from the APA is used (there are very few expulsions each year, however; Koocher and Keith-Spiegel, 1998). As an alternative to expulsion, the Committee may offer stipulated resignation. The violator is allowed to resign on certain conditions – for example, that the violation must be disclosed for a certain period of time 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.

Selected Special Issues in Research Ethics

So far, we have discussed ethical issues in planning research, recruiting and selecting research participants, conducting research, and reporting results, as well as the prevention of misconduct and the enforcement of ethical guidelines and principles. This section discusses current and emerging issues regarding ethics in I-O psychology research. Because of space limitations, the following is only a subset of issues that we could address. However, we hope that discussing these issues will provide an appreciation for what we believe are some important trends affecting ethics in research. First, we discuss ethical concerns arising from the increased use of the Internet as a tool for conducting research. Second, we discuss the prevalence of ethical codes around the world and compare and contrast the codes of different countries. Finally, we encourage I-O psychologists to conduct research on ethics so that future ethical guidelines can be informed by empirical results.

Research using the Internet

The Internet is emerging as a method for conducting research, especially surveys and, to some extent, experiments. The number of research studies conducted via the Internet has increased substantially since the 1990s (see American Psychological Society, 2000 for a list of studies). As a result, growing ethical concern about the Internet as a research tool has also risen and some ethical guidelines have been proposed (APA, 1997; Childress and Asamen, 1998; Hewson, Laurent, and Vogel, 1996; Michalak and Szabo, 1998).

First, informed consent must be addressed. While researchers can post consent forms online and have participants click on a button if they consent, some have argued that it is not possible to determine if they really understand what they are agreeing to do (Azar, 2000). Concerns that participants might have about the study could be resolved through phone calls or personal meetings depending on the geographic locations of the researcher and participants. Researchers should also remind participants that they are free to withdraw at any time and that their participation is voluntary. Next, confidentiality issues must be resolved. If data are being collected and stored through the Internet, precautions need to be taken to ensure the secure transfer and storage of the information so that unauthorized individuals cannot obtain access. Data encryption technology and password protection may help guarantee confidentiality. In addition, debriefing participants may be of concern. It is difficult to determine whether participants will read any statement aimed at debriefing them. We refer readers to Stanton and Rogelberg (ch. 13, this volume) for a more detailed discussion of these issues.

Ethics codes around the world

Interest in ethics in research is not limited to the United States. In fact, many countries have developed codes of ethics regarding research, some of which are similar to the

standards observed in the USA in terms of coverage and stringency, while others diverge noticeably. Schuler (1982) reviewed ethics codes in Austria, Canada, France, Germany, Great Britain, the Netherlands, Poland, Sweden, and the USA. Results showed that three ethical principles are consistent across the countries surveyed. Specifically, every country emphasized the protection of research participants from physical harm, psychological harm, and maintenance of confidentiality. Kimmel (1996) conducted a follow-up survey, including Australia, Canada, France, Germany, Great Britain, the Netherlands, Scandinavia, Slovenia, Spain, Switzerland, and the USA. Results showed that every country emphasized the well-being and dignity of research participants in their ethics code by addressing informed consent, deception, protection from harm, and confidentiality.

A more recent study of 24 countries and their ethics codes was conducted by Leach and Harbin (1997). These authors compared the codes of different countries with the APA's ethical guidelines and found that Australia, Canada, Israel, and South Africa share 100 percent of their principles with the USA (i.e., with the APA), while China had no overlap because its code emphasizes mostly testing and assessment. Canada's ethical code was the most similar to that of the APA, while China was the most divergent. The authors concluded that there are ten universal ethical standards, which involve privacy, confidentiality, boundaries of competence, avoiding harm, exploitative relationships, delegation to and supervision of subordinates, fees and financial arrangements, avoidance of false or deceptive statements, informed consent to therapy, and informed consent to research. Interestingly, no country other than the United States addressed the following standards relevant to research: design of education and training programs, duplicate publication of data, sharing data, and professional reviewers. These commonalities and dissimilarities are indicative of different values among the countries surveyed. However, we should emphasize that they all seemed concerned with protecting the rights of research participants.

Conducting empirical research on ethics

Although the APA's ethical principles were derived from surveys of ethical concerns of psychologists, they did not take into consideration empirical research (Stanley, Sieber, and Melton, 1987). Indeed, empirical research on ethical issues arising during research has been sparse. This is unfortunate because, by conducting empirical research on ethics, we can discover how participants view research, make sure our studies are perceived as ethical, and, ultimately, empirical data can be used by IRBs and other policy-makers in designing better informed, data-driven ethical guidelines for conducting research. Thus, although we do not advocate that results of empirical studies replace moral principles in the design of ethical guidelines, results of empirical studies can complement and inform value-based decisions and policies (Aguinis and Handelsman, 1997b; Aguinis and Henle, 2001).

Research on ethics can be conducted in several ways. First, researchers can design experiments to determine how ethical standards influence participants' reactions. For instance, one group of participants could be given a detailed explanation of the study's

purpose (e.g., "the purpose of this study is to ascertain whether employees who are more conscientious are less likely to steal from their employers"), whereas another group could be given a less detailed description (e.g., "the purpose of this study is to investigate behaviors at work"). Differences in willingness to participate in the study and answer distortion between the groups could be examined to assess the effects of various informed consent procedures. Another method of researching ethical issues is to give potential participants a description of a study and ask for their reactions to it (Aguinis and Henle, 2001; Fisher and Fyrberg, 1994). Continuing with the previous example, participants could be asked if they would volunteer for such a study, and if they would feel their privacy had been invaded. For more information on empirical work conducted on ethical issues in research, readers are referred to Stanley, Sieber, and Melton (1996).

Conclusions

Increased attention has been focused on ethics in research over the past few decades. If we do not conduct ethical research, participants, organizations, and society will be wary of our work and may become alienated from the discipline of I-O psychology.

This chapter has offered many recommendations that, if followed, will encourage ethical I-O psychology research. First, in planning research, researchers must evaluate their competence and knowledge of ethical guidelines, use sound designs, and determine the ethical acceptability of their study. Second, in recruiting and selecting participants, researchers must consider the various issues arising from the use of university subject pools as well as volunteers in general, including subtle coercion and taking extra care not to harm members of groups that have been discriminated against, or exploited, in the past. Third, in conducting research, researchers must be aware of participants' right to be protected against harm, and also that their rights regarding informed consent, privacy, confidentiality, protection from deception, and debriefing be respected. Our discussion has included specific recommendations on how to protect each of these rights. Fourth, particularly relevant to organizational settings are researchers' conflicting roles (e.g., researcher, consultant, employee), which can create ethical dilemmas. Researchers must clarify their roles with various constituencies and openly and honestly address conflicts before conducting their research. Fifth, in reporting results, researchers must avoid various types of unethical behavior, including misrepresentation of results, censoring of data, plagiarism and undeserved authorship credit, and not sharing data with other researchers. Sixth, researchers must be aware of emerging ethical concerns that have not yet been addressed by current ethical codes (e.g., Internet research, ethical codes around the world). Finally, it would be beneficial for I-O psychology if researchers conducted empirical work on ethical issues so that our ethics codes can be informed by empirical evidence in addition to moral and value-based principles. In closing, we should stress that every I-O psychologist has a responsibility to ensure that their research meets established ethical guidelines to protect participants' rights and further the advancement and positive societal impact of our field.

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