Online Ethics Center
FOR ENGINEERING AND SCIENCE

Introduction: What is Research Ethics?

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Description

Research Ethics is defined here to be the ethics of the planning, conduct, and reporting of research. This introduction covers what research ethics is, its ethical distinctions, approaches to teaching research ethics, and other resources on this topic.

Body

Introduction

Topics

Animal Subjects

Authorship

Biosecurity

Collaboration

Conflicts of Interest

Data Management

Human Subjects

Mentoring

Peer Review

Publication

Research Misconduct

Social Responsibility

Stem Cell Research

Whistleblowing

Educational Settings

Descriptions of educational settings, including in the classroom, and in research contexts.

Discussion Tools

Case Studies

Debates

Literature

Textbooks

What is Research Ethics?

Research Ethics is defined here to be the ethics of the planning, conduct, and reporting of research. It is clear that research ethics should include:

- Protections of human and animal subjects

However, not all researchers use human or animal subjects, nor are the ethical dimensions of research confined solely to protections for research subjects. Other ethical challenges are rooted in many dimensions of research, including the:

- Collection, use, and interpretation of research data
- Methods for reporting and reviewing research plans or findings
- Relationships among researchers with one another
- Relationships between researchers and those that will be affected by their research
- Means for responding to misunderstandings, disputes, or misconduct
- Options for promoting ethical conduct in research

The domain of research ethics is intended to include nothing less than the fostering of research that protects the interests of the public, the subjects of research, and the researchers themselves.

Ethical Distinctions

In discussing or teaching research ethics, it is important to keep some basic distinctions in mind.

- It is important not to confuse moral claims about how people ought to behave with descriptive claims about how they in fact do behave. From the fact that gift authorship or signing off on un-reviewed data may be "common practice" in some contexts, it doesn't follow that they are morally or professionally justified. Nor is morality to be confused with the moral beliefs or ethical codes that a given group or society holds (how some group thinks people should live). A belief in segregation is not morally justified simply because it is widely held by a group of people or given society. Philosophers term this distinction between prescriptive and descriptive claims the 'is-ought distinction.'

- A second important distinction is that between morality and the law. The law may or may not conform to the demands of ethics (Kagan, 1998). To take a contemporary example: many believe that the law prohibiting federally funded stem cell research is objectionable on moral (as well as scientific) grounds, i.e., that such research can save lives and prevent much human misery. History is full of examples of bad laws, that is laws now regarded as morally unjustifiable, e.g., the laws of apartheid, laws prohibiting women from voting or inter-racial couples from marrying.

- It is also helpful to distinguish between two different levels of discussion (or two different kinds of ethical questions): first-order or "ground-level" questions and second-order questions.

- First-order moral questions concern what we should do. Such questions may be very general or quite specific. One might ask whether the tradition of 'senior' authorship should be defended and preserved or, more generally, what are the principles that should go into deciding the issue of 'senior' authorship. Such questions and the substantive proposals regarding how to answer them belong to the domain of what moral philosophers call 'normative ethics.'

- Second-order moral questions concern the nature and purpose of morality itself. When someone claims that falsifying data is wrong, what exactly is the standing of this claim? What exactly does the word 'wrong' mean in the conduct of scientific research? And what are we doing when we make claims about right and wrong, scientific integrity and research misconduct? These second-order questions are quite different from the ground-level questions about how to

conduct one's private or professional life raised above. They concern the nature of morality rather than its content, i.e., what acts are required, permitted or prohibited. This is the domain of what moral philosophers call 'metaethics' (Kagan, 1998).

Ethical Approaches

Each of these approaches provides moral principles and ways of thinking about the responsibilities, duties and obligations of moral life. Individually and jointly, they can provide practical guidance in ethical decision-making.

- One of the most influential and familiar approaches to ethics is deontological ethics, associated with Immanuel Kant (1742-1804). Deontological ethics hold certain acts as right or wrong in themselves, e.g., promise breaking or lying. So, for example, in the context of research, fraud, plagiarism and misrepresentation are regarded as morally wrong in themselves, not simply because they (tend to) have bad consequences.
  The deontological approach is generally grounded in a single fundamental principle: Act as you would wish others to act towards you OR always treat persons as an end, never as a means to an end.

- From such central principles are derived rules or guidelines for what is permitted, required and prohibited. Objections to principle-based or deontological ethics include the difficulty of applying highly general principles to specific cases, e.g.: Does treating persons as ends rule out physician-assisted suicide, or require it? Deontological ethics is generally contrasted to consequentialist ethics (Honderich, 1995).

- According to consequentialist approaches, the rightness or wrongness of an action depends solely on its consequences. One should act in such a way as to bring about the best state of affairs, where the best state of affairs may be understood in various ways, e.g., as the greatest happiness for the greatest number of people, maximizing pleasure and minimizing pain or maximizing the satisfaction of preferences. A theory such as Utilitarianism (with its roots in the work of Jeremy Bentham and John Stuart Mill) is generally taken as the paradigm example of consequentialism. Objections to consequentialist ethics

tend to focus on its willingness to regard individual rights and values as "negotiable." So, for example, most people would regard murder as wrong independently of the fact that killing one person might allow several others to be saved (the infamous sacrifice of an ailing patient to provide organs for several other needy patients). Similarly, widespread moral opinion holds certain values important (integrity, justice) not only because they generally lead to good outcomes, but in and of themselves.

- Virtue ethics focuses on moral character rather than action and behavior considered in isolation. Central to this approach is the question what ought we (as individuals, as scientists, as physicians) to be rather than simply what we ought to do. The emphasis here is on inner states, that is, moral dispositions and habits such as courage or a developed sense of personal integrity. Virtue ethics can be a useful approach in the context of RCR and professional ethics, emphasizing the importance of moral virtues such as compassion, honesty, and respect. This approach has also a great deal to offer in discussions of bioethical issues where a traditional emphasis on rights and abstract principles frequently results in polarized, stalled discussions (e.g., abortion debates contrasting the rights of the mother against the rights of the fetus).

- The term 'an ethics of care' grows out of the work of Carol Gilligan, whose empirical work in moral psychology claimed to discover a "different voice," a mode of moral thinking distinct from principle-based moral thinking (e.g., the theories of Kant and Mill). An ethics of care stresses compassion and empathetic understanding, virtues Gilligan associated with traditional care-giving roles, especially those of women.

- This approach differs from traditional moral theories in two important ways. First, it assumes that it is the connections between persons, e.g., lab teams, colleagues, parents and children, student and mentor, not merely the rights and obligations of discrete individuals that matter. The moral world, on this view, is best seen not as the interaction of discrete individuals, each with his or her own interests and rights, but as an interrelated web of obligations and commitment. We interact, much of the time, not as private individuals, but as members of families, couples, institutions, research groups, a given profession

and so on. Second, these human relationships, including relationships of dependency, play a crucial role on this account in determining what our moral obligations and responsibilities are. So, for example, individuals have special responsibilities to care for their children, students, patients, and research subjects.

- An ethics of care is thus particularly useful in discussing human and animal subjects research, issues of informed consent, and the treatment of vulnerable populations such as children, the infirm or the ill.

- The case study approach begins from real or hypothetical cases. Its objective is to identify the intuitively plausible principles that should be taken into account in resolving the issues at hand. The case study approach then proceeds to critically evaluate those principles. In discussing whistle-blowing, for example, a good starting point is with recent cases of research misconduct, seeking to identify and evaluate principles such as a commitment to the integrity of science, protecting privacy, or avoiding false or unsubstantiated charges. In the context of RCR instruction, case studies provide one of the most interesting and effective approaches to developing sensitivity to ethical issues and to honing ethical decision-making skills.

- Strictly speaking, casuistry is more properly understood as a method for doing ethics rather than as itself an ethical theory. However, casuistry is not wholly unconnected to ethical theory. The need for a basis upon which to evaluate competing principles, e.g., the importance of the well-being of an individual patient vs. a concern for just allocation of scarce medical resources, makes ethical theory relevant even with case study approaches.

- Applied ethics is a branch of normative ethics. It deals with practical questions particularly in relation to the professions. Perhaps the best known area of applied ethics is bioethics, which deals with ethical questions arising in medicine and the biological sciences, e.g., questions concerning the application of new areas of technology (stem cells, cloning, genetic screening, nanotechnology, etc.), end of life issues, organ transplants, and just distribution of healthcare. Training in responsible conduct of research or "research ethics" is merely one among various forms of professional ethics that have come to

prominence since the 1960s. Worth noting, however, is that concern with professional ethics is not new, as ancient codes such as the Hippocratic Oath and guild standards attest (Singer, 1986).

Resources

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Notes

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Resource Type

Essay

Parent Collection

Resources for Research Ethics Education

Topics

Using Moral Theories in Teaching

Goals of Ethics Education
Pedagogical Approaches

Discipline(s)

Research Ethics
Teaching Ethics in STEM