which their results are put? To what extent should scientists become advocates for applying knowledge in a particular way? Quite naturally disagreements arise on how to resolve these issues. This controversy is compounded in the case of human service researchers, because their research normally is initiated with some explicit, clinical application in mind. The classic approach to these issues derives from the exhortations of the sociologist Max Weber (1946, orig. pub. 1922) that science should be "value-free." Social scientists, according to Weber, should create knowledge, not apply it. Therefore, they have no special responsibility for the ultimate use to which that knowledge is put. Furthermore, according to Weber, they are under no obligation to advocate particular uses of scientific knowledge. Indeed, advocacy is frowned on as threatening objectivity, which is a central concern of science. So although remaining value-free is difficult, many argue that abandoning the effort would be disastrous, for it would prevent us from acquiring an accurate body of knowledge about human social behavior and might threaten the researcher's credibility as a disinterested expert (Gibbs, 1983; Gordon, 1988; Halfpenny, 1982).

Karl Marx (1964, orig. pub. 1848) originally developed the opposite stance in this controversy. Marx championed the cause of the poor and downtrodden; he believed that social researchers should bring strong moral commitments to their work and strive to change unfair or immoral conditions. Following Marx, some modern researchers believe that social research should be guided by personal and political values and directed toward alleviating social ills (Brunswick-Heinemann, 1981; Fay, 1987). Furthermore, scientists should advocate for uses of their research by others that would help accomplish these personal goals.

Sociologist Alvin Gouldner (1976) developed a compromise position on the value-free controversy. Gouldner pointed to the obvious—namely, that scientists have values just as other human beings do. Furthermore, he noted, those values can influence research in so many subtle ways that their effects can never be totally eliminated. So instead of denying or ignoring the existence or impact of these personal values, scientists need to be acutely aware of and up front about them in research reports. Being thus forewarned, consumers of their research are better able to assess whether the findings have been influenced by personal bias. In addition, Gouldner argued that social scientists have not only the right, but also the duty to promote the constructive use of scientific knowledge (Gouldner, 1976). Because someone will make decisions concerning the use of scientific knowledge, scientists themselves are best equipped to make those judgments. As Gouldner states, technical competence would seem to provide a person with some warrant for making value judgments. People who take this position view the value-free stance as a potentially dangerous dereliction of a responsibility that accrues to scientists by virtue of their expertise and role in developing new knowledge.

Clinician–researchers, in particular, may be attracted by this stance. Because their research is conducted, in part, to advance the practice goals of the profession, they would probably view ensuring that any clinical application of the results be faithful to the outcome of the research as one of their duties. Thus, human service researchers are more likely than many other behavioral scientists to take a strong stand in favor of advocacy.

Nothing is wrong with researchers openly pressing for the application of scientific knowledge in ways they deem to be desirable—so long as their advocacy is tempered with respect for objectivity. The danger of advocacy is that scientists can come to feel so strongly about the issues they promote that those feelings hamper the objective collection and analysis of data.

Protecting Vulnerable Clients

Human service clients, because they often are involuntary recipients of services, may find themselves vulnerable against pressures to cooperate in research projects conducted by the organizations that provide them with services. Such clients are likely to be sought out as research subjects, either because they often are viewed as being deviant in some way, and therefore interesting to study, or

because they may be easier than other groups to locate and keep track of during a research project.

Welfare recipients, children in day care settings, patients in public mental hospitals, and participants in job-training programs, to name only a few, are likely candidates for participation in social research projects. In fact, it is common for operators of new or special programs to be required by their funding sources to research the effects of their programs as a condition for receiving those funds. Although such safeguards as codes of ethics and governmental regulations may serve as useful guides, special obligations fall on human service practitioners to safeguard their clients from unreasonable pressures to participate in research.

A crucial issue in this regard is the matter of voluntary and informed consent. Can clients actually give consent freely? This is one of the reasons that much research using prison inmates as subjects has been discontinued: It is debatable how free inmates really are to give consent. If participation in the research brings significant rewards in the form of separate living quarters or greater privacy, these rewards may be almost coercive in the Spartan, degrading, and often dangerous world of the prison inmate. Although participation in the research is, on the face of it, voluntary, inmates may not seriously weigh the disadvantages or dangers of the research when their participation is perceived as a means of avoiding assault or rape.

Similar ethical questions also arise with research on people who have significant psychopathologies. If the psychopathology involves defective comprehension or impaired insight, then the subjects may be unable to give truly informed consent. Research on such a population would have to be approached very carefully and could be justified only if it could not be done on a less vulnerable group. If the same research goals could be accomplished with a less vulnerable group, then that would be the route to follow. If it were decided to do research on a group with significant psychopathology, then informed consent should be approached in ways that protect potential participants from even covert coercion. For example, consent could be sought by some party other than the researchers (to avoid the force of authority), or it could be sought in the presence of a relative, friend, or other advocate for the individual (to provide the social support to allow a refusal). If the psychopathology completely impairs the ability to give consent, then most forms of research would be unethical unless it could be shown that either the patient or society would benefit significantly and the research could be done in no other way (Oeye, Bjelland, & Skorpen, 2007).

The problem of voluntary consent may be somewhat more subtle among other recipients of human services. Even if refusal to participate is not linked to termination of benefits, clients might not be sure of this, and thus might be disinclined to take the risk of finding out. In addition, the reading level of clients receiving public assistance often is less than that of the eighth grade; yet the reading level necessary to comprehend many welfare documents is above 13 years of education. Thus it may be that clients who are accustomed to being confused by welfare requirements might not aggressively seek to determine their right to refuse participation in a research project. We are not suggesting that research never be conducted on prisoners or recipients of public welfare. Rather, clinician–researchers need to exercise additional caution—and, in some cases, possibly forgo valuable research projects—in the interests of ensuring truly voluntary informed consent.

Research in Practice 3.2 discusses ethical issues involving harm, misconduct, and protecting vulnerable clients and what can be done to protect clients who might be negatively affected.

Withholding Treatment for Research Purposes

An issue of particular concern to human service providers is the research practice of withholding treatment from a control group to assess whether a given treatment is effective. The **control group** serves as a comparison group. If a group receiving the treatment shows more improvement than the control group over a certain span of time, we can feel justified in claiming that the treatment brought about the improvement. With no control group,

RESEARCH IN PRACTICE 3.2 Program Evaluation: Vulnerable Clients at Risk

Science must maintain constant vigilance against research that harms people or is a product of fraud and misconduct. This is especially true in applied research where social or medical interventions may affect people's lives. Several recent cases of such ethical violation demonstrate this point. In 1996, the internationally respected researcher Dr. Francis Collins, famous for his work on the government's project to map all human genes, retracted five research papers because a junior colleague had fabricated data. The studies, which were on leukemia, had been published in leading scientific journals (Altman, 1996). Another case involved the cellular biologist Robert P. Liburdy, who published studies purporting to demonstrate a link between exposure to electromagnetic fields and cancer. Eventually, the Office of Research Integrity of the DHHS concluded that much of his data was fictitious, but not before several multimillion-dollar liability suits had been initiated against power companies (*Federal Register*, 1999).

When such fraud occurs in the context of human service research, the consequences can be especially chilling. The case of Dr. Stephen Breuning came to light in the 1980s. He had published research alleging beneficial effects of certain drugs for the control of behavior in severely developmentally disabled individuals. Social interventions were implemented to help many developmentally disabled children based on the results of his research. Yet, Breuning's results were based, in part, on falsified data. Eventually, the case led to a criminal indictment, and Dr. Breuning was sentenced to 60 days in a halfway house and five years of probation. However, detecting, documenting, and acting on this fraud was a long battle (Garfield & Welljams-Dorof, 1990).

A recent example of ethical violations in the protection of human subjects in applied research comes from the University of Oklahoma, where it was alleged that the principal researcher and an oversight official repeatedly violated federal regulations meant to protect human subjects in cancer research (Pound, 2000). These researchers reportedly were unqualified to conduct the research, the vaccine injected had not been properly tested, and the IRB had failed to monitor the tests. What makes this case especially significant for this illustration is not only the nature of the violations, but also the manner in which the ethical violations came to light. It was not a high-level scientist or an IRB that detected the ethical problems; rather, it was a registered nurse with a limited background in clinical research who had been recently hired at the project and was troubled by what she saw as violations of safety rules, suppression of information, and lying to patients and federal regulators. When her university superiors failed to address her concerns, she didn't give up; instead, she advocated for the patients by writing to federal health regulators. As a consequence, government regulators shut down all government-funded research at the Tulsa

however, we cannot say with confidence that the improvement shown by the treatment group was the result of the treatment. It could be that the improvement would have occurred even in the absence of the treatment. The control group, which is comparable to the treatment group in all ways except that it does not receive the treatment, makes it possible to rule out this possibility. Control groups thus are very important to the ability to state whether an independent variable causes change in a dependent variable (see Chapters 2 and 10). In fact, the evidence-based practice approaches discussed in Chapter 1 give the most credence to evidence resulting from research designs that use random assignment of people to treatment and control groups. These EBP approaches argue that such research designs provide the "best" evidence.

Presumably, research is being conducted on some treatment because that treatment is believed to be effective. Herein lies the ethical dilemma: Some service providers believe it is unethical to withhold a treatment that might help people. They believe that withholding treatment deprives people in the control group of the possibility of improvement. This is a serious problem that is not easy to resolve, but there are a number of issues to consider: First, we might ask whether it is ethical to use untested treatments. We pointed out in Chapter 1 that evidence-based approaches to human service professions explicitly caution against the use of treatments without proven

campus and directed the university to address the problems. The case emphasizes the importance for all human service professionals, not just scientists, to understand the principles of research and research ethics. Although cases of ethical violation in social and medical research may be rare, detection and prevention of such conduct may well depend on the vigilance of the human service practitioner who encounters the subjects of research.

These cases highlight several disturbing issues in ethics, research, and human service practice. First, some of this research managed to pass through the filters of review panels and institutional procedures without question. How well can the institutionalized research system prevent fraudulent work? Second, when unethical practices are discovered, who bears the responsibility for alerting practitioners and the public to potentially harmful implications? In manufacturing, the government can require product recalls, but how do we protect the public from the implementation of fraudulent research? Third, how do we safeguard those who detect potential fraud? In many cases, the people most likely to discover such fraud are colleagues, assistants, students, and others close to the research. To the extent that these people perceive disclosure as risking unpleasant consequences for themselves, they will be reluctant to come forward. Finally, the slow, plodding nature of the bureaucratic process raises the question of what can be done to process cases efficiently while also protecting the rights of individuals accused of fraud.

A close study of the Breuning case suggests that the procedures of the scientific process do afford some protection against the widespread impact of fraudulent data on both science and practice. Based on the assumption that influential research will be widely cited in other research studies, an ingenious study used the *Science Citation Index* and the *Social Science Citation Index* to examine the number of citations made by other researchers to Breuning's 20 publications between 1980 and 1988 (Garfield & Welljams-Dorof, 1990). The 200 citations found suggested that his work was influential. However, when the researchers evaluated who had made the citations and the *context* of the citations to better understand the effects of the Breuning studies, things looked a bit different. For example, of the 200 citations, 40 percent were self-citations by Breuning or his coauthors. In addition, following the publication of a critical review of Breuning's work, citations to his work by others declined sharply. Finally, of 38 studies judged to be materially affected by Breuning's publications, 21 led to negative conclusions, disagreeing with his findings or criticizing his methods. The authors concluded that the pattern of citations suggests the process of scientific publication and critique is capable of purging science, to a degree, of fraudulent studies.

effectiveness. Providing services is expensive and time-consuming, and it also raises clients' expectations for improvement. Is it ethical to do this when no evidence documents that the treatment will be beneficial? For the most part, we would not think of marketing new medicines without a thorough test of their effects, both positive and negative. We should expect no less from the human services we offer.

Alternatives sometimes can be found to withholding treatment. One alternative would be to offer the control group a treatment that is known to be effective and then see whether the new treatment provides more or less improvement. In this way, all clients are receiving a treatment that is either known to be or suspected of being effective. In the study of the effectiveness of suicide intervention programs, for example, one certainly would be reluctant to evaluate a new intervention by using a control group that received no intervention at all. One study of outpatient interventions targeting suicidal young adults used a randomized experiment in which subjects were assigned either to a new experimental treatment or to a control group that received a treatment that had been commonly used for these interventions. Although both groups showed improvement, the experimental treatment was more effective in retaining the highest-risk participants (Rudd, Rajab, & Orman, 1996).

Another alternative to withholding treatment would be to delay giving the treatment to the

control group and make the comparisons between those receiving treatment and the control group over this period of time. For example, in a study of two different approaches to controlling people's smoking, all participants in the study were told that, if they were randomly placed in the group that would not receive immediate treatment, not only would they receive treatment when the study was over, they would receive whichever treatment the study showed to be most effective (Coehlo, 1983). This resolves the ethical problem by ensuring that all participants will receive treatment at some point.

In cases without such alternatives, however, clinician–researchers must use the risk–benefit approach: Does the benefit to be gained from the research outweigh the risks of withholding treatment from the people in the control group? If we were studying people at high risk of suicide, we would be cautious about withholding treatment. In the treatment of nonassertiveness, on the other hand, we might decide that a delay of a few weeks in treatment would not be terribly detrimental and that whatever damage occurred could be undone once treatment was initiated. As with so many other ethical issues, this is ultimately a judgmental one over which clinician–researchers will continue to agonize.

CODES OF ETHICS

A point emphasized in this chapter is that ethical judgments are difficult and often controversial because they involve interpretation and assessment. Most professional organizations establish written codes of ethics to serve as guides for their members to follow. These codes by no means settle all debate, but they do stand as a foundation from which professionals can begin to formulate ethical decisions. These codes can be found at the websites and in publications of the major organizations of professionals who conduct research in the social sciences and human services. See, for example, the web pages of these organizations:

- American Sociological Association (http://www.asanet.org)
- National Association of Social Workers (http://www.naswdc.org)
- Association for Applied and Clinical Sociology (http://www.aacsnet.net)
- American Association for Public Opinion Research (http://www.aapor.org)

The codes of ethics of other social science and human service professions would be similar to these.

REVIEW AND CRITICAL THINKING

Main Points

- What is ethical in research and practice is based on human values and varies as those values change.
- The mistreatment of minorities in research has been a major impetus to the development of ethical standards for research in the United States and abroad.
- Social research typically is evaluated in terms of risks versus benefits, with some "questionable practices" allowed if the research promises sufficient benefits.
- Informed consent assures participants the ability to determine their own destiny, but may prevent the use of some research methods and force the study of only those persons who volunteer.
- Some level of deception is sometimes used in research, but whether or under what conditions deception is acceptable has been highly controversial.
- Research subjects have a right to privacy, and it can be protected by letting them edit data about themselves from a data set, keeping the