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Ethics and the Forensic Sciences: Professional Autonomy in the Criminal Justice System

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ABSTRACT: Forensic scientists in their roles as expert witnesses or as laboratory employees experience restrictions on their exercise of professional discretion which raise questions about their ability to act responsibly in the criminal justice system. To respond effectively to these challenges to their professional autonomy, forensic scientists must find ways to increase their control over their work and to convince other key actors in the criminal justice system of the importance of doing so.

KEYWORDS: jurisprudence, forensic sciences, symposium, witnesses

Forensic scientists are a mixed breed in that they represent a diverse group of scientific disciplines with variations in technical training, experience, and ethical traditions. When thrown into the milieu of the U.S. legal system, however, they face a common set of dilemmas that tests both their scientific training and their professional norms. The purpose of this paper is to identify some of those dilemmas and to assess the professional responses to them. While the difficulties are of most immediate concern for individual forensic scientists, I shall be especially interested in the role of the professional group.

Two Cultures: Science and Law

At the root of many of the ethical dilemmas experienced by scientists who become professionally involved in the law's adversarial system is the clash of two cultures. Law is an adversary process with a different set of operating procedures and values than science. For example, attorneys are free to interpret scientific evidence in a way that supports their client. Indeed, it is their ethical obligation to do so. Scientists, however, would not tolerate the arbitrary presentation of data or the deliberate concealment of unfavorable experimental outcomes. In science, the truth, wherever it may lead, serves everyone's interest. In the legal system, that which serves the interest of one's client is what counts as the truth.

When forensic scientists enter the arena of law, they are subject to pressures and constraints imposed by the legal system. As a practical matter, their options are limited, perhaps so much so as to raise the question of whether a forensic scientist can *ethically* participate. Two different views on the matter are worth noting.

One view takes the position that scientists should be more accommodating towards the

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law. Two statisticians, Miron Straf and Stephen Feinberg [1], contend that

statisticians must be more accepting of their science being used in ways that serve the legal process well. Statisticians should not necessarily expect to impose the rigors of their discipline for scientific relevance, completeness, accuracy, and generality upon the courts, and they may need to become more tolerant of the following aspects of the legal process:

- the selection of evidence according to legal relevance,
- the expression of ideas in somewhat vague and imprecise terms,
- the reformulation of statistical concepts into words that can take on new and different meanings, and
- the inference of conclusions, not from proofs, logical consequences, or even statistical tests of significance, but rather from impressions and assessments of reasonable experts . . .

An alternative view, one which places a greater burden on the legal system, is articulated by philosopher Alan Goldman. He argues that the burden of proof lies with those who would have scientists “accept limitations on [their] authority to act on direct moral perception The presumption is always that agents ought to exercise fully autonomous moral judgement, taking all relevant factors into account directly and acting on their perceptions of such factors” [2]. Both of these views raise the question of at what point, if at all, forensic scientists should subjugate their professional norms to those of other key actors in the criminal justice system?

Professional Ethics and the Legal System

How instructive are the ethical prescriptions that have traditionally influenced professional behavior to forensic scientists seeking guidance in morally complex situations? This section addresses two of the more vexing ethical dilemmas experienced by forensic scientists.

Partisan Litigation and the Forensic Expert Role

Guidelines prepared for forensic engineers state that “Your responsibility is to be loyal to your client within the framework of ethical practice, which places truth above all other considerations” [3]. In principle, this prescription has great appeal. But what about its practical application? To be “loyal” to one’s client implies an advocacy role, but placing “truth above all other considerations” suggests a more impartial role. From an ethical perspective, which role should prevail? And which “framework of ethical practice” should be honored—that of law enforcement agencies, lawyers, or the forensic science profession?

Since forensic scientists are typically employed by one side or the other in the adversarial legal process, the impartiality/advocacy dichotomy is a matter of considerable concern for those sensitive to its implications for their professional role. Historically, the law has defined the role of the expert as that of an impartial educator asked to assist the trier of fact so that the latter can decide questions which may depend on specialized knowledge. The expert, then, has an ethical responsibility to offer a complete and objective picture of the evidence pertinent to the case at issue.

Some argue, however, that in reality the role of impartial educator is difficult to maintain, “both because of pressures toward advocacy from the attorneys who hire the expert, and because of a strong tendency to identify with the side for which one is working” [4]. They take the position that the expert should, within the context of the adversary system, be a responsible advocate, supporting one side of an issue without distorting or misrepresenting the existing evidence. Alice Rivlin [5], a proponent of this view, calls for a

new tradition of forensic social science in which scholars or teams of scholars take on the task of writing briefs for or against particular . . . positions. They . . . bring together all of the evidence

that supports their side of the argument, leaving to the brief writers of the other side the job of picking apart the case that has been presented and detailing the counter evidence.

For others, there are both pragmatic and moral considerations that argue against the advocacy role. In practice, there is “no guarantee that a misleading or one-sided version . . . will be corrected” by others [2]. The proper role of the expert is “not that of client advocate, but that of education of the jury. The requirement of adopting the role of impartial education follows directly from our justification for testifying. Given that the moral aim of such testimony is to inform the decision-making process in the jury so as to make it more rational, the proper manner of testifying is that which best achieves this” [2].

For those advancing the impartial educator role, it is generally not sufficient merely to give honest answers in response to specific questions or requests, or to avoid intentionally misleading others. Rather, the expert must be willing to volunteer information that may be ethically, though not legally, required [6]. She should be prepared to point out the tentative nature of scientific findings and to acknowledge contradictory evidence when it exists. “Otherwise, the scientist is indeed no different from any other well-informed advocate who seeks to advance advantageous truth and to minimize or hide disadvantageous truth” [7].

I now return to the question of which “framework of ethical practice” should govern the expert’s conduct in the adversary process. Lawyers frequently consider forensic science a utilitarian tool to further their professional ends. They will select or reject experts and evidence according to the needs of their clients. But although an unyielding commitment to advocacy may be a moral imperative for attorneys, it can be antithetical to the ethical responsibilities of forensic science experts. The expert, then, cannot appeal to the norms governing the attorney’s role for guidance on how he should function. Rather, forensic scientists must retain professional autonomy over their work and the ethical principles which have traditionally guided their profession.

The Forensic Science Laboratory: Scientist as Employee

Science plays an important role in today’s criminal justice system as the forensic science laboratory is increasingly called upon to assist in the gathering and processing of evidential material. But from the perspective of professional ethics, all is not well in the laboratory.

Conflicts and tensions are likely to occur in organizations employing professionals because organizational needs and professional requirements often come into conflict. Bureaucratic organizations require predictable behavior, coordination, and loyalty. Yet professionals typically expect to be autonomous, subject only to the limits of their expertise, and contend that they should be permitted to act on their sense of social responsibility. The forensic science laboratories are not immune from the tensions that arise from these conflicting role expectations.

The institutional characteristics of forensic science laboratories can have considerable influence on the work of the employed scientists. In many instances the laboratories are expected to function according to the dictates of the main consumers of laboratory services—the law enforcement community—and, as such, are an extension, if not a formal part, of a law enforcement agency. This has several important consequences for laboratory performance. First, the tasks assigned to scientists by supervisory personnel reflect the priorities set by the governing organization—the prosecutor’s office or police department—and the funding they allocate to the laboratories. Professional discretion can be severely restricted.

Second, zealous pursuit of criminal convictions, often accompanied by the selective consideration of evidence, can determine what laboratory scientists evaluate and whether or not it is ever used.

Police officers collect the evidence to be tested and often become advocates in convincing prosecutors and judges that a particular suspect committed the crime. Much potential evidence is

over-looked in this screening process or . . . simply not submitted for analysis. And even if the evidence is submitted, the results might not be used if they do not support the police investigator's theory concerning the crime [8].

Such action on the part of police or prosecutors overrides whatever professional authority scientists might be expected to exercise in the laboratory.

Third, it is the law enforcement agency in which the laboratory is situated that controls the system of rewards and sanctions for the forensic science employees. The latter are expected to cooperate and work toward organizational goals, an understandable feature of organizational life. But blind loyalty or loyalty under threats of retaliation is not conducive to the exercise of professional discretion. For example, a report of an Illinois Grand Jury found that "the testimony of the firearms examiner that he could not have refused to sign what he believed was an inadequate and preliminary report on pain of potential discharge is highly alarming" [9]. Under such pressures, professional notions of morality may be forced to yield to hard, pragmatic judgments. Indeed, William Curran contends that

The temptation for the forensic scientist . . . is to become a servant of the police and the criminal prosecutor's office to the extent that truth is sacrificed to arrest, disposition of cases, and a good prosecution record. . . . Such forensic scientists improperly join in the chase for a likely suspect and resolve doubts in support of their colleagues in the police department [10].

Whether or not Curran's harsh assessment is accurate, Bradford's call for "forensic science systems that are independent of the executive control of public protection agencies" [9] deserves serious attention. Short of that, or complementary to it, are professional standards that will support the exercise of appropriate professional discretion by forensic scientists over their work.

External Constraints on Professional Autonomy

I have chosen to examine the two ethical problems presented above because they pose serious challenges to the professional autonomy of forensic scientists. The remainder of this essay focuses on those challenges and how various professional groups might be expected to respond to them in the setting of the criminal justice system.

There are several reasons for focusing on the role of the professional group.² First, there is the power and influence that accompany professional privilege. The professions have been vested by the state with the power to determine who may enter the profession, what knowledge and skills must be acquired to achieve professional status, and by what standards of conduct individual professionals will be judged. Ultimately, then, the individual's right and ability to practice is defined by his or her relationship to the group, as are the standards governing such practice. Concomitant with this organized power and privilege is a collective responsibility to ensure that they are used responsibly and for the purposes for which they were granted.

Second, there is the collective responsibility that is inextricably linked to a profession's commitment to serve important social values. As a condition for professional autonomy and social support, a profession willingly commits (or promises) its resources and expertise to serve society's well-being. It thus accepts for itself a duty to apply its special knowledge and skills to socially defined ends.

A third reason is the mediating influence of the group between the expectations and needs of clients or employers and the provision of services by individual professionals. The socialization process achieved through professional education and reinforced by professional norms can help subordinate individual interests to the collective purposes of the profession.

²This emphasis on *group* responsibility is not meant to suggest that individual professionals are relieved of their responsibilities to work towards whatever changes may be required.

And "the collectivization of appropriate norms and their transmission to individual practitioners are the cornerstones" [11] of the trust relationship between individual practitioners and clients. This is so because "we place our trust not only in individual professionals, but also in the professional group. We rely on the group to guarantee that its members fulfill their agency obligations. . . . We trust professionals to act in our interests. . . . And we trust professionals because the exercise of professional discretion at the individual level is governed by rules which are prescribed and enforced by the group" [12]. Theoretically, at least, it is the assumption of collective responsibility by the group that supports and reinforces individual professional behavior.

And a fourth reason is the professions' presumptive preference for self-regulation as an alternative to increased public control which requires that they assume greater internal control over their affairs. Self-regulation places the burden collectively on the group to ensure that individual members are competent and perform according to high ethical standards.

According to sociologist Eliot Freidson, "a profession is distinct from other occupations in that it has been given the right to control its own work." This includes the authority "to determine who can legitimately do its work and how the work should be done" [13].³ Such control carries with it a responsibility to clients and the larger public that members of the profession will meet standards of competent and ethical performance. It would appear that these requirements of professional status are problematic for forensic scientists.

Scientists who are employed as expert witnesses or by forensic science laboratories experience considerable obstacles in attempting to discharge their professional responsibilities. Their employment status takes on considerable importance because it influences the capacity of professionals to control their work. They must perform their work in circumstances that are shaped by the structures and policies of the organization for which they work and by the resources allocated to them by others.

For the scientists hired by counsel as an expert witness, compromises are made in what evidence is solicited from the witness at the discretion of the attorney, and these militate against the scientist's autonomy.⁴ After all, it is the attorney who attracts the client, orchestrates a defense or prosecution, and allocates the resources available. The attorney manages the entire case, while the expert witness is one among many role players. While the constraints on the forensic witness may be avoided by any particular scientist simply by refusing to accept the role assigned him by the litigation process, that is an unsatisfactory response for a system that increasingly views the participation of experts as crucial to the administration of justice.

The problem is more acute for scientists employed by forensic science laboratories that are formally situated in a law enforcement agency, "with local and often political considerations shaping the tenor of the laboratory and the philosophies of the professional staff" [14]. In most organizational units, administrators are responsible for developing policies and procedures that reflect goals of the larger organization and for allocating funds accordingly. They thus can exert control over the kinds of professional work possible and the ways that it can be performed. The typical forensic science laboratory scientist working in such an organization has limited influence over these matters.

As a consequence, the autonomy of the forensic scientist is overshadowed by the requirements of the employing organization. Peterson [15] describes the outcome for the forensic science laboratory in this way:

In their crimefighter role, the police pursue objectives and use methods of information gathering that are fundamentally different from those of the scientists. . . .

³Such authority is not absolute, but rather ranges along a continuum where different professions and other occupational groups are located.

⁴This is true more so on the witness stand than in an expert's written report, where presumably all facts pertinent to the expert's opinion rendered will be revealed and which would be subject to disclosure either by statute or by accepted practice.

The control exerted by the police at this evidence-collection stage not only determines what evidence the scientist examines, but also limits the types of analyses that may be performed on the evidence and the types of questions to which the scientist may seek answers.

Many believe that the collection of physical evidence is the most critical state of the entire forensic science utilization process; yet, this level is where forensic scientists have the least control.

In evaluating this tension between the professional autonomy of forensic scientists and the organizational biases of law enforcement, one should be cautious in characterizing it as a conflict between good and evil, with one party clearly virtuous and the other sinful. There may be justifiable reasons to restrict professional autonomy in favor of some greater organizational or social good. In the absence of such justification, however, forensic scientists have an obligation to raise public consciousness of any adverse effects on our system of justice by efforts on the part of persons outside the profession to lessen professional control over forensic science work. At the same time, they need to make a convincing case for increasing their autonomy in the criminal justice system.

Professional Autonomy for Forensic Scientists: A Mixed Record

To what extent can the forensic science profession organize the work of its members in such a way that the public can be assured of a high standard of performance—technically and ethically—by individual professionals? At this time, the answer is not entirely encouraging.

There are few “tested” ethical guidelines for expert witnesses. The Code of Ethics and Conduct of the American Academy of Forensic Sciences (amended 1986) includes only one provision (that which prohibits members from providing any “material misrepresentation of data”) which appears applicable to expert testimony. But that offers little guidance on how to handle the compromises vis-a-vis attorneys referred to earlier and says nothing about what role—educator or advocate—is ethically required. The National Academy of Forensic Engineers (NAFE) has adopted the Code of Ethics of the National Society of Professional Engineers (NSPE), but even the founding president of the NAFE acknowledges the “obvious need for some elaboration on the code to answer those particular problems which arise in the application of engineering within the jurisprudence system.”⁵ Psychologists who testify in court can refer to the 1981 Ethical Principles of Psychologists. For example, they require psychologists to “provide thorough discussion of the limitations of their data . . . and . . . acknowledge the existence of alternative hypotheses and explanations of their findings.” But for some psychologists, such provisions are aimed more at scholars reporting on their research to an academic audience or to psychologists treating clearly identifiable clients in a clinical setting. They remain dubious about their value to the expert in court [1]. And a former president of the American Psychiatric Association has characterized that profession’s ethical principles as “irrelevant as guidelines for forensic psychiatrists” [16]. Perhaps recognizing this, the American Academy of Psychiatry and the Law has very recently adopted Ethical Guidelines for the Practice of Forensic Psychiatry.

On a more positive note, several professional groups have endorsed a draft set of Recommended Principles of Practice for Design Professionals Serving as Expert Witnesses. And perhaps the most comprehensive set of guidelines appear in the Code of Ethics of the California Association of Criminalists, which addresses court testimony as well as the responsibilities of forensic scientists employed in the laboratory setting.

An important function of a profession’s code of ethics is to support members against unwarranted erosion on their autonomy or improper demands on them by outsiders. An appeal

⁵M. M. Specter, Secretary and founding President of the National Academy of Forensic Engineers, personal communication, 8 April 1987.

to the code, reinforced by the profession's resources, may strengthen the hand of its individual members in resisting unduly intrusive incursions on professional autonomy by employers. As a distillation of the profession's collective experience and wisdom, a code of ethics can also offer guidance to individual professionals who find themselves uncertain about the proper course of action.

But there is little evidence to suggest that the existing patchwork quilt of ethical guidelines described above, with some more or less pertinent than others and few of them tested over time, is capable of strengthening professional autonomy when subject to the biases and constraints of the criminal justice system. What may be needed is a concerted, joint effort on the part of all professions engaged in forensic science activities to identify a common set of ethical principles that can command the support of forensic scientists generally and earn the respect of the criminal justice system.

In addition to ethical standards, forensic scientists must also meet certain professional standards in preparing their work and reporting their findings. But currently there are no minimum standards for determining who is qualified to testify in court or to examine evidence. The fact is that the job title "forensic scientist" is not based consistently on formal educational credentials, and the training and experience of forensic scientists is as varied as are the disciplines which they represent. Up to a point, such diversity can be a source of strength. At the same time, however, it can sometimes hinder the profession's ability to identify a recognized core of knowledge essential to professional practice.

The lack of accepted credentials for forensic scientists is further complicated by the absence of any "standard laboratory procedures available that the examiners are expected to follow when analyzing typical forms of evidence" [8] and of standards for reporting information that is subject to litigation. Given this state of affairs, forensic scientists would be hard pressed to make a strong claim for control over their work. The profession clearly has "a considerable distance to travel until it satisfies a fundamental professional goal which is to maintain scientific competency and render technically correct statements in all written and oral reports" [8].

There are relatively new efforts underway to respond to these problems. The California Association of Criminalistics has proposed certification standards and procedures for its members which are expected to be operational in mid-1988. The certification program is intended to demonstrate that a person has "an appropriate level of understanding of the field . . . and can properly apply whatever specific procedures are required to complete a task, both technically and ethically" [17]. The program is aimed at those working in a forensic-science laboratory and apparently would not apply to expert witnesses employed in other settings. On another front, the American Society of Crime Laboratory Directors [18] has adopted "Guidelines for Forensic Laboratory Management Practices," which outline a quality assurance program for the examination of evidence and the reporting of results.

The Role of the Professional Association

It is through the organized, self-governing professional associations that individual members and the public expect the professions to discharge their responsibilities. A professional association, whose members have primary authority over who shall belong and hold office and what rules shall govern its members, is understandable as a social unit authorized to represent the profession, which is of course what it claims to be. It is a visible private-sector institution on which individual professionals and members of the public rely to monitor and evaluate the extent to which professional performance measures up to the technical and ethical standards of practice promulgated by the association.

The task of the professional associations of forensic scientists is, at this juncture, twofold. First, they must develop a set of ethical principles or guidelines that recognizes and seeks to safeguard the integrity of expert testimony and evidence in the criminal justice system. With-

out attempting to develop those principles here, it is possible to point out several themes that ought to be addressed:

- Client identification—Who is the client of the expert witness and the laboratory forensic scientists? By identifying specific clients (e.g., law enforcement agencies, courts, juries, attorneys), it will then be possible for forensic scientists to evaluate the effects of their participation in the criminal justice system on particular clients and to define their concomitant professional responsibilities.
- Role definition—What is the proper professional role of the forensic scientists in the criminal-justice system? When the performance of that role conflicts with the roles of other prominent actors in the criminal-justice system, how should the forensic scientist resolve that conflict?
- Ethical priorities—How should forensic scientists resolve conflicts among ethical principles? What principles, and in what circumstances, should have priority over others?

Once such principles are articulated, the associations must press for legislators, forensic science laboratory administrators and the courts to accord the profession's ethics considerable weight in adjudicating conflicts among professionals in the criminal justice system.⁶

Second, the associations should work toward establishing an institutional credentialing system for forensic science laboratories. By doing so, the profession can attempt to put control over forensic science work back into the hands of its members by requiring conformity to a set of standards that affects laboratory employment practices—the recruitment and qualifications of personnel, the allocation of work, the handling of evidence, and the reporting of forensic science findings. In this regard, the accreditation program of the American Society of Crime Laboratory Directors [19] and the aforementioned “Guidelines for Forensic Laboratory Management Practices” represent promising approaches toward reinforcing professional autonomy in the forensic science laboratory. This is so because both measures will allocate more authority to guide and evaluate the performance of rank-and-file forensic scientists to forensic science laboratory managers, who are often themselves trained as forensic scientists. While this may not necessarily increase the use of discretion and judgment by individual rank and file professionals in the laboratory, it will nevertheless contribute toward investing control of professional work in the hands of the profession.

Neither of these tasks will be easily accomplished, however. It is possible that, at least with regard to a credentialing system, other key actors in the criminal justice arena may oppose such efforts. Indeed, it is reasonable to question why the norms of forensic scientists should prevail over other competing professional values in the criminal justice system. What should the relation of the forensic science profession be to other professions in deciding the ethical norms that should govern professional conduct in the adversarial process? The answer must come from deliberations involving a wide range of parties with an interest in the operation and outcomes of the criminal justice system. This includes the forensic science profession, which will need to convince others of the importance and weight that ought to be accorded to its work and professional norms.

The diversity of associations that represent different segments and disparate traditions within the same profession may also work against a unified professional front on the specific terms of a system of institutional credentials. Thornton [14], for example, has characterized the criminalistics community as having “displayed very little consensus . . . [on] the role criminalistics should play in the administration of criminal justice.” Nevertheless, if forensic scientists are going to assert control over their work, then their professional associations are logical sources for building support and gaining institutional allies in the public arena for such an effort.

⁶The recently adopted Code of Ethics of the American Society of Crime Laboratory Directors is an important step in this direction. Among other things, it acknowledges the ethics codes of professional forensic science societies and states that “It is in the best interests of our profession that managers support these endeavors by endorsing their efforts and by encouraging participation by our employees.”

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