

Beyond the Scientific Limits of Expert Testimony

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Dr. Pollack^{1,2} has often argued that a major basis for the legal value and credibility of expert courtroom testimony lies in the neutrality and objectivity with which the forensic psychiatrist can apply his expertise to legal issues for legal ends. The testifying expert is required to present data and opinion in an adversarial arena where pressures may often exist toward overextension of expert testimony. These pressures on forensic psychiatry make it vulnerable to distortion or abuse by the legal system.³ It is proposed that the ideal of neutrality and objectivity can best be implemented in forensic psychiatric or psychologic practice through an explicit awareness of the types of external influences and individual biases which may affect expert testimony in particular cases. This understanding can then be utilized to articulate specific roles which the forensic expert may choose in addressing particular legal issues, in the most appropriate and useful manner to the courts.

Psychiatry and the other behavioral sciences have been increasingly called upon to provide courtroom testimony on issues of public concern. As strong as this pressure to testify has been, criticism of such involvement has similarly increased and has questioned the basis of the very expertise that appears to be in such demand.^{4,5} There is little doubt that expert testimony can be useful in many areas or that public decisions can benefit from access to the various existing resources of scientific data concerning human behavior. In the public mind, however, to the extent that *any* expert testimony can be questioned, the truthfulness or validity of *all* such testimony becomes suspect.^{6,7} It is therefore incumbent on physicians and scientists involved in providing expert testimony, which may have far-reaching impact beyond their professional disciplines, to understand the limitations and possible uses of their roles in providing such testimony.

A major criticism of expert testimony has been that of its *overextension* beyond the limits of existing methodology and data.⁸ There are many reasons for such overextension, involving ethical dilemmas in what constitutes the expert scientific role and the pressures as well as valid needs of the legal system. The purpose of this article is not to examine all such issues comprehensively but rather to focus selectively on certain concerns involving expert testimony based on scientific expertise.

Forensic psychiatry, perhaps most noted in the public mind for its controversial role in the insanity defense, has expanded its expertise to

virtually all areas of the criminal justice system. These roles have included selection and training of police officers, competency of defendants to stand trial, jury selection, appropriateness for parole or probation, and sentencing issues.⁹⁻¹² Although behavioral scientists have been involved in these elements of the criminal justice system, their expertise in many of these areas has yet to be firmly established.¹³ One problem which has potentially wide-reaching impact for the American prison system is that of the appropriateness of certain celling practices which have resulted from overcrowding, and scientific testimony has been sought to provide information as to psychologic effects of various prison conditions.^{14,15} One such case, that of *Smith v. Fairman*,¹⁶ will be examined in detail in order to illustrate some of the difficulties in extending psychiatric expertise to this particular social-legal problem. This example will then be utilized to explore some general issues in the appropriate limits v. overextension of scientific expertise.

Case Example

*Smith v. Fairman*¹⁶ represents a recent important case in which a plaintiff in Illinois, who was an inmate of the Pontiac Correctional Center, filed a class action suit. The legal basis of this suit was that double-celling practices (i.e., putting two inmates in a cell designed for one) at Pontiac resulted in crowding and stressfulness and therefore constituted "cruel and unusual punishment," a violation of the 8th and 14th Amendments to the Constitution of the United States. Pontiac, a maximum security penitentiary, built in 1871 and originally designed for long-term incarceration of 1,200 inmates, was housing over 1,600 prisoners, of which approximately 400 were randomly assigned two per cell.

The plaintiff's case for applicability of the "cruel and unusual" standard rested on two considerations: first, that the specific double-celling conditions at Pontiac (55.3 square feet per inmate) violated various proposed humanitarian standards;^{17,18} and second, the scientific research based on animal analogue, human stimulation, and prison studies showed crowding to have specific adverse effects. There was little argument as to the first consideration, but expert testimony differed strongly as to the second. The plaintiff's attorneys called psychiatrists and psychologists who testified that on the basis of 36 cited research studies, certain effects could be concluded to a "reasonable degree of scientific certainty" regarding the specific conditions at Pontiac. These conclusions were (1) that prolonged close confinement has been shown to create stress and fear, leading to frustration, hostility, aggression, depression, apathy, excessive accidents, and suicide; (2) that such consequences may have irreversible effects; and (3) that the specific celling conditions at Pontiac constituted such stress.

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One author (J.L.C.) was approached by the defense in this case to review systematically the applicability of these studies to the plaintiff's claims. The same 36 studies were examined as to methodology and generalizability, and serious reservations were raised as to the adequacy of the available research¹⁹ to substantiate the conclusions of the plaintiff's experts. The main conclusions of this review, and subsequent testimony on this issue, was that the question itself was beyond the current limits of behavioral sciences' expertise. It was concluded that a variety of methodological problems prevented specific conclusions from being made as to the psychologic effects of overcrowding in prisons and, specifically, could not be generalized to the particular conditions at Pontiac. It must be emphasized that the possible stressfulness of double celling was not itself addressed, only the applicability of these studies to resolve this question. In his report to the court, J.L.C. also felt a responsibility to add the following comment:

... such a use of scientific study results is an abuse of the scientific method and could be seen as a rationalization for a moral or philosophical belief (for example, that it is 'inhumane' to double-cell prisoners at Pontiac).²⁰

Basically, what was stated was the concern that when experts testify beyond the valid inferences of existing data or methodology, then the result is a statement of one's own personal or political belief, inappropriately disguised as expert testimony.²¹ There is no objection to forensic experts making statements of informed and concerned opinion on important issues. It is rather the lack of differentiation between legitimate scientific deduction and personal value judgment, which constitutes a critical vulnerability of the scientist as an expert witness, and which, in one manner or another, has added to much of current criticism.

Testimony concerning punishment within the correctional system exemplifies particularly well the difficulties in differentiating between expert opinion and value judgment. There are strong and differing opinions concerning the appropriateness and psychologic effects of punishment within and outside the behavioral sciences. Szasz,²² Menninger,²³ and Skinner²⁴ represent particularly well-publicized and differing views. Ziskin,⁵ e.g., has utilized such existence of disparate views to criticize the appropriateness of expert testimony in the behavioral sciences in general. In such an atmosphere of strongly held, differing views, it is not difficult for experts to testify on the basis of controversial research in a manner supportive of their personal convictions. These various points of view may have merit, as opinions, and may be of interest to decision and policymakers when stated as such. Stating such opinions on the basis of scientific expertise, however, means functioning in reality as an advocate of a particular viewpoint, and thus laying open for criticism one's impartiality as an expert witness. It can

be argued that when science cannot validly be brought to bear on a particular issue, then that issue should remain completely the responsibility of judges, administrators, legislators, and the body politic.

In *Smith v. Fairman*,¹⁶ the judge ruled in favor of the plaintiff, i.e., that conditions and particular celling practices at Pontiac *did* constitute cruel and unusual punishment. The judgment was not made, however, on the basis of the plaintiff's expert testimony, but rather on general humanitarian considerations as related to the specific conditions at Pontiac. It would also be worthwhile to mention the most recent US Supreme Court decision in regard to double celling, *Rhodes v. Chapman*,²⁵ which also included expert testimony as to crowding and stress. In this case the constitutionality of double celling at a different institution was upheld. In *Rhodes v. Chapman*,²⁵ as in *Smith*, the court did not primarily address the scientific debate vis-à-vis overcrowding in rendering its opinion and based its judgment on the applicability of the following legal definitions and case law:

- I. Punishment is deemed cruel and unusual when it:
 - A. Involves wanton and unnecessary infliction of pain (*Gregg v. Georgia*²⁶).
 - B. Is disproportionate to the severity of the crime (*Coker v. Georgia*²⁷).
 - C. Is unusual under contemporary standards.
- II. Punishment is constitutional in that:

"To the extent such conditions are restrictive and even harsh, they are part of the penalty that criminals pay for their offenses against society."²⁸

It can be seen that these criteria, though certainly subject to interpretation, are explicit, reasonable, and practicable, even though they do not include criteria of a scientifically determinable nature.

Social Pressures in the Overextension of Expert Testimony

If the courts and other policymaking institutions are able to make reasonable decisions without expert testimony, why is it so often sought out? The following are some factors that are particularly important and deserve careful scrutiny.

Existence of Complex Social Problems in Need of Resolution As stated by Bazelon,²⁹ "The public arena is a place where awesome decisions are made on the basis of limited knowledge and groping understanding." An example of such complex issues is IQ testing, which has come under considerable controversy in California and Illinois for potential bias against minorities in placement of students in special education classes.³⁰ In regards to the legal process itself, psychologists have been called upon to testify on the validity and limitations of eyewitness testimony.^{31,32} These represent

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two examples of areas where public knowledge may be insufficient for informed decision making. Several additional factors, outlined below, contribute to the extensive involvement of behavioral scientists in presenting expert testimony.

Claims of the Behavioral Sciences One reason for the solicitation of behavioral science input has been the increasing acceptance by courts and the public at large of psychologic explanations of behavior.³³ This increased acceptance has paralleled claims by the behavioral sciences, at one time or another, of expertise in almost all areas of human behavior. What is frequently misunderstood is that claims may differ from verification and may be based on theoretical positions unsubstantiated by empirical data. Robitscher,³⁴ e.g., details the effects of psychoanalytic theory on the claims and public perception of psychiatry. He stresses that with the introduction of the concept of unconscious process and methods for uncovering it, the psychiatrist could claim to observe what others could not; to “know” more about a defendant than judge, defense counsel, or even the defendant himself/herself. The expert could claim to make understandable that which appears irrational and could thus testify as to both conscious and unconscious intent. He/she could also claim to know what influences these processes and thus testify as to dispositional issues.

Learning theory, from a very different theoretical perspective, has attempted to identify the basic laws of all behavior,³⁵⁻³⁶ therefore potentially lending expertise to any and all legal issues, since the law involves itself with human behavior. This approach has attempted to determine the fundamental mechanisms of human behavior from a variety of research paradigms, including those using animal models. As previously noted, one of the problems in *Smith* was the attempt of plaintiff's experts to generalize the results of various animal studies to the effects of specific human crowding conditions.

Additionally, the expansion of behavioral science to social fields, especially the rise of social psychology and psychiatry, has allowed for claims of expertise on issues concerning various specific environments, such as penal institutions¹⁹ and even the court itself.^{37,38} If one accepts the complete range of claims which behavioral scientists have at times made, regardless of the degree of empirical verification, then there is no area of the law which could not be subject to expert opinion.³⁹

Conflicting Goals of Medicine In another respect, societal considerations involve a basic aspect of medicine and the helping professions which interface directly with legal concerns related to the protection of society. This protection has always been a concern of medicine and took on special meaning for psychiatry during the two world wars. Starting with World War I, “alienists” were called upon to treat battle-related trauma and, as

part of this duty, to assess and differentiate between bona fide psychologic reactions to war and malingering, thus consigning some examinees to disciplinary channels.⁴⁰ Freud,⁴¹ testifying before the Austrian Post-War Commission, was one of the first to voice concern about the role conflicts that such use of psychiatric expertise may involve. Today, much of the court involvement of psychiatrists involves the often conflicting best interests or wishes of the individual versus the concerns of public safety or societal needs.^{42,43} In situations lacking agreed upon criteria as to which duty takes precedence, at least the adherence of a particular clinician to one duty or the other should be made clear.

Willingness of Courts to Accept Expert Testimony With the increasing complexity of society, courts are called upon to make important public policy decisions which involve issues beyond their legal expertise and are awesome in their potential effects. Adding to this the prevalent overtaxing of court calendars, it becomes understandable how judicial decisions themselves can become displaced onto particular experts. In this regard, Bazelon²⁹ has noted: "Public decisions are often so close to impossible that those who are charged with making them are more than anxious to pass their burden to unwitting experts." Suarez⁴⁴ has similarly observed: "The judicial system lumps the conflicts, needs and fears of its terrible responsibility on psychiatry."

An illustration of this overreliance concerns the large proportion of judicial procedures in the mental health area which are not truly adversarial in nature.⁴ In a typical case, an indigent defendant may be seen briefly by a court-appointed psychiatrist, and even more briefly by a public defender, before a court hearing in which the expert's conclusion as to need for involuntary hospitalization may be accepted without substantial argument.⁴⁵ The situation has gradually changed through the patient rights movement,⁴⁶ but the history of uncritically accepting conclusory expert opinion could not help but have encouraged uncritical acceptance of expert claims. A related example of judicial overreliance on psychiatric judgment is that of the prediction of dangerousness.⁴⁷

The Adversarial Process The adversarial process itself comprises an additional societal force toward overextension of expertise. On one hand, the ability to challenge and crossexamine witnesses has always been the main safeguard against excessive reliance on expert testimony.^{3,34} On the other hand, the essence of the adversarial system is for two opposing sides to maximize, within the rules of evidence, the data and testimony that support their case and minimize that which conflicts.⁴⁸ Clinicians who testify in court thus find themselves in the position of desiring or being pressured to exaggerate the content of their testimony *and its certainty* by courtroom questioning designed to advance a particular side.⁴⁹ This pressure

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is aggravated by another element which may predispose, unintentionally, toward exaggeration of testimony. This is the fact that a majority of mental health testimony is provided by clinicians other than forensic specialists,⁵⁰ including therapists and treating physicians testifying about their own patients. In such cases it may become difficult for clinicians to adequately draw the line between objective circumspection and their "therapeutic bias,"⁵³ their commitment to the best interests of their patients.

There is another, more subtle potential for overextension that accrues from the court's solicitation of expert testimony within the adversarial process. This is that whenever mental health experts take part in criminal justice proceedings, their presence in and of itself may serve to validate that element of the criminal justice system.⁵ Similarly, willingness to address legal questions on the basis of behavioral science expertise, may serve to reinforce an arguable position that certain laws (e.g., defining insanity) and the legal process itself have *scientific* validity.²² One potential result is the obfuscation of differences between legal standards, such as responsibility, competency, and punishment, and scientific definitions and concepts such as categories of mental disorder, intelligence, and psychologic stress. Such parallels or identities have only been addressed preliminarily,⁵² although some advances have been made with respect to competency to stand trial,⁵³ informed consent,⁵⁴ and criminal responsibility.^{55,56}

Roles in Expert Testimony

The argument is proposed that these general factors tend to cloud differences between legal issues and scientific knowledge, and thus put pressure on scientists to testify to legal concerns beyond their valid expertise. These factors contribute toward the creation of certain roles which experts at times fulfill when providing testimony. In Table 1, a classification of

Table 1. Roles in Expert Testimony

Role	Purpose	Use of Data
Hired gun Advocate	Financial or other self-interest Support of adversary position	Distorts data to support opinion Selects data supportive of particular position
Impartial expert	Evaluation of case	Reviews all data, pro and con; forms opinion on basis of data rather than side soliciting services
Consultant	Evaluation of applicability of data	Reviews comprehensiveness and generalizability of research as it relates to particular legal issues
Ivory tower	Evaluation of public policy	Comments on relevance of scientific inquiry and knowledge to public policy issues

such roles is proposed, with the important caveat that in practice such roles may not be mutually exclusive.

The first role, that of the *hired gun*, emerges from the adversarial system and is a role that unfortunately exists in all professions. The hired gun exemplifies the simple point that some may find it financially or otherwise profitable to leave ethics aside and provide whatever testimony may be needed. This does happen and has been justly condemned within each of the mental health professions. It is additionally unfortunate that to the public, this role is often perceived to be the rule rather than the exception. In cases of this type, it is incumbent on professionals themselves, through enforcement of standards and ethics, to police this area of abuse.

The second role, that of the *advocate*, occurs when personal points of view are given priority in a particular case. This could possibly occur when a physician testifies in support of patients' interests, as may happen for example, in the area of Social Security disability testimony.⁵⁷ It can also occur when advocacy of a particular school or theory in psychiatry or psychology becomes an issue. Psychodynamically oriented clinicians may take a different point of view than biologically or phenomenologically oriented ones as to a particular defendant's culpability.⁵⁸ Current areas of controversy in forensic psychiatry, which may be susceptible to advocacy, include episodic dyscontrol,⁵⁹ use of hypnosis⁶⁰ as well as lie detection⁶¹ in the acquisition of evidence, and use of the computerized tomography scan in the diagnosis of schizophrenia.⁶² It should be noted that the advocate and hired gun positions are the ones most conducive to an adversarial process and are thus likely to be encouraged (subtly or otherwise) by counsel.

The third role, the *impartial expert*, is not an easy role to pursue, but is the one officially sanctioned by the court. This role requires behavioral scientists to pursue actively all avenues of evidence, whether or not those avenues further the interests of whoever solicited the experts' services. This is not always an easy requirement and is often met with less than enthusiastic cooperation by counsel. Pressures against impartiality may be especially great, e.g., on clinicians working within an organizational context (a community mental health center, insurance company, or a state facility). This role places a requirement on all experts who work within the legal system, or any institution, to educate themselves in the concepts and operations of that system.⁶³ It may also involve an additional responsibility on the part of experts to educate attorneys who solicit their services.

The design of programmatic services provide one means by which impartiality can be guarded. In the area of child custody, e.g., pressure is often encountered to provide negative comments concerning the opposing parent or guardian's capacities, regardless of whether or not this other person was specifically evaluated.⁶⁴ For example, the Child Custody Evaluation Project

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of the Isaac Ray Center, in Chicago⁶⁵ undertakes evaluations only with the participation of *both* sides (parents and attorneys), either voluntarily or through court order. Attorneys for both sides must agree to attend a joint conference after the evaluation, where results, conclusions, and recommendations are explained. The advantages of this procedure are exemplified by the fact that in the Project's two-year history, 59 of 60 cases originally scheduled for contested custody hearings have been settled out of court.

The next role, the *consultant*, is exemplified by the stance taken by one of the present authors in the *Smith v. Fairman*¹⁶ double-celling case reviewed above. This role recognizes that in many instances, the most objective testimony that can be given is not as to which side or claim is supportable, but rather to the capacities and limitations of expert input into the case.⁶⁶ This role differs from that of the impartial expert in that the consultant focuses on the breadth (comprehensiveness and generalizability) of theory or research being applied to a particular case rather than focusing on which side the existing data tend to favor. It then becomes the consultant's role to put the extent and applicability of particular knowledge in perspective for the court.

One example of the court's active solicitation of behavioral scientists in a consultant role was the highly publicized *Wyatt v. Stickney*⁶⁷ case, which involved the adequacy of psychiatric care in Alabama state mental hospitals. During these proceedings, the judge requested and obtained testimony, as *amici curiae*, from seven major government agencies, professional mental health associations, and legal rights organizations.⁶⁸

The final role may be characterized as the *ivory tower* academician. This is the individual who testifies in a particular case, but not about the case. It is distinct from the role of the consultant in that testimony addresses broad policy issues rather than the extent or appropriateness of knowledge applied to a particular case. This may include inquiry into the legitimacy of behavioral science testimony on particular legal issues. Such testimony may not be helpful in the individual case, where a specific legal decision is being sought. It can be helpful, however, when appropriately and judiciously used in forcing examination of the basic assumptions on which various experts operate and their potential value to the legal system.^{10,39} An example of such an area would be whether or not choosing a theory of imprisonment (such as punitive, rehabilitative, or "just desserts" models⁶⁹ *ought* to be the appropriate province of experts or of public decision making. Most of all, the ivory tower role can force confrontation of difficult issues that the courts and the public might otherwise find too easy to avoid or circumvent.

While each of these roles is open to potential abuse, the last three roles (impartial expert, consultant, academician) would generally be considered as ethically acceptable. The advocate role may be appropriate in several

circumstances, as when the relative worth of competing scientific formulations constitutes a specific issue before the court. Each of these roles (with the exception of the hired gun) may be appropriate or inappropriate, depending on the content, decisional issues, and societal pressures in a particular case. The role expectations of the attorney for the expert may remain undefined or conflict with the most suitable or valid role given the circumstances. Each of these roles may be passively or unintentionally assumed or they may be specifically chosen. In *Smith v. Fairman*,¹⁶ e.g., the testifying author (J.L.C.), after his initial review, sent a letter of intent to the defense attorneys, specifically defining which role he would most likely assume (that of the consultant) if his services were to be utilized.

It may be cogently argued that experts must be clear as to what role they are being asked to assume and choose which ethically allowable role is most appropriate. Acceptance of a particular role should be based on an awareness of the limits of his/her personal expertise, scope, and boundaries of the role itself and potential ethical problems that the role may entail. This also includes an awareness of the particular legal and societal pressures impinging on that role.

In summary, an argument is made that overextension of expert testimony is a product of various legal and societal forces. These include forces *impinging on* behavioral scientists, such as the need for courts to decide on complex and far-reaching issues through an adversarial process. They also include forces *arising from* behavioral science, including excessive claims of knowledge and motivations to promote particular points of view. Such forces then serve to create certain roles for experts in presenting testimony. It is argued that providing testimony beyond one's expertise may serve to conceal personal value judgments in the mantle of medical or scientific authority, and thus may co-opt decisions which may be more properly regarded as legislative or administrative concerns. A specific case was presented which illustrated both a particular area susceptible to overextension of expertise (relationship of behavioral research to legal definitions of cruel and unusual punishment), as well as use of a particular role (the *consultant*) in providing appropriate testimony.

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