The litany of social dysfunction is now familiar. The rates of violent crime are higher than they have ever been: Americans kill and maim one another at per-capita rates an order of magnitude higher than other industrialized nations. The rate of marriage has been generally declining and the rate of illegitimacy hits new highs each year. Tens of thousands of children have no fathers and no family member or close acquaintance who has a regular job. This pattern is now repeating into a second and third generation. Illiteracy is becoming a problem and schools have so lost authority that the accepted response to armed pupils is to install metal detectors. Senator Moynihan in a celebrated article recently pointed out how we cope with social disintegration by redefining deviancy, so that crimes become "normal" behavior.

How did we arrive at this condition? There's no short answer, but I have come increasingly to believe that my own profession -- psychology -- bears a large part of the blame. The story began many years ago, when psychology defined itself as a science. By thus anointing itself, psychology gained great prestige. People accepted with little demur prescriptions that would earlier have been condemned on moral grounds. Don't spank your child. Don't attempt to deter sexual exploration by young people -- deterrence is probably bad and will certainly fail. Punishment is ineffective and should be replaced by positive reinforcement. Self-esteem is good, social stigma bad. It is not clear that this advice was all wrong. What is clear, and what I will show in this article, is that it was not based on science.

Some questions about behavior can be answered -- either now or in the future -- through the methods of science. How does visual perception work? What are the effects of different reward schedules? How accurate is memory for words and faces? What lighting conditions are best for different kinds of task? Which people are likely to succeed in which professions? Other questions, including apparently simple ones such as the value of some teaching techniques or the legitimacy of corporal punishment, cannot be answered. They cannot be answered by science because they have consequences that go beyond the individual or far into the future. Corporal punishment and teaching methods affect not just the child but, eventually, the nature of society. Society cannot be the subject of experiments, and even if it could, effects of social changes usually take decades or even centuries to play out. Hence we cannot expect to get hard scientific answers to many social questions.

Obviously, we need to separate those questions that belong in the domain of science from those that do not; to separate questions which can be answered definitively from those which cannot. Unfortunately, psychology as a profession tends to assume that all questions about human action fall within its domain and all can eventually be answered with the authority of science -- and this imperialism has gone largely unquestioned.

Psychologists and behavioral psychiatrists seem like a diverse crew. At one end we have "touchy-feelys" who say things like "any of us who were raised in the traditional patriarchal system have trouble relating because we've been 'mystified' to some degree by an upbringing that compels obedience and rules by fear, a raising that can be survived only by a denial of the authentic self (John Bradshaw)." At the other we have the behaviorists, who say things like "In the scientific view... a person's behavior is determined by a genetic endowment traceable to the evolutionary history of the species and by the environmental circumstances to which as an individual he has been exposed (B. F. Skinner)."

Skinner and Bradshaw seem to agree on little. Skinner had no time for "authentic selves" or "feelings"; Bradshaw undoubtedly feels little kinship with Skinnerian "rat psychology." It may come as a surprise, therefore, to learn that psychological pundits from Bradshaw to Skinner agree on several important things. Almost all have a perspective that is entirely individual. All reject what John Bradshaw calls "fear," Fred Skinner called "aversive control" and the rest of us call punishment. Nearly all psychologists believe that behavior is completely determined by heredity and environment. A substantial majority agree with Skinner that determinism rules out the concept of personal responsibility. This opposition between determinism and responsibility is now widely accepted, not just by behaviorists but by every category of mental-health professional, by journalists, by much of the public -- and by many in the legal profession.

Behaviorism is the most self-consciously "scientific" of the many strands that make up psychology. Although recently somewhat overshadowed by other movements such as cognitive psychology, the influence of behaviorism during most of the short history of psychology has been overwhelming. Consequently, when behaviorists have produced "hard" evidence in favor of beliefs already shared by other psychologists, the combined effect has always been decisive. I will describe just such a confluence in this article.

About moral positions, argument is possible. But about scientific "facts" there can be no argument. Skinner, and the behaviorist movement of which he was the head, delegitimized both individual responsibility and punishment. Responsibility was dismissed by philosophical argument. Punishment was ruled out not by moral opposition but by supposedly scientific laboratory fact. Less "scientific" psychologists and psychiatrists have also agreed that punishment is bad, but the reasons for their consensus are more complex and to do with the social function of psychotherapy. Nevertheless, for the majority of psychologists and psychiatrists, the "facts" established by the be-
behaviorists have always constituted an unanswerable argument -- especially if they support preexisting beliefs. This "scientific" consensus has had a devastating effect on the moral basis of American society. I will argue just two things in this article: first, that there is no opposition between behavioral determinism and the notion of individual responsibility. And second, that the supposedly scientific basis for blanket opposition to punishment as a legitimate social instrument --in the family, school and workplace, and the judicial system--is nonexistent. My focus is Skinnerian behaviorism, because it is the area of psychology that has been most concerned with large social issues. But the key ideas have been carried forward by a much larger number of psychologists and psychiatrists who have never thought of themselves as behaviorists.

B. F. Skinner's 1971 best-seller Beyond Freedom and Dignity contains his most concerted, and successful, attack on traditional methods of social control. Most psychotherapists, behaviorist and nonbehaviorist alike, have come to agree with the substance of Skinner's message: that punishment is bad and that the idea of individual responsibility is a myth. Skinner's argument is simply wrong. It will be a task for future sociologists to understand why such a bad argument received such ready assent.

Skinner contrasts the "prescientific" view that "a person's behavior is at least to some extent his own achievement" with the "scientific" view that behavior is completely determined by heredity and environment. The conventional view, says Skinner, is that "[A] person is free. He is autonomous in the sense that his behavior is uncaused. He can therefore be held responsible for what he does and justly punished if he offends. That view, together with its associated practices, must be re-examined when a scientific analysis reveals unsuspected controlling relations between behavior and environment." What's wrong with these apparently reasonable claims?

**FREEDOM**

Is man free? Well, as the professor used to say, it depends on what you mean by "freedom." The bottom line is that you're free if you feel free. Skinner's definition is simpler: to him, freedom is simply the absence of punishment ("aversive contingencies"). But we are all "punished" by gravity if we don't obey its rules. The punishment can sometimes be quite severe, as beginning cyclists and skaters can attest. Yet we don't feel unfree when we learn to skate or cycle. Punishment doesn't always abolish freedom -- and freedom is not just absence of punishment.

Skinner has another definition for freedom: absence of causation ("autonomous man"). This is an odd notion indeed. How can one ever prove absence of causation. In science, a conjecture like this is called "proving the null hypothesis" and everyone accepts its impossibility. We might prove the converse, however, that people feel unfree when their behavior is determined, that is to say, when it can be predicted. For example, suppose a rich and generous aunt offers her young niece a choice between a small sum of money and a large sum. In the absence of any contrary factors, the niece will doubtless pick the larger over the smaller (classical economics rests on the assumption that this will always be the free choice). Can we predict the niece's behavior? Certainly. Is her behavior determined? Yes, by all the usual criteria. Is she unfree? She certainly doesn't feel unfree. People generally feel free when they follow their preferences, no matter how predictable those preferences may be. Behavior can be predicted in other contexts as well. Mathematicians predictably follow the laws of arithmetic, architects the laws of geometry and baseball players the laws of physics. The behavior of all is determined; yet all feel free. Ergo, predictability -- determinism -- doesn't equal absence of freedom as Skinner proposes.

So, even if we could predict all human behavior with the precision of these examples, this wonderful new science would have no bearing at all on the idea of freedom.

**PUNISHMENT**

There's another strand in Skinner's assault on traditional practices, his attack on punishment. He rejects punishment not because it's morally wrong, but because it doesn't work. (W. H. Auden had no such doubts about punishment when he remarked "Give me a no-nonsense, down-to-earth behaviorist, a few drugs, and simple electrical appliances, and in six months I will have him reciting the Athanasian creed in public.") Since everyone knows that some punishments work, sometimes, you'll naturally be curious to know how Skinner defended this position. His argument boils down to three points: punishment is ineffective because when you stop punishing, the punished behavior returns; punishment provokes "counterattack"; positive reinforcement is better. Let's look at each of these.

Punishment is ineffective. Well, no, it isn't. Common sense aside, laboratory studies with pigeons and rats (the data base for Skinner's argument) show that punishment (usually a brief electric shock) works very well to suppress behavior, so long as it is of the right magnitude and follows promptly on the behavior that is to be suppressed. If the rat gets a moderate shock when he presses the bar, he stops pressing more or less at once. If the shock is too great, the rat stops doing anything; if it's too weak, he may still press the bar once in a while; if it's just right, he quits pressing, but otherwise behaves normally. Does the punished behavior return when the punishment is withdrawn? It depends on the training procedure. A rat well-trained on an avoidance procedure called shock postponement, in which he gets no shock so long as he presses the lever every now and then, may keep pressing indefinitely even after the shock generator is disconnected. In this case, punishment has very persistent effects indeed.

Punishment provokes counterattack. Sure; if a food-producing lever also produces shock, the rat will try to get the food without getting the shock. A famous picture in introductory psychology texts is called "breakfast in bed." It shows a rat in a shock-food experiment that learned to press the lever while lying on its back, insulated by its fur from the metal floor grid. Skinner was right that rats, and people, try to beat a punishment schedule.

Positive reinforcement is more effective. Not true. The effects of positive reinforcement also dissipate when the reinforcement is withdrawn, and there is no positive-reinforcement procedure that produces such persistent behavior as a shock-postponement schedule. Positive reinforcement also provokes "counterattack." Every student
who cheats, every gambler who rigs the odds, every robber and thief, shows the "counterattack" provoked by positive reinforcement schedules.

There are other arguments on both sides, but the net conclusion must be that the scientific evidence is pretty neutral in deciding between reward and punishment. They both have their advantages and disadvantages: punishment is better for suppressing behavior, positive reinforcement better for generating behavior; avoidance (punishment) schedules tend to produce more persistent behavior than reward schedules, and so on. If we wish to favor reward over punishment, we must make a moral, not a scientific, case.

**JUSTICE AND DETERMINISM**

All this might be academic, but for its impact on legal thinking. The opposition between determinism and responsibility, and the doubts cast on punishment, do seem to raise issues of justice. If "the Devil (or, at least, "my environment") made me do it!" surely the rigors of just punishment (of dubious effectiveness in any case, according to psychologists) should be spared? In the era of Lorena Bobbit, the Reginald Denny attackers and the Menendez brothers, this argument evidently strikes a receptive chord in the hearts of American juries.

Too bad, because the argument is false. I've already argued that behavior can be both determined (in the sense of predictable) and free. I'll argue now that the legal concept of personal responsibility is founded on this kind of predictability. Personal responsibility demands that behavior be predictable, not the opposite, as Skinner contended.

What is the purpose of judicial punishment? Legal scholars normally identify two purposes, retribution and deterrence. Retribution is a moral concept, which need not concern us here. But deterrence is a practical matter. Arguments about deterrence are clouded by ideology and the impossibility of deciding the issue by the methods of science. Nevertheless, there is an approach to deterrence that is straightforward and acceptable to most people which much simplifies a jury's task. The idea is that the purpose of legal punishment is to minimize the total amount of suffering in society, the suffering caused by crime as well as the suffering caused by punishment. The concept is simple: if thievery is punished by amputation, the level of thievery will be low, but the suffering of thieves will be very high, higher perhaps than warranted by the reduction in theft. On the other hand, if murderers go free, the level of murder will be high and the ease of the killers will not be balanced by the suffering of the rest. We may argue about how to measure suffering and how to assess the effect of a given level of legal punishment for a given crime, but the principle, which I call the social view of punishment, seems reasonable enough. It is consistent with the fundamental principle that government exists for the welfare of society as a whole, not for the good of any particular individual. Once they understand the argument, most people seem to agree that the social view of punishment is acceptable, although not, perhaps, the whole story. What people do not seem to realize is that this perfectly reasonable view is not opposed to determinism: it requires determinism.

From an objective point of view -- the only legitimate point of view for science -- "holding a man responsible" for his actions means nothing more than making him subject to punishment if he breaks the law. The social view of punishment assumes that people are sensitive to reward and punishment, that behavior be predictable subject to causal influences. If criminal behavior is predictably deterred by punishment, the justly punished criminal is less likely to disobey the law again, and serves as an example to other potential lawbreakers. This is the only objective justification for punishment. But if behavior were unpredictable and unaffected by "reinforcement contingencies" -- if it were uncaused, in Skinner's caricature of "freedom" -- there would be absolutely no point to punishment or any other form of behavioral control, because it would have no predictable effect. In short, legal responsibility requires behavioral determinism, not the reverse.

It is interesting to reflect that the objective case for personal responsibility rests entirely on the beneficial collective effects (on the sum total of human suffering) of just punishment. It does not rest on philosophical notions of individual autonomy, or personal intent, or anything else at the level of the individual -- other than normal susceptibility to reward and punishment. The idea that the law is somehow concerned with the mental state of the accused, rather than with the consequences of judicial action, has taken root because Skinner, like most other psychologists, focused so exclusively on the individual.

If a person's "behavior is at least to some extent his own achievement" then, says Skinner, he can be blamed for failure and praised for success. Since personal responsibility is a myth (he concludes) praise and blame are irrelevant. But if personal responsibility is defined as I have defined it, praise and blame need not -- should not -- be abandoned. In the social view, the use of praise and blame has nothing to do with the ontology of personal responsibility, the epistemology of intention or whatnot. It has everything to do with reward and punishment (in other contexts, Skinner admits as much, at least with respect to praise). We praise good behavior because we wish to see more of it; we blame the criminal because we wish less crime. Praise and blame are perhaps the strongest incentives available to society. By giving them up, Skinner gave up our best tools for social order.

It is extraordinary that Skinner seems to have missed the connection between determinism and the sanctions imposed by the legal system. He spent his life studying how the behavior of animals is determined by the conditions of reward and punishment. He and his students discovered dozens of subtle and previously unsuspected regularities in the actions of reward and punishment. Yet he failed to see that the system of rewards and punishments imposed by society works in much the same way as his reinforcement schedules.

Remarkably, law and science seem to agree on the social view of punishment. Only when punishment is likely to be completely ineffective as a deterrent does the law limit its use. If the criminal is insane, or if injury was the unintended result of actions whose harmful outcome was unforeseeable, no guilt is attached to the perpetrator.
and no punishment is given -- presumably because punishment can play no role in preventing the recurrence of such acts. There is surprising congruence between the legal concept of responsibility and the function of punishment as a deterrent. "Guilt" is established not so much by the act, as by the potential of punishment to deter the act.

**THE "VICTIM" DEFENSE: WHAT SHOULD THE JURY DO?**

These arguments greatly simplify a jury's task. Jurors have no need to puzzle through philosophical questions about "intent" or knowledge of right and wrong. Nor do they need to ask whether criminal behavior was determined by the defendant's past history. (The scientific answer will almost always be, "yes," because almost all behavior is determined.) History is not the point. The point is: Did the defendant know that his actions would have an illegal outcome? And, if the accused had known, in advance of the act, that sure punishment would follow, would he still have acted as he did? If the criminal would have been deterred by the prospect of punishment then, says the social view, he should be punished. Did the Menendez brothers know that their actions would result in the death of their parents? Presumably, yes. If they had known that these acts would result in severe punishment (life in prison, death), would have they have acted nevertheless? Probably not. Verdict: **guilty**. On the other hand, if the jury has reason to believe that the defendants' past history was so horrific that they would have murdered even in the face of certain punishment, then some other verdict (which might still involve removing these damaged men from society) would be appropriate.

**THE PROPER ROLE OF PSYCHOLOGY**

The social view of punishment is as far as psychology can go towards prescribing social policy. Given a certain set of values, psychology may help us decide what system of rewards and punishments will be helpful in promoting them. But the social view of reward and punishment does not by itself prescribe social policy. Our value system, our morality, plays a legitimate role in measuring "suffering," in evaluating known outcomes and in judging the rightness of wrongness of particular rewards and punishments. We're less moved by the plight of the disappointed thief who breaks open an empty safe, than by the suffering of a mugging victim, for example. Psychology can tell us a little (only a little, since we don't do such experiments on human beings) about the individual effects of corporal punishment vs. the effects of a jail term; it cannot tell us whether corporal punishment is cruel or not. Social science can tell us that more people will be killed by guns if guns are freely available than if they are not. It cannot tell us whether the freedom to bear arms is an inalienable right. Psychology can tell us something about the extent of homosexuality in different cultures; it cannot tell us whether homosexuality is good, bad or a matter of indifference. Psychology can also tell us that social opprobrium -- Hester Prynne's "A", blame, or the big red "D" some have proposed for drunk drivers -- is often an effective deterrent. It cannot tell us whether such punishments are "right" or not. Scientific psychology, like all science, is amoral: it tells us what is, or what might be -- not what should be. Psychologists who offer more, promoters of "authentic selves" or punishment-free societies, are peddling not science but faith.