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**COVER** Adult mudpuppy (*Necturus maculosus*). This large aquatic salamander has been used frequently in physiological studies because cells throughout its body are exceptionally large. The eyes of this animal are used to show that glial cells in the retina normally buffer light-evoked changes in intraretinal potassium concentration. See page 578. [Photograph by W. B. Pavlik, Department of Psychology, University of Georgia].

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## Drunk Driving and Statistical Morality

The picture pulls at the heartstrings: a grieving family at the side of a daughter in a coma. It appeared last week in the newspapers, as one more victim of a drunk driver was counted. She joins a growing group, including many killed and others seriously injured. The best estimates are that 50% of motor vehicle accidents, which kill more people each year than were killed during all of the Vietnam War, are caused by drunk drivers. In too many such cases the driver is a repeater whose license was not revoked for previous offenses, despite a law on the books, by a kindly but muddleheaded judge who did not understand statistics.

What may be called "statistical morality" is the precept that a given course of action that may cause some harm to individuals now will result in greater benefit to more individuals in the future. Tests of a new drug or vaccine on a limited number of volunteers, half of whom are given placebos, is one example. A tough law on drunk driving is another. It is inevitable that such a law will cause some hardship on offenders who are subjected to an automatic sentence, whether it be prison, suspension of a driver's license, or a large fine. Careful consideration of the punishment to make the penalty commensurate with the crime must be made at the time that the law is designed, but once the law is enacted, every judge who suspends a sentence should be aware that he or she erodes the deterrence effect and ensures that some future victim will pay for the mercy shown.

Mercy to the lawbreaker in the dock is frequently justified by the argument, "We can't do anything more to help the victim, so let's not be too mean to the criminal." In fact, the overwhelming purpose of punishment is to deter the next act, and not, as claimed by some who wish to confuse the issue and whip up sentiment for the criminal, an act of vengeance. The murderer, the drunk driver, the rapist—all appear in court after committing an act that cannot be undone. Society correctly says that, if convicted, they must pay the penalty to diminish the chances of the future murder, driving incident, or rape. Deterrence depends on the sureness of punishment. Unfortunately, there are far too many sitting on judicial benches who do not understand this and who rationalize that "in this case, the defendant will suffer undue hardship if the penalty is enforced." The argument of being kind to the violator today is often rationalized on the basis that one does not know the name and telephone number of the victim who will be injured and therefore it is not our responsibility. Such thinking is truly immoral because it allows a sanctimoniousness in the present to obscure the harsh reality that a future victim will certainly become a statistic. To some extent the future injury will be caused by the failure to implement a carefully thought-out law.

In some Scandinavian countries, penalties for drunk driving are so severe that revelers select in advance a driver who abstains from alcohol during an evening of merriment. In the United States there are tough laws on the books in many states, but these laws are so often overstepped by judges that the impression is created that they are easy to evade. That leads to exactly the situation that we have today; far fewer people here are deterred from drinking and driving than is the case in other countries.

Statistical morality implies that a painstakingly structured procedure will minimize the total victim count in our society. It requires that the initial plan be well considered but, once implemented, there should be no exceptions based on the false assumption that small deviations today are less serious than the consequences to the unnamed but statistically certain victims of the future. Statistical morality applies to tests for drugs and vaccines—for instance, the administration of a vaccine like the whooping cough. It is known that when this vaccine is given to 1 million children about 100 will have serious side reactions, including death. When public outcries led to a cancellation of the public requirement for vaccination in England, the number of deaths from whooping cough climbed so alarmingly that the vaccine requirement was reinstated. Statistical morality would say, "Require the test—more people will be saved." Those who believe that "we are only responsible for what we cause" would have said, "No. We are not responsible for the deaths caused by nature's scourges, only for those caused by the vaccine we required." Morality in the new age should state that the errors of omission are as important as the errors of commission. The more we know about risks, whether from drunk drivers or vaccines for whooping cough, the more we will require a statistical morality that ensures the least harm to the most people.

—DANIEL E. KOSHLAND, JR.