

## A Sociolegal Problem

**Social Control of the Drinking Driver.** MICHAEL D. LAURENCE, JOHN R. SNORTUM, and FRANKLIN E. ZIMRING, Eds. University of Chicago Press, Chicago, 1988. xx, 452 pp., illus. \$49.95; paper, \$19.95. Studies in Crime and Justice.

The drunk driver is the arch-villain of this decade. It was a drunk driver who, in May 1980, struck and killed 13-year-old Cari Lightner while she was walking on the sidewalk. The driver had been arrested a few days earlier on a DUI (driving under the influence of alcohol) charge. The girl's mother, Candy Lightner, transformed her personal loss into a national movement to "get tough" with drunk drivers, appropriately named "MADD" (an acronym for Mothers Against Drunk Driving). Since then there have been sweeping changes in legislation and enforcement efforts targeted at drunk driving, working in a virtuous cycle with changing public attitudes. DUI is now in every sense a serious crime.

It is an appropriate time for a careful look at this sociolegal transformation, and in particular to assess what has been accomplished and at what cost. *Social Control of the Drinking Driver* does not provide an overall assessment but does offer a great deal of relevant information. The 14 chapters, written by some of the best-known scholars in this area, are intended by the editors "to serve as basic references for their specific topics," and the collection as a whole is hoped to provide "an almost comprehensive statement of knowledge about drunken driving and its control in the Western world." In fact, there are notable gaps, but it is certainly true that a great swath of scholarly work has been reviewed—the bibliography is 43 pages long—and several of the chapters do live up to the editors' aspirations. The primary strength of the collection as a whole is in the recounting and analysis of the use of the criminal law in controlling DUI; other forms of social control are covered less thoroughly.

In the final chapter, Franklin Zimring observes that responses to the drunk driving problem by the United States and other advanced Western countries have converged in recent years. The consensus is toward the "moderately punitive," in which (i) the major weapon against drunk driving is the criminal law; (ii) the crime of DUI is de-

fined by a "per se" rule, in terms of blood alcohol concentration (BAC), rather than (or in addition to) being defined in terms of behavior; (iii) sanctions include heavy fines and short jail terms; and (iv) the credibility of these legal threats is enhanced through detection efforts (target patrol, roadside inspections, and so on) and publicity. Johannes Andenaes's chapter recounts the origination of this strategy in Scandinavia in the 1930s and provides evidence that the violation rate has been and remains low there. This evidence of effectiveness has figured importantly in the spread of the Scandinavian approach to the United States and other countries. Michael Laurence's chapter notes that Congress imported this approach with the Alcohol Traffic Safety Act of 1982, which made grants from the Highway Trust Fund contingent on a state's legislating the per se definition of DUI, together with jail terms for convicts and increased enforcement efforts.

The drunk driving problem in the United States may be declining as a result of all this attention—there has been a downward drift in the percentage of fatal accidents, from 50% in 1980 to 44% in 1984, involving a driver with a BAC greater than 0.10% (and thereby DUI by the usual per se rule). This decline could be purely coincidental or even an artifact of data collection procedures, but several authors suggest that it is at least plausible that it is the direct result of the deterrence effect of harsher penalties more frequently applied. H. Laurence Ross is the best-known student of the empirical impact of DUI legislation and enforcement efforts, and his chapter provides indirect support for the deterrence explanation of U.S. trends. After reviewing recent interventions in Britain, Canada, and Australia, Ross concludes that these efforts had large short-term impacts in some instances, and though the deterrent effects of an anti-DUI intervention have been hard to sustain, there is at least one notable example (in New South Wales) of effective ratcheting upward of the perceived threat level. John Snortum, however, asserts in his chapter that the simple deterrence explanation for apparent reductions in DUI in the United States is not sufficient. (Ironically, he bases this conclusion in part on Ross's research.) However, it is plausible, says Snortum, that greater compliance is the result of a complex of changes that

include stronger enforcement efforts but also include changes in public attitudes.

Though the crusade against drunk drivers may have reduced the highway fatality rate, this success has not been achieved without cost. Besides the obvious costs to those arrested, and to the criminal justice system, whose resources are grossly overextended, there has also been a less tangible cost—the undermining of important principles of criminal law. The main culprit here is the per se rule. The use of this "scientific" definition of alcohol-induced impairment has greatly facilitated convictions in DUI cases, since the accuracy of a blood test is easier to prove than the validity of a policeman's judgment of a driver's behavior. But if we remember that the real issue remains one of impairment, then the per se definition is troublesome. Alan Donelson's chapter provides extensive evidence that BAC is a poor proxy for impairment; there are large interpersonal differences in alcohol tolerance, experience, and other factors that influence the degree of driving impairment associated with a given BAC. With respect to impairment, then, the per se rules violate the norm that equals should be treated equally before the law.

Furthermore, the per se rule is problematic in that drinkers have no easy way to determine whether they are in violation of the law when they decide to drive. Chapters by Robert Voas and by Scott Geller and Galen Lehman review the evidence that there is enormous variability in the relationship between number of drinks consumed and resulting BAC. Relevant factors include the alcohol content of the drinks, the rate of consumption, how much food is in the drinker's stomach, and his or her weight and percentage body fat. Even the most sophisticated "nomograms" (charts relating alcohol consumption to BAC) are highly imperfect guides. From the drinking drivers' perspective, then, it is a matter of guesswork whether they are in violation of the per se law. Laurence notes that the per se rules have quite reasonably been challenged in the courts under the "vagueness doctrine," but so far without success.

Without question, drivers with BAC exceeding 0.10% have, as a group, a high rate of serious highway accidents. But that rate is properly viewed as an average of a population that is highly diverse with respect to risk of serious accident (and that includes some who are capable of driving safely). Joseph Gusfield's chapter gives an interesting account of how MADD and other such groups have been effective in achieving a wide consensus that *all* those who drink and drive deserve moral condemnation and severe punishment, that anyone who is techni-

cally guilty of DUI should be viewed as a "killer drunk." This vindictiveness complements strong enforcement efforts and severe penalties but fails to acknowledge the actual diversity among DUI violators. And labeling this group as villains promotes punitive responses while slighting possibly more cost-effective interventions, such as restricting the sale of alcoholic beverages.

*Social Control of the Drinking Driver* gives us a more thorough account of the criminalization of DUI than of non-punitive methods of social control. The principal alternative to the criminal law is the imposition of greater restrictions on the availability of alcohol. Recent research has demonstrated the effectiveness of two types of restriction on availability—the minimum legal purchase age and taxes on alcoholic beverages. There is clear evidence that increasing alcohol taxes or the minimum age reduces highway fatality rates among youths (P. J. Cook in *Alcohol and Public Policy*, National Academy Press, 1981, p. 255; P. J. Cook and G. Tauchen, *Journal of Legal Studies*, Jan. 1984, p. 169; H. Saffer and M. Grossman, *ibid.*, June 1987, p. 351). These effects are quite large compared with what can be reasonably accomplished through criminal law enforcement, yet they are scarcely mentioned by the authors in this book. Ragnar Hauge's review of the effects of changes in availability of alcoholic beverages concerns itself with minor interventions (liquor store strikes, Saturday closings) and neglects the important ones. Geller and Lehman give a hopeful assessment of the effectiveness of training alcohol beverage servers to ration customers, but the potential gains here are necessarily small. In the array of promising countermeasures against DUI, reducing availability through higher taxes must rank at or near the top. It deserves more attention in a book that aspires to comprehensiveness.

Compilations always have gaps, redundancies, and unresolved inconsistencies, and this one is true to form. Readers who wish a briefer and more accessible account of this literature may want to wait for the publication of James Jacobs's new book (also with the University of Chicago Press) on drunk driving. But the advantage of this collection is that we are given a picture of the "frontier" by the scholars whose work has defined it. They give us a fascinating account of the punitive approach of the 1980s and some suggestions of what might be considered as alternative strategies for controlling the drinking driver when this decade has faded.

PHILIP J. COOK  
Institute of Policy Sciences  
and Public Affairs,  
Duke University,  
Durham, NC 27706

## The Construction of Voids

**Innovation and the Rise of the Tunnelling Industry.** GRAHAM WEST. Cambridge University Press, New York, 1988. xvi, 355 pp., illus. \$80.

The tunnel is a unique type of structure, a significant void distinguished by the absence of material rather than a construct of form. Although frequently overlooked by scholars, the history of tunnels dates to ancient times when they were first built as *qanats* to drain natural groundwater strata in arid regions. In the Greek and Roman eras they were critical components of aqueducts used to connect cities with distant water sources. In particular, tunnels achieved importance in systems that required the maintenance of even gradients regardless of topographic irregularities. They were expensive, labor-intensive projects and were undertaken only when necessary for the success of a larger system. In the 19th century railroads spurred major interest in tunnel construction because they required constant grades for right-of-ways to ensure reliable locomotive operation. Later, the technology received a major boost as transportation interests sought ways to traverse rivers, harbors, and even the open sea (witness the on-going "Chunnel" project planned to connect Brit-

ain and France) without relying upon bridges that could impede ship navigation.

In this book, West elucidates the origins and major uses of key tunneling innovations from the 1830s to the present. Disclaiming any attempt to write a comprehensive history of modern tunneling, he is content to focus on technological development using a methodology that largely avoids social and economic analysis. In the parlance of modern-day historians of technology, his is an "internalistic" approach that eschews general contextual discussion while concentrating on how certain important technologies were created and utilized. Despite an attempt to generalize on the nature of innovation in technological systems, the heart of the book lies in the detailed descriptions of how tunnels are constructed. These descriptions are grouped into the categories of hard-rock techniques, soft-rock techniques, and specialized tunneling machines. Although the book is written primarily from a British perspective (the author is associated with the British Transport and Road Research Laboratory), it contains data on several projects in America, Europe, and Japan. In particular, considerable attention is given to the hard-rock drilling and blasting techniques developed for the Hoosac Tunnel in western Massachusetts and the Mont Cenis Tunnel between France and Italy (both



"Blow in Haskin's tunnel under the Hudson River (1880)." Blows (sudden loss of air pressure followed by inrush of water) occurred in a number of early compressed-air tunnels. In this instance, "the miners took refuge in the air lock, but one of the doors was jammed . . . and twenty men were drowned." This contemporary print shows the airlock on the left. Haskin's tunnel "is thought to be the first in which telephones were used . . . although the . . . wires must have been routed in a different way from that shown by the artist otherwise they would have been cut the first time the air lock door was closed!" [From *Innovation and the Rise of the Tunnelling Industry*; Smithsonian Institution]