

Such public announcements raise questions about privacy and confidentiality. Referring to digital technologies, Scott McNealy, chief executive of Sun Microsystems, once remarked, "Privacy is dead. Get over it." Could the same be said of genomics and genetic testing? We may soon be able to identify the owner of an anonymized DNA sample from little more than their genomic data. With the increasing power and plummeting cost of sequencing technologies, analysis, computers and data storage, the loss of privacy seems inevitable. We must rethink the ground rules.

Collins quotes former ice-hockey player Wayne Gretzky, whose father advised him to "Skate where the puck is going to be." *The Language of Life* tells you where the personal-genomics puck is headed. ■

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Administration with teeth was one indirect result of the efforts of Norris and Gettler and of the awakening consumer movement.

Prohibition proved a disaster, but ethyl alcohol was still the most important poison. As chronic alcoholism and alcohol-fuelled deaths soared, Gettler profited from the casualties by conducting more painstaking experiments, coming up with the first published scale relating blood-alcohol content to levels of drunkenness. In the course of his career he also helped to highlight the dangers of supposedly health-giving radium and 'illuminating gas' — a toxic mixture of carbon monoxide and hydrogen, and devised increasingly sensitive tests for the poisoner's darlings — arsenic and mercury bichloride — in the tissues of corpses.

When Norris became a medical examiner in 1918, scientific evidence carried little weight in the US courts. He died in 1935, probably of overwork. By the time Gettler retired in 1959, lawyers were complaining that the reputation of his toxicology laboratory in New York City was so great that as far as juries were concerned, his word was law. The United States's first university courses in forensic medicine were up and running, and had already generated his and Norris's successors. More than 300 people attended Norris's funeral, including the chairman of the state liquor authority. They realized that he had presided over a mini-Enlightenment. ■

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## The bootleggers' legacy

**The Poisoner's Handbook:  
Murder and the Birth of Forensic Medicine  
in Jazz Age New York**

by Deborah Blum

Penguin Press: 2010. 336 pp. \$25.95, £16.20

As Deborah Blum describes vividly in *The Poisoner's Handbook*, the catalyst for the birth of forensic medicine in the United States was Prohibition. Most people think of the nationwide banning of the consumption of alcohol in the 1920s as merely a failed attempt at social engineering. Yet, as Blum shows, it was an exercise in mass poisoning — self-inflicted and government-condoned.

Her two protagonists, New York City's Chief Medical Examiner Charles Norris and his chief toxicologist, Alexander Gettler, saw the problem coming from afar. Early on in the 13-year experiment to outlaw ethyl alcohol, bootleggers turned to its poisonous cousin methyl alcohol, also known as wood alcohol, to quench the nation's thirst. Norris and Gettler saw the results carried into the city morgue. To begin with, methyl alcohol causes the same pleasant feelings of inebriation as ethyl alcohol, but these are quickly followed by blindness, coma and death.

As one apparatchik tried to advise the danger-courting public, bootleggers are not your friends. But to the mystification of the authorities, even when people knew the risks, they continued to frequent the speakeasies. When the government saw that its "noble experiment" was in danger of failing, it decided that the problem was that methyl alcohol, readily available as industrial alcohol, didn't taste nasty enough. It put its chemists to work designing ever more unpalatable toxins — out of which creative bootleggers could be relied on to conjure hooch. If you won't learn, stern Uncle

Sam cautioned the public, then we'll make you sicker and sicker until you do.

In New York, Norris and Gettler were left to clear up the mess. They worked tirelessly, Norris supplementing his department's derisory budget out of his own, well-lined pocket. Gettler's meticulous experiments enabled him to work out the lethal doses and mechanisms of action of many an illicit cocktail ingredient.

Blum leaves her readers in no doubt that the two blazed a scientific trail. Before Norris's arrival in office, a milkman could be a coroner and sign death certificates, poisons were rife in household and cosmetic products, labelling was non-existent and manufacturers were not held responsible for any damage their products might cause. The creation of a Food and Drug



US toxicologists had plenty of work during Prohibition as bootleg drinks often proved to be lethal cocktails.

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