

Straight Whiskey and Bad Regulation

The 1906 Pure Food and Drugs Act's extension to whiskey was intended to protect distillers, not consumers.

BY MACY SCHECK AND DANIEL J. SMITH

Whiskey was one of the many products regulated by the Pure Food and Drugs Act of 1906. Public health crusaders at the time claimed that whiskey regulation was in the public interest because rectifiers—non-distillers who purchase and then blend whiskeys and other additives to create specific profiles, and who favor neutral spirits to replicate the taste and appearance of straight, barrel-aged whiskey—often added poisonous ingredients. It is estimated that 50–90 percent of whiskey sold in the United States at the time was rectified, ranging from simple combinations of whiskeys and blends of whiskeys and other flavorings, to more adulterated products that falsely claimed to be high-quality bourbons and other whiskeys.

In recent research, we used consumption data, reports on chemical tests of whiskey, trade book recipes, and reported deaths and poisonings from whiskey to search for evidence to support the public interest rationale for regulating whiskey. We found little evidence that there was a problem with poisoned whiskey. Entrepreneurs in the whiskey industry faced a strong profit incentive to make investments to assure consumers of the safety and quality of their products. These investments included:

- imparting distinctive and hard-to-reproduce characteristics in their whiskey
- adopting brand names
- creating exclusive dealer agreements
- transitioning from selling their whiskey from barrels to packaging it in sealed bottles

Whiskey producers successfully developed these mechanisms to

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demonstrate to consumers their products' genuineness and quality.

Jointly, these efforts provide evidence in support of the public choice interpretation of whiskey regulation presented by Clayton Coppin and Jack High in their 1999 book *The Politics of Purity*. According to Coppin and High, the extension of the Pure Food and Drugs Act to whiskey was driven by straight whiskey distillers seeking to regulate their primary competition—rectifiers—out of existence. But, in fairness, evidence of special interest politics alone does not rule out the existence of genuine public safety concerns necessitating whiskey regulation. In fact, regulation that benefits special interest groups is often most successful in the presence of real or perceived public health or safety concerns that provide the special interest groups with a public-spirited rationale for regulation, as Bruce Yandle explained in *Regulation* some four decades ago. (See “Bootleggers and Baptists: The Education of a Regulatory Economist,” May–June 1983.)

The consensus among regulatory economists is that most regulation is public interest in origin, meaning that the politicians enacting the regulation had legitimate public safety concerns. These efforts

are then captured by special interest groups through the regulatory process via revolving doors and industry interaction and influence. However, whiskey regulation provides a historical example of a major federal regulation that was driven by special interests *from its origins* under demonstrably false and unjustified public interest rationales.

EARLY WHISKEY HISTORY

Before the industrial revolution, whiskey was sold locally in small, unaged batches directly to the consumer. It was not until after the industrial revolution that large-scale industrial distillers emerged. Two distinct types of whiskey production appeared: straight and rectified. Straight whiskey was aged in government-bonded warehouses under the 1897 Bottle-in-Bond Act, while rectified whiskey was unaged whiskey flavored in an attempt to replicate the taste of straight whiskey without the substantial cost of barrel-aging.

This shift from small-batch, local production to large-scale distilling opened the door to adulteration. This was because whiskey was commonly sold from large barrels to the consumer. The architect of the Pure Food and Drugs Act, U.S. Department



of Agriculture chief chemist Harvey Wiley, claimed, “If I could only talk, I’d tell you things about this particular subject [rectified whiskey] that would make your hair curl and that would result either in your becoming a total abstainer, or else in demanding affidavits from the distiller, the bottler, the retailer and the government revenue officers with every bottle you purchase.”

EVIDENCE OF ADULTERATION

If whiskey commonly contained poisonous ingredients, as claimed by public health crusaders, then we would expect to see a decrease in the consumption of whiskey as the public shied away from the dangerous product. Yet, looking at that era’s data on the production of spirits, which was overwhelmingly whiskey, we see consumption on the rise. The only exception was an understandable dip during the Depression of 1893.

Next, we looked at newspaper reports from that era on chemical tests of whiskey. We found a total of 25 tests conducted before the passage of the Pure Food and Drug Act. While the tests found a total of 22 different poisonous substances, there are a few reasons to take these results with a grain of salt. Two of the most damning chemical tests came from Samuel Aughey, a minister and member of the Lincoln Temperance Society, and Hiram Cox, another temperance movement advocate. Together they claimed to find 12 poisonous chemicals that no other chemical analysis found. One local saloon owner challenged Aughey’s analysis, forcing him to recant and declare the saloon’s spirits pure. Aughey was also criticized for lacking “scientific precision” among his peers. Chemical tests done by reputable agencies, including reports from the American Pharmaceutical Association of New York, Massachusetts Board of Health, the New York Board of Excise, the Vermont State Assayer, the Wayne County, Michigan, Liquor Inspector, the Dairy and Food Commission of Pennsylvania, and the Dairy and Food Commission of Minnesota yielded very few, or no, positive tests for poisons in whiskey.

Next, we examined rectifier trade books containing recipes for various types of whiskeys. The books we reviewed contained nearly 150 recipes. We found a total of 13 different poisonous ingredients mentioned in the recipes, often infrequently, with 41 percent of the poisonous ingredients listed in only two trade books that also contained higher-grade recipes that used few or none of these ingredients.

The poisonous ingredient that was most frequently listed was creosote, which was used to impart a smoky flavor in whiskeys purported to be Scotch or Irish. (The U.S. tariff on Scotch and Irish whiskey at the time was so high that it was nearly impossible for Americans to afford the genuine product.) However, a newspaper analysis showed that the dangers from small doses of creosote were not yet recognized. Dr. Henry Leffman of Philadelphia’s Jefferson Medical College, for instance, was quoted as saying that “a few drops of creosote in a barrel of common whisky give the same flavor [as peat smoke] without doing any harm.”

The next most widely used poisonous ingredient was spirits of

nitre, which also was not recognized as a poisonous ingredient in small quantities at that time and wasn’t banned by the Food and Drug Administration until 1970. The third most used poisonous ingredient was fusel oil, which gave a bead to the rectified whiskey. Most recipe books offered detailed instructions for how to remove the oil from neutral spirits, and some of the other poisonous ingredients found in recipes were included to remove the fusel oil. Rectifiers became so good at removing fusel oil that Wiley, the Agriculture Department chemist, recognized its absence to distinguish rectified from straight whiskey because straight whiskey commonly contained it. While it was certainly considered dangerous at that time, modern barrel-aged whiskey still contains fusel oil.

Finally, we examined the reported deaths and poisonings from whiskey as reported in newspapers from 1850 to 1906. We found only 52 deaths and 14 poisonings over a 56-year period, indicating that adulterated whiskey was not a systematic threat to Americans. The details of many of those 52 deaths reinforce that. For instance, 22 were from a single incident in New York that was later determined to be unintentional. Another 10 resulted from a barkeep suspected of committing murder intentionally by serving American Indians whiskey containing kerosene.

Looking at all four pieces of evidence, we found little evidence of the systematic poisoning of whiskey. There were, however, a handful of dangerous ingredients across our four pieces of evidence that, while not widely used, did appear with some frequency. Those ingredients were creosote, fusel oil, spirits of nitre, sulphuric acid, and wood alcohol. Many of those ingredients were called for in general recipe books, suggesting that, at least in small doses, the chemicals were not considered dangerous at the time. Wood alcohol was the exception, and no recipe books listed it as an ingredient, but most of the reputable agencies testing whiskey specifically reported negative tests for it. Wood alcohol, which was more expensive to produce than grain alcohol, was invented for industrial users of alcohol so they could avoid paying the high tax on grain alcohol. Many of the deaths and poisonings we found from wood alcohol were from personal labeling mistakes.

In short, the public interest rationale given by regulators for regulating whiskey under the Pure Food and Drugs Act is not supported by the historical evidence.

PRIVATE PROVISION OF QUALITY

The public interest rationale is further weakened by whiskey industry investments intended to assure consumers of the safety and genuineness of their product in response to the claims made by public health crusaders that whiskey was commonly poisoned. These entrepreneurial firms tried four different mechanisms:

Unique factors/ The first method was imparting unique features into their whiskey through the distillation process. This could be done by selecting unique ingredients, such as corn rather than rye, or using charred barrels for aging, like that of Bourbon County, Kentucky, whiskey. Other whiskeys, such as Tennessee

Whiskey, used limestone water and maple wood charcoal to create a unique flavor and color. This helps explain the much broader variety of techniques and grain bills for whiskey that developed in the U.S. whiskey-producing region as compared to Scotland, despite both areas being of similar size.

Admittedly, there were limitations to this mechanism and its effectiveness in ensuring safety and quality. Rectifiers quickly devised recipes that attempted to replicate the most sought-after whiskeys. This meant that the whiskey entrepreneurs' efforts to impart a distinct flavor, aroma, and appearance, while initially successful, were insufficient to provide a permanent signal of safety and quality.

Branding / The second mechanism developed by early whiskey entrepreneurs was branding. Local reputation was often enough to assure quality when whiskey production was small-scale and localized. But as the industry grew, brands were created, often based on the family names that had built firms a local reputation.

The introduction of brands also signaled that the whiskey industry was shifting to compete on quality rather than price alone. The introduction of brand names like Jack Daniel's allowed distillers to advertise directly to their consumers rather than rely on local dealers. This also meant that distillers could now start offering guarantees of quality. Many distillers even went so far as to publish their product's chemical analysis to assure their customers of its purity and safety.

Distribution networks / Despite the development of brand names, customers were still vulnerable to the threat of adulteration once a barrel of whiskey had been opened by their local dealer. The distillers themselves may have taken necessary precautions to avoid adulteration during the distillation process, but once the barrel was out of their possession, dealers had the perverse incentive to stretch or alter the otherwise unadulterated barrel of whiskey. Even the Bottled-in-Bond Act stamps affixed by government agents on straight whiskey barrels leaving a bonded warehouse were insufficient to assure consumers that what was inside an opened barrel was what was advertised.

To solve this problem, whiskey distillers began to leverage the reputation of their local whiskey dealers to ensure quality and safety. This was done by vetting local dealers and granting them exclusive rights to sell a distiller's whiskey in a market. Local dealers benefited by being granted monopoly rights to an exclusive territory. An 1895 advertisement, for instance, states, "Remember that I handle the product of the Charles Nelson's Green Brier Distillery, also Isaac Vanzant Distillery, also Ben Tolley's Distillery, and no other Liquor house in this town can buy from either of these distilleries. These distilleries sell me these goods under a guarantee that they are absolutely pure."

Naturally, there were some instances of fraud. Some distributors would claim to be sole agents of a particular distillery to dupe customers. For example, a 1904 advertisement for Jack Daniel's Whiskey noted, "I wish to state to the public that there have been

houses in Nashville advertising themselves as sole agents of Jack Daniel's No. 7 Whiskey. I have no sole agents in Nashville but W. F. Baker & Co. [which has] always been recognized as the headquarters for my whisky."

Seals / The adoption of sealed whiskey bottles was the major innovation in the whiskey industry that provided reliable assurance of quality and genuineness to consumers. The sale of a sealed whiskey bottle was a definitive signal to consumers that the whiskey they were buying was unadulterated. Before the development of the bottling machine in 1903, mass production of glass bottles was a costly investment for distillers. Old Forester (originally known as Brown, Thompson & Co.'s Old Forrester Whiskey) was the first American whiskey sold in a glass bottle, beginning in the 1870s. Advertisements at the time indicated that a sealed bottle was a major selling point to consumers. An 1881 advertisement, for instance, featured three monkeys unable to "monkey" around with the bottle's contents.

CONCLUSION

The historical evidence fails to support the public interest rationale for the regulation of whiskey under the Pure Food and Drugs Act. There is scant evidence that whiskey was commonly, and knowingly, poisoned or a pressing threat to consumers at the time. With public health crusaders and the Temperance movement advancing exaggerated claims that it was commonly poisoned, however, entrepreneurs in the industry were motivated by the pursuit of profit to invest in developing mechanisms to assure consumers of the safety and genuineness of their whiskey. R

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