The Phantom in the Flask:
How Poisoned Alcohol Killed Thousands During Prohibition in the United States

Sean Loughran
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Professor Meg D. O’Sullivan
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“I can’t eat, I can’t talk,/ Been drinking’ mean jake, Lord, now I can’t walk, Ain’t got nothin’ now to lose,/ ‘Cause I’m a jake walkin’ papa, with the jake walk blues.”¹ These were the words of the Allen Brothers in their 1930 song “Jake Walk Blues,” which sold 25,000 copies and became a cultural marker for the effects of poisonous alcohol during Prohibition.² The song references a malady that proliferated in the American South that came from consuming an alcohol-based medicine, which contained an ingredient that attacked the nervous system. As a result, tens of thousands of Americans spent the rest of their lives either wheelchair-bound or left with the jerky jake walk. Familiar images pop into most people's minds when they think of the prohibition era: Flashy gangsters, flappers in speakeasies, and bootleggers in souped-up automobiles. Quite often in the mind's eye, one does not stop to think of the quality of the alcohol that was being consumed. Today alcohol mostly flows freely in the United States, with some exceptions. Generally, we do not think of alcohol being deadly apart from alcohol poisoning, alcoholism, alcohol-related diseases, or drunk driving. However, alcohol was the lynchpin to Prohibition, and it was, in reality, often poisoned with deadly chemicals. This paper focuses on how the prohibition of alcohol during the 1920s-1930s within the United States led to the production and consumption of both legal and illegal toxic alcohols. The 18th amendment prohibited the production and distribution of alcohol in the United States but did not outlaw its consumption. Predictably, alcohol consumption continued under the 13 years of prohibition, which gave rise to increased amounts of toxic moonshine and poisoned industrial alcohols being consumed by the general public. From the influx of these poisoned forms of alcohol, Americans

began to die in the thousands from consuming these toxic liquors. Overall, these deaths were observed by the public, the government, and moonshiners alike, but nothing substantive was ever done to stop poisoning these alcohols until constitutional prohibition was lifted in 1933. As a result, during Prohibition, the bootleggers, wets, dries, and the United States Government were all complicit in the deaths of thousands of Americans and the paralysis of tens of thousands by failing to stop the poisoning of alcohol.

**What is Denatured Alcohol?**

Denatured alcohol is a process of combining various chemicals into ethyl alcohol to change the chemical composition of the ethyl alcohol. One of the most common denaturants used in this process at the time was putting methyl alcohol, also known as methanol or wood alcohol, into ethyl alcohol. This process is primarily used for making industrial alcohol unfit for an individual to consume as a drink. Ultimately, denaturing was introduced so that industrial alcohol could be taxed differently from consumable alcohol. The Government was more confident in denatured industrial alcohol not being renatured into potable ethyl alcohol. However, on the black market, denaturing alcohol was primarily a way to cut ethyl alcohol to increase the overall volume of their product, making it more economical for bootleggers than selling pure ethyl alcohol.

**Denatured Industrial Alcohol**

Following the suite of other Western countries, the United States began to implement the denaturing of industrial alcohol in 1907, a practice that was incentivized by making denatured alcohol tax-exempt for industrial manufacturers that produced alcohol. It was stipulated that up to 10% of methyl alcohol could be added to a batch of ethyl alcohol to make it unsafe for
consumption, as methyl alcohol attacks the nervous system and can shut down the lungs and heart, killing anyone who ingests too much. In a 2001 study, it was stated that “assuming that an adult consumes 425-ml standard measures of a drink containing 40% alcohol by volume over a period of 2 h, the maximum tolerable concentration (MTC) of methanol in such a drink would be 2% (v/v) by volume,” \textsuperscript{3} and with government formulas being, at their weakest, 2% methanol by volume, ingesting denatured industrial alcohol was very dangerous. It was also codified that methyl alcohol could be used in conjunction with other chemicals to render the ethyl alcohol unfit for consumption.\textsuperscript{4} However, consumption of wood alcohol, or methyl alcohol, predated the implementation of the denaturing process of industrial alcohol with methyl alcohol. The deaths from methyl alcohol consumption pre-prohibition were relatively low compared to what would come during the years of constitutional prohibition.\textsuperscript{5} Initially, it seems that the U.S. Government's main concern was whether industrial alcohol manufacturers would try and increase profits by feigning the denaturing of their alcohol, only to then use it to produce consumable alcohol utterly free of taxation. However, it seems that the practice of denaturing alcohol was \textit{successful in not} being reappropriated into alcohol intended for consumption within the United States during the fiscal year of 1907.\textsuperscript{6}


\textsuperscript{4} U.S. Congress, House, \textit{An Act For the withdrawal from bond, tax free, of domestic alcohol when rendered unfit for beverage or liquid medicinal uses by mixture with suitable denaturing materials}. Chap. 3047. 59th Cong., 1\textsuperscript{st} session. June 07, 1906. \url{https://www.loc.gov/law/help/statutes-at-large/59th-congress/session-1/c59s1ch3047.pdf}.


Denatured Industrial Alcohol Under Constitutional Prohibition

The implementation of denatured industrial alcohol seemed to have been largely successful in avoiding being repurposed into "consumable" alcohol alongside minimal reports of deaths due to the consumption of methyl alcohol before Prohibition. However, the implementation of constitutional prohibition in the United States made a rush within the American populace to shore up as much alcohol as possible for private consumption before introducing the 18th amendment on January 1st, 1920. In an article published on January 30th, 1921, Journalist T.R. Ybarra wrote that “what was true of the months before prohibition is even truer of much of what is now being illegally sold under the guise of alcohol liquor … The tricks adopted to palm off on the thirsty ‘fake’ beverages masquerading under well-known names are legion.”

While estimates prove difficult to ascertain- the increase of poisoned liquor deaths increased as prohibition crept forward. Dr. Charles Norris, the Chief Medical Examiner of New York City from 1918 to 1935, wrote a report to the Mayor of New York City in 1927, which indicated that the rate of alcoholism had gone up and declared that the government should not be blamed for the increase of deaths from denatured alcohol poisoning. Norris noted that:

the Department of Health … "rejects certificates of death from private physicians in which the word 'alcoholism' is the main or contributing cause." For this very good reason private physicians will rarely make such a report and expose their deceased customers to the indignity of a post-mortem examination. For equally obvious reasons, private physicians will prefer to ascribe death to other "natural causes" when they can, in the case of clients in good standing or society, and there is no reason why the Health Department should go behind their report.

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This passage indicates that the collection of data on potential deaths caused by alcohol consumption, whether poisoned or safe, was skewed by the practices of the Department of Health and the discretion of private physicians wishing to maintain the "moral" image of their clients. This muddying of statistics has seriously dampened subsequent academic work attempting to ascertain concrete numbers on the numbers of deaths due to denatured industrial alcohol consumption during the prohibition era that lasted from 1920 until 1933.

The politicization of Deaths from Denatured Industrial Alcohol Poisoning & Wood Alcohol

As with many controversial issues, this one was no exception in that it had various polarized views surrounding it. During Prohibition the political landscape was divided amongst wets and dries in the public sphere, with the Government largely upholding dry sentiments. Overall, this divided political landscape was fertile ground for blame to be tossed around by all factions involved, with no real action taking place as a result. Whether it was industrial manufacturers, government officials, journalists, or the everyday wet/dry citizens, everyone felt that different groups should be held accountable for the uptick in poisoning deaths from the ingestion of methyl alcohol by the populace. Industrial manufacturers of alcohol initially resisted attempts to further regulate their businesses in 1922, while government officials wished to shift blame away from themselves implementing methyl alcohol’s introduction into industrial ethyl alcohol in the first place. However, bootleggers, speak-easy operators, and suppliers also had a hand in cutting their products with wood alcohol and various other chemicals themselves, which

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10 U.S. Congress, House, An Act For the withdrawal from bond, tax free, of domestic alcohol when rendered unfit for beverage or liquid medicinal uses by mixture with suitable denaturing materials.
lead to additional deaths. Within this murky situation, it is fair to say that bootleggers,
politicians, government employees, and industrial manufacturers of alcohol were all involved
with getting poisonous chemicals into alcohol. As a result, they share the blame in the deaths that
occurred due to their decisions.

“Ginger Jake”

Ginger Jake is an interesting example of a previously existing medicinal product,
Jamaican Ginger Extract, which contained high levels of alcohol, that was then altered by the
Hub Specialty Company with devastating effect. Many people were left permanently paralyzed
from consuming this specific poisonous alcohol, while others outright died. An intriguing aspect
of this specific example of a poisonous alcohol produced under prohibition is how it has a
notable impression on blues music produced after the poisonings occurred. A professor at the
City University of New York Medical School, Dr. John Morgan, found this impression in
various songs that talked about “jake leg,” which was a symptom from the paralysis left by
consuming Ginger Jake. The study of Ginger Jake is a tale that displays how the average
consumers during Prohibition were the ones most affected by poisonous moonshine and how
little consideration, or justice, they were given for their suffering.

More Contemporary Views of Alcohol Poisoning Deaths During Prohibition

Herbert Asbury was an American journalist who wrote various books on criminal activity
during the 19th and 20th centuries. He published a sprawling book that covered the history of

11 Lawrence Segel, “Ginger Jake Blues: Adding Jamaica Ginger to Drinks Was a Covert Way of Drinking Alcohol
during Prohibition -- but after One Company Adulterated the Product It Caused a Horrible Medical Disaster in the
1930s,” Medical Post 38, no. 34. September 24, 2002, 41,
http://search.proquest.com/hnpnewyorktimes/docview/228744256/citation/893DFBE8E36946F2PQ/1.
12 “Interview: Dr. John Morgan Discusses the History of Jake Leg,” All Things Considered, September 12, 2003, 1,
http://www.proquest.com/docview/189954456/citation/8C7FA9A94BF842C9PQ/1.
Prohibition in the United States in 1950. His book takes from numerous sources on dry/wet literature, newspapers, interviews, previous books. He mentions many compelling examples of people having been poisoned by toxic alcohols during Prohibition and mentions a few books that could be investigated for additional information.\textsuperscript{13} Lisa McGirr cursorily mentions deaths from alcohol poisoning in her book \textit{The War on Alcohol}, where she draws from the works of both Herbert Asbury and Dr. John Morgan and states that “throughout Prohibition several thousand more, largely poor men and women, are known to have died from poisoned liquor.”\textsuperscript{14} It seems that this topic has only been skimmed by historians and journalists within various newer sources but has yet to be thoroughly investigated.

This topic is important because it explores a range of ethical and moral questions as to how a government implements policies that could potentially harm its citizens. While many agree that Prohibition was an exercise in implementing an impossible law to enforce, the incompetence goes far beyond these standard bounds. By exploring this topic, the evidence shows a government that knew its policies were killing Americans regularly and did nothing of real measure to stop it. Even when some politicians attempted to bring the poisonings to an end, their bills were badly defeated during voting sessions. Ultimately, we see a government that was ignorant at best and apathetic at worst in how it managed the deaths and paralysis of tens of thousands of Americans under constitutional prohibition.

On June 7th, 1906, the United States would begin its journey of beginning to denature alcohol intended for industrial purposes. Previous to this decision, the taxes on pure ethyl alcohol were $1.10 per proof, per gallon. This tax was broadly applied to ethyl alcohol meant for consumption and industrial purposes, which put a hefty cost on industrial alcohol manufacturers in the United States. The United States made this decision by following the examples of Britain and Germany, which had similarly enacted laws that made denatured alcohol tax-free for industrial purposes. After passing this law, it was enacted on January 1st, 1907, and denatured alcohol would have a permanent residence within the United States from that day forward.

This legislation seemed reasonable in the following years; industrial manufacturers could increase their profits by having their alcohol become tax-free at the cost of that alcohol becoming poisonous and unfit for human consumption. However, this did not seem to be the primary concern of the United States government at the time as they prioritized monitoring whether alcohol producers would cheat this law to make tax-free consumable alcohol. Noted within an IRS document which provided an overview for the fiscal year of 1907, they reported that "nevertheless, a subject of congratulation that few, if any, frauds have been committed or attempted in connection with the manufacture or use of this class of spirits." However, with a

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15 U.S. Congress, House, An Act For the withdrawal from bond, tax free, of domestic alcohol when rendered unfit for beverage or liquid medicinal uses by mixture with suitable denaturing materials.
17 Internal Revenue Service, Treasury Department, Doc. No. 2489.
growing temperance movement in the United States, the prohibition of alcohol was 13 short years away from the 1907 implementation of denaturing industrial alcohol.

In 1919 the 18th amendment was ratified, stipulating that “the manufacture, sale or transportation of intoxicating liquors within, the importation thereof into, or the exportation thereof from the United States and all territory subject to the jurisdiction thereof for beverage purposes is hereby prohibited.”\(^{18}\) While the 18th amendment outlawed the manufacture, sale, and transportation within the United States, it failed to make alcohol consumption illegal. While people would have still consumed alcohol even if the consumption of alcohol had also been stipulated as being illegal, it certainly did not help reduce consumption. As a result, prior to the implementation of the prohibition of alcohol, Americans began to try and stockpile as much alcohol as possible before it started in 1920.

In 1921 T.R. Ybarra wrote in the *New York Times*, "Again enter the Alcohol twins, Ethyl and Methyl. As a few people know before prohibition, and most citizens have learned since … Methyl continually bobs up in the booze-hootch sold legally before June 30, 1919, and in that which (rumor has it) is being sold illegally nowadays."\(^{19}\) This article shows that liquor sold legally between 1919 and 1920 had been contaminated with methyl alcohol. Ybarra’s words also show how the average consumer would usually not need this information before prohibition, but that prohibition had forced the average consumer to become familiar with Methyl alcohol.

Ybarra also wrote on his experience from observing different experiments that chemists performed to test ethyl alcohol for methyl alcohol, and concluded that “An effective way of


\(^{19}\) Ybarra, “When Drink Are Poison.”
detecting the presence of crude wood alcohol is to put a sample of the drink to be analyzed in a dish and apply a Bunsen burner. This will bring out the strong the … odor of wood or methyl alcohol.”\textsuperscript{20} However, not everyone could perform this simple test, especially while being served in a speakeasy.

One method that was used to disguise denatured alcohol as safe ethyl alcohol was the “filling … of well-known brands of liquor by means of a wire heated to white heat and run through the bottoms of such bottles. Into the perforation thus made inferior liquor, often containing a high percentage of wood alcohol.”\textsuperscript{21} This process made it so even legitimate alcohols were liable to have been tampered with before Prohibition had even been put into full effect.

Dr. Reid Hunt, who was the head of the Department of Pharmacology at Harvard University, urged readers of Ybarra's article that consumption of wood alcohol was dangerous, but more interestingly, is that Dr. Hunt stated:

\begin{quote}

\hspace{0.5cm}testimony was offered in a court a number of years ago to the effect that the manufacturers of flavoring extracts had been approached by dealers in wood alcohol and urged to make preparations with it. The fact that already at that time the bottles were labeled ‘Poison’ was explained as a ruse to prevent the Government from placing an internal revenue tax upon wood alcohol.\textsuperscript{22}
\end{quote}

This example demonstrates how industrial manufacturers of alcohol were also making deals and aiming at the new, desperate black market of alcohol consumers. Whether or not their liquor was pure ethyl alcohol passed off as denatured industrial alcohol, or was in fact, denatured industrial alcohol repurposed for consumption is up to speculation. However, it does not seem promising\textsuperscript{20,21,22}

\textsuperscript{20} Ybarra, “When Drink Are Poison.”
\textsuperscript{21} Ybarra, “When Drink Are Poison.”
\textsuperscript{22} Ybarra, “When Drink Are Poison.”
that they wanted to flavor their alcohol, which was a common practice of making denatured alcohol taste better during Prohibition.

By 1922 officials had begun to investigate industrial manufacturers of alcohol to try and find a solution to this problem. They addressed it through the “elimination of ‘fly-by-night’ dealers in barber supplies, hair tonics”\textsuperscript{23} and by trying to make manufacturers exclusively use denatured industrial alcohol. A salesman of industrial ethyl and denatured alcohol cited that “the legitimate price for pure alcohol was $4.70 a gallon, whereas denatured alcohol could be had for as low as 40 cents a gallon. The deaths from alcohol poisoning had figured largely in reducing the bootleg price of pure alcohol from $16 a gallon to $8 a gallon.”\textsuperscript{24} It seems that the price reduction for ethyl alcohol was potentially an attempt to make ethyl alcohol more affordable, thus making it more economically sound for a bootlegger to buy and sell ethyl alcohol rather than buying denatured industrial alcohol to then distribute for consumption on the black market. However, the method of the dry agents seems counterintuitive as it would lead to further consumption of industrial denatured alcohol by the general alcohol consumer. This approach seems irresponsible in retrospect, as it indeed led to more deaths, but it is crucial to remember how politicized alcohol consumption was at this time. The attention of dry agents was on preventing the consumption of ethyl alcohol, which was so great that they might not have perceived consumers getting their hands on ethyl alcohol as a better alternative to being given poisonous denatured alcohol.

An early example of the Federal Government's ignorance on the deadliness of denatured industrial alcohol is an early legal attempt to require medicines to include denatured alcohol,

\textsuperscript{23} “DRY AGENTS CENTRE FIGHT ON ALCOHOL.”
\textsuperscript{24} “DRY AGENTS CENTRE FIGHT ON ALCOHOL.”
which was met with large-scale resistance by medical professionals. On March 10th, 1922, the New York Times wrote that "A committee of five prominent pharmacists … sent a letter to Secretary of the Treasury Andrew W. Mellon … that the ‘use of especially denatured or premixed alcohol in the manufacture of medicines for internal use is unwise from the standpoint of public health.’"25 By attempting to pass a bill that would have essentially poisoned all forms of medicines with alcohol in them, the Federal Government showed that it had either not learned how deadly denatured alcohol was yet or that they did not see it as an issue. At this time, the dries saw medicinal alcohol as a threat to the credibility of their cause with “prohibitionists and temperance advocates … argu[ing] that the widespread use of liquor as medicine hurt their cause … It was universally agreed that the need for medicinal liquor had been sharply and steadily declining throughout the half century before Prohibition.”26 While dry forces were focused on delegitimizing and controlling medicinal alcohols, other, more dangerous forms of alcohol would continue to be produced illicitly.

During Prohibition there was a significant quantity of alcohol produced from low-quality and amateur stills. It was noted by Roy A. Haynes, U.S. Prohibition Commissioner that "The modern moonshiner uses lye … but his design is to give his product a 'kick.' … In the course of a few weeks this kind of moonshine, if drunk continuously, is likely to eat out the lining of the human stomach."27 Within the crude stills that littered the continental United States, most

moonshiners were not chemists and added ingredients based on their intuition. This amateur chemistry resulted in poisonous moonshines that could commonly give one "rotgut" if consumed too much. Yet the dries of the time were beginning to shift their focus from the “classic” image of the rural moonshiner and towards urban centers where immigrants resided: “In our populous cities 90 per cent of the moonshining is done by the foreign-born population. Their methods are exceedingly unsanitary. Their stills often are located on the upper floors of crowded tenement buildings.” It seemed that urban stills would become their primary focus of enforcing prohibition laws for some dry forces.

However, not all illicit manufactures of alcohol during Prohibition were as unsophisticated as Haynes’ report claimed. For example, at the South River Chemical Works in South River, New Jersey, there was a plant that was able to purchase denatured industrial alcohol in bulk, and then renatured it to produce alcohol to sell in bulk to bootleggers. However, this plant was brought down in 1926 when:

Emanuel (Mannie) Kessler, reputed to be the wealthiest bootlegger in the world and Maurice Sweetwood, who served a term with Kessler in Atlanta Penitentiary for bootlegging activities, were accused yesterday … of conspiracy to violate the Volstead act through the operation of the South River Chemical Works, Inc, a so-called ‘wet-cleaning plant’ … The plant is alleged to have produced 4,000 gallons of redistilled alcohol daily since June 1 last [year] … its[sic] still alone being valued at about $40,000. This bust had brought down one of the largest manufacturers of illicit alcohol during Prohibition that was able to churn out over 4,000 gallons of alcohol daily for roughly nine months. While the chemical composition of illicit alcohols varied greatly depending on the site, this particular plant

28 Hanes, “50-CENT MOONSHINE BRINGS $60 A GALLON.”
was noted as having three chemists in the arrest record: “chemist; Isador Wolkin … chemist; John Ackerman … chemist; Max Carp.”\textsuperscript{30} It seems that even this plant, which had a 40,000 dollar still and three chemists would be able to produce a safe product, but “United States Attorney Emory R. Buckner … said that the alcohol seized at the plant clearly showed that traces of the poison remained after the redistillation process.”\textsuperscript{31} Even this plant, which had every resource at its disposal that a bootlegger could have wanted, could not truly renature the industrial alcohol it purchased and make it safe for human consumption. This example demonstrates how even a top-of-the-line bootlegging facility during Prohibition could not safely renature denatured industrial alcohol for public consumption.

Large-scale, urban-based distilleries continued to be busted in the same way that the South River factory had been: with under-cover agents infiltrating them. Prohibitionary forces saw this measure as an effective way to take down these illicit stills. Prohibition agents had crafted a similar manufacturer called the "Le Shone de Paris, ostensibly a perfumery house,"\textsuperscript{32} which had operated for seven weeks … by and with the approval of Mr. Buckner’s prohibition division [which] turned over to the Government … about $100,000.”\textsuperscript{33} The Le Shone de Paris was able to generate this incredible revenue by doing what the South River factory had done; “For a time Le Shone de Paris used only completely denatured alcohol, for the handling of which no permit was needed.”\textsuperscript{34} Both of these operations had been able to secure vast quantities of denatured industrial alcohol because it was not as heavily regulated as the more pure ethyl

\textsuperscript{30} “BIG ALCOHOL PLANT LAID TO KESSLER.”
\textsuperscript{31} “BIG ALCOHOL PLANT LAID TO KESSLER.”
\textsuperscript{33} “‘UNDER COVER’ CASE ENDED BY BUCKNER.”
\textsuperscript{34} “‘UNDER COVER’ CASE ENDED BY BUCKNER.”
industrial alcohols that were used for medicinal purposes. Unfortunately, this lack of enforcement, combined with the economic incentive to buy cheap denatured alcohol and sell it for the high price of consumable alcohol, led to many bootleggers running similar operations.

Eventually, the Government felt it had strong enough evidence and launched a case in January of 1926 “against the Olivet Distributing Company … one of the largest denaturing plants in the United States, and twenty-four individuals.”35 However, the case brought against the Olivet Distributing Company:

failed … when United States Attorney Buckner filed a nolle prosequi dismissing [the] indictment … the Government was influenced by the action of liquor trial juries here, which have shown an unwillingness to return a verdict of guilty against persons whom the government had ‘trapped’ by operating speakeasies or other illegal liquor concerns in order to get evidence.36

This case showed the limits to how the Government could try and regulate the steady diversion of denatured industrial alcohol into the hands of bootleggers. It was also shown from this case that “Representative F. H. LaGuardia … protested, both on the floor in Congress and in a letter to Secretary Mellon … [and] at one time asked that some action be taken here against Government-operated speakeasies … but Mr. Buckner … quit his job this week.”37 From this exchange, it seems that dry agents on the ground genuinely wanted to try and curb the sale of alcohol in the most effective ways they could. However, their efforts were hampered by higher political forces, resulting in frustrations from those agents doing the groundwork. Ultimately, with the dismissal of this case, it seemed that dry agents had to change their tactics to reel in their war on denatured industrial alcohol. By this time, Major Chester P. Mills was already devising a

35 “‘UNDER COVER’ CASE ENDED BY BUCKNER.”
36 “‘UNDER COVER’ CASE ENDED BY BUCKNER.”
37 “‘UNDER COVER’ CASE ENDED BY BUCKNER.”
new strategy by the time Buckner begrudgingly closed his under-cover case in early 1927, then swiftly resigned from his post.

In late 1926 Major Chester P. Mills began to concentrate on the reappropriation of denatured industrial alcohol, claiming that “a sufficient quantity of specially denatured alcohol had been withdrawn to make enough beverage liquor for New York to last through Christmas … He accounted for the withdrawals by saying they had been made before the permit system had been overhauled by his office.”38 Major Mills would win the Durant Prohibition Plan Prize, a $25,000 endowment for implementing his plan to uphold the Eighteenth Amendment. In his proposal, Mills stated that "Diversion of alcohol and liquors under cover of indiscriminately granted permits controlled by unreliable persons provides the vast majority of liquor consumed today."39 Mills thought that this problem was due to the Government providing special permits for the use of consumable alcohol and that the "rush to put the provisions … into effect these privileges were granted without proper caution; result, there are still large numbers of such permits in the hands of lawbreakers."40 The plan that Mills devised was to crack-down on the issuances of permits to alcohol manufacturers, stating that “Permits, when issued, should be temporary, not longer than six months’ duration, so that local administrators may have further opportunity to determine the legitimacy of the business proposed … If such time proves the applicant responsible and legitimate … a permanent permit may be issued.”41 While Major Mills

40 Mills, “Text of Major Mills’s.”
41 Mills, “Text of Major Mills’s.”
saw denatured industrial alcohol as the largest manufacturer of illicit alcohol in the United States, he did have detractors to his cause.

In early 1929, L.H. Hampton, Assistant Chief Counsel of the Prohibition Unit of the Treasury Department went on to debunk Mills’ claim that denatured industrial alcohol was the main source of illicit alcohol in the United States. Hampton stated that:

Diversion of denatured alcohol … was never a very considerable source of supply of bootleg liquor … This is evident from the commissioner’s report showing that last fiscal year a total of 35,200 illicit distilleries and stills, and 26,594,533 gallons of mash were seized by enforcement officers … the quantity of mash seized if distilled, at a reasonable estimate, would have made approximately 4,000,000 gallons of ‘moonshine’ liquor.42

Hampton then sustained his attack further on Mills’ plan by pointing out that for years the Government had been careful with whom they issued permits for the production of industrial alcohol. This schism between the dry forces on what aspects of prohibition to focus on illustrates the disorganization and confusion on how to tackle the issue of enforcing prohibition.

Another avenue taken by the dries to combat the rising deaths from people consuming denatured alcohol was to put warnings on labels of these alcohols and change denaturants from toxic chemicals to harmless ones.43 However, this argument was being made in 1927, at which point the consumption of denatured alcohol had already caused many deaths. Therefore, it seems strange that the Government did not intervene and implement the introduction of different, non-toxic denaturants so that citizens would be less likely to die or be permanently blinded from drinking alcohol. They concluded their argument by stating that "each bottle or vessel containing

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the alcohol in its present so-called denatured form shall be marked, as other poisons, with skull and crossbones. This will eliminate the necessity of altering the present formula and will clear the United States of all responsibility.”44 This is where the argument becomes quite complex over who is ultimately responsible for the deaths caused by the consumption of denatured alcohol as the Government ceded all responsibility for its citizens dying by labeling a poison as a poison. One could argue that it is the responsibility of the consumer to know what they are consuming. However, in many cases, the consumer could not readily test their alcohol, nor would they be given, by an unscrupulous liquor dealer, a bottle labeled as a poison. In fact, in 1923, it was noted that "In another instance a 'manufacturer' was apprehended while bottling four different kinds of whisky from a single barrel of alcohol. The labels on the bottles were first-class imitations of those used on two kinds of Scotch whisky, one brand of American rye and one of American bourbon.”45 This passage shows that there was an established awareness of this issue four years prior to 1927, and that putting “poison” on the industrial denatured alcohol bottles would be completely ineffective with actually helping most consumers. Perhaps, at large, the Government saw the implementation of labeling denatured alcohol as a way to shift blame from themselves and solely to the bootleggers and consumers.

Government officials seemed eager to either deny blame outright for the deaths of those being poisoned by denatured industrial alcohol or shift responsibility for resolving the matter from themselves and whichever group was readily available. Within Mills' Plan, he wanted to shift the issuances of permits for producing denatured industrial alcohol from Federal to Local Governments and the role of supervising those permit holders.46 Dr. Charles Norris, the Chief

44 “WOMEN DRY'S URGE POISON.”
45 Hanes, “50-CENT MOONSHINE.”
46 Mills, “Text of Major Mills.”
Medical Examiner of New York City from 1928 to 1935, penned a letter to the mayor of New York City in 1927 concerning the increase of deaths from consuming poisoned liquor within the city at the time. This letter was later reworked and published into an essay where Dr. Norris stated that:

So these five and twenty Americans died not of poison liquor but poisoned liquor. Who poisoned it? The Government? By no means. There is a lot of loose talk about Government poisoning of drinking alcohol, and most of it is sheer poppycock. The Government permits, it is true, the use of wood alcohol as a denaturant. So do most civilized Governments.47

While it is true that other governments at the time had implemented the use of methyl alcohol as a denaturant for industrial alcohol, these other countries did not also have an active ban on ethyl alcohol intended for consumption in their countries. Dr. Norris notes that “The Federal Government admits that while 80,000,000 gallons of grain alcohol are manufactured yearly under permit, only about 70,000,000 gallons of it turn up again in legally manufactured products. Ten million get away.”48 Norris's essay is mostly objective, concluding that: “This is the price of the Great Experiment … This is the net dividend of our noble experiment – in extermination.”49 Dr. Norris acknowledged the tragedy of people dying from being poisoned by methyl alcohol and ascribed the blame onto Prohibition itself. However, Dr. Norris ultimately sidestepped who was ultimately responsible for bringing about Prohibition, and who had the power to end it or pass legislation that could cease the poisoning of those 10,000,000 gallons of denatured industrial alcohol that flooded the streets of the United States annually.

In a court case in 1928, it was decided that “Federal and State authorities took issue … over the responsibility for preventing the sale as beverages of products containing wood alcohol

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… Federal authorities placed the responsibility upon the State … Insamuch as wood alcohol is not a beverage, but a recognized poison.”50 This case echoes a larger occurrence during Prohibition where the Federal Government tended to try and shift responsibility for enforcing prohibition onto the state and local levels of Government. Ultimately, the deaths of Americans from consuming poisoned liquor were another aspect of this larger tendency of the Federal Government to dole out responsibility to state and local governments instead of taking additional time and resources to assume responsibility themselves. Nevertheless, while the Federal Government may not have felt responsible for these deaths, who did the public think was to blame?

The general population had a uniform reaction of being outraged that people were being poisoned, yet there was a diverse discourse when it came to who was to blame. While delivering a sermon, Rev. Dr. Daniel A. Poling said, "Certainly the Government does not murder. All industrial alcohol with dangerous elements in it is labelled 'poison.' The bootlegger who removes that label is the man who is the murderer.”51 Within the camp of ascribing blame to the bootleggers was the Women’s Christian Temperance Union, which had absolved the Government of any wrongdoing as well.52 However, many saw the Government as being complicit within these poisoning cases and that they were responsible for at least making changes in the denaturing process of industrial alcohol. In early 1927 those within the "wet" camp of politics began to try and pass legislation that would force the Government to find

52 “WOMEN DRYS URGE POISON.”
alternative denaturants that would merely cause the alcohol to smell and taste horrendous but not poison the alcohol.\(^53\) The dries immediately started a rebuttal to this move: “The drys, under the leadership of Wayne B. Wheeler, General Counsel of the Anti-Saloon League … declared in a statement … that ‘the fact that a few cannot be saved must not blind us to the multitudes who are being rescued from misery, poverty, disease and death by the outlawry of liquor.”\(^54\) Thus began a long political battle where the wets attempted to make the Government use alternative denaturants while the dries sought to keep methyl alcohol as the primary denaturant despite it being a poison. Finally, in May of 1930, a bill set to change the denaturing of alcohol from poisonous methyl alcohol to finding a non-lethal alternative was proposed, but was defeated in a 54 to 19 vote in the Senate. Upon this defeat, Senator Tydings stated that “The very fact is that the government, driven by fanatics who have no regard for human life in the furtherances\([\text{sic}]\) of this law … advocates the death penalty for doing no greater thing than drinking a pint of liquor.”\(^55\) Senator Tydings tried again in June of 1930 to pass a bill changing denaturants of alcohol to nonlethal chemicals but was defeated again, this time 45 to 16.\(^56\) From examining the failures of combatting bootleggers, distilleries, and various other methods of fighting the distribution and consumption of alcohol, we can see that the only real change that could cease


\(^{54}\) "WETS PLAN FIGHT OVER DENATURANTS."


the poisonings of individuals would come from political action, at least in the case of repurposed denatured industrial alcohol. Unfortunately, however, the dismal defeat of Senator Tydings resolutions reflects the inability or the unwillingness of those in power to enact laws to cease the poisonings at the source.

While denatured industrial alcohol and moonshine were significant sources of tainted liquor to sweep the United States, they were not the only ones. During Prohibition there were many medicines that contained alcohol that were legal ways for one to consume alcohol. One such medicine was Jamaica Ginger, often called “Ginger Jake” which was 70% alcohol and “had been used as a remedy in the U.S. since the 1860s. It was easily obtainable from pharmacies where it was sold as a headache remedy, digestive aid, promote of menstrual flow and immune helper for mild upper respiratory infections.”57 However, Ginger Jake would become another poisonous alcohol under prohibition, where one brand’s product was found to contain tri-ortho-cresyl phosphate, a neurotoxin that had begun to paralyze those that consumed it. On March 7th of 1930, “A strange malady with paralytic characteristics, apparently caused by the drinking of poisoned liquor, had put about forty victims in city [the] city hospital”58 in Oklahoma City. On March 19th, "Cincinnati physicians today were concerned over the appearance of a strange form of paralysis which has been increasing … The victims lose control of their legs and in some instances the hands.”59 The next day, another report stated that "125 were suffering with a strange form of paralysis which doctors said came from drinking a Jamaica Ginger concoction …

About 100 more cases of the puzzling partial paralysis were reported in Kentucky, bringing the total number of known victims to nearly 300.”60 Shortly after, there was swift legal that began prosecuting those behind the Ginger Jake poisonings. On April 7th, 1930, "Two indictments, involving fifty-one individuals and ten firms, were returned today by a federal grand jury for the alleged sale of Jamaica ginger that resulted in 300 paralysis cases.”61 However, the poisonings were much more extensive than just 300 people. On May 26th, 1930 it was reported that:

The Treasury Department will conduct a vigorous investigation to bring about the arrest of wholesale and retail distributors of fluid extract of ginger … Dr. James M. Doran, Prohibition Commissioner, stated today on returning from an inspection trip in Louisiana and Mississippi. In Mississippi alone … there are from 7,000 to 8,000 cases of poisoning and paralysis from the consumption of extract …. Dr. Doran declared that the situation is serious and presented one of the most unusual problems confronting the prohibition bureau since the Eighteenth Amendment was adopted.62

In forthcoming years, the United Victims of Ginger Paralysis Association was formed and claimed up to 35,000 members,63 which shows how widespread the distribution and casual consumption of medicinal alcohols were during Prohibition. The poisonous batches of Ginger Jake were traced back to a company named "Hub Specialty Company" out of Boston, which had been the initial point of distribution for this toxic batch of Ginger Jake, which then permeated across the country.64 The President of Hub Specialty Company, Harry Gross, and his associate Max Reisman were both found guilty of violating prohibition laws: "they conspired to ship from State to State from June 1928, to February 1931, adulterated drugs and to transport intoxicating
liquor.”\textsuperscript{65} Gross and Reisman were each sentenced to two years of probation, but Gross violated his parole and was sentenced to two years of jail time afterward. The sentences for Gross and Reisman were unusually light as they had pleaded that they were merely middlemen and would help find the source of the poisoned Ginger Jake. However, Gross and Reisman were the sources of the adulterated Ginger Jake as they had asked the Celluloid Corporation if their product, tri-ortho-cresyl, was deadly, which they had replied it was not. While this may seem to clear the names of Gross and Reisman, shortly after producing the toxic Ginger Jake "a man identifying himself as an employee of the Dolan Drug Company, which was a shell operated by Gross and Reisman, called the warehouse that was storing the jake and said, ‘Those sixteen drums of ginger which you have stored in my name are poison. I don't want them.’”\textsuperscript{66} Despite their willing negligence in distributing poison to tens of thousands of Americans, Gross and Reisman managed to get away with infuriatingly small sentences.\textsuperscript{67}

The tens of thousands of Americans that were affected by Jake Leg were anything but silent about what had happened. The United Victims of Ginger Paralysis Association “tried to sue the distributors who sold them the bad jake … In May of 1931 … Unfortunately, the Federal Rules of Civil Procedure, which effectively enabled class-action lawsuits, were seven years in the future, and product-liability law was in its infancy.”\textsuperscript{68} The victims were unable to sue the companies responsible for their suffering and similarly never received aid from the Federal Government, but nothing was ever produced to assist them. On top of all of these defeats, the

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\textsuperscript{66} Baum, “Jake Leg Annals of Epidemiology.”
\textsuperscript{67} Baum, “Jake Leg Annals of Epidemiology.”
\textsuperscript{68} Baum, “Jake Leg Annals of Epidemiology.”
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victims of Ginger Jake watched Gross and Reisman receive two years' probation and two years jail time, respectively. While the victims of Ginger Jake never got to make their mark in law, they did leave a cultural mark in Blues music: "The Allen Brothers record sold 25,000 copies throughout the Southeast, and many people heard about 'The Jake Walk Blues' the first time by listening to the records."69 “The Jake Walk Blues” encapsulates the spirit of Blues music so effectively, a story telling the defeated and downtrodden people of America that saw those that poisoned them essentially walk free, failed to then sue them, then failed to receive aid to help them with their now broken bodies.

From looking at how the government unequally enforced the law surrounding poisonous alcohols, a picture emerges of a government that was frequently incapable, unwilling and uninterested in persecuting individuals responsible for poisoning tens of thousands of Americans from 1919 to 1934 in the United States. In the case of bootleggers cutting their product with methyl alcohol, there was not much that could've been done by the Government other than what they had been doing, which was to pursue and prosecute the bootleggers. As for denatured industrial alcohol, which was being repurposed, the Government could have chosen to find non-lethal denaturants for their industrial alcohol but chose, rather strongly, to kill two separate bills that would have implemented that exact change. As for the victims of Ginger Jake, lack of government oversight on drugs being distributed in the United States allowed for unscrupulous manufacturers to poison their product and kill or paralyze tens of thousands of Americans, and lacked proper legislation to properly prosecute the two men behind the mass poisoning. Overall, all these actions serve as an example of a government that attempted to make a law that it had no possible hope of ever fully enforcing. As a result of the negligence on the part of the United

69 Baum, “Jake Leg Annals of Epidemiology.”
States government, tens of thousands of Americans died from a drug becoming unregulated and therefore left to lower safety standards than pre-prohibition alcohol safety standards. The ultimate lesson from those lives cut short from poisonous alcohols during Prohibition is that the deregulation of a drug opens the door for deadly additives to find their way into those now deregulated drugs, frequently coming with deadly consequences. Regardless of a drug's legal status, some individuals will always find ways to consume that drug, even turning to black markets and potentially dangerous versions if it has been criminalized. As with poisonous alcohol in the past, today, Americans die from the sustained war on drugs from the same basic concept that the criminalization of drugs does not abolish the demand for those drugs. While some Americans would have died from drinking poisonous alcohol if Prohibition had never come to pass, it would undoubtedly have been much less than the mass poisonings that proliferated across the United States from 1920 to 1933.
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