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A
HISTORY
of
WORLD
in
6 GLASSES



TOM STANDAGE

Author of *The Victorian Internet* and *The Turk*

SPIRITS *in the*
COLONIAL PERIOD



High Spirits, High Seas

One can distill wine using a water-bath, and it comes out like rosewater in color.

—*Abu Yusuf Yaqub ibn Ishaq al-Sabbah al-Kindi, Arab scientist and philosopher (c. 801-73 CE), in The Book of the Chemistry of Perfume and Distillations*

A Gift from the Arabs

AT THE CLOSE of the first millennium AD, the greatest and most cultured city in western Europe was not Rome, Paris, or London. It was Cordoba, the capital of Arab Andalusia, in what is now southern Spain. There were parks, palaces, paved roads, oil lamps to light the streets, seven hundred mosques, three hundred public baths, and extensive drainage and sewage systems. Perhaps most impressive of all was the public library, completed around 970 CE and containing nearly half a million books—more books than any other European library, or indeed most European countries. And it was merely the largest of seventy libraries in the city. No wonder Hroswitha, a tenth-century German chronicler, described Cordoba as "the jewel of the world."

Cordoba was only one of the great centers of learning within the Arab world, a vast dominion that stretched at its height from the Pyrenees in France to the Pamir Mountains in central Asia, and as far south as the Indus Valley in India. At a time when the wisdom of the Greeks had been lost in most of Europe, Arab scholars in Cordoba, Damascus, and Baghdad were building on knowledge from Greek, Indian, and Persian sources to make further advances in such fields as astronomy, mathematics, medicine, and philosophy. They developed the astrolabe, algebra, and the modern numeral system, pioneered the use of herbs as anesthetics, and devised new navigational techniques based on the magnetic compass (an introduction from China), trigonometry, and nautical maps. Among their many achievements, they also refined and popularized a technique that gave rise to a new range of drinks: distillation.

This process, which involves vaporizing and then recondensing a liquid in order to separate and purify its constituent parts, has ancient origins. Simple distillation equipment dating back to the fourth millennium BCE has been found in northern Mesopotamia, where, judging from later cuneiform inscriptions, it was used to make perfumes. The Greeks and Romans were also familiar with the technique; Aristotle, for example, noted that the vapor condensed from boiling salt water was not salty. But it was only later, starting in the Arab world, that distillation was routinely applied to wine, notably by the eighth-century Arab scholar Jabir ibn Hayyan, who is remembered as one of the fathers of chemistry. He devised an improved form of distillation apparatus, or still, with which he and other Arab alchemists distilled wine and other substances for use in their experiments.

Distilling wine makes it much stronger, because the boiling point of alcohol (seventy-eight degrees centigrade) is lower than that of water (one hundred degrees centigrade). As the wine is slowly heated, vapor begins to rise from its surface long before the liquid starts to boil. Due to alcohol's lower boiling point, this vapor contains proportionately more alcohol and less water than the original liquid. Drawing off and condensing this alcohol-rich vapor produces a liquid with a far higher alcohol content than wine, though it is far from being pure alcohol, since some water and other impurities evaporate even at temperatures below one hundred degrees. However, the alcohol content can be increased by repeated redistillation, also known as rectification.

Knowledge of distillation was one of many aspects of the ancient wisdom that was preserved and extended by Arab scholars and, having been translated from Arabic into Latin, helped to rekindle the spirit of learning in western Europe. The word *alembic*, which refers to a type of still, encapsulates this combination of ancient knowledge and Arab innovation. It is derived from the Arabic *al-ambiq*, descended in turn from the Greek word *ambix*, which refers to the specially shaped vase used in distillation. Similarly, the modern word *alcohol* illuminates the origins of distilled alcoholic drinks in the laboratories of Arab alchemists. It is descended from *al-koh'l*, the name given to the black powder of purified antimony, which was used as a cosmetic, to paint or stain the eyelids. The term was used more generally by alchemists to refer to other highly purified substances, including liquids, so that distilled wine later came to be known in English as "alcohol of wine."



Distillation equipment in a medieval laboratory. The production of spirits began as an obscure alchemical technique known only to a select few.

From their obscure origins in alchemical laboratories, the new drinks made possible by distillation became dominant during the Age of Exploration, as seafaring European explorers established colonies and then empires around the world. Distilled drinks provided a durable and compact form of alcohol for transport on board ship and found a range of other uses. These drinks became economic goods of such significance that their taxation and control became matters of great political importance and helped to determine the course of

history. The abstemious Arab scholars who first distilled wine regarded the result as alchemical ingredients or a medicine, rather than an everyday drink. Only when knowledge of distillation spread into Christian Europe did distilled spirits become more widely consumed.

A Miracle Cure?

On a winter night in 1386 the royal doctors were summoned to the bedchamber of Charles II of Navarre, the ruler of a small kingdom in what is now northern Spain. The king was known as "Charles the Bad," a nickname he earned early in his reign when he suppressed a revolt with particular cruelty and ferocity. His favorite pastime was plotting against his father-in-law, the king of France. Now, after a night of debauchery, Charles had been struck down by fever and paralysis. His doctors decided to administer a medicine reputed to have miraculous healing powers, and made using an almost magical process: the distillation of wine.

One of the first Europeans to experiment with this novel process was the twelfth-century Italian alchemist Michael Salernus, who learned of it from Arab texts. "A mixture of pure and very strong wine with three parts salt, distilled in the usual vessel, produces a liquid which will flame up when set on fire," he wrote. Evidently, this process was known only to a select few at the time, since Salernus wrote several of the key words of this sentence (including *wine* and *salt*) in secret code. Since distilled wine could be set on fire, it was called *aqua ardens*, which means "burning water."

Of course, burning also described the unpleasant sensation produced in the throat after swallowing distilled wine. Yet those who tried drinking small quantities of *aqua ardens* found that this initial discomfort, sometimes disguised using herbs, was far outweighed by the sensation of invigoration and well-being that swiftly followed. Wine was widely used as a medicine, so it seemed only logical that concentrated and purified wine should have even greater healing powers. By the late thirteenth century, as universities and medical schools were flowering throughout Europe, distilled wine was being acclaimed in Latin medical treatises as a miraculous new medicine, *aqua vitae*, or "water of life."

One firm believer in the therapeutic power of distilled wine was Arnald of Villanova, a professor at the French medical school of Montpellier, who produced instructions for distilling wine around 1300. "The true water of life will

come over in precious drops, which, being rectified by three or four successive distillations, will afford the wonderful quintessence of wine," he wrote. "We call it aqua vitae, and this name is remarkably suitable, since it is really a water of immortality. It prolongs life, clears away ill-humors, revives the heart, and maintains youth."

Aqua vitae seemed supernatural, and in a sense it was, for distilled wine has a far higher alcohol content than any drink that can be produced by natural fermentation. Even the hardiest yeasts cannot tolerate an alcohol content greater than about 15 percent, which places a natural limit on the strength of fermented alcoholic drinks. Distillation allowed alchemists to circumvent this limit, which had prevailed since the discovery of fermentation thousands of years earlier. Arnald's pupil, Raymond Lully, declared aqua vitae "an element newly revealed to men but hid from antiquity, because the human race was then too young to need this beverage destined to revive the energies of modern decrepitude." Both men lived to be well over seventy, an unusually advanced age for the time, which may have been taken as evidence for aqua vitae's life-prolonging power.

This wonderful new medicine could either be administered as a drink or applied externally to the affected part of the body. Aqua vitae's proponents believed it could preserve youth; improve memory; treat diseases of the brain, nerves, and joints; revive the heart; calm toothache; cure blindness, speech defects, and paralysis; and even protect against the plague. It was, in short, regarded as a panacea, which was why Charles the Bad's doctors decided to administer it to their patient. Working by candlelight, they enveloped the king in sheets soaked with aqua vitae, hoping that contact with the magical fluid would cure his paralysis. But the treatment went disastrously wrong: The sheets were accidentally ignited by a careless servant's candle, and the king instantly went up in flames. His subjects are said to have regarded his fiery and agonizing death as a divine judgment, for one of the king's final acts had been to order a dramatic increase in taxation.

Over the course of the fifteenth century, aqua vitae began to change from a medicinal drink into a recreational one as knowledge of distillation spread. This process was helped by a new invention, the printing press, developed by Johannes Gutenberg during the 1430s. (It was new to Europeans, at least, though the same idea had occurred to the Chinese some centuries earlier.) The first printed book about distillation was written by Michael Puff von Schrick, an Austrian doctor, and published in Augsburg in 1478. It was so popular that

fourteen editions of the book had appeared by 1500. Among the claims made by von Schröck were that drinking half a spoon of aqua vitae every morning could ward off illness, and that pouring a little aqua vitae into the mouth of a dying person would give him or her the strength to speak one last time.

But for most people, aqua vitae's appeal came not from its supposed medicinal benefits but from its power to intoxicate people quickly and easily. Distilled drinks proved particularly popular in the cooler climes of northern Europe, where wine was scarce and expensive. By distilling beer, it was possible to make powerful alcoholic drinks with local ingredients for the first time. The Gaelic for aqua vitae, *uisge beatha*, is the origin of the modern word *whiskey*. This new drink quickly became part of the Irish lifestyle. One chronicler recorded the death in 1405 of Richard MacRagh-naill, the son of an Irish chieftain, who died "after drinking water of life to excess; and it was water of death to Richard."

Elsewhere in Europe, aqua vitae was called "burnt wine," rendered in German as *Branntwein* and in English as *brandywine*, or simply *brandy*. People began distilling wine in their own homes and offering it for sale on feast days, a practice that was widespread and troublesome enough that it was explicitly banned in the German city of Nuremberg in 1496. A local doctor observed: "In view of the fact that everyone at present has got into the habit of drinking aqua vitae it is necessary to remember the quantity that one can permit oneself to drink, and learn to drink it according to one's capacities, if one wishes to behave like a gentleman."

Spirits, Sugar, and Slaves

The emergence of these new distilled drinks occurred just as European explorers were first opening up the world's sea routes, reaching around the southern tip of Africa to the east, and crossing the Atlantic to establish the first links with the New World in the west. The process began with the exploration by Portuguese explorers of the west coast of Africa, and the discovery and colonization of the nearby Atlantic islands, the first stepping stones on the way to the Americas. These expeditions were organized and funded by Prince Henrique of Portugal, also known as Prince Henry the Navigator. Despite his name, Prince Henry himself remained in Portugal for most of his life. He went abroad just three times, and even then only as far as North Africa, on three military excursions that

respectively made, destroyed, and restored his reputation as a commander. But from his base in Sagres he masterminded an ambitious program of Portuguese naval exploration. Prince Henry funded expeditions and collated the resulting reports, observations, and maps. He also encouraged his captains to embrace advances in navigation such as the magnetic compass, along with trigonometry and the astrolabe, an invention which had, like distillation, been introduced by Arabs into western Europe. The chief motive of the Portuguese, Spanish, and other explorers of the time was to find an alternative route to the East Indies, in order to circumvent the Arab monopoly on the spice trade. Ironically, their eventual success was due in part to the use of technology provided by the Arabs.

The Atlantic islands of Madeira, the Azores, and the Canaries proved to be ideal places to produce sugar, another Arab introduction. But growing sugarcane required enormous amounts of water and manpower. The Arabs had amassed a range of irrigation techniques and labor-saving devices during their westward expansion, including the water screw, the Persian innovation of underground aqueducts, and water-powered mills to process sugarcane. Even so, sugar production under the Arabs relied on slaves, mostly brought in from East Africa. The Europeans captured many of the Arab sugar plantations during the religious wars of the Crusades but lacked experience in growing sugar and needed even more manpower to maintain production. During the 1440s the Portuguese began to ship black slaves from their trading posts on the west coast of Africa. At first these slaves were kidnapped, but the Portuguese soon agreed to buy slaves, in return for European goods, from African traders.

Mass slavery had been unseen in Europe since Roman times, in part for religious reasons, for doctrine forbade the enslavement of one Christian by another. Such theological objections to the new slave trade were overlooked or sidestepped using a number of dubious arguments. At first, it was suggested that by buying slaves and converting them to Christianity, Europeans were rescuing them from the false doctrine of Islam. But then another argument emerged: Black Africans, argued some theologians, did not qualify as fully human, could not, therefore, become Christians, and could be enslaved. They were, according to another theory, "children of Ham," so their enslavement was sanctioned by the Bible. This insidious logic was not widely accepted, at least at first. But the remoteness of the Atlantic islands meant the use of slave labor could be kept conveniently out of sight. By 1500 the introduction of slaves had turned Madeira

into the largest exporter of sugar in the world, with several mills and two thousand slaves.

The use of slaves in sugar production expanded dramatically after the European discovery of the New World by Christopher Columbus in 1492. He had been looking for a westerly passage to the East Indies but instead found the islands of the Caribbean. There was no gold, spices, or silk to take back to his royal patrons in Spain, but Columbus confidently declared the islands ideal for growing sugar, a business he knew well. On his second voyage to the New World in 1493 he took sugarcane from the Canary Islands. Production was soon under way on the Spanish islands of the Caribbean and on the South American mainland, in what is now Brazil, under the Portuguese. Attempts to enslave the indigenous people failed, as they inexorably succumbed to Old-World diseases, so the colonists began importing slaves directly from Africa instead. Over the course of four centuries, around eleven million slaves were transported from Africa to the New World, though this figure understates the full scale of the suffering, because as many as half the slaves captured in the African interior died on the way to the coast. Distilled drinks played a central role in this evil trade, which intensified as the British, French, and Dutch established sugar plantations in the Caribbean during the seventeenth century.

The African slavers who supplied the Europeans with slaves accepted a range of products in exchange, including textiles, shells, metal bowls, jugs, and sheets of copper. But most sought-after by far were strong alcoholic drinks. The Africans in different regions already drank alcoholic drinks such as palm wine, mead, and various varieties of beer, all of which dated back to antiquity. But alcohol imported from Europe was, in the words of one trader, "everywhere called for," even in Muslim parts of Africa. In the early days of the slave trade, when it was dominated by Portugal, African slavers acquired a taste for strong Portuguese wines. In 1510 the Portuguese traveler Valentim Fernandes wrote that the Wolofs, a people from the Senegal region, "are drunkards who derive great pleasure from our wine."

Wine was a convenient form of currency, but European slave traders quickly realized that brandy was even better. It allowed more alcohol to be packed into a smaller space inside the cramped hold of a ship, and its higher alcohol content acted as a preservative, making it less likely than wine to spoil while in transit. Africans valued distilled spirits because they were far more concentrated, or "hot," than their own grain-based beers and palm wines. Drinking imported

alcohol became a mark of distinction among African slavers. Textiles were often the most valuable component of the packages of goods exchanged for slaves, but alcohol, and brandy in particular, was the most prestigious.

It soon became customary for Europeans to present large quantities of alcohol, known as *dashee* or *bizy*, as a gift before beginning negotiations with African traders. The Europeans and Africans conversed in a pidgin language derived from Portuguese, several examples of which were transcribed by a French trader, including *qua qua* (linen) and *singo me miombo* (give me some strong liquor). According to John Atkins, a British naval surgeon who chronicled the slave trade, the African slaver "never cares to treat with dry lips." William Bosman, a Dutch slave trader, recommended that captains of slave ships should make daily gifts of brandy to local leaders and principal traders. The Africans of Whydah, he warned, would not do business at all unless they had first been presented with sufficient *dashee*. "He that intends to trade here, must humour them herein," he wrote.

Brandy oiled the wheels of the slave trade in other ways, too. One account records that the canoemen who ferried goods to and from European ships were paid a bottle of brandy a day as a retainer, plus an extra two to four bottles on days when they worked, and a bonus bottle on Sundays. The guards who marched slaves from holding pens on the coast down to the shore were also paid in brandy. The connections between spirits, slaves, and sugar were further strengthened following the invention of a powerful new drink made from the waste products of the sugar-production process itself. That drink was rum.

The First Global Drink

On a September day in 1647 an Englishman named Richard Ligon caught his first glimpse of the Caribbean island of Barbados from the deck of the ship *Achilles*. "Being now come in sight of this happy island, the nearer we came, the more beautiful it appeared to our eyes," he wrote in an account of his voyage. Appearances proved deceptive, however, for when Ligon and his fellow travelers disembarked they discovered that Barbados was in the midst of an outbreak of the plague. This disrupted the travelers' plans, so that having only intended to stay for a few days, Ligon remained on the island for three years. During his stay he compiled a detailed account of the island's many plants and animals, the customs of its people, and the workings of its sugar plantations.

The first English settlers had arrived on Barbados in 1627 to find the island uninhabited. They set about trying to grow tobacco, which had become popular in their homeland and had proved to be a profitable crop for farmers in the new North American colony of Virginia. But Barbados tobacco was, Ligon observed, "the worst . . . that growes in the whole world." So the settlers brought in sugarcane, equipment, and expertise from Brazil instead. During Ligon's stay, sugar established itself as the island's most important crop. The industry was heavily dependent on slave labor. Ligon ran into the religious logic used to justify slavery when a black slave, to whom he had explained the workings of a compass, asked if he could convert to Christianity, "for he thought that to be a Christian was to be endued with all those knowledges he wanted." Ligon relayed this request to the slave's master and was told that slaves were not allowed to convert—since "by the Lawes of England . . . we could not make a Christian a slave"—so any slaves who were allowed to convert would have to be freed. And that was unthinkable, since it would have stopped the lucrative sugar business in its tracks. Within a decade Barbados dominated the sugar trade, making its sugar barons among the richest men in the New World.

The planters on Barbados gained more than just sugarcane and equipment from Brazil; they also learned how to ferment the by-products of the sugar-making process and then to distill the result to make a powerful alcoholic drink. The Portuguese called it cane brandy, and they made it from the foam skimmed off the boiling cane juice or from the cane juice itself. This process was further refined on Barbados, however, where the cane brandy was made from molasses, the otherwise worthless leftovers from sugar making. This made it possible to make cane brandy far more cheaply and without any reduction in the output of sugar. The planters of Barbados could literally have their sugar and drink it too.

According to Ligon, the resulting drink, known as "kill-devil," was "infinitely strong, but not very pleasant in taste. . . . The people drink much of it, indeed too much; for it often layes them asleep on the ground." Wine and beer were costly to import, and liable to spoil while in transit from Europe, but kill-devil could be made locally in large quantities. Ligon noted that kill-devil was sold on the island itself "to Planters, as have no sugar-works of their own, yet drink excessively of it, for they buy it at easie rates," and also to passing ships, "and it is transported into foreign parts, and drunk by the way." Only after Ligon's departure was kill-devil given the name by which it is known today. A traveler

who visited Barbados in 1651 observed that the islanders' preferred drink or "chief fudling" was "Rumbullion, alias Kill-Devoll, and this is made of sugarcanes distilled, a hot, hellish and terrible liquor." Rumbullion, a slang word from southern England that means "a brawl or violent commotion," may have been chosen as the drink's nickname because that was frequently the outcome when people drank too much of it.

Rumbullion, soon shortened to rum, spread throughout the Caribbean and then beyond. It was given to newly arrived slaves as part of the "seasoning" process, which weeded out the weak and subdued the unruly. Slaves were encouraged to become dependent on regular rations of rum, both to withstand the demands placed upon them and to blot out the associated hardship. It was also used as an inducement. Slaves were rewarded with extra rum for catching rats or performing particularly unpleasant tasks. Plantation records suggest slaves were typically issued two or three gallons of rum a year (but in some cases as much as thirteen gallons), which they could either drink themselves or barter for food. As a result, rum became an important tool of social control. Ligon noted that it was also used as a medicine, and that when slaves were unwell, the doctor gave to each one "a dram cup of this Spirit, and that [was] a present cure."

Rum also became popular among sailors, and from 1655 was adopted as a substitute for the traditional ration of beer on Royal Navy ships in the Caribbean. Within a century it became the navy's preferred drink during long cruises. Replacing the usual gallon of perishable, weak beer with a half pint of rum had predictable consequences for discipline and efficiency, however, and prompted Admiral Edward Vernon to issue an order that the rum should be mixed with two pints of water. Diluting the rum had no effect on the total amount of alcohol consumed, though it made the sailors more inclined to drink the otherwise unpalatable water available on board ships. What turned out to be far more important was Vernon's idea to add sugar and lime juice to the mixture to make it more palatable. He had invented a primitive cocktail that was immediately named in his honor. Vernon's nickname was "Old Grogam," because he wore a waterproof cloak made of grogram, a coarse fabric stiffened with gum. His new drink became known as grog.

The problem remained that the strength of rum varied widely, and sailors who saw their rum being watered down to make grog felt shortchanged. Before the invention of an accurate hydrometer in the nineteenth century, there was no easy way to measure the strength of an alcoholic drink. So the navy's pursers, who

were responsible for distributing the rum ration, measured the strength of the unmixed rum beforehand using a rule of thumb said to have been devised at the Royal Arsenal. They mixed the rum with a little water and a few grains of black gunpowder, then heated the mixture using a magnifying glass to concentrate the rays of the sun. If the gunpowder failed to ignite, the mixture was too weak, and more rum would be added. Only when the gunpowder just barely ignited was the mixture deemed to be the correct strength, which corresponds to 48 percent alcohol. (If the mixture was too strong, an explosion could ensue, and tradition has it that the sailors were then entitled to help themselves while the purser was incapacitated.)

The use of grog in place of beer played an unseen role during the eighteenth century in establishing British supremacy at sea. One of the main causes of death among sailors at the time was scurvy, a wasting disease that is now known to be caused by a lack of vitamin C. The best way to prevent it, discovered and forgotten many times during the eighteenth century, was to administer regular doses of lemon or lime juice. The inclusion of lemon or lime juice in grog, made compulsory in 1795, therefore reduced the incidence of scurvy dramatically. And since beer contains no vitamin C, switching from beer to grog made British crews far healthier overall. The opposite was true of their French counterparts, for whom the standard drink ration was not beer but three-quarters of a liter of wine (the equivalent of a modern bottle). On long cruises, this ration was replaced by three-sixteenths of a liter of eau-de-vie. Since wine contains small amounts of vitamin C but eau-de-vie does not, the effect was to reduce the French navy's resistance to scurvy, just as the British navy's resistance was increasing. The Royal Navy's unique ability to combat scurvy was said by one naval physician to have doubled its performance and contributed directly to Britain's eventual defeat of the French and Spanish fleets at Trafalgar in 1805. (It also meant that British sailors became known as "limeys.")

All this was far in the future, however, when rum was first invented. Its immediate significance was as a currency, for it closed the triangle linking spirits, slaves, and sugar. Rum could be used to buy slaves, with which to produce sugar, the leftovers of which could be made into rum to buy more slaves, and so on and on. Jean Barbot, a French trader, observed on visiting the west coast of Africa in 1679 that he found "a great alteration: the French brandy, whereof I had always had a good quantity abroad, being much less demanded, by reason that a great quantity of spirits and rum had been bought on that coast." By 1721

one English trader reported that rum had become the "chief barter" on the slave coast of Africa, even for gold. Rum also took over from brandy as the currency in which canoemen and guards were paid. Brandy helped to kick-start the transatlantic trade in sugar and slaves, but rum made it self-fueling and far more profitable.

Unlike beer, which was usually produced and consumed locally, and wine, which was usually made and traded within a specific region, rum was the result of the convergence of materials, people, and technologies from around the world, and the product of several intersecting historical forces. Sugar, which originated in Polynesia, had been introduced to Europe by the Arabs, taken to the Americas by Columbus, and cultivated by slaves from Africa. Rum distilled from its waste products was consumed both by European colonists and by their slaves in the New World. It was a drink that owed its existence to the buccaneering enterprise of the Age of Exploration; but it would not have existed without the cruelty of the slave trade, from which Europeans deliberately averted their gaze for so long. Rum was the liquid embodiment of both the triumph and the oppression of the first era of globalization.

The Drinks That Built America

Out of the cheap molasses of the French Islands, New England made the rum which was the chief source of her wealth—the rum with which she bought slaves for Maryland and the Carolinas, and paid her balances to the English merchants.

—*Woodrow Wilson, U.S. President (1856-1924)*

America's Favorite Drink

ENGLAND'S PLAN TO establish colonies in North America, starting in the late sixteenth century, was founded on a fallacy. It was generally assumed that the region of the North American continent to which England laid claim—the lands between thirty-four degrees and thirty-eight degrees north, named Virginia in honor of Queen Elizabeth I, the virgin queen—would have the same climate as the Mediterranean region of Europe, since it lay at similar latitudes. As a result, the English hoped that the American colonies, once established, would be able to supply Mediterranean goods such as olives and fruit and reduce England's dependence on imports from continental Europe. One prospectus claimed that the colonies would provide "the Wines, Fruit and Salt of France and Spain . . . the silks of Persia and Italy." Similarly, abundant timber would do away with the need to import wood from Scandinavia. The colonists and their backers in London also hoped to find precious metals, minerals, and jewels. America, in short, was expected to be a land of plenty that would quickly turn a profit.

The reality turned out to be very different. The harsher-than-expected North American climate meant that Mediterranean crops, and other imports such as sugar and bananas, would not grow. Nor were there any precious metals, minerals, or jewels to be found, and attempts to make silk failed. In the decades after the establishment of the first permanent English colony in 1607, the colonists faced many unexpected difficulties as they struggled to make a living from the land. They had to contend with disease, food shortages, infighting, and constant battles with the local Indians, whose lands they had appropriated.

Amid such hardship, securing a reliable supply of alcohol assumed great importance. When two of the three ships that had brought the first permanent settlers to Virginia in 1607 set off back to England, Thomas Studly, one of the inhabitants of the new colony of Jamestown, complained that "there remained neither taverne, beer house, nor place of reliefe." The first supply ship, arriving that winter, brought some beer, though much of it had been drunk by the crew. Further shipments were often substandard or had spoiled during the voyage. In 1613 a Spanish observer reported that the three hundred colonists had nothing but water to drink, "which is contrary to the nature of the English—on account of which they all wish to return and would have done so if they had been at liberty." Little had changed by 1620: The population had grown to three thousand, but, noted one observer, "the greatest want they complain of is good drink"—in other words, something other than water.

That same year, a shortage of beer determined the site of the second English colony, established by the Puritan separatists known as the Pilgrims. The *Mayflower* set out in 1620 aiming for the Hudson River but made landfall farther north at Cape Cod. Bad weather prevented the ship from heading south, so the ship's captain dumped his passengers on the shore. William Bradford, a Pilgrim leader who became governor of the colony, noted in his diary, "We could not now take time for further search or consideration, our victuals being much spent, especially our Beere." The sailors were anxious to ensure sufficient supplies of beer for the return journey since it was wrongly believed at the time that drinking beer on a sea voyage provided protection against scurvy. The Pilgrims, like the colonists in Virginia, had to resort to water. "It is thought that there can be no better water in the world, yet dare I not prefer it before good beer, as some have done," a colonist named William Wood observed, "but any man will choose it before bad beer." When a third English colony was established, in Massachusetts, the settlers made sure they brought plenty of beer. In 1628 the ship *Arbella*, which carried the leader of the Puritan colonists, John Winthrop, had among its provisions "42 Tonnes of Beere," or about ten thousand gallons.

Owing to the harsh climate, European cereal crops, which could be used to make beer, were very difficult to cultivate. Rather than rely on imported beer from England, the settlers tried to make their own from corn, spruce tips, twigs, maple sap, pumpkins, and apple parings. A contemporary song is testimony to the resourcefulness of these brewers: "Oh we can make liquor to sweeten our lips, Of pumpkins, of parsnips, of walnut-tree chips." Nor was wine making an

option, as it was for the Spanish and Portuguese colonists farther south. The colonists tried to introduce European vines, but their efforts failed due to the climate, disease, and, since they were from northern Europe, lack of wine-making experience. They tried to make wine from local grapes instead, but the result was revolting. Eventually, the Virginia colonists decided to concentrate on the commercial cultivation of tobacco, and to import malted barley (from which to make beer) from Europe, along with wine and brandy.

Everything changed in the second half of the seventeenth century, however, when rum became available. It was far cheaper than brandy, since it was made from leftover molasses rather than expensive wine, and did not have to be shipped across the Atlantic. As well as being cheaper, rum was stronger too. Rum quickly established itself as the North American colonists' favorite drink. It alleviated hardship, provided a liquid form of central heating in the harsh winters, and conveniently reduced the colonists' dependence on imports from Europe. Rum was generally drunk neat by the poor, and by the better off in the form of punch—a mixture of spirits, sugar, water, lemon juice, and spices served in an elaborately decorated bowl. (This drink, like the cruder naval drink of grog, was a forerunner of the modern cocktail.)

The colonists consumed rum when drawing up a contract, selling a farm, signing a deed, buying goods, or settling a suit. One custom decreed that anyone who backed out of a contract before signing it had to provide half a barrel of beer, or a gallon of rum, in compensation. Not everyone welcomed the appearance of this cheap, powerful new drink, however. "It is an unhappy thing that in later years a Kind of Drink called Rum has been common among us," lamented the Boston minister Increase Mather in 1686. "They that are poor, and wicked too, can for a penny or two-pence make themselves drunk."

From the late seventeenth century, rum formed the basis of a thriving industry, as New England merchants—primarily in Salem, Newport, Medford, and Boston—began to import raw molasses rather than rum and do the distilling themselves. The resulting rum was not thought to be as good as West Indies rum, but it was even cheaper, which was what mattered to most drinkers. Rum became the most profitable manufactured item produced in New England. In the words of one contemporary observer: "The quantity of spirits which they distil in Boston from the molasses they import is as surprising as the cheapness at which they sell it, which is under two shillings a gallon; but they are more famous for the quantity and cheapness than for the excellency of their rum." Rum became so

cheap that in some cases a day's wages could get a laborer drunk for a week.

From Rum to Revolution

In addition to selling rum for local consumption, the New England distillers found a ready market among slave traders, for whom rum had become the preferred form of alcoholic currency with which to purchase slaves on Africa's west coast. Distillers in Newport even made an extra strong rum specifically for use as a slave currency. Since it packed more alcohol into a given volume, it provided a more concentrated form of wealth. The thriving trade in rum did not sit well with the planters on the British sugar islands or their backers in London, however, for the New England distillers were importing their molasses from the French sugar islands. Since France had banned the manufacture of rum in its colonies in order to protect its domestic brandy industry, French sugar producers were happy to sell their molasses to New England distillers at a low price. At the same time, British sugar producers happened to be losing out to the French in the European sugar market. The New England distillers' use of French molasses added insult to injury. The British producers called for government intervention, and in 1733 a new law, known as the Molasses Act, was passed in London.

The act levied a prohibitive duty of sixpence per gallon on molasses imported into the North American colonies from foreign (in other words, French) colonies or plantations. The idea was to encourage the New England distillers to buy molasses from the British sugar islands, since their exports were not subject to the duty. But the British islands did not produce anywhere near enough molasses to supply the New England rum industry; and the distillers, in any case, regarded the French molasses as superior. If it had been strictly enforced, the act would have forced the distillers both to cut production and to raise their prices, and would have brought a sudden end to New England's prosperity by removing the mainstay of its economy, since rum then accounted for 80 percent of exports. It would also have deprived the North American colonists of their favorite drink; by this time, rum was being consumed at a rate of nearly four American gallons per year for every man, woman, and child in the colonies.

So the distillers ignored the law almost completely, smuggling in molasses from the French islands, and when necessary bribing the officials who were supposed to collect the duty, though most turned a blind eye. Customs officers were appointed in England, and most of them stayed there, drawing their salaries and

paying someone else to carry out their duties overseas. Accordingly, these junior functionaries had more sympathy for their fellow colonists than for their masters in London. Within a few years of the law's passage, the vast majority of rum produced—over five-sixths, according to some estimates—was still being made from smuggled molasses. At the same time, the number of distilleries making rum in Boston grew from eight in 1738 to sixty-three in 1750. Rum continued to flow, maintaining its position in all aspects of colonial life. It played an important role in election campaigns: When George Washington ran for election to Virginia's local assembly, the House of Burgesses, in 1758, his campaign team handed out twenty-eight gallons of rum, fifty gallons of rum punch, thirty-four of wine, forty-six of beer, and two of cider—in a county with only 391 voters.

Although the Molasses Act was not enforced, it was resented. Passing the law was a colossal blunder on the part of the British government. By making smuggling socially acceptable, it undermined respect for British law in general and set a vital precedent: Henceforth, the colonists felt entitled to defy other laws that imposed seemingly unreasonable duties on items shipped to and from the colonies. As a result, the widespread defiance of the Molasses Act was an early step along the road to American independence.

A subsequent step occurred with the passage of the Sugar Act in 1764, at the end of the French and Indian War, during which British troops and American colonists fought together to defeat the French. (This conflict was the American component of a broader war between France and Britain, fought in Europe, North America, and India, that was arguably the first true world war.) Victory ensured British dominance of the North American continent but left Britain with an enormous public debt. Reasoning that the war had been fought largely for the benefit of the colonists in America, the British government concluded that they should help to foot the bill. Furthermore, many of the colonists had continued to trade with the enemy, France, during the war. So the government decided to strengthen and enforce the Molasses Act. The sixpence-per-gallon duty on molasses was halved, but the government took steps to ensure that it would now be collected in full. Customs officers were no longer allowed to remain in Britain while others collected duties on their behalf. Colonial governors were required to enforce the laws strictly and arrest smugglers, and the Royal Navy was given the power to collect duties in American waters.

The new act, with its explicit goal of raising revenues, rather than merely regulating trade, was deeply unpopular in America. New England's rum distillers

led the opposition to the new rules by helping to organize a boycott of imports from Britain. Many Americans, not just those whose livelihoods were affected by the act, regarded it as unfair that they should have to pay taxes to a distant parliament where they had no representation. The cry of "no taxation without representation" became a popular slogan. Advocates of independence, known as the "Sons of Liberty," began to mobilize public opinion in favor of a break with Britain. These campaigners often met in distilleries and taverns. One revolutionary leader, John Adams, noted in his diary that he attended a meeting of the Sons of Liberty in 1766 in "a counting-room in Chase and Speakman's distillery," where the participants drank rum punch, smoked pipes, and ate cheese and biscuits.

The Sugar Act was followed by a series of other unpopular laws, including the Stamp Act of 1765, the Townshend Acts of 1767, and the Tea Act of 1773. The result was the Boston Tea Party of 1773, in which three shiploads of tea were dumped into Boston harbor in protest at new tax rules. But although tea is the drink associated with the start of the revolution, rum played just as important a role in the decades leading up to the eventual outbreak of the Revolutionary War in 1775. Fittingly, on the eve of the outbreak of hostilities, when Paul Revere made his famous ride from Boston to Lexington to warn John Hancock and Samuel Adams of the approach of British troops, he stopped off for a rum toddy (rum, sugar, and water, heated by plunging a red-hot poker into the mixture) at a tavern in Medford belonging to Isaac Hall, the captain of the local militia.

Once the fighting started, rum was the preferred drink of American soldiers during the six years of hostilities. General Henry Knox, writing to George Washington in 1780 about the procurement of supplies from the northern states, emphasized the particular importance of rum. "Besides beef and Pork, bread & C flour, Rum is too material an article, to be omitted," he wrote. "No exertions ought to be spar'd to provide ample quantities of it." The taxation of rum and molasses, which began the estrangement of Britain from its American colonies, had given rum a distinctly revolutionary flavor. Many years after the British surrender in 1781 and the establishment of the United States of America, John Adams, by then one of the country's founding fathers, wrote to a friend: "I know not why we should blush to confess that molasses was an essential ingredient in American independence. Many great events have proceeded from much smaller causes."

Pioneer Spirit

Rum was the drink of the colonial period and the American Revolution, but many of the citizens of the young nation soon turned their backs on it in favor of another distilled drink. As settlers moved westward, away from the eastern seaboard, they switched to drinking whiskey, distilled from fermented cereal grains. One reason was that many of the settlers were of Scotch-Irish origin and had experience of grain distilling. The supply of molasses, from which rum was made, had also been disrupted during the war. And while grains such as barley, wheat, rye, and corn were difficult to grow near the coast—hence the early colonists' initial difficulties with making beer—they could be cultivated more easily inland. Rum, in contrast, was a maritime product, made in coastal towns from molasses imported by sea. Moving it inland was expensive. Whiskey could be made almost anywhere and did not depend on imported ingredients that could be taxed or blockaded.

By 1791 there were over five thousand pot stills in western Pennsylvania alone, one for every six people. Whiskey took on the duties that had previously been fulfilled by rum. It was a compact form of wealth: A packhorse could carry four bushels of grain but could carry twenty-four bushels once they had been distilled into whiskey. Whiskey was used as a rural currency, traded for other essentials such as salt, sugar, iron, powder, and shot. It was given to farmworkers, used in birth and death rituals, consumed whenever legal documents were signed, given to jurors in courthouses and to voters by campaigning politicians. Even clergymen were paid in whiskey.

So when the secretary of the U.S. Treasury, Alexander Hamilton, began to look for a way to raise money to pay off the vast national debt incurred during the Revolutionary War, imposing a federal excise duty on the production of distilled drinks seemed an obvious choice. The excise would raise money and might discourage people from drinking too much. Hamilton believed that such an excise would be "favourable to the agriculture, to the economy, to the morals, and to the health of the society." In March 1791 a law was passed: From July 1, distillers could pay either an annual levy or an excise duty of at least seven cents on each gallon of liquor produced, depending on its strength. An immediate outcry arose, particularly along the western frontier. The excise seemed particularly unfair to the inland settlers because it applied to liquor as it left the

still, not at the point of sale. This meant that whiskey produced for private consumption or barter was still subject to excise. Furthermore, many of the settlers had come to America to get away from revenue collectors and government interference. They complained that the new federal government was no better than the British government, whose rule America had just shaken off.



The Whiskey Rebellion of 1794 (*The Capture of the Whiskey Tax Collectors*)

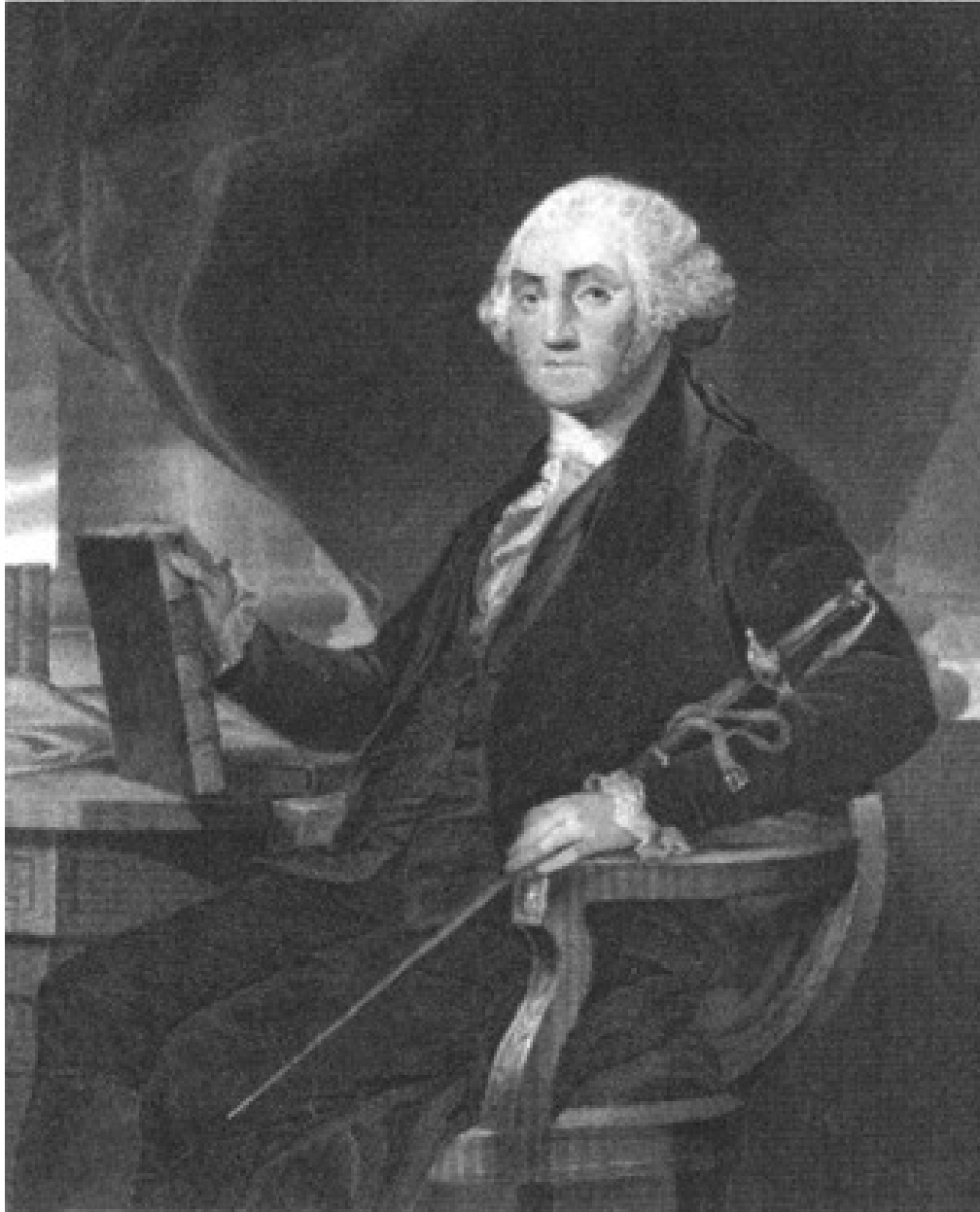
The disagreement over the whiskey excise also reflected a deeper divide over the balance of power between the states and the federal government. By and large, the inhabitants of the eastern territories were happier than those of the southern and western ones with the idea that federal law should take precedence over state law. The new law—which specified, among other things, that offenders would be tried in federal court in Philadelphia, rather than in local courts—seemed to favor eastern, federalist interests. James Jackson of Georgia declared in the House of Representatives that the excise would "deprive the mass of the people of almost the only luxury they enjoy, that of distilled spirits." If it was not opposed, he asked, what might come next? "The time will come," Jackson warned, "when a shirt shall not be washed without an excise."

Once the new law came into force, many farmers refused to pay up. Revenue collectors were attacked, their documents stolen and destroyed, and the saddles

taken from their horses and cut into pieces. The opposition was strongest in the fiercely separatist western Pennsylvania "Vontier counties of Fayette, Allegheny, Westmoreland, and Washington. Groups of farmers opposed to the excise began to coordinate organized resistance. Distillers who paid the excise had holes shot in their stills. Notices advocating disobedience appeared on trees. Congress amended the law in 1792 and 1794 to reduce the tax on rural distillers, and gave the state courts jurisdiction to try offenders. But this failed to quell the opposition. Hamilton, who realized that the authority of the federal government was now at stake, sent federal marshals to western Pennsylvania to serve writs on several farmers who had refused to pay.

Violence flared after one such farmer, William Miller, was served with a writ in July 1794. A shot was fired at the marshal's party by one of Miller's associates, though no one was hurt. Over the next two days the two groups skirmished, the mob of armed "whiskey boys" opposed to the excise swelled to five hundred, and there were deaths on both sides. David Bradford, an ambitious attorney, assumed leadership of the whiskey boys and called on the local people for support. Around six thousand men gathered at Braddock's Field, near Pittsburgh. Bradford was elected major general of this impromptu army. Amid high spirits, military exercises, and target practice, the rebels passed resolutions advocating secession from the United States and the establishment of a new independent state.

Convinced by Hamilton that decisive action was necessary, President George Washington requisitioned thirteen thousand militiamen from eastern Pennsylvania, New Jersey, Virginia, and Maryland. These troops, along with artillery pieces, baggage, and supplies of tax-paid whiskey, were sent over the mountains to Pittsburgh to demonstrate the preeminence of the federal government to the secessionists. The nascent rebellion was, however, already crumbling. As the army approached, Bradford fled and his supporters melted away. Ironically, the arrival of the militia to take on the whiskey boys did much to resolve the problem: At the end of their march, the federal soldiers wanted more whiskey, which they paid for in hard cash. This provided the distillers of western Pennsylvania the funds with which to pay the excise.



George Washington

A token group of twenty rebels was taken back to Philadelphia and paraded through the streets. But other than being held in jail for a few months, they escaped punishment. Two of their number were sentenced to death but were pardoned by the president. Ultimately, the liquor excise failed and was repealed a few years later. Paying the federal militia to suppress the rebellion cost \$1.5 million, nearly one-third of the entire excise duties collected during the ten years the excise law was in force. But while both the rebellion and the excise failed, the suppression of the Whiskey Rebellion, the first tax protest to take place since independence, forcefully illustrated that federal law could not be ignored, and was a defining moment in the early history of the United States.

The failure of the rebellion also led to the development of another drink, as

Scotch-Irish rebels moved farther west into the new state of Kentucky. There they began to make whiskey from corn as well as rye. The production of this new kind of whiskey was pioneered in Bourbon County, so that the drink became known as bourbon. The use of corn, an indigenous crop, gave it a unique flavor.

In the last years of his life, George Washington himself established a whiskey distillery. The idea came from his farm manager, a Scot who suggested that the grains produced at Washington's estate, Mount Vernon, could be profitably made into whiskey. Two stills began operating in 1797, and at the peak of production, shortly before Washington's death in December 1799, there were five stills. That year he produced eleven thousand gallons of rye, which he sold locally, making a profit of \$7,500. He also gave barrels of it to family and friends. "Two hundred gallons of Whiskey will be ready this day for your call," Washington wrote to his nephew on October 29, 1799, "and the sooner it is taken the better, as the demand (in these parts) is brisk."

Washington's activities as a whiskey maker presented a stark contrast with the attitudes of another of America's founding fathers, Thomas Jefferson. He denounced "the poison of whiskey" and famously remarked that "no nation is drunken where wine is cheap, and none sober where the dearness of wine substitutes ardent spirits as the common beverage." Jefferson did his best to cultivate vines in America and advocated a reduction in the excise duty charged on imported wine as "the only antidote to the bane of whiskey." But his cause was hopeless. Wine was far more expensive, contained less alcohol, and lacked the American connotations of whiskey, an unpretentious drink associated with independence and self-sufficiency.

Colonialism by the Bottle

Throughout the colonial period, spirits provided an escape from hardship—both the self-imposed kind experienced by the European colonists and the far greater hardships they imposed on African slaves and indigenous peoples. For as well as using spirits to purchase, subdue, and control slaves, European colonists in the Americas deliberately exploited the local Indians' enthusiasm for distilled drinks as a means of subjugation.

The origin of this enthusiasm is the subject of much debate, but it seems to have arisen from the Indian assumption that spirits, like indigenous hallucinogenic

plants, had supernatural powers that the drinker could only access by allowing himself to become completely intoxicated. A late-seventeenth-century observer in New York remarked that the Indian tribesmen were "great lovers of strong drink, yet they do not care for drinking unless they have enough to make themselves drunk." If there was not enough for everyone in a group to get drunk, the alcohol would be shared among a smaller number, while the others became spectators. The insistence on complete intoxication also explains why some Indians found it puzzling that Europeans sometimes preferred wine over rum. "They wonder much of the English for purchasing wine at so dear a rate when Rum is much cheaper &c will make them sooner drunk," noted one colonist in 1697.

Whatever its origins, this custom was widely exploited by Europeans, who took care to supply large quantities of alcohol when trading with Indians for goods or land. In practice, this meant rum in British-controlled areas and brandy in French areas. The use of brandy by French fur traders in Canada was criticized by a French missionary, who denounced "the infinity of disorder, brutality, violence . . . and insult, which the deplorable and infamous traffic in brandy has spread universally among the Indians of these parts. . . . In the despair in which we are plunged, nothing remains for us but to abandon them to the brandy sellers as a domain of drunkenness and debauchery." Rather than suppressing the brandy trade, local French troops regarded the maintenance of supply, both for themselves and for sale to the Indians, as their main duty.

In Mexico, the introduction of distillation by the Spanish led to the development of mescal, a distilled version of pulque, the mildly alcoholic indigenous drink made by the Aztecs from the fermented juice of the agave plant. (Pulque was the everyday, staple drink; Aztec warriors, priests, and nobles drank chocolate, the drink of the elite.) The Aztecs and other local Indians were then encouraged to drink mescal rather than pulque, and indeed to overindulge in this far stronger drink. In 1786 the viceroy of Mexico suggested that the Indian fondness for drink and its effectiveness in fostering dependency on the colonial power meant that the same approach should perhaps be tried with the Apaches to the north. This would, he suggested, create "a new need which forces them to recognize very clearly their obligatory dependence with regard to ourselves."

Distilled drinks, alongside firearms and infectious diseases, helped to shape the modern world by helping the inhabitants of the Old World to establish themselves as rulers of the New World. Spirits played a role in the enslavement

and displacement of millions of people, the establishment of new nations, and the subjugation of indigenous cultures. Today, spirits are no longer associated with slavery and exploitation. But other echoes of their uses in colonial times persist. Air passengers who throw a bottle of duty-free spirits into their hand luggage do so because it is a compact form of alcohol that is hardy enough to survive a long journey unspoiled. And in their desire to avoid excise duties, purchasers of duty-free spirits are maintaining the antiestablishment tradition of rum runners and whiskey boys.