

# A Selected Social History of the Stepping-Stone Drugs and Opiates



Thomas P. Gullotta

In the mid-1970s, Denise Kandel and her colleagues (Kandel, 1981; Kandel & Faust, 1975; Kandel, Kessler, & Margulies, 1978; Kandel, Yamaguchi, & Chen, 1992) published a series of papers establishing a sequence in the pattern of use of substances by adolescents and debunking the prevalent belief that marijuana was the stepping-stone drug to heroin use. More recently, scientists examining the effects of alcohol on the brain have offered partial evidence in confirmation of Kandel's original thesis (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2008). Regrettably, this information has been ignored by generations of policymakers and their appointees to federal and state departments responsible for the prevention of substance abuse. In a volume dedicated to examining evidence-based approaches to the prevention and treatment of adolescent substance misuse, it is useful to trip down memory lane and revisit Kandel and her associates' findings and further to place three of these stepping-stone drugs into a broader social historical perspective. By so doing the reader of this volume hopefully will appreciate the challenges that confront society as it attempts to reduce the misuse of substances by its youth. Lastly, we examine heroin, the drug at the end of drug abusers journey and those man-made concocted opiates that rival heroin in their destructive abilities.

## The Sequence of Adolescent Drug Use

American colonists whether English or Dutch loved their drink, preferably intoxicating. Struyvesant reported that "Almost one full fourth of the town of New Amsterdam [New York]" was occupied by "houses for the sale of brandy, tobacco,

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T. P. Gullotta (✉)

Child and Family Agency of Southeastern Connecticut, New London, CT, USA

e-mail: [tpgullotta@aol.com](mailto:tpgullotta@aol.com)

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and beer” (Struyvesant cited in Child, 1896, p. 17). Whether smoking a pipe and downing a pint in a tavern to the stories of headless horsemen or attending the ordination of the new minister in a New England village, alcohol quenched the thirst of those in attendance. Consider this invoice for the community gathering accompanying an ordination in 1785:

Thirty bowls of punch before the people went to meeting.

Ten bottles of wine before they went to meeting.

Forty-four bowls of punch while at dinner.

Eighteen bottles of wine.

Eight bowls of brandy.

Cherry rum and cider [quantity not mentioned] (Child, 1896 pp. 55–56).

Given this long infatuation with intoxicating beverages, it is not surprising that Americans in their condemnation of drug abuse overlook the connection between those substances and alcohol.

The work of Denise Kandel and her associates (e.g., Kandel & Faust, 1975) was the first to establish a well-defined pathway to illicit drug use. Using representative samples of New York State high school students, these researchers established that the overwhelming majority of youth who used marijuana (98%) began with beer and wine. “Drug use begins specifically with beer and wine ... These are the ‘entry drugs’ into the continuum of drug use” (Kandel & Faust, 1975, p. 931).

The second step toward illicit drugs in their model was either the use of stronger alcoholic beverages followed by cigarette smoking or cigarette smoking followed by stronger alcoholic beverages. In either instance this could then lead to the third stage of marijuana use and then to the fourth stage of other illicit drug use.

The authors caution, “while the data show a very clear-cut sequence in the use of various drugs, they do not prove that the use of a particular drug infallibly leads to the use of other drugs higher up in the sequence” (Kandel & Faust, 1975, p. 931). At each stage individuals choose to stop and not use the next drug in the sequence.

While this last observation remains true, advances in neuroscience point to the heightened risk individuals experience along this pathway. Combine this increased biological risk with life events whether of a medical, social, or personal nature and the risk of addiction rises. Having identified the stepping-stones into illicit drug misuse as beer and wine, tobacco, and marijuana, what we know about these substances from a social historical context is discussed next.

### *Beer: The Staff of Life*

Lager Beer: A friendly drink,

A healthy drink, A family drink, A national drink. (Late nineteenth-century poster, in Burnham, 1993)

At an eatery that brewed its own beers I sampled bread made from the grain left over from the beer-making process. That act of consumption completed a circle

albeit in reverse that has gone on for thousands of years. Beer or “liquid bread” was likely discovered as the by-product of bread making by our ancient Neolithic ancestors (Tannahill, 1973 p. 63). Through a process of trial and error our distant relatives found that raw grain was made digestible by allowing it to sprout in water, then dried and ground into meal. Incidentally, this wet mixture was porridge. Left in an old earthen vessel filled with nooks and crannies harboring bacteria, this porridge would start to ferment after several days as the bacteria (yeast) consumed the sugars released by crushing the grain. The by-products released by the bacteria happened to be CO and alcohol, producing a porridge that was both filling and mildly intoxicating.

Draw off the liquid from this mixture and the resulting product is nutritious beer. Tannahill (1973) informs us that the ancient Sumerians allotted 40 oz. of this brew to a worker daily. That is a tad more than a half-gallon a day. Beer mattered as much for the Egyptians whose Goddess Hathor was the deity responsible for its presence on earth. Not only was it a food and a beverage, but it was also a medicine appearing as an ingredient in 118 of the 600 prescriptions found in the ancient Egyptian medical text, Papyrus Ebers (Brown, 2003).

Beer as nourishment continued to recent times. For example, before pasteurizing milk became popular its consumption by children and others could be deadly. This was especially true of the milk provided to large cities like New York and Chicago where the cows that provided milk to these cities were often confined in unsanitary disease-ridden warehouses where tubercular animals quickly spread the infection to all. Thus, statements like, “You can depend on the beer, but you can’t tell about the milk you get down here,” speak to reasons why parents gave beer to their children to drink (Burnham, 1993, p. 60).

Despite America’s propensity for alcoholic beverages and the growth in popularity of beer with the influx of immigrant groups like the Germans who brought their taste for it from the Old World to the New, concern for its harm to individuals and families grew. This minority of voices gathered strength as Saloons multiplied and more potent distilled alcoholic beverages appeared. One need only compare Hogarth’s etching of a society consuming beer with the plate of that same society downing gin to understand the growing worry.<sup>1</sup>

In the USA, this concern reached a crescendo in 1916 with enough antidrinking candidates elected to Congress to pass a national prohibition amendment. By 1919, the necessary majority of states had ratified the 18th amendment that it became law. Interestingly, Burnham (1993) contends that due to wartime restrictions in 1916 on grain for food rather than alcohol, prohibition was essentially in place by 1918. The notorious Saloons in which most drinking occurred had virtually disappeared and the country appeared ready to accept prohibition.

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<sup>1</sup> During the thirteenth century, the process of distillation became known in Europe. Distilled beverages were treated as medicines called aqua vitae (water of life). By the 1500s, aqua vitae was associated with criminal activity in England. In the mid 1600s, gin was developed in Holland by distilling grain with juniper berries.

More interesting still is that prohibition did not totally prohibit alcohol consumption! The Volstead Act that defined the 18th amendment “explicitly permitted religious groups to use wine, physicians to prescribe alcohol, and private citizens to own and drink it even to make small quantities of wine and beer for home use” (Burnham, 1993, p. 27). Thus, those with wealth stocked their cellars with distilled spirits. The immigrants brewed their own beer or as my Italian grandmother did crushed her own grapes in a wine press I still own, deposited the sweet liquid into oak barrels for bacteria to feed upon and transform into wine. The losers in this were the cash-rich distillers and the poor who had frequented the now closed Saloons. As we know, this experiment was not to last long. Change occurred and prohibition was repealed not because of the rise in the criminal element and the “Speak Easy” but because of the loss of tax revenue and the effective lobbying of cash-rich disgruntled distillers (Burnham, 1993).

Sobered by their recent experience, the distillers and their distributors launched a media campaign to redefine the role of beer and other alcoholic beverages in American life. Using magazines, sporting events, and even toys, beer was taken out of the Saloon and the back room where men were grudgingly permitted to retire after supper for a smoke and a drink to the dining room table where it was consumed in front of the family. In time, mom was seen toasting her smiling husband with a foaming glass herself. Billboards spoke to the allegiance of a beer to a ball team, and I was known to stuff the ballot box in favor of my favorite Reingold Beer Beauty as a child of 9 as I played with my toy Budweiser Wagon piled high with kegs pulled by several handsome plastic white horses. The keg temporarily disappeared to be replaced by bottles and cans in a six-pack that has been replaced over time by the 12-, 18-, and now 24-can case.

With the end of prohibition, consumption of beer and other alcoholic beverages gradually grew and with it returned the problem of men, women, and, shortly, youth unable to manage their drinking. Prior to prohibition, this problem was identified with the substance and its dispensing location—the Saloon. The distillers and their distributors were not to make this same mistake again. Home, the family picnic, and other G-rated celebrations would be the venues for consumption. Alcoholism was gradually redefined not as a societal issue but as an individual problem. Rather than consider distribution of consumption approaches that would limit the availability of alcohol, the focus was now on genes and the psychological fallings of that man, woman, or youth (Burnham, 1993).

In place of setting a limit on the alcoholic beverages to be consumed, the public was told to designate a driver. Appealing to individual responsibility that rings so true in a society that worships rugged individualism shifted responsibility from the makers of conveniently packaged cases with carrying handles containing cans or bottles with pop top or twist off caps and newly formulated “fortified” alcoholic beverages to the flawed soul unable to exercise control over the command to “Pick a pair of six packs—Buy Bud.” Any attempt to refocus the discussion toward limiting alcohol consumption was dealt with harshly by this cash-rich powerful beer and alcohol lobby. For example, in 1995, the long brewing resentment of the beer industry against the Center for Substance Abuse Prevention found expression in its suc-

cessful efforts to significantly reduce the agency's drug prevention effort in a newly elected Republican Congress. As Kuntz (1995, p. A12) reported in the *Wall Street Journal*, "Soon after the House passed its last major spending bill this month, Coors Brewing Co. sent two cases of beer to the office of the subcommittee that wrote the measure. The alcohol beverage industry has good reason to be grateful. The bill would gut the Center for Substance Abuse Prevention, an agency the industry says promotes an antidrinking message threatening to its bottom line."

Presently, the message to the public is to drink in moderation but to purchase in bulk. The effects of this mixed message on youthful drinkers can be measured in one sense by data that indicate 23.1% of 8th graders, 42.2% of 10th graders, and 61.5% of 12th graders reported trying alcohol in 2017 (Johnston, O'Malley, Miech, Bachman, & Schulenberg, 2017, Table 1, Trends in Lifetime Prevalence). The source of this information is the *Monitoring the Future* survey that has been undertaken with graduating seniors since 1975 and extended to other students in the 1990s. Now, 61.5% of 12th graders tasting alcohol is nothing to be particularly proud of considering that the drinking age is 21 except that the grandparents of those youths who graduated in the class of 1979 reported that 93% of them had tried alcohol. Of course, those grandparents will likely fondly recall that the legal drinking age was 18 in most states in 1979. Thus, compared to their grandparents the graduating student in 2017 is less likely to have ever tried alcohol, but as the child who drank beer in place of milk would be quick to share—circumstances color the picture significantly.

## ***Tobacco***

"The most sovereign and precious weed that ever the earth tendered to the use of man" (Ben Johnson, 1598, cited in Shoemaker, 1898, p. xi).

While the Old World introduced small pox to the New World, "Montazuma's revenge" might better be considered syphilis and tobacco to the Europeans. The first is believed to have been returned to Europe by a less than virtuous Columbus and his crew, and the second is briefly mentioned in his log as "a few dried leaves which must be something of importance to these people" (Burns, 2006, p. 16). While syphilis spread quickly across Europe and reached epidemic proportions within a few years of its arrival, the use of those "few dried leaves" was considerably slower. Its introduction to England is credited to Sir John Hawkins, English sea captain and slave trader, who is said to have seized the crop in a raid along the Florida coast noting that:

The Floridians when they travel have a kind of herb dried, who with a cane and an earthen cap in the end, with fire, and the dried herb put together, do suck through the cane the smoke thereof, which smoke satisfieth their hunger, and therewith they live four or five days without meat or drink. (Burns, 2006, p. 22).

It was not Hawkins, however, but Sir Walter Raleigh whose friendship with Queen Elizabeth I popularized the use of tobacco in England and earned him the distinction of a brand of cigarettes to be named after him centuries later.

Like nearly every newly discovered New World plant, tobacco was touted for its medicinal qualities. In the Old World, tobacco smoke, paste, or parts of the plant would be applied to every imaginable orifice or laid on to relieve pain, cure emotional distress, or treat sickness. Similarly, in England from 1573 to 1625 it was believed to be a helpful treatment for heart pains, snake bites, fever, exhaustion, and the Black Plague. None other than the great diarist Samuel Pepy recorded:

This day ... I see in Drury Lane houses marked with a red cross [denoting the presence of the Plague]...which was a sad sight to me ... It put me into an ill conception of myself and of my smell, so I was forced to buy some roll tobacco to smell an chaw, which took away the apprehension. (Burns, 2006, p. 27)

As with every great discovery, it would not be the medicinal benefits (sic) but the entertainment aspects of tobacco that would endear this plant to society. In taverns and coffee houses across Old and New Worlds the active ingredient in tobacco would work its magic of calming its consumer and subduing his hunger.

That ingredient, nicotine or more properly nicotiana, was named after the Frenchman Jean Nicot who first described the medicinal properties of the substance in 1559 (Austin, 1979). The addictive characteristics of nicotine, being as it is commonly inhaled into the lungs thus enabling its rapid passage to the brain, led the then Surgeon General C. Everett Koop in 1988 to caution that “the pharmacologic and behavioral processes that determine tobacco addiction are similar to those that determine addiction to drugs such as heroin and cocaine” (Byrne, 1988, p. 1143).

But concern about this noxious weed was evident centuries earlier. It was prohibited in the Massachusetts Bay Colony in 1632 and several years later in Connecticut. In the mid 1600s, The Roman Catholic Church concerned with the growing use of tobacco by its clergy and parishioners and the calming effects resultant from its use sought to refocus its following on more salient issues like death, damnation, and the like. Thus, papal bills prohibiting the use of tobacco under penalty of expulsion from the church were enacted. This ban remained in effect for roughly 100 years (Goodman, 1994).

In Russia, tobacco was called “the devil’s plant” in the 1600s. The Russian Czar, no slouch at having his word taken seriously, saw thousands put to death who ignored his decree prohibiting its use (Goodman, 1994).

Even the English monarch James I who followed Queen Elizabeth I to the throne saw no good in this plant and tried by means of taxation to eliminate its presence on English soil. In 1604, the year after his coronation, he had published anonymously *A Counter-Blaste to Tobacco*. In it, he concluded that tobacco was:

a custom loathsome to the eye, hateful to the nose, harmful to the brain, dangerous to the lungs, and in the black stinking fume thereof, nearest resembling the horrible Stygian smoke of the pit that is bottomless. (James, 1604/1932, pp. 34–35)

Actually, what may have been driving James I mad was the reality that the tobacco England was consuming was coming from the Spanish settlements of the

New World. In the sense of balance of trade payments, tobacco was costing the England what imports from China is costing the USA today.

Enter into this scenario the American Colonies and, in particular, Virginia. In the 1500s, the Virginia colony was a small destitute community with a history of repeated financial failure behind it. There is evidence that James I was growing tired of the financial drain Virginia was having upon the Mother Country, but this disappointment and simultaneous concern over tobacco's noxious harm vanished with the development in Virginia of a tobacco similar in quality to that being imported from Spain. Soon the revenues from the sale of Virginia tobacco erased any concern of either quelling tobacco's use or possibly disposing of this previously nonproducing asset (Virginia).

Tobacco was consumed in the colonies and in the early years of the republic by crushing the dried leaves and igniting them in a pipe, rolling the leaves and igniting them (a cigar), compacting the leaves into a tight mass and biting off a small portion which was then chewed (a chew or chew), or, as was popular in Europe, pulverizing the leaf into a very fine powder and inhaling it through the nostrils (snuff).

The development of the cigarette must be credited to Spain. The story of its invention was that discarded cigars were gathered by the poor and the waste tobacco deposited onto paper which was then rolled, crimped, and smoked. The advantage of the cigarette over the cigar or pipe was time. A good pipe or cigar was a leisurely affair spent in contemplation of writing the next verse, savoring the aroma of a fine brandy, or attending to the learned argument of a fellow coffee house philosopher. The popularity of the cigarette was made on the battlefield. First, in the ill-fated British experience in the Crimean War and later by its export from England to the USA in the Civil War (Goodman, 1994; Wagner, 1971).

Recall that the active ingredient in tobacco is nicotine, a substance which when inhaled into the lungs travels quickly to the brain and produces a sense of calm and relaxation by interacting with brain neurotransmitters like serotonin and dopamine. Imagine being Steven Crane's (1895/2001) young protagonist, Henry Fleming, in the *Red Badge of Courage* marching forward with friends and neighbors as the unit's leader rushes before them waving his sword above his head attracting to his motions soft masses of lead-like yellow jackets to a fall picnic. These stinging insects of death flatten on contact tearing into a face or punching a hole into flesh that cries out as it writhes on the dampened crimson ground. Still, the line of which you are a part advances slowly worming its way across the battlefield turned cemetery. The cigarette was the perfect fortifier for such a suicidal venture. Alcohol would impair motor control, cloud vision, and numb rather than stir the body to action. Better the quickly consumed cigarette to impart just enough calm before the butchery. With the close of conflict between the states, the cigarette found a home off the battlefield and in the rapidly industrializing USA. In a world where time is money, its advantages of quickly induced calm and quenched hunger favored its use over the pipe or cigar and it was cleaner than the chew whose residue could be found nearly everywhere as this visiting Englishman observed:

We discussed these important questions until my companions paired themselves off into their respective beds. I selected the cleanest corner of that had been least spat upon—and lay down on the floor with my carpet-bag for a pillow. (Anonymus, 1863, p. 499)

Indeed, the novelist Charles Dickens (Burns, 2006) could not help but record on his first visit to the USA that on one occasion a guest chewing tobacco in his hotel room and not seeing a spittoon let loose with well-directed copious stream of juice out the window. Problem was the window was closed. There trickling down the window pane, Dickens observed, the spittle resided without its depositor taking further notice.

Like its fraternal twin—alcohol, the years after 1865 saw a rise in activity to curb the spreading use of tobacco, particularly cigarettes whose popularity had grown such that by 1885 one billion were being manufactured yearly. Indeed, a total of 14 states early in the twentieth century had passed such laws but these efforts were to disappear with the advent of World War I.

The slaughter of human life had changed little since the Civil War. Frontal assaults continued to be a popular military strategy but the machine gun replaced the cannon's grape shot as the weapon of preference that segmented the line of troops worming across the open pockmarked fields of France. Between these doomed excursions, troops burrowed into the ground to hide from the death above. Again, alcohol that could numb the soldier from the death encircling him was rejected in favor of the cigarette with none other than General Black Jack Pershing (Burns, 2006, p. 158) stating, "You ask me what we need to win this war? I answer tobacco as much as bullets." Indeed, he was to back these words with a demand for "tens of thousands of tons of cigarettes" from the home front which was complied with (Burns, 2006, p. 158). His endorsement of the cigarette was echoed by others on his staff, "a cigarette may make the difference between a hero and a shrinker;" and even President Woodrow Wilson (a smoker himself) got into the act by endorsing the New York Sun's "Smokes for Soldier's Fund" (Burns, 2006, p. 158).

The result of these demands was the demise of antismoking measures in the USA. Well-meaning groups like the YMCA, the Salvation Army, and the Red Cross responded to these requests to support the troops overseas. With the conclusion of the war to end all wars, tobacco and the cigarette especially were an inexorable part of the American landscape. For the next 40 years, a movie could not be watched without the haze of tobacco smoke on the screen; magazine and newspapers ads touted the flavor, taste, or masculinity of tobacco products; and the new medium of radio and later television brought entertainment compliments of the tobacco companies. This advertising effort was successful with yearly production of cigarettes exceeding 80 billion in the 1920s to hundreds of billions by the 1960s.

With the return of world hostilities in 1941, it was not surprising that tobacco's importance as a necessary war item was again embraced. Replacing General Black Jack Pershing was General Douglas MacArthur (corn cob pipe smoker) who encouraged one group to use the funds it had raised to spend, "the entire amount . . . to buy American cigarettes," for the troops (Burns, 2006, p. 198). Franklin Roosevelt (a cigarette smoker) saw the importance of tobacco to the war effort to the extent that



he instructed draft boards to provide deferments to tobacco farmers, thus ensuring an adequate supply of this once noxious weed.

It would seem that tobacco's place in American society was secured except that occasional reports would appear in the scientific literature describing the harmful effects of inhaling tobacco smoke. The first of these appeared in England in 1924 when the respected English Chemist Ernest Kennaway described a substance he called "tar" and linked this sticky substance to cancer. His study's findings were replicated over the next two decades with the findings remaining unchanged (Burns, 2006).

In 1952, a Christian Herald report of the work of the American Cancer Society was reprinted in the widely subscribed to *Reader's Digest* and the American public was made aware of the growing evidence linking tobacco to harmful health outcomes. In 1957, the UK, and in 1964, the US Government Health Services adopted formal positions linking tobacco to cancer and other diseases. Still, more than three decades would pass in the USA and it would not be until potentially bankrupting lawsuits against the makers of tobacco products were awarded that significant steps were taken to curtail tobacco use by the general public and especially youth (Burns, 2006).

Examining the data gathered from the *Monitoring the Future* (Johnston et al., 2017) study indicates that 9.4% of 8th graders, 15.9% of 10th graders, and 26.6% of 12th graders in 2017 reported trying cigarettes at least once. This compared to 74% of the graduating class of 1979. To this data must be added the % of youth who have tried Vaping—the tobacco industry's latest effort to maintain its profitability. In this regard 18.5% of 8th graders, 30.9% of 10th graders, and 35.8% of 12th graders in 2017 reported Vaping at least once. As marijuana—or as public relation firms would prefer it be known—cannabis is most often consumed via inhalation into the lungs, the rise in vaping is a disturbing trend.

## *Marijuana*

When I was in England I experimented with marijuana a time or two, and I didn't like it. I didn't inhale. (Candidate, Bill Clinton in Ifill, 1992, p. A15 of the *New York Times*)

One reason why we appreciated pot, as y'all call it now, was the warmth it always brought forth from the other person—especially the ones that lit up a good stick of the shuzzit or gage. (Louie Armstrong cited in Sloman, 1979, p. 133)<sup>2</sup>

For 450 years and more another weed in the New World went relatively unnoticed. It may be that the greater calm and sense of well-being it conferred over tobacco interfered with the work to be done or that Alice B. Tokilas' recipe for

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<sup>2</sup>It was difficult to choose a single quote to open this section so I chose two. Joining Bill and Louie in acknowledging their use are Arnold Schwarzenegger, John Kerry, Bing Crosby (his son revealed his use), Newt Gingrich, Margaret Mead, Michael Bloomberg, Carl Sagan, and Donna Shalala to name but a few (AlterNet.org, n.d.; Retrieved from [www.alternet.org/dugreporter/18941](http://www.alternet.org/dugreporter/18941)).

brownies suffered by association with Gertrude Stein's often indecipherable writing. In any case, the evilness of marijuana as the entry drug into the wasteland of drug abuse dates from the late 1930s.

Marijuana or hemp had been known to civilization for thousands of years before that date. Like other substances in this chapter, it too was used as a medicinal substance for a variety of health problems. Among those uses, the Chinese mixed it with wine and administered it as an analgesic before surgery (Grinspoon & Bakalar, 1993). Others believed it to be helpful in treating malaria and venereal disease, and Robert Burton (1621/1851) in his compendium *The Anatomy of Melancholy* reported its use to treat depression.

Marijuana was raised as a cash crop in the English colonies. The fibers of the hemp plant were a valuable commodity and continue today to be turned into a variety of products including cloth and rope. Indeed, George Washington cultivated the plant. Hemp production in the USA, continued until about the time of the Civil War when other nations replaced the USA as its major producer. Its use as a medicinal substance declined in the late 1800s for two principal reasons.

The first was the uncertain effect of its psychoactive ingredient, THC (delta-9-tetra-hydrocannabinol), compared to other substances like opium and coca and their derivatives (morphine and cocaine). The second was the increased use of the hypodermic syringe after 1860, enabling soluble drugs to be injected and speed relief to the patient. In this second respect, marijuana was not soluble in water (Grinspoon & Bakalar, 1993).

Recent histories of marijuana suggest that the events that moved marijuana from being considered a relatively harmless plant to the status of "killer weed" originated in the southwest during the 1930s. Prior to that time, the substance was essentially ignored. For example, it was not regulated by the Harrison Narcotics Act of 1914. Indeed, in 1920 the US Department of Agriculture published a booklet encouraging its production as a cash crop. The circumstances surrounding marijuana's decline from relative obscurity to infamy involved the migration of Mexicans into the USA during the Great Depression and the scarcity of work.

Other than Alice and Gertrude, it appears that in the late 1920s and early 1930s the largest group of users of marijuana for recreational purposes was Mexican Americans. Recall the treatment of the Joad family in its migration from Oklahoma to California in search of work in Steinbeck's epic novel *The Grapes of Wrath* and the tensions are evident. Add to those tensions of high unemployment and ethnic prejudice and the conditions are ripe for harmful actions to be taken (Austin, 1979; Grinspoon, 1971; Sloman, 1979).

Interestingly, while legislative delegations from the southwest lobbied the federal government for action, those requests were initially ignored by Harry Anslinger then heading the Federal Bureau of Narcotics. However, neither the requests nor the depression disappeared and by 1937 Congress had enacted the Marijuana Tax Act. With marijuana now a substance of concern, legal authorities in the southwest acted quickly by deporting individuals found in possession of marijuana. In their zealotry—perhaps prejudice is the better word—against those with a Central American ancestry, individuals deported included native-born Americans with

family histories extending back generations in the USA to a nation that was foreign to them—Mexico.

Since the 1930s, marijuana has been understood at various times in North American society to offer “one moment of bliss and a lifetime of regret” or to provide “a mildly intoxicating, sensory altering, view of the cosmos.” Some have suggested the substance possesses no legitimate medicinal uses. Others believe marijuana has medicinal value in reducing side effects experienced in the treatment of cancer, for example. In recent years, state legislatures have passed laws allowing individuals with a variety of medical issues to possess and use marijuana for medical purposes. More recently, states such as Vermont, Colorado, California, and Massachusetts have passed recreational marijuana use acts in spite of existing federal law that prohibits its use.

The data from Johnston et al. (2017) indicate that 13.5% of 8th graders, 30.7% of 10th graders, and 45% of seniors in 2017 admitted to having tried marijuana at least once. This compared to 60.4% of the graduating class of 1979. The good news is that lifetime marijuana usage among young people is down. The questions that remained to be answered in the coming years are: What effect will Vaping have on usage? Secondly, should the legal availability of marijuana in states increase, what impact will that exert on adolescent usage?

## *Heroin and Other Opiates*

And now my beauties, something with poison in it, but attractive to the eye and soothing to the smell...poppies, poppies, poppies will put them to sleep. (Wicked Witch of the West, [Motion picture], 1939 cited in LeRoy et al., 1939)

Among the remedies which has pleased the almighty God to give to man to relieve his sufferings, none is so universal and so efficacious as opium. (Sydenham, 1680/2010, p. 72)

Edmund: We're talking about Mama...After you found out she'd been made a morphine addict, why didn't you send her to a cure. then, at the start, when she still had a chance. (O'Neil, 1956, p. 139–140)

We begin with the poppy. From its seed pods we extract a milky white substance (opium) that as one Witch observed, “put them to sleep.” Useful substance this opium in a time long before medicine had evolved to offer more than palliative care. A touch of distillation and from opium we extract a more potent substance called morphine. Not willing to leave well enough alone—remember, the pharmaceutical industry is not profitable using natural ingredients—altering nature a touch produces oxycodone and hydrocodone. But why stop there? In a plastic world, chemists create new previously unknown substances that outperform the best that nature can provide as in OxyContin and fentanyl.

But to return to the beginning, discover a “medicinal” substance like opium or its offspring morphine and watch the creative uses to which it can be put. For example,

in *Dr. Chase's Recipes or Information for Everybody: An Invaluable Collection of About Eight Hundred Practical Recipes* (Chase, 1866) the good doctor offered up these helpful aids to Mom for her family:

For Nervousness—Nervous Pill—Morphine 9 grs.; extract of stramonium and hyoseyamus, of each 18 yrs.; form into pill-mass by using solution of gum arabic and tragacanth... Dose—in case of severe pain or nervousness, 1 pill taken at bedtime will be found to give a quiet night of rest.

Or for the children—Cough Candy—Tincture of squalls 2 ohs.; camphorated tincture of opium, and tincture of holy, of each 1/4 oz.; wine of impeach 1/2 oz.; oils of gaultheria 4 drops, sassafras 3 drops, and of anise seed oil 2 drops... Druggists will get confectioners to make this for a trifle on the pound over common candies. (Chase, 1866, pp. 149, 171–172)

The good Dr. Chase was not alone in his liberal use of opium and morphine. Patent medicines of the day like *Mrs. Winslow's Soothing Syrup* and *Dr. LeGear's Colic Remedy* freely mixed alcohol with opium in a concoction called laudanum. No doubt Mrs. Winslow and Dr. LeGear delivered on their promises to parents. A teaspoon or two of either elixir would reduce a child to a quiet, drooling, limp doll. As World War I approached, the federal government gradually strengthened its restrictions on the use of these substances decreasing over time the number of women like Eugene O'Neil's Mary Tyrone's addiction to opiates.

While decreasing availability reduced abuse, opiates remained a problem—particularly heroin—but this abuse was considered a problem of the lower classes and the fringe artistic community; that is until the 1990s. It was then that a new class of drugs like OxyContin was introduced to the marketplace. I use the word marketplace intentionally as this and similar substances like fentanyl were heralded by their manufacturers as superior to existing and less potent alternatives (Courtwright, 2001).

As public relations firms know, to sell a product a demand must be established and in this case that demand was pain management—pain management not just for those needing palliative care at the conclusion of their lives but those temporarily discomforted by a removed tooth, a dislocated shoulder or a broken toe. With a free dinner, a goody bag containing among other things a golf ball, and a brief lecture by a paid drug representative medical practitioners were encouraged to prescribe and prescribe they did with sales of OxyContin rising from \$45 million dollars in 1996 to \$1.5 billion in 2002. Despite fines for misrepresenting the potential harm of these new opiates, the drug industry continues the profitable excessive manufacturing of these substances (Deprez & Barrett, 2017; Etter, 2017).

The data from Johnston et al. (2017) indicate that less than 1% of 8th, 10th, and 12th graders admitted to having tried heroin at least once in their lifetime. The lifetime use of narcotics other than heroin (including pain medications) is 6.8% among seniors. This data point of 6.8% is indicative of a slow decline in usage by youth since 2014. That said, those youth abusing opiates may well not be represented by this study as their drug behavior may have removed them from school settings. Further, the opiate crisis facing this country is described primarily as a young adult problem and not one belonging to adolescents—yet.

## Closing Thoughts

From this excursion down history's pathways what inferences can be drawn?

Whether they calmed nerves, lessened hunger, offered new insights into the cosmos, or cured illness, the initial use of each substance was regulated by the shaman or community leaders. The rules governing their use enabled the community to seemingly function successfully. Difficulties arose when these substances were taken out of their original context and placed into another, that is, from medicine or religious use to recreational use and from special circumstance or ceremonial use to continual use by those who would misuse them. With the growth of knowledge, these ancient substances lost their magical ability to answer questions, cure illness, and satisfy hunger. No longer did they open doors to insight and new information valuable to the group. Instead their usefulness became personal pleasure, and it is in this context that we find ourselves today.

As a species we seem to have evolved little from our extinct cousins who discovered that grain or fruits left in vessels fermented into an often unpleasant tasting beverage with pleasant and sought-after mood-altering characteristics or that some plants had similar qualities. It is a pity that this world does not contain enough wonderment to satisfy our needs for exploration and seeking contentment. But clearly the use of these and other substances suggest that it does not. For those who would disagree with me, consider the trouble Venezuela natives go to make the native beer—Chicha. Corn would be raised, gathered, and the women of the village would chew the corn kernels. These they would then spit into a community bowl. The process of chewing the corn splits the kernels, which mixed with the saliva in their mouths and transformed the starch found in the corn to sugar. Yeast feeds on the sugar, releasing alcohol and CO. Voilà, the end result is Chicha—allegedly a “tasty beer” (Emboden, 1979, p. 154)! Lastly, the reality that alcohol, tobacco, and increasingly marijuana are permitted for recreational use suggests that these stepping-stone substances to other drugs will not turn to sand anytime soon.

Thus, we find ourselves in a quandary that is reflected in the circumstances described in the chapters to follow. We lament the number of youth who have traveled this well-worn path to other addictive drugs and the harm brought on them as a result, the expense to society for their addictive behavior, and the less than stellar success rate of their rehabilitation. Society speaks much of prevention but really means by that word, “please wait your time and then don't overindulge.”

Perhaps, if society did not then immerse youth in a world of temptation far more enticing than Eden's one lone apple tree, they might wait but that is not the case. In our society tempting apple trees are abundant, and their luscious fruit are ever ripe for the tasting. As the reader is soon to learn, prevention approaches aimed at strengthening the will power of our young Adams and Eves (using prevention's tools of education, social competency promotion, and natural caregiving) to resist those apples are increasingly being paired with approaches that build fences around those trees like ID carding and arresting adults who serve or purchase alcohol and tobacco for minors (using the prevention tools of community organization and

systems intervention). Encouragingly, this multifaceted approach has shown positive results. Discouragingly, this fencing approach has not focused attention on the manufacturing or distribution element of the equation, for example, reducing the alcoholic content of beverages or the chemical composition of pain relievers. These are “harm risk reduction” approaches—a phrase dropped from the lexicon of substance abuse prevention that deserves reinstatement if we are to be serious in our efforts to limit the use of stepping-stone substances by underage Adams and Eves.

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