

[Transcript] The Tim Ferriss Show / #698: Dr. Mark Plotkin on Coffee, The World's Favorite Stimulant — Chemistry, History, and More

This episode is brought to you by my very own Cockpunch Coffee. Goodness gracious, does it give me the giggles just to say that. This year, one way I've scratched my own itch is by creating Cockpunch Coffee. The first coffee I've ever produced myself in which I now drink every morning. It is a tie-in to a fictional world that I created, but that is another bizarre story for another time. Now, there is some karmic upside to this whole project that I'll get to in a second. Back to the coffee, I enlisted the help of world-class experts. I have access to a lot of them and tested dozens of variations over many months. As longtime listeners know, I have very high standards when it comes to coffee, and I have been diagnosed also with moderate, severe OCD, so I pay attention to the details in this case, and that is actually a true statement. After dialing in the sourcing, roasting, and more, this is the combo that finally made me say this is the one. And it was very clear, it was immediate, it was practically instantaneous. Nothing else had quite hit the mark, and then this one did, after a lot of tweaking. To learn all about it, check out cockpunchcoffee.com, spelled as it sounds, which is a mighty strange website in and of itself. Now, here's the karmic side. 100% of my Cockpunch-related proceeds date, which are now around \$2.5 million, including those from Cockpunch Coffee, go to my nonprofit foundation, the SciSafe Foundation, which focuses on cutting-edge scientific research and other uncrowded bets. Many of the game-changing early-stage psychedelic research that you've read about in the press, the news, the media over the last five years has been funded by the SciSafe Foundation behind the scenes, but that is not all that it does. To learn more about the latest projects that I am working on, you can check out SciSafeFoundation.org, that's spelled S-A-I-S-E-I Foundation.org. SciSafeFoundation.org. SciSafe means, among other things, rebirth in Japanese, and having spent a lot of time there, that word has special meaning for me on a bunch of levels. And if you'd like some of the best coffee in the United States, at least in my humble opinion, check out cockpunchcoffee.com. I think you'll love it as much as I do, and by buying a bag, you're doing some good at the same time. Since my portion of the proceeds, go to the Foundation. Grab a bag or two or three at cockpunchcoffee.com one more time, because I get the giggles just saying it. That's cockpunchcoffee.com. Hello, boys and girls, ladies and germs. This is Tim Ferriss. Welcome to the Tim Ferriss show, where it is usually my job to deconstruct world-class performers to tease out their routines, habits, et cetera, that you can apply to your own life. This is going to be a slightly different episode. This time around, we have a special edition featuring my friend Dr. Mark Plotkin, famed ethnobotanist. Mark takes over my duties as host for this episode and shares an episode of his Plants of the Gods podcast, but you are hearing it before anyone else. You are hearing it before even his own podcast subscribers, so this is a Tim Ferriss show exclusive. But let's back up. Who is Dr. Mark Plotkin? Mark, you can find him online on Twitter at [docdoc](https://twitter.com/docdoc). Mark Plotkin is an ethnobotanist who serves as president of the Amazon conservation team, which has partnered with roughly 80 tribes to map and improve management and protection of roughly 100 million acres of ancestral

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rainforests.

He is best known to the general public as the author of the book *Tales of a Shaman's Apprentice*, one of the most popular books ever written about the rainforest. His most recent book is *The Amazon*,

What Everyone Needs to Know. You can find my interview with Mark, where we dig into his history, his mentors, including Richard Evan Shultes, the legendary Richard Evan Shultes, and so on at tim.blog.com. This episode, however, this tightly packed episode explores all things coffee, which is the most widely consumed mind-altering plant product in the world, and it gets into all different aspects of coffee, many of which I think will surprise you. So without further ado, please enjoy.

Hello, everyone. I'm Mark Plotkin, Dr. Mark Plotkin of the Amazon conservation team, and host of the podcast *Plants of the Gods*, hallucinogens, healing, culture, and conservation. Kicking off this new season, we're going to talk about the ethnobotany of coffee.

Over the course of our four seasons, we've talked a lot about how plants and fungi are woven through

our history and our prehistory in surprising and often unexpected ways. We discussed how the battle over tall timbers to build tall ships led directly to the American Revolution. We looked into how ethnobotanist Richard Shultes' quest for the magic mushrooms of Mexico led to the development of blockbuster beta-blocker heart drugs. We examined how absinthe inspired both the greatest writer and the greatest painter of the 20th century. Today, however, we're going to talk about coffee, truly a plant of the gods. Coffee is the most widely consumed mind-altering plant in the world, and it has a rich and intriguing history. But first, let me pose a question.

The history of coffee features adultery, larceny, spies, smugglers, and slave revolts.

If Hollywood can make hit movies based on an amusement park ride like *Pirates of the Caribbean* and based on a plastic doll like Barbie, why have they never made a film about the history of coffee?

On a personal note, I've had the opportunity to drink a lot of great coffee in a wide variety of different settings. I've enjoyed superb café in such non-tropical places as Holland and Japan.

I've attended coffee ceremonies in East Africa, the original home of the coffee plant.

I've drunk the famous Blue Mountain Coffee in Eastern Jamaica and have downed many a cup in Latin America, from Mexico to Argentina. But the best coffee I've ever had and continue to have on almost daily basis is the coffee we drink in my hometown of New Orleans, and this is coffee with chicory. Why do we drink coffee with chicory? During the Napoleonic Wars, after the defeated Trafalgar of the French fleet by Admiral Horatio Nelson and his navy in 1805, the British imposed a naval blockade to prevent foreign products from entering France. The French therefore liked two tropical plant products that they craved, sugar from sugarcane and coffee.

Napoleon, however, launched an innovative approach to attempt to solve this problem.

He challenged his countrymen to produce sugar and coffee, or coffee like drink, from local plants, since neither sugarcane nor coffee could be grown outside of the tropics and in France, and France was cut off from her tropical colonies. The success was that of the sugar beet, which grows well in temperate regions. The French developed a strain of beet which yielded sufficient

sugar to meet local demand. However, they were never able to find a coffee substitute which had all the benefits and taste of coffee. One of the most popular species with which they experimented

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was the chicory plant, which thrives in temperate regions. Despite Napoleon claiming that chicory was an excellent substitute for coffee and subsidizing its cultivation, it is not. But it is an excellent adulterant. In other words, it can be mixed with coffee, so a little coffee would go a long way. Furthermore, coffee mixed with chicory is exceptionally flavorful. So even after the Napoleonic wars had long ended, people had developed a preference for the taste of coffee mixed with chicory, which is why today, in parts of the world that were influenced by French colonialism, like New Orleans or Vietnam, many people still prefer to drink their coffee with chicory. Perhaps the greatest irony of the coffee story is that it is unquestionably an acquired taste. Brian Cowan, in *The Social Life of Coffee*, quotes behavioral psychologist Robert Bowles, an authority on motivation, who said, quote, coffee is one of the great marvelous flavors. Who could deny that? Well, actually, anyone drinking coffee for the first time would deny it. Coffee is bitter and characterless. It simply tastes bad the first time you encounter it. By the time you've drunk a few thousand cups, though, you cannot live without it. End of quote. From a broader perspective, note that over the course of the four seasons of *The Plants of the Gods* podcast, we have heard different theories as to the ethnobiological origins of human consciousness. Several thousand years ago, the size of our ancestors' brains increased by about 30%. According to the late ethnobotanist Terence McKenna, this was due to these creatures' discovery and ingestion of hallucinogenic mushrooms, the so-called stoned ape hypothesis. A competing and possibly complementary explanation for the birth of consciousness is that these primates were feeding on ripe fruits in which the sugars had fermented into alcohol. This theory, put forward by the Yale primatologist Ian Tattersall and others, is known as the Drunk Monkey Hypothesis. Meanwhile, the current consensus is that our species evolved in or near the Great Rift Valley of Eastern Africa. The writer Anthony Wilde has proposed a different ethnobotanical explanation as to why our species may have evolved in the region, why cranial capacity increased here, and the plant native to the region that drove this evolution is coffee. Wilde wrote, quote, it's tempting to wonder whether the proliferation of wild coffee trees in the same Ethiopian Highland forest could also have had a hand in the process. Coffee has always been associated with speed of cognition and expression, and the sudden dawn of self-awareness in the Genesis story of the Bible concerning the forbidden fruit of the tree of knowledge is something that could have been prompted by a psychoactive substance such as caffeine. Such awareness is also an attribute of language and thought. To place coffee center stage in the story of the fall is altogether a more inspired piece of casting than the choice of a lowly, golden, delicious apple. Imagine coffee berries driving their eaters into a caffeine-fueled frenzy of quick-fire contention and ingenious thinking, engines of brain evolution, end of quote. Keep in mind that the Bible talks about the tree of knowledge, not the mushroom of knowledge, nor the grapevine of knowledge, and in the Ethiopian Highland forest where it is native, coffee is a tree that can reach well over 20 feet in height. On a side note, one of the earliest pre-human fossils from Indonesia is known as Java Man. For reasons that will become clear, we can refer to the human ancestor from the coffee forest of Ethiopia as Moka Java Man. Now, the origin story of coffee. It was supposedly discovered by a goat herder named Kaldi,

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who noticed that his goats became frisky and animated after eating the fruits of a local tree. He consumed a few and felt a similar burst of energy, the original precursor to Red Bull. If Kaldi did in fact exist, he was probably a member of the Oromo peoples, O-R-O-M-O, native to southwestern Ethiopia. The Oromos considered coffee to be the tears of Waka, the supreme sky god, and they and the other early Ethiopians devised a variety of means for consuming coffee. Both the beans and the leaves were chewed and they were said to make a wine out of the fermented pulp. The fruits were ground and mixed with butter or other animal fat to provide a high energy snack that could be taken along on travels, meaning that coffee was a key component of the original granola bar. There may have been several other reasons for devising so many ways of ingesting the plant, but one reason was undoubtedly the driving force, caffeine. In an ancient world devoid of many, if not any, other stimulants, the discovery of caffeine was a revelation and we will delve deeper into this later in the program. But let me define what a stimulant is. A stimulant is a substance which tends to increase activity in the central nervous system, leading to an increased alertness and energy, enhanced focus and performance, and decreased drowsiness. In moderation, a stimulant can produce a sense of comfort and well-being, even a subtle sense of euphoria. Caffeine clearly represents one of the first stimulants discovered by humans, if not by pre-human ancestors. It is an alkaloid found in the coffee plant. Alkaloids, as we've heard in previous episodes, are naturally occurring compounds that often have pronounced physiological and sometimes mental effects in humans and other animals. Some of the alkaloids we've already discussed in earlier episodes are cocaine, morphine, and nicotine. Calde and the Aromos discovery of coffee was somewhere around the 9th century. As word spread of this remarkable plant product, coffee traveled across the Red Sea to the Arabian Peninsula, where the beans were being roasted and coffee was served as a drink. According to Mark Pendergrast in his excellent book, *Uncommon Grounds*, legend has it that Muhammad himself claimed that, under the invigorating influence of coffee, he could quote, unhorse 40 men and possess 40 women. So coffee was the first Viagra. Coffee found particular favor amongst the Sufis in Yemen, members of a mystical and spiritual sect of Islam. Some Sufis are best known to the outside world as whirling dervishes, look them up on YouTube. Sufis employed chanting, dancing, and meditation to enter a trans-like state to attain union with the divine, and they cherished coffee as an invaluable aid for maintaining concentration and staving off drowsiness during nocturnal prayer ceremonies. To meet this growing demand in Arabia, major plantations were established in the mountains of Yemen in addition to those already created in Ethiopia. The major port from which coffee was exported to the rest of the Islamic world was Mocha on Yemen's southwest coast. As a result of this trade, coffee has often been known as Mocha. Yet another explanation is that the chocolatey flavor of this Yemeni coffee has resulted in today's drink known as Mocha, which usually consists of coffee to which chocolate has been added. As demand for coffee grew, coffee houses attracted unanticipated and unwanted attention by the ruling authorities. Alexander Dumont, best known as the author of *The Three Musketeers*, wrote that, quote, the Imams complained their mosques were empty while the coffee houses were always full, end of quote. According to botanist Estelle Levitan, quote, religious leaders felt that the time spent in the coffee houses should have been spent in the mosque.

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Political leaders also felt threatened by the political discussions common in coffee houses.

Pendergast, in his classic *Uncommon Grounds*, wrote, quote, coffee gained its reputation as a troublemaking social brew. Various rulers decided that people were having too much fun in the coffee houses, including gambling, writing satirical poems about political and religious leaders, and, quote, irregular and criminally unorthodox sexual situations, end of quote.

As a result, coffee in coffee houses were banned in certain locales.

In a few extreme cases, some coffee drinkers were beaten while others were drowned, but the custom of coffee consumption persisted. Why would coffee drinking continue in the face of this persecution? Certainly, the Loren Grip of caffeine was part of it. Pendergast explains, quote, coffee provided an intellectual stimulant, a pleasant way to feel increased energy without an apparent ill effects. Coffee houses allowed people to get together for conversation, entertainment, and business, inspiring agreements, poetry, and irreverence in equal measure. So important did the brew become in Turkey that a lack of sufficient coffee provided grounds for a woman to seek a divorce, end of quote. Coffee became deeply ingrained in Muslim culture, so much so that it became known as, quote, the wine of Islam. Remember that Islam prohibits the consumption of alcohol, so coffee was the alternative. Sometimes a culture will adopt a drink to better differentiate themselves from another society, like we heard in our rum episode, where Americans turned to bourbon and coffee and away from rum and tea to demonstrate they were no

longer typical British subjects. As Western infidels drank alcohol, which was forbidden to Muslims, coffee helped stimulate the mind and maintain attention during prayers while reducing the appeal of prohibited items like alcohol and hashish. And if coffee was the wine of Islam, coffee houses were the Islamic equivalents of taverns and bars in the West. Coffee houses sprang up in Aleppo, Cairo, Damascus, and other cities throughout the Arab world, where they quickly became hubs of social interaction. In the words of coffee historian Jonathan Morris, quote, the advent of the coffee house created possibilities for new forms of social interaction. The coffee houses appeal lay in providing the first legitimate public space for socialization among Muslim men. The layout of these early coffee houses facilitated an egalitarian ambiance as patrons were seated according to the order in which they arrived rather than by their social rank. Morris posits that some of the attacks on coffee house culture by religious and political conservatives may have been due to their progressive orientation that defied existing social and existing economic hierarchies. As we will hear, this foreshadows similar uncertainties by political conservatives in Europe many years later. Nonetheless, these lively Arabic and Turkish coffee houses were visited by European travelers who enjoyed their first taste of coffee. So embedded in local culture was coffee by then that these Europeans assumed the plant was native to the Middle East, so much so that Linnaeus, the father of scientific classification, named the plant *Kafea Arabica*, an incorrect appellation for a plant native to Ethiopia. Much of what we know about the early use of coffee in Ethiopia is derived from the writings of a fascinating but much overlooked British ethnobotanist named James Bruce, one of the most extraordinary characters in the history of exploration. Bruce was also a wine merchant, a linguist, antiquarian, anthropologist, self-taught physician, cartographer, artist, and explorer, best known for helping determine the origin of the Blue Nile. Having

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taught himself both Arabic and Ge'ez, an ancient and sacred Ethiopian language, Bruce traveled to Ethiopia in 1770 and spent two years exploring local peoples and their uses of medicinal plants and coffee, not just the drink, but the ritual preparation and serving ceremony.

Bruce's writings make gripping reading. Some of the customs he described were so bizarre and westernized that he was widely disbelieved by many of his contemporaries, though subsequent explorers were able to confirm the accuracy of many of Bruce's descriptions. Furthermore, his accounts provide ample evidence of the dangers and challenges early plant explorers faced. In one instance, he was heading east through the desert to meet up with a local Muslim dignitary in the belief that joining forces with him would convey some protection from local brigands. Such was not to be. Bruce and his colleagues found

only the remains of the caravan and the corpses of the dignitary and his men who had been tacked, robbed, and murdered. Nevertheless, there were Ethiopians who discovered coffee.

It was the Arabs who introduced it to the outside world, and they proved to be shrewd business people

anxious to maintain their monopoly as the popularity of this new drink spread to the west.

Once Venetian traders brought coffee to Europe around 1615,

and caffeine exerted its inexorable grip on these new consumers, the European colonial powers recognized the economic potential and realized that coffee could become a valuable cash crop in their tropical colonies. The first Europeans to break the Arab monopoly were the Dutch, the greatest commercial entrepreneurs in the 17th and 18th century. The so-called Dutch century was a period of extraordinary economic prosperity, and their powerful navy and vast merchant fleet generated the wealth and artistic innovation manifested in the paintings of Rembrandt, Vermeer, and Franz Hals. Much of this wealth was derived from tropical trade. Nicholas Witson, explorer of Siberia, maritime author, mayor of Amsterdam, and member of the governing board of the Dutch East India Company encouraged the Dutch merchant Van Broek to obtain live coffee plants from Mocha in 1616. The Dutch planted them in the Dutch East Indies on the island of Ceylon, now Sri Lanka, in 1658, and then Java in 1699, and then in their colony in Surinam, which was the first plantation in South America in 1716. Production from the East Indies soon eclipsed that of Yemen, and coffee from these Dutch colonies was soon known as Java, named in honor

of the island on which it grew, hence the generic name Mocha Java. Trees from the Asian plantations were shipped to the Amsterdam Botanical Garden in 1706, but only a single specimen survived the arduous journey. One seedling from this plant was gifted to French King Louis XIV in 1713, and it was planted in the Jardin de Plon in Paris. A cutting from the French tree was taken to the Caribbean island of Martinique, where it eventually gave rise to many of the world's coffee plantations, particularly in Central and South America, all descended from this single specimen in the Amsterdam Botanical Garden. Historian Henry Habhaus wrote, quote, no other single plant has ever had such an influence on world trade. No other single plant can be identified as the mother and father of a whole way of life. At least half of the huge coffee industry worth over a hundred billion dollars a year springs from a single ancestral plant grown in the Amsterdam Botanical Garden. How the lonely plant made it from Paris to the Caribbean

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is the stuff of legend. According to his personal account, a French naval officer named Gabriel Mathieu de Clu wanted to bring coffee to the French West Indies, but the king of France ordered that his coffee plant was not to be touched. De Clu, however, knew that the royal physician had carte blanche to collect any botanical material he might need for medicinal purposes, since most remedies at that time were made from plants. De Clu bribed the physician for some seedlings and set sail with his botanical booty for the Caribbean. The trip was not a smooth one. Off the coast of Tunisia, the ship was attacked by Barbary pirates who were fended off by the onboard cannons. According to De Clu, on the ship was a spy in the employ of the Dutch who did not want the French to start a coffee industry which would compete with their own. Though the Frenchman was able to keep the Dutch spy away from his precious seedling, another threat arose when the ship was nearly destroyed by a tropical storm which sharply reduced the onboard supply of potable water. Trapped in the windless doldrums for over

a month, the indefatigable Frenchman shared his tiny water ration with his beloved plant, which ultimately survived and thrived when planted in Martinique.

Nor was this the only story of intrigue in the coffee saga.

There are three small countries nestled in the northeastern shoulder of South America, moving west-east, Guyana, formerly British Guyana, Suriname, formerly Dutch Guyana, and French Guyana. As mentioned earlier, Suriname is where the Dutch had made the first South American plantings in 1716 but without much commercial success. Ironically, Suriname was to play an important but indirect role in the creation of the Brazilian coffee industry.

Ever since the first arrival of the Europeans over 500 years ago, there have existed border disputes between the three Guyanas, disagreements that have continued to the present day. In an attempt to resolve a problem between Dutch and French Guyana in 1727, colonial officials asked a Portuguese military official named Francisco de Melo Palleta neighboring Brazil to adjudicate the dispute. Melo Palleta was not only a soldier and a diplomat but also a fervent nationalist and a bit of a rake. He was determined to smuggle some coffee plants to Brazil since their export from French territory was expressly forbidden, while casting his wandering eye on French Governor Dorvilleier's wife,

he decided to combine his two pursuits. In the course of the border negotiations in the capital city of Cayenne, he managed to seduce Madame Dorvilleier. At the closing banquet, she handed her charming paramour an invaluable parting gift, a bouquet in which was hidden coffee seeds descended from the immortal plant that de Clu had brought from Paris to Martinique. These smuggled seeds gave birth to the Brazilian coffee industry, today valued at more than 10 billion dollars or about 35 percent of the world's coffee. Melo Palleta's introduction of coffee into Brazil in the early 18th century was not an immediate success, whereas he and his colleagues began planting it in the Amazon. Coffee production began to skyrocket about a century later when Brazilians began planting it further south in the states of Minas Gerais, Rio de Janeiro, and São Paulo, while destroying vast tracks of the Atlantic rainforest in the process.

As coffee is a labor-intensive crop, enormous numbers of Africans were imported and enslaved in appalling conditions. As is so often the case, with economies closely tied to a few commodities, booms and busts enriched and impoverished locals. As power and wealth was concentrated in the hands

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of a few, a new class of ultra-wealthy coffee barons arose, detailed in the books of Brazilian authors like Jorge Amado and Euclides da Cunha. The bust cycle and the abolition of slavery, extraordinarily late in 1888 in Brazil, saw former slaves flock to major cities like Rio, creating enormous shantytowns known as favelas that persist to the current day. And the abolition of slavery and the resulting demand for cheap labor led to an influx from various parts of the world, immigrants from Italy, Lebanon, Syria, and Japan, among others. It's a little known fact that Brazil harbors the largest population of Japanese people outside Japan. Ironically, many coffee enthusiasts that visit Brazil find that much of the local coffee known as cafezinho is awful. In my opinion, the world's best coffee is grown on rich, usually volcanic soils, and under shade, which is why Colombian and Costa Rican coffee are so spectacular. However, much, if not most, of Brazilian coffee is grown on porous soils directly exposed to the burning tropical sun, and failing to develop the oils and aromas that characterize the best mocajava. I was once in an upscale bar in São Paulo, Brazil, and ordered a cup of coffee, which was so dreadful that I expressed my disdain to the bartender. He smiled, reached under the bar, and pulled out a small burlap sack that had printed on the side. So para exporto só, only for export. He made me a delicious espresso, winked, and said, Brazil makes more money when we send the best stuff abroad. Brazil went from exporting 22,000 tons of coffee in 1800 to more than 3 million tons in 1900, an increase of over 130 times. Today, Brazil is exporting about 4 million tons, meaning that's producing about 35% of the world's coffee, as I mentioned earlier. Worth noting is the inextricable link between coffee and slavery during the early days of the coffee industry, and not just in Brazil. The most productive plantations in the French Empire were in Santo Domingo, now known as Haiti. In the late 1700s, it was said to be the most profitable colony in the tropical world, producing not only coffee, but sugar, cocoa, and indigo dye. So brutal were the conditions of the enslaved Africans, however, that a series of slave revolts eventually led to the Haitian Revolution. With the remarkable Toussaint Louverture in charge, the slaves overthrew their colonial overlords and established the first independent Black Republic in the world in the year 1804. With the loss of Santo Domingo as a major coffee exporter, other Central and South American countries began planting coffee. Ever since, coffee has played a major role in tropical American countries, contributing to economic development, employment, export revenues, and other benefits. However, the flip side of the story is a negative one. Establishment and expansion of coffee plantations has usually been at the expense of tropical rain forests, and the economic yields have typically been concentrated at the very top of the economic pyramid, as is often the case in the capitalist system, the rich got richer and the poor got a lot poorer. A highly recommended account of this is detailed in the book *Coffeeland* by Augustine Sedgwick. The author details how a poor but upwardly mobile Englishman makes his way to El Salvador in Central America, becomes fabulously wealthy coffee baron, controlling enormous amounts of land in a tiny country, and essentially impoverishing his workers who end up worse off. The pattern repeated itself elsewhere. According to Pendergrass book in northern Guatemala in the 30s, Germans owned 80% of the arable lands, yet paid their primarily indigenous workers as little as three cents a day. And many of the coffee barons in Central America in the 30s were not only German, but also ardent Nazis. According to Pendergrass, quote, local Gestapo members brought increasing pressure to bear

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on non-Nazi Guatemalan Germans, sometimes threatening them if they did not comply. These Nazis compiled a secret list of 40 unpatriotic Germans who were to be executed once Germany won the war and took over Guatemala. The US took an even more active interest in Latin America as a result, to keep the Nazis at bay and maintain the flow of coffee to the homeland and to Allied soldiers overseas. After the attack on Pearl Harbor and the sinking of Brazilian ships by Nazi submarines, Latin America, particularly numerous political fence sitters, firmly embraced the Allied cause. The number two major coffee power in South America after Brazil has long been Colombia, whose volcanic soils, mountain slopes, and ample rainfall create optimal conditions for coffee cultivation. Coffee has said to have been introduced in Colombia in the 18th century by Jesuit priests. Supposedly the Jesuits are said to have helped spread coffee trees by requiring their parishioners to plant them as part of their penitence for misdeeds.

As in Brazil, the economic importance of coffee led to the construction of infrastructure, like roads and railroads, to facilitate the transport of the beans to larger cities and to ports for export. And, as in Brazil, the concentration of wealth from the business created a powerful class of coffee barons. A notable exception to this seemingly unavoidable process was Costa Rica. Coffee was introduced in the Central Valley in the 1700s. As in Colombia, volcanic soils and ample rainfall proved ideal, and coffee soon became the major export crop. Costa Rica, however, never developed a coffee culture built on an over-concentration of wealth in the hands of a very few coffee barons. It may be the ticos, as Costa Ricans are generally known, possess a much more egalitarian nature, or it may be that there was no tradition of autocratic rulers, unlike the Maya in Guatemala, the Chipsha in Colombia, the Incas in Peru, or the Aztecs in Mexico. Whatever the reason, they produced some of the best coffee in the world. About the same time that coffee was being introduced into South America, the Dutch East India Company began importing large shipments of coffee from Java, then in the Dutch East Indies, now part of Indonesia, into Holland in the year 1711, and, as had happened in the Muslim Middle East, demand for coffee, sword, and Christian Europe. Artists, writers, and composers began singing the praises of coffee, sometimes literally. Johann Sebastian Bach composed the Coffee Cantata, one of his most beloved pieces, as part of the libretto he wrote, quote, how sweet coffee tastes, lovelier than a thousand kisses, sweeter than muscatel wine. Henri de Balzac, the famous French playwright and author, penned an essay entitled, The Pleasures and Pains of Coffee. I believe Balzac provided the best explanation as why artists fell so deeply in love with Moca Java, quote, once coffee hits your system, ideas quickly march into motion, like the battalions of a great army, end of quote. This underscores a point I've been emphasizing throughout the Plants of the Gods podcast series, that these substances are ideogens, not just hallucinogens, ideogens, they help create new ideas and concepts. To repeat Balzac's quote, since it is so fundamental, once coffee hits your system, ideas quickly march into motion, like the battalions of a great army. Much of Balzac's prodigious output was turbocharged by his coffee consumption. According to some reports, the Frenchman was downing fifty cups a day. His death at the age of fifty-one might in some part be due to his coffee addiction. After all, one must wonder how the poor man ever got to sleep. Yet his countryman, the philosopher Voltaire, was even more addicted and more prolific. The author of over twenty thousand letters,

two thousand books and pamphlets, he was said to have consumed as many as seventy-two cups of coffee a day. To understand why coffee had an even more profound impact in Europe than it did in the Middle East, two topics merit a bit of discussion.

The first is potable water. As the human species began to relinquish the hunter-gatherer lifestyle, people began to live together in greater numbers and in greater proximity than ever before. With no understanding of hygiene or the germ theory of disease, once pristine water sources, like streams, rivers and lakes, became ever more polluted if not just outright toxic and poisonous. This at least partially explains why beer was invented at the same time and the same place as agriculture, the Fertile Crescent of Mesopotamia, about eight thousand years ago, in what is now Iraq. Because the preparation of beer and later coffee involves boiled water, microorganisms were reduced or killed, and because beer and wine were alcoholic, microorganisms were reduced or eliminated, hence beer, wine and coffee were much safer to drink than water. Prior to the advent of coffee in Europe, and given the absence of the Islamic prohibition of alcohol, many Europeans drank the equivalent of near beer all day long. The result was a population which lived and worked in what was essentially a constant state of mild befuddlement. The advent of coffee proved to be a revelation. Thanks to the caffeine, coffee, in moderation at least, enhances alertness, concentration, cognition and productivity. In the words of Anthony Wilde, they, quote, exchanged a state of permanent inebriation for a state of permanent caffeination. I love that quote. Not only was coffee safe to drink, but consumers could think more clearly and work better, harder and longer hours.

The increasing availability of coffee and the growing number of coffee houses in which it was consumed and new ideas were proposed and debated has been hailed as, quote, a brain explosion. None unlike what most certainly happened when our pre-human ancestors first consumed magic mushrooms, fermented fruits and coffee beans in East Africa. As had been the case in the Muslim world, coffee houses became wildly popular and proved to be a meeting of the minds and different classes and cultures with endless conversations literally fueled by a botanical stimulant. Many historians lose sight of the biological irony of this intellectual fervor, but not Anthony Wilde, who wrote, quote, caffeine is nothing more than a natural insecticide, and the high caffeine levels protect the coffee fruit from unwanted attention. Hapless insects, who ingest too much, find that their nervous systems go into overdrive. By the miracle of international trade, the same symptoms can be observed in office workers the world over. And in the ancient coffee houses of Europe, the same symptom could be observed. The first establishments in England were opened in the 1650s by Pasqua Rose, a Greek trained in Turkey in London, and the Angel in Oxford by a Lebanese gentleman known to history as Jacob the Jew. The Angel is still in operation at 40 High Street in Oxford, although it is now known as Queensland Coffee House, and across the street is the Grand Café, a relative newcomers, having been founded two years later after the Angel in 1654. The Grand was established by a Syrian Jew, meaning that coffee was essentially introduced to England by a Turk, a Lebanese, and a Syrian, which demonstrates how coffee was essentially percolated in the Middle East as it made its way from Africa to Midwestern Europe.

Nearly 25 years after the first coffee houses opened in England, the total number exceeded 3,000. The connection between coffee, conversation, debate, and learning did not end with the coffee houses in 17th century Europe. When I moved to Cambridge in 1974, the real

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Cambridge,

the one in Massachusetts, not the one in England, Harvard Square was percolating with great coffee houses like the Café Pamplona and the Café Algiers and bookstores like Shane Hoffs and Grolliers, and this helps explain why college and university towns almost always feature great coffee shops.

The combination between coffee drinking and coffee thinking is a real one. Let me repeat that, and this explains why coffee and university towns almost always feature great coffee shops.

The combination between coffee drinking and coffee thinking is a real one.

In point of fact, one can argue that this coffee drinking played an unquestioned role in moving humanity from the Renaissance all the way forward to the internet age.

The Renaissance, the word means rebirth, was a period in Europe in which society emerged from the preceding morass of the Dark Ages into an era with a focus on the classical arts, learning, and literature of ancient Greece and Rome, which in turn fostered the development of new ideas, perspectives, and technologies. This period then led to the Enlightenment, which while honoring the wisdom of the ancient Mediterranean sought new ideas based in reason and empirical observation. As we move into this part of the discussion, I want to pay special tribute to Tom Standage's wonderful book, *A History of the World in the Six Glasses*, which explains this aspect of the coffee story in great detail. It is one of my favorite books on drinks and history along with those of Dr. Patrick McGovern, who we hope to interview in an upcoming episode. In any case, as we heard in the episode on the ethnobotany of wine, the civilizations of the ancient Greeks and Romans were awash in wine. And as the intellectuals of the Enlightenment sought to move beyond these Mediterranean societies, coffee, a drink unknown to the classical world, was seen as one way of doing just that. To a society during the Enlightenment which prized clear and rational thought in the same way that coffee was the opposite of alcohol, coffee houses were the antithesis of bars and taverns. Yet, as was the case in the Islamic world, all this gathering and blathering in the coffee houses made at least some of the authorities nervous. In this new environment, people of all classes could interact and engage in free and open discussions, challenging traditional beliefs and traditional power structures like the monarchy and the church, which made these traditional power centers very nervous. According to Standage, Catholic opponents of coffee claim that, quote, since Muslims were unable to drink wine, the devil had punished them with coffee instead, so that Christians should not be permitted to drink coffee. In a possibly apocryphal encounter near the dawn of the 17th century, Pope Clement VIII was asked to rule on the question of whether coffee should be banned. After he sampled a cup, he smacked his lips and announced, quote, this Satan's drink is so delicious that it would be a pity to let the infidels have exclusive use and he approved coffee for Catholics. In 1675, King Charles II of England proved apprehensive about commoners and nobility gathering in coffee houses and having unfettered

and caffeine-fueled discussions and debate about political and social issues. He issued a proclamation

aimed at suppressing coffee houses, claiming that these venues were, quote, seminaries for sedition, end of quote, that were spreading, quote, diverse false reports, end of quote, the 17th century equivalent, I suppose, of fake news. Parallel concerns were expressed by the women of the day who were excluded from British coffee houses. They complained

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that

their husbands were spending so much time in coffee houses that, quote, the whole race was in danger

of extinction. Not the similar argument was put forward in a lewd pamphlet from women excluded from these cafes entitled, quote, humble petition and addresses of several thousands of buxom good women languishing in extremity of want, end of quote, who complained that men were spending so much time in coffee houses and drinking so much coffee that they arrived home with, quote, nothing stiff but their joints. What then was the draw, in addition to the caffeine, that drew these men in whose debates and discussions made the Enlightenment so enlightening? Unlike today, these coffee houses were centers of financial, intellectual, political, and scientific activity. According to Standage, these institutions were, quote, centers of self-education, literary and philosophical speculation, commercial innovation, and in some cases, political fermentation. Take that, Dr. Seuss. Europe's coffee houses functioned according to Standage as the Internet of the Age of Reason. One underappreciated aspect of the power and purpose of these 17th century cafes was public education. In most of the Western world at the time, particularly in class-ridden England, higher education was open to and affordable by the extremely wealthy. Yet any man, for the price of a cup of coffee, could enter rub shoulders, ask questions, or debate ideas with some of the greatest minds of all time. Mathematician Isaac Newton, economist Adam Smith, satirist Jonathan Swift, and architect Christopher Wren were all devoted denizens of the coffee houses of their day. That these venues were so highly regarded as a place where the common man could enter and learn from brilliant thinkers led to the coffee houses to be known as, quote, penny universities, which was the cost of a cup of coffee. Take that, Starbucks.

It's hard to overestimate the intellectual prowess of some of the polymaths who frequented the coffee houses. Christopher Wren was not only an architect, he was also an astronomer, a physicist, and a co-founder of the Royal Society, Britain's most prestigious scientific organization of the day. Wren is best known for designing and building some of London's most iconic edifices after the Great Fire of 1666, including St. Paul's Cathedral. Robert Hook was an astronomer, biologist, physicist, and microscopist, and urgent planner. Using the microscope, he is the person who discovered the cell. Edmund Halley was an astronomer, mathematician, and physicist who described the orbit of the comet, which was eventually named after him. And perhaps the two most impactful gentlemen who did some of their most creative thinking and arguing in British cafes were Isaac Newton, astronomer, mathematician, and physicist, and Adam Smith, Scottish economist and philosopher. Newman's book Principia, generated in part by

coffee house conversations, detailed his thoughts on the laws of motion and gravitation, and served as the basis for modern physics. Adam Smith authored The Wealth of Nations, which was to capitalist economics what Newton's book was to physics, and Smith penned much of his masterwork in the British coffee houses in Coxborough Street, a gathering place for Scottish intellectuals. Note that the scripting of immortal works in British coffee houses did not cease with the conclusion of the Enlightenment in the late 18th century, while Adam Smith was a Scott who wrote his enduring treatise in England, a British woman penned her timeless books in Scottish coffee houses just a few years back. Slightly more than two centuries after the publication of The Wealth

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of Nations, a single mother living on welfare began writing fiction in Edinburgh coffee houses, she commented, quote, it's no secret that the best place to write, in my opinion, is in a cafe. You don't have to make your own coffee, you don't have to feel like you're in solitary confinement, and, quote, if you have writer's block, you can just get up and walk to the next cafe while giving your batteries time to recharge and your brain time to think. The best writing cafe is crowded enough to allow you to blend in, but not too crowded that you have to share a table with someone else, end of quote. Sometimes calling herself Joanne Murray, she's more widely known to the world as J.K. Rowling, author of the Harry Potter series, which is sold to date over 500 million books in 80 languages. It's important to emphasize, once again, that coffee was much more than a drink and a wonderful new book by Jacob Mikhanowski called

Goodbye Eastern Europe. He points out that coffee was this almost unattainable goal that people would

strive for, would lust for, would do just about anything they get a hold of. Let me read a wonderful quote that encapsulates this talking about the role of coffee in communist Romania, quote, coffee, real coffee, had less spiritual significance than some other products, but it was just as valuable. Most of what one could find in stores was a coffee substitute made from burnt chickpea flour called neckazole. Actually, no one was really certain what it was made of. It might have contained barley, chestnuts, or chickpeas, probably with a small admixture of

coffee to boot. Some people would sieve it before brewing that is strain it to get the bits of straw out. Even coffee dregs were a treasure to be used and reused again and again until they lost all their flavor. Pure natural coffee was almost too precious to use right away. One Romanian father managed to obtain a few dozen real coffee beans for his son. In those days, it felt as if time had reached a total standstill and socialism would last forever. The father was convinced that authentic coffee would soon disappear from his part of the world for good, so he kept his handful of beans safely hidden in a hermetically sealed container as an inheritance for his little boy. He wanted to be sure that one day when he was a grown man, his beloved son would be able to have a single cup of real coffee and savor just once the smell of freedom. End of quote.

One particularly noteworthy development and outcome of British coffee houses during the Enlightenment was how they began to specialize and turbocharge developments in certain fields from science to insurance. Standage wrote, quote, coffee houses functioned as information exchanges for scientists, businessmen, writers, and politicians. Depending on the interests of their customers, some coffee houses displayed commodity prices, share prices, or shipping lists on their walls. Others subscribed to foreign newsletters filled with news from other countries. Coffee houses became associated with specific trades. Acting as meeting places where actors, musicians, and sailors could go if they were looking for work. Coffee houses catering to a particular clientele or dedicated to a given subject were often clustered together in a single neighborhood. This specialization around the topic or a business culminated in the creation of major and enduring institutions. According to Anthony Wilde, quote, the shipping interest at Lloyds Coffee House became Lloyds of London, the powerful insurance underwriter. The London stock exchange

emerged from Jonathan's Coffee House. In Oxford, Tilliards was the coffee house and which was

founded

the Royal Society, which was to become the most illustrious scientific institution of the age. Meanwhile, in France, coffee house culture not only led to intellectual advances, but also to violence. As in England, cafes were popular gathering places for discussion and dissemination of new ideas, like individual rights and questioning the value of the monarchy. Thinkers and coffee drinkers like Diderot, Rousseau, Voltaire, and even Benjamin Franklin were regular customers. The combination of caffeine, radical ideas, and the development of revolutionary fervor proved a combustible one. Ironically, the French monarchy's support of Enlightenment ideals in America proved part of their undoing. According to Standage, quote, as France struggled to deal with a mounting financial crisis largely caused by its support for America in the Revolutionary War, coffee houses became centers of revolutionary ferment. Enlightenment ideas and economic hardship made France a tinderbox. As pressure mounted, the French philosopher Montesquieu wrote, quote, Were I the king, I would close the cafes. For the people who frink with those places heat their brains in a very tiresome manner. I would rather see them get drunk in taverns, than at least they would only harm themselves, while the intoxication which coffee arouses in them causes them to endanger the country's future. Montesquieu's analysis proved prescient. The leaders of the French Revolution, men like Desmoulins, Danton, Barot, and Robespierre, fomented their insurrectionary plans at Parisian coffee houses like Procope, which still stands in the heart of Saint-Germain. In fact, a speech by Desmoulins at the Café de Foy in Paris in 1789, calling the citizens to arms, set the chaos in motion, and the caffeinated mobs storm the Bastille just a few days later. Before I wind up this episode, in response to our listeners' request, I want to add a bit of botanical background for my fellow plant nerds. The genus *Coffea* is native to Africa in the island of Madagascar. It is a member of the Rubiaceae family, which also contains the quinine tree, which we'll be discussing in a later episode. Most of the world's coffee is derived from one species, *Coffea arabica*, native mostly to Ethiopia, although some specimens have been found in neighboring Kenya and South Sudan. Coffee is a beautiful shrub or small tree, which can reach in excess of 20 feet, 30 feet in some cases, in the wild. It features smooth, dark evergreen leaves, born in pairs on opposite sides of the stem. Exquisite white flowers are extremely fragrant. The fruits, known as coffee cherries, resemble large holly berries. Coffee beans are not beans at all, but resemble true beans, which are members of the legume family. Coffee fruits typically contain two of these beans, which are actually seeds that are covered by pulp mucilage and parchment. So to be clear, coffee beans, botanically speaking, are not beans, they're seeds. Once the ripe beans have been picked, usually by hand, since they're delicate and must be picked at the peak of ripeness, the so-called beans are extracted, processed, dried, and roasted to produce commercial coffee. One peculiar and somewhat more expensive form of coffee is peaberry. A peaberry is simply a double coffee bean. Most coffee fruits produce two beans per cherry, but in one case out of ten, only a single bean develops. Some coffee aficionados claim that peaburys produce a more intense, more flavorful cup of coffee, but if so, the difference is lost on me. As an aside, an even more expensive coffee is, quote, kopi luak from Indonesia. Coffee fruits, known also as coffee cherries as noted earlier, are fed to palm civet cats, which are small, mongoose-like mammals in Southeast Asia. Enzymes in the civet's digestive

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tract are supposed to alter the beans' flavor, which are then excreted, then washed, carefully, I hope, then roasted, ground, and prepared. Inspired by this weird process, the Brazilians are doing something similar with guans, which are rainforest turkeys, known as jacu bird coffee, and the ties are doing it with elephants, which is then sold as black ivory coffee, which can cost up to a thousand dollars a pound. Meanwhile, there's another species, in addition to *cafe arabica*, which plays an important role in coffee cultivation and production. Robusta coffee, with the scientific name of *cafea canephora*. Robusta is hardier than arabica, whereas arabica must be grown above 2,000 feet on well-drained mountain slopes. Robusta can thrive from sea level up to 2,000 feet and can survive warmer climates as well. Moreover, robusta beans contain twice as much caffeine as those of arabica, meaning they require fewer pesticides, since caffeine, as we've heard, is actually an insecticide. And they have a stronger flavor and more bitter taste and produce more crema, which is why robusta is often used to make espresso or included in espresso blends. To coffee aficionados, robusta is generally considered a less expensive and lower quality product, but its hardiness, lower susceptibility to disease and ability to grow in hotter and lower regions, and its desirability for espresso blends make it a valuable commodity in its own right. Worth noting is that there are dozens of endemic species of *cafea* found in Madagascar, the enormous island located off the southeast coast of Africa across the Mozambique Channel. As far as we know, these species are caffeine free, meaning that these wild species might one day prove useful in crossbreeding with commercial species to reduce caffeine content, increase yields, and enhance resistance to pest and diseases. Meanwhile, the global economic value of coffee is staggering. After petroleum products and precious and industrial metals, coffee represents one of the world's most valuable commodities. Put another way, Americans are estimated to consume more than 400 million cups of coffee every day, and several northern countries like Finland, Norway, and Sweden drink way more coffee than Americans on a per capita basis. In fact, again in terms per capita, the U.S. with coffee houses on so many corners does not even rank in the top 10 of coffee drinking countries. Let me say that again. In terms of per capita consumption, the U.S. with coffee houses on so many corners does not even rank in the top 10 of coffee drinking countries. Yet one can accurately state the demand for coffee is out of this world. According to Jonathan Morris, not only do scientists drink coffee at the Antarctic Research Lab, but there is an Italian espresso machine on the International Space Station. So let's talk a bit about the role of coffee and the culture and history of the United States. Coffee had been available in Boston for over a century prior to the American Revolution. When the British imposed heavy taxes on tea, coffee was considered a patriotic alternative. In fact, the famous Boston Tea Party on the evening of December 16, 1773, was planned in the Green Dragon, which was both a coffee house and a tavern, and served as a meeting place for Samuel Adams, John Hancock, Paul Revere, and other members of the Sons of Liberty. Daniel Webster called the Green Dragon, quote, the headquarters of the revolution. Coffee, as would also be the case with Bourbon, was seen to be a patriotic drink versus British tea and British rum, according to Habhaus, quote, there were tea parties and emulation of the affair in Boston Harbor that took place in

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every one of the other colonies. Social events pledging those present to drink coffee instead of tea became badges of respectable revolutionary fervor. It was a socially and politically brave man or woman who stuck to tea after independence. As would be the case in France, caffeine generated

upheaval. In 1922, American journalist William Yookers penned the classic book *All About Coffee*, in which he stated, quote, wherever it has been introduced, coffee has spelled revolution.

It has been the world's most radical drink in that its function has always been to make people think. And when the people begin to think, they become dangerous to tyrants.

Coffee played a role in both the colonies and the new nation. Alexander Hamilton drew up plans for the Bank of New York, a predecessor of the National Bank, at a coffee house on Wall Street in 1783. The Declaration of Independence was first read aloud to the public at Philadelphia's Merchant

Coffee House. And as the Enlightenment gave way to the Industrial Revolution, as the 1700s drew to a close, the role of coffee shifted as well. In the American colonies, just as in Europe, coffee and coffee houses catalyzed development and promotion of new ideas. With the Industrial Revolution, however, denizens of rural areas flocked to the cities to take time-consuming, monotonous, and often dangerous factory jobs. In these settings, coffee enhanced alertness and improved coordination, which not only increased productivity but could mean the difference between

life and death in coal mines, textile mills, and iron foundries, which featured few safeguards.

During the Civil War, coffee assumed a primary role in maintaining soldiers' morale, alertness, and well-being. Coffee beans, as a relatively light and non-perishable foodstuff, served as a treasured and essential component of the Union Army rations. Jonathan Morris wrote, quote, Coffee centrality to the troops' existence can be gauged from the fact that the word coffee appears more frequently in Civil War soldiers' diaries of the period than rifle, cannon, or bullet.

Soldiers then and now prize coffee as an appetite suppressant and an unfailing source of alertness and energy. One peculiar coffee-laced episode from the Civil War led to an American presidency and thus bears retelling. The bloodiest day in American history was September 17, 1862, at the Battle of Antietam, with a combined tally of 22,727 dead, wounded, or missing. Future U.S. President, but then Sergeant William McKinley, made his way to the front lines, dodging heavy fire and serving hot coffee to his fellow Union soldiers.

McKinley's actions were considered such a morale booster that his efforts became known as, quote, McKinley's Coffee Run, and were immortalized by a monument on the battlefield near Sharpsburg, Maryland. Nonetheless, compared to Jimmy Doolittle's Daring Raid on Tokyo in 1942, paratroopers dropping behind Nazi lines the night before D-Day in 1944, or Navy Seals helicoptering into hostile territory to finish off Bin Laden in 2011, McKinley's Coffee Run doesn't rank very high on the list of U.S. military heroics. The end of the 19th century in the U.S. saw a shift towards convenience over freshness and taste in food and drink, and coffee was no exception. Fast-paced lifestyles, demand for instant gratification, and the move towards standardization led consumers to canned and instant coffee. Taste and quality took a backseat, not just with coffee but with all consumables. With hairy consumers, egged on by clever and insistent marketing, frozen and canned

foods dominated the pantries and kitchens of American families. The Cultural Revolution of

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the 60s and 70s, driven by the baby boomers, and fueled by not a few plants of the gods, wink, wink, saw increased appreciation and demand for fresher, healthier, tastier, and even organic food stuffs, including coffee. We tend to associate this counterculture with the so-called hippies, but the movement really began with the beatniks. Young people in the 1950s, who rebelled against conventional societal norms, rejected materialism and expressed their creativity through literature, poetry, and folk music. Part of their rebellion was expressed in their disdain for their parents' drug of choice, alcohol, instead famous beatniks like Alan Ginsberg and Jack Kerouac, downed coffee and famous coffee houses like the Vesuvio in San Francisco, the Café Regio in Greenwich Village, or the Club Passim in Harvard Square. As part of their rejection of mindless consumerism and materialism, these folks helped spearhead the specialty coffee movement, which focused on the production and enjoyment of high-quality coffee. Eventually, coffee was treated as wine, not something

to quaff in a hurry, but a libation to savor and appreciate. Note that wine, according to Jonathan Morris, contains about 300 compounds affecting flavor, whereas coffee has well over a thousand. Meanwhile, the specialty coffee movement places a strong emphasis on quality and flavor and artisanal craftsmanship. Direct trade relationships with coffee farmers feature top prices for high-quality beans to emphasize fair trade, address economic inequalities, and support sustainable practices. And these coffee enthusiasts employ special brewing methods unknown to their parents, like cold water process, French press, and pour overs to enhance the enjoyment of both the coffee and the experience in general. No electric percolators are Mr. Coffee Machines for them. So why did this movement originate in the western U.S.? Whereas the earliest

and most important ports for importing coffee were New York and New Orleans, several historical events

led to the West Coast becoming the leading center of coffee culture. One was the Gold Rush in the mid-1800s, in which people from the East Coast chose to travel through the Isthmus of Panama and Central America to reach California, which was quicker than traveling overland across the U.S. in those days. This increased maritime connections between the West Coast, where the demand was, and Central America, where the coffee was produced. And the 49ers, as the miners were then known,

wanted coffee for all the same reasons cited above. And to increase its competitive advantage, the Port of San Francisco developed better unloading and distributing facilities than existed in New York and New Orleans, the predominant coffee ports of the day. Shortly thereafter, during the First World War, the coffee from Central America, often produced on German-owned plantations and intended for the Port of Hamburg, Germany, was diverted to San Francisco instead. Meanwhile, a boom in coffee shops in both the Bay Area and Seattle, Pete's was founded in Berkeley in 1966, while Starbucks was founded in Seattle in 1971, fostered increased interest in, demand for, and appreciation for specialty coffee throughout the West Coast. So it is no accident that this revolutionary brew, coffee, married to a culture of creativity and innovation, helped foster the birth of Microsoft in Seattle and Silicon Valley in the Bay Area, one of the greatest technological advancements in human history. In the words of Tom Standage, coffee remains the preferred drink for anyone seeking an intellectual edge in the 21st century, just as it was in the 17th.

Its association with innovation, reason, and networking, plus a dash of revolutionary fervor,

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has a long pedigree, end of quote, and thank you coffee.

Hey guys, this is Tim again, just one more thing before you take off, and that is Five Bullet Friday. Would you enjoy getting a short email from me every Friday that provides a little fun before the weekend? Between one and a half and two million people subscribed to my free newsletter,

my super short newsletter called Five Bullet Friday. Easy to sign up, easy to cancel. It is basically a half page that I send out every Friday to share the coolest things I've found or discovered, or have started exploring over that week. It's kind of like my diary of cool things. It often includes articles I'm reading, books I'm reading, albums perhaps, gadgets, gizmos, all sorts of tech tricks and so on that get sent to me by my friends, including a lot of podcast guests, and these strange esoteric things end up in my field, and then I test them, and then I share them with you. So if that sounds fun, again, it's very short, a little tiny bite of goodness before you head off for the weekend, something to think about. If you'd like to try it out, just go to tim.blog/friday, type that into your browser, tim.blog/friday, drop in your email, and you'll get the very next one. Thanks for listening. This episode is brought to you by my very own Cockpunch Coffee. Goodness gracious, does it give me the giggles just to say that. This year, one way I've scratched my own itch is by creating Cockpunch Coffee. The first coffee I've ever produced myself, in which I now drink every morning. It is a tie-in to a fictional world that I created, but that is another bizarre story for another time. Now there is some karmic upside to this whole project that I'll get to in a second. Back to the coffee, I enlisted the help of world class experts. I have access to a lot of them and tested dozens of variations over many months. As longtime listeners know, I have very high standards when it comes to coffee, and I have been diagnosed also with moderate severe OCD, so I pay attention to the details in this case, and that is actually a true statement. After dialing in the sourcing, roasting, and more, this is the combo that finally made me say this is the one. And it was very clear, it was immediate, it was practically instantaneous. Nothing else had quite hit the mark, and then this one did after a lot of tweaking. To learn all about it, check out cockpunchcoffee.com, spelled as it sounds, which is a mighty strange website in and of itself. Now here's the karmic side. 100% of my cockpunch-related proceeds date, which are now around \$2.5 million, including those

from cockpunchcoffee.com. Go to my non-profit foundation, the Saisei Foundation, which focuses on cutting

edge scientific research and other uncrowded bets. Many of the game-changing early-stage psychedelic research that you've read about in the press, the news, the media over the last five years has been funded by the Saisei Foundation behind the scenes, but that is not all that it does. To learn more about the latest projects that I am working on, you can check out SaiseiFoundation.org

that's spelled S-A-I-S-E-I Foundation.org. SaiseiFoundation.org. Saisei means, among other things, rebirth in Japanese, and having spent a lot of time there, that word has special meaning for me on a bunch of levels. And if you'd like some of the best coffee in the United States, at least in my humble opinion, check out cockpunchcoffee.com. I think you'll love it as much as I do, and by buying a bag, you're doing some good at the same time. Since my portion of the proceeds, go to the Foundation. Grab a bag or two or three at cockpunchcoffee.com one more time,

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because I get the giggles just saying it. That's cockpunchcoffee.com.