



# THE CHEMICAL MUSE

DRUG USE AND THE ROOTS OF WESTERN CIVILIZATION

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THOMAS DUNNE BOOKS.

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**For Dante**  
May you always know yourself

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## **Introduction**

I should have seen it coming. After a decade of tireless study in both the sciences and the humanities, thousands of dollars in student loans, two master's degrees, hundreds of hours of grading papers and working with students of my own, and a series of rigorous proficiency exams—designed more than anything else to scare me into

knowing as much as I could about everything that had happened over two thousand years ago—I sat in the only suit I could afford, awaiting the verdict on my dissertation exam. The five professors who made up my committee had grilled me for more than two hours, without a single compliment or even a hint of encouragement. They seemed to be preoccupied with just one particular chapter of my 250-page thesis. I shouldn't have been surprised; my paper's larger topic, the use of medicinal drugs in the Roman Republic, was accepted, but what they disliked was the chapter in which I wrote about the Roman penchant for recreational drugs and the prevalent use of psychotropics by just about everyone in antiquity, farmers and aristocrats alike. When the committee called me into the room, nobody was smiling, not even my advisor. They detained me for another hour or so and then left the room, one by one. Not a single member of the committee gave me the traditional "congratulations, doctor" handshake or wished me luck on a bright academic future. When everyone but my advisor had exited the room, I humbly asked her if I had passed. It was at that point in my life that I first discovered the fine line between intellectual compromise and total capitulation.

The choice was simple. Take out the chapter on the ancient world's recreational drug use, and any references to narcotics in the rest of the dissertation, or fail the exam. I had seen the evidence for myself, and I knew my conclusions were sound. But it seemed obvious that the committee just didn't like the implications of a drug-friendly Western society. After all, the most vocal member of my committee, the head of the department, had refuted my conclusion that the Romans used recreational drugs with the seemingly nonacademic response, "They just wouldn't do such a thing." After years of research, the best that academia had to offer was an anachronistic presupposition: We think drugs are bad, so why wouldn't they?

I felt as if I hadn't gotten my day in court; I was being forced to bury the truth in order to fulfill some sort of moralistic agenda. I knew the founders of Western civilization used recreational drugs, and I had plenty of examples to prove it, but nobody wanted to hear that. So I did the only thing I could; I tucked my scholarly tail between my legs and deleted the sections in my dissertation on narcotics, stimulants, and psychedelics. This pleased the members of my committee, especially those most adamantly opposed to the thought that the greatest minds of antiquity might have indulged in drugs. Within two or three days they had all signed my degree warrant, and presto, I became a Ph.D.

Several months later I decided that the facts I had learned as a grad student were too important to remain hidden by overly conservative academics. After continuing my research into drugs in a, I decided to take my case to the public; I wanted to present the facts to anyone interested, to put as much evidence on display as possible, and to let everyone outside of academia reach the conclusions for themselves. During my tenure as a doctoral student, I had found an excellent book on the history of opium published by Thomas Dunne, publisher of his own imprint at St. Martin's Press. I wrote up a proposal and fired it off. A few months later, I found that I would indeed have my day in court.

In writing *The Chemical Muse*, I wanted to show that recreational drugs were an integral aspect of the same societies that gave us valuable concepts like democracy and the scientific method. I wanted the modern West to see that its founding fathers were drug users, plain and simple; they grew the stuff, they sold the stuff, and, most important, they used the stuff. The modern antidrug campaign is not a democratic movement at all; the ancient world didn't have a Nancy Reagan, it didn't wage a billion-dollar drug war, it didn't imprison people who used drugs, and it didn't embrace so-

briety as a virtue. It indulged... and from this world in which drugs were a universally accepted part of life sprang art, literature, science, and philosophy.

In order to understand the demand for narcotics and the prevalence of psychotropic drugs in antiquity, it's important also to understand the harsh reality of life several thousand years in the past. The first chapter of this book is all about the risks, injuries, and disappointments that dominated life in ancient Greece and Rome and offers some examples of the great minds produced in this ancient crucible. Plagues, natural disasters, poor sanitation, and wars kept pressure on the biological struggle for survival. Life was truly difficult, and the likelihood of your making it to your seventh, eighth, or ninth decades was dramatically lower than it is today. The ancient world didn't worry about heart attacks, strokes, or diabetes. Their killers were the elements of their harsh environment, not poor diet and lack of exercise. Yet despite such harsh circumstances, Classical civilization gave birth to ideas that would guide cultural development of at least three continents for almost two thousand years after its decline.

As a result of rampant disease and endless variations of physical suffering, the ancient world turned to drugs for the treatment of specific ailments and many forms of pain relief. Ancient medicine, championed by such figures as Hippocrates and Galen, relied heavily on botanicals in the treatment of disease. Ancient medical texts, many of which have never been translated from the original Greek and Latin, are full of descriptions of potions, salves, ointments, purgatives, plasters, and all sorts of other complex medications. It's safe to say that when the Greeks and Romans got sick, they inevitably turned to drugs, as described in this book's second chapter. Antiquity's drug knowledge was the result of hundreds—if not thousands—of years of trial and, no doubt, error with local plants and vegetation. Like other cultures, the Greeks and Romans found out that some botanical species could treat wounds, some could ease pain, others could even prevent pregnancy... and they used them without reservation. The Greeks and Romans understood that plants could be used as curatives, but they also discovered that drugs could drive you out of your senses. They had experience with a number of plants and fungi—things like opium poppies, ergot, mushrooms, and belladonna—that contained strong, mind-altering chemicals. The third chapter of this book examines the most prevalent recreational plants and the potent narcotic and psychotropic drugs they contained. The Classical world, with its great philosophers, tragedians, and statesmen, was well aware of the euphoria, sedation, and temporary psychosis of certain substances derived from plants and animals.

The fourth and fifth chapters of this book begin a cursory investigation of some of the most prominent effects of recreational drug use on the development of ancient culture. In these chapters I look at the peculiar *narco-mythology* of the Greeks and Romans and the very real existence of drug-wielding sorcerers in antiquity.

Stories of mythic witches tell us much about the practices of actual sorcerers and soothsayers. After looking at the impact of drugs on the myths we all know, I turn to ancient magicians, a real group of people who were notorious for their command of powerful drugs. Ancient authors immortalized these wonder workers, just as they did the famous warriors, philosophers, and statesmen of their era. Many of the magic workers found in Classical literature were nothing like our modern concept of the witch, a term we see through the filter of the Middle Ages. Ancient sorcerers didn't wear black hats and ride on broomsticks; they prepared and administered drugs, thereby miraculously "transforming" their victims or willing participants. In fact, ancient sorcerers were much more like the drug dealers of today than the devil-conjuring crones of post-Classical literature.

In chapter 6 I examine the subject of "inspiration, as it applies to writing, and highlight several ancient authors who used the image of drugs and drug users to create their own peculiar genre of drug-inspired literature. These authors not only spoke of psychotropics, but actively appealed to drug-using audiences who could fully appreciate the image of intoxication. I use the works of three storytelling artists, namely, Homer, Virgil, and Ovid, to show that the Classical world's greatest writers clearly accepted recreational drugs as a foundational element of their culture. While nobody in a drug-friendly society like that found in antiquity would feel pressure or have reason to publicly admit to their own use of mind-altering chemicals, these three individuals betray a knowledge of drugs that can only have come from firsthand use.

Chapters 7 and 8 address the effects that drug use had had on the philosophy of Western society and the democratic form of governance the ancient world produced. Here, I look at the development of early Greek philosophy under the influence of psychotropic and narcotic substances. In chapter 7 I try to answer some of the more important questions presented by an awareness of the ubiquity of mind-altering substances in Greece and Rome. For example, did drug use affect the development of Greek ideas about humanity's place in the universe? In chapter 8 I look at the fruit of the drug-influenced psyche... which is none other than democracy itself.

In the conclusion, I tackle the question "What does all this mean?" So the Greeks and Romans used recreational drugs! What implications can we find for our modern world? History presents us with myriads of upright, important, brilliant, vibrant people who made positive contributions to the development of the world around us while using drugs. In reading this book, you may come to the conclusion that the West would not have survived without these so-called junkies and drug dealers; and you, as a beneficiary of the Renaissance and the Enlightenment, would not be an heir to the freedom for which the Western world has been known for centuries.

Information contained in *The Chemical Muse* will not make me popular. Recreational drug use is an aspect of our history that has been dutifully covered up and effectively ignored for the past fifteen hundred years. It may cast a shadow on the great statesmen, poets, and philosophers that we have held up as paragons of virtue over the centuries, and it may make us think twice about some of our modern assumptions about the ancient world, but it is a story that needs to be told. I do not regret opening Pandora's box. If that's what *The Chemical Muse* achieves, I will have managed to regain a bit of my idealism and courage from my years as a graduate student.

Finally, I would be remiss in my duty to the work at hand if I failed to mention briefly a strange incident that took place immediately before the doctoral examination that sparked this entire project. As I waited nervously in my office, trying to anticipate the barrage of questions that would come my way, a kindly-looking, gray-bearded man appeared at my door and asked if I could answer a question. Taken by surprise, I replied that I was just about to go to the most important exam of my career but that I would be glad to indulge him for a few minutes. Completely unaffected by the quiet of my situation, the old man asked me a question I will never forget. With a pleasant but slightly disturbing smile he said, "Why do you think the gods killed Actaeon?"

Actaeon was a hunter in Greek myth who stumbled upon the goddess Artemis while she was bathing. Incensed, she turned him into a stag, whereupon his own hunting dogs devoured him.

In response to his question, I flippantly said, "Well, I guess the gods don't like Peeping Toms." Without pausing to acknowledge the absurdity and sarcasm of my response, the strange fellow proceeded with his own answer. He said, "I think it's all about the *violation of the sacred*. You see, the gods killed Actaeon because he saw too

much. And that's what happens when you go beyond the limits of your fellow mortals." With that he wished me good luck and walked away. I didn't think twice about our little conversation, but ran headlong in to my fateful meeting. At the time, I must admit, I thought this gentleman must have been a bit of a kook. After experiencing the disaster of my dissertation examination I can't help but feel a bit like a man devoured by his own allies . . . like someone punished by the gods for seeing too much. In a way, the old man let me know what was about to happen to me, and thus left me with a key to understanding my own fate. For that, I humbly thank him.

## **1 The Ancient Crucible**

The Greek knew and felt the terror and horror of existence.

—Friedrich Nietzsche

Two thousand years ago, life was nothing less than an endless struggle for survival. The cultural milieu of the ancient Greeks and Romans, something we now call Classical civilization, gave birth to venerated institutions and ideas like Western philosophy, the scientific method, and democratic governance, yet it was neither idyllic nor romantic. Antiquity saw the birth of humanism and political freedom, concepts that

brought hope and prosperity to the West and ultimately sparked the Renaissance and Enlightenment, but the ancient world was very much a place of overwhelming anguish. Greece and Italy were home to renowned authors and statesmen like Pliny, the natural historian, Pericles, the democratic reformer, and Julian, the Roman emperor who tried in vain to break Christianity's stranglehold on state affairs, but in the midst of such psychologically liberating tendencies, distress and misery were accepted facts of life, cruel torments sent by a host of merciless gods. Men and women died a thousand preventable deaths in antiquity, where existence was oftentimes a sorrowful tragedy, a pitiful farce that opened with a chorus of grieving mothers and closed with the entire cast's premature exit.

Natural disasters, fatal diseases, and unending warfare dogged man's every step from womb to pyre like maddening Furies. Volcanoes, epidemics, and vicious combat brought death and destruction, claiming the lives of the famous and the infamous alike, along with history's forgotten multitudes. The devastatingly harsh conditions that prevailed forged literary traditions characterized by equal proportions of pessimism and passion. Modern audiences often fail to appreciate the ancient world's understanding of the transience of life, and thereby misread Greek and Latin literature. Scholars, Hollywood, and a now vanishing breed of high school Latin teachers see much more of themselves in ancient peoples than actually exists. Give them a toga and a laurel wreath and they'd suddenly think they're Julius Caesar. However, history just doesn't work that way. Time and social evolution have changed the ways we live and die, and thus our experiences as a species.

Today the West views death as an endogenous process, the breakdown of the body, while ancient Greeks and Romans saw it as the result of uncontrollable external forces. Catastrophes killed them; we kill ourselves. Fatty foods, indolence, and a history of smoking give most of us moderns that ignominious heart attack, stroke, or cancer that escorts us to our resting places. However, in antiquity plague, famine, and hand-to-hand combat cut life short. Those who managed to live long were champions of a small but resilient minority. They were a select few, constantly aware that most of their contemporaries were not so lucky. Accordingly, sorrow, pessimism, and anxiety form a strong undercurrent in Classical literature, produced as it was by those who survived the diseases and wars that dominated ancient life. Classical myth, the lifeblood of Western society, is endowed with a spirit of tragic evanescence, a heartfelt communion with the metaphysical reality that life is painful and fleeting. Two millennia ago people were capable of living just as long modern postindustrialists, but most didn't. Harsh environmental factors lowered the average survival rate in antiquity, but it's important to understand that the biology of human life was no different. People are not capable of living longer today than they did then, they just manage to dodge the statistical bullets of the ancient world. Although it's impossible to put a number on the average life expectancy of the Classical world with any accuracy, the written records left behind by the Greeks and Romans make it clear that it was much lower than it is today.

Much of the great psychological burden imposed by the harsh living conditions of ancient life has been alleviated, making it difficult for us to fully appreciate the customs, values, and mores found in ancient literature. More important, a great demographic gulf prevents us from understanding several facets of the Classical world that have been intentionally ignored by modern scholars, namely, the widespread use of mind-altering substances, antiquity's enduring obsession with drug-wielding sorcerers, and the profound influence of narcotics on the development of Western literature and society.

In order for us to wrap our modern minds around the ancient love affair with drugs, we must first understand why these chemicals were so desperately needed; we must ask ourselves what compelled the Greeks and Romans to seek the solace offered by pharmaceuticals, and how their lifestyles and living conditions induced them to become experts in the use of narcotics. Examining the ancient world's struggle with the forces of nature, disease, and violence will show us why drugs were such valued commodities and how the Greeks and Romans started their cultural journey on the path toward discovering the psychotropic and analgesic effects of certain natural substances.

The search for information about antiquity begins in the dust and ashes of ancient ruins. Beneath the ominous shadow of Mount Vesuvius today, tourists walk the streets of Pompeii peering in at the remains of once-lavish temples, public buildings, marketplaces, and eateries. Archaeologists who excavated the site made grim plaster molds of impressions left by the volcano's ash-covered victims, which give viewers today the eerie feeling that the dead still inhabit the dark corners of the city. Pompeii, along with one of her close neighbors, Herculaneum, is amazingly well preserved for one simple reason: It was completely wiped off the map of human affairs by a volcanic eruption in 79 A.D. forces that snuffed out its inhabitants with such sudden violence preserved it for later generations.

Across the Mediterranean, tourists drink and dance the night away on the picturesque island of Santorini. The island, just a few hours journey from mainland Greece, is a wonderful place to relax, unwind, and maybe sow a few wild oats. Long before it became a popular vacation spot, it was known as Thera, the home of an ancient people we call the Minoans. A terrible explosion on this volcanic island sometime around 1600 B.C. buried its settlements in ash and forever transformed its circular shape into something resembling a crescent moon enfolding a monstrosly ominous crater. Like Pompeii, it sports some fantastic ruins.

Both Pompeii and Thera tell us one important thing about the ancient world: Natural disasters occasionally wiped out everything from small communities to neighboring villages, large cities, and even entire cultures. There were no emergency warning systems, no protective architecture or sophisticated fire codes, no storm cellars, no disaster plans, and no International Red Cross. When tragedy struck in the form of an earthquake, volcano, flood, or fire, the people of antiquity bore the full weight of nature's wrath. Victims of natural disasters simply vanished.

Archaeological ruins like those of Pompeii make for sensational viewing, but it's important to remember that the disaster that preserved the city's streets and buildings also snuffed out the lives of countless victims. Pliny the Elder (a title meant to distinguish him from his nephew of the same name) was one such man. He died while valiantly trying to rescue survivors from the terrible devastation of the fiery eruption. As the head of the Roman naval fleet stationed in the area, he was in an excellent position to render assistance to those who fled to the beaches to get away from the ash and noxious fumes. Of course, his rescue attempt was not entirely altruistic. As an author of a lengthy and rather obsessively detailed work on natural history, he was quite anxious to view firsthand the behavior of Vesuvius.

Curiosity got the best of Pliny. He succumbed to the poisonous gases belched up by the volcano. It was a sudden and sad end to the life of a man who spurned the spirit of superstition that so characterized his world and searched for rational explanations to natural marvels.

Born in northern Italy around 23 A.D. to an aristocratic family, Pliny steered clear of the political intrigue of the mid—first century that claimed the lives of many pro-

minent citizens. He took an assignment with the Roman military in Germany and became acquainted with Titus, the son of the future emperor Vespasian, an association that would eventually serve him quite well. However, things quickly began heating up for the ruling elite in Rome when the emperor Nero assumed power, and Pliny wisely took a backseat in political affairs. During this period of his life he devoted his energies to writing and scholarly research.

Pliny was nothing less than a workaholic, a man who spent all hours of the day reading and writing. His greatest work, the *Natural History*, is a marvelous encyclopedia of facts and fictions of the natural world, excerpted from countless ancient authorities. It includes topics as diverse as geography, anthropology, zoology, botany, and medicine. Pliny talked about any and all aspects of the world of nature, fearing to leave out any pertinent details on a given subject, even if they seemed a bit hard to believe. He was a master of the curious and the controversial, and his work contains a wealth of information on the early development of science and scientific investigation. Most important, Pliny was fascinated by the world of drugs; his *Natural History* contains lengthy sections on the use of , animal products, and minerals in medicines and poisons.

Despite his intimate knowledge of the natural world, Pliny failed to predict the lethality of Vesuvius and became one of its many victims at a not-so-ripe old age; he was only in his midfifties. His death serves to remind us that the great accomplishments of the citizens of antiquity were brought to fruition against a background of tremendous suffering and future uncertainty.

Pliny, like his contemporaries, was a victim of his surroundings; and it wasn't just spectacular natural disasters like floods, earthquakes, and volcanoes that threatened survival. Technological inadequacies were also a persistent problem, and the ancient world constantly suffered as a result. Although Greeks and Romans were known for their genius for abstract mathematics and engineering, the materials and methods available two thousand years ago significantly limited their technological development. Juvenal, a Latin satirist known for his biting criticisms of Roman society, writes that it was not uncommon for buildings to collapse under their own weight, without the aid of an earthquake or volcano:

We live in a city shored up, for the most part, with gimcrack  
Stays and props: that's how our landlords arrest  
The collapse of their property, papering over great cracks  
In the ramshackle fabric, reassuring the tenants  
They can sleep secure, when all the time the building  
Is poised like a house of cards . . . <sup>1</sup>

Stone monuments aside, much of the construction in antiquity was simply inadequate and even downright dangerous. Even when buildings managed to stand firm against gravity, there remained the frightening danger of fire, due to the highly flammable components commonly used in construction. Conflagrations were a common spectacle, especially in large, overcrowded cities like Rome. Juvenal gives us the gruesome details, with just a touch of Roman sarcasm:

... I prefer to live where  
Fires and midnight panics are not quite such common events.  
By the time the smoke's got up to your third-floor apartment  
(And you still asleep) your heroic downstairs neighbor  
Is roaring for water, and shifting his bits and pieces to safety.  
If the alarm goes at ground-level, the last to fry

Will be the attic tenant, way up among the nesting

Pigeons with nothing but tiles between himself and the weather.<sup>2</sup>

Fires could wipe out entire neighborhoods in an incredibly short time; and the fire department wasn't always reliable, particularly if you didn't have enough money to pay it off.

Natural disasters and poor construction materials threatened survival in the premodern West, but misfortune also wore other guises to life's miserable masquerade. Famine was a menace, a fiend the first world has only recently learned to live without. Obesity was more of an oddity than a regular occurrence in ancient society, where concerns about fatty foods were unknown; few had the resources to be gluttons. Fat wasn't unseemly because it was unfashionable, it was just unnatural.

Part of the reason people were skinnier in Athens and Rome than they are today was the difficulty of maintaining a constant, safe food supply. Without agricultural controls and advanced food distribution systems, famines could be caused by a variety of environmental factors. Simple fluctuations in rainfall, temperature, and relative humidity could significantly reduce crop yields and diminish the nutritional value of agricultural produce. In addition, plant diseases, like wheat rust, devastated wide swaths of agricultural lands and quickly threatened critical food supplies. Even if a particular season's yield happened to be bountiful, there was no guarantee that the foodstuffs would be properly distributed. The Mediterranean Sea was antiquity's best means of transporting its grain across great distances, but critical shipping routes were regularly disrupted by storms, warfare, and piracy; often failed to reach their destinations, and people died as a result.

Furthermore, food shortages were usually accompanied by mass migrations, civic unrest, or deadly plagues. Difficulties like these only added to the number of the dead, which meant that starvation and malnutrition were among the most significant causes of death in the Classical world. For example, in 125 B.C. a disastrous locust infestation caused a famine that killed roughly 200,000 people. Although this scourge has largely disappeared from the West's social radar screen thanks to insecticides, pestilence was a recurrent disaster and an implacable source of anxiety for our ancestors.

Slowly digesting one's own body for sustenance is a painfully horrific way to die, and many poor souls watched the awful spectacle of friends and family wasting away to nothingness, but nature possessed far quicker means that were equally shocking. A variety of venomous creatures lurked in bustling cities and the verdant countryside, waiting for unsuspecting victims to present themselves as targets. Among the host of reptiles and insects that the Classical world met on a daily basis, snakes were a particularly persistent source of anxiety. North Africa was practically overrun with these creatures, while southern Europe had its own share of lethal species.

The Greeks and Romans bestowed names on venomous snakes that reflect a macabre appreciation for aspects of their behavior and physical characteristics: The *muagros* was the "mouse hunter", and the *kerastes* was the "horned one". They also gave names that reflected the symptoms brought about by an unfortunate encounter: Accordingly, the *seps* caused "putrefaction" and the *dipsas* made its victim suffer from "extreme thirst." From this vocabulary, English derived a number of scientifically valuable words like *keratin*, *sepsis*, and *polydipsia*.

In a society lacking antivenin, snakes presented a significant threat to survival. Classical authors tell us snakes invaded homes, temples, frolicked in agricultural fields, and often scurried across well-traveled highways. No place was safe, and

nobody was immune from random attacks; rural families, field slaves, travelers, merchants, and soldiers were frightfully accustomed to the sight of dangerous snakes: As a contemporary poet described it:

Consider now the murderous asp, bristling with dry scales, the most sluggish of all snakes. Its form is terrifying, but when in movement, it uncoils its weight slowly and ever seems to wear a fixed look in its drowsy eyes... It has four fangs, their underside hollow, hooked, and long, rooted in its jaws, containing poison, and at their base a covering of membranes hides them. Thence it belches forth poison unassuageable on a body. Be they no friends of mine whose heads these monsters assail. For no bite appears on the flesh, no deadly swelling with inflammation, but the man dies without pain, and a slumberous lethargy brings life's end.<sup>3</sup>

Much of the ancient medicine and magic found in texts from Egypt to Spain is pre-occupied with the treatment of snake and insect bites.

Ancient doctors relied on drugs to counter the specific symptoms of snake venom, but botanical curatives failed to block the toxins themselves, so they were seldom effective and therefore only palliative. Despite their frequently impressive understanding of human anatomy and pharmaceuticals, the biochemistry of toxic substances was well beyond the level of medical advancement achieved in the Greco-Roman world. As a result, weaker members of society, including infants, young children, and the elderly frequently succumbed to an untimely death. Fortunately, what was once a source of peril has now become just a nuisance. The modern world's separation from nature's most dangerous creatures has significantly quelled our age-old concern for such venomous animals and insects.

Arachnids also troubled the ancient world, with the scorpion perhaps the most feared. The sting of this beautifully armored beast agonizing pain and death. Ancient authorities on venomous pests considered the honey-colored varieties more dangerous than their red and black cousins: They tell us that scorpion stings caused fever, extreme thirst, chills, and profound delirium. Children were clearly the most vulnerable to the effects of scorpion venom and probably made up the majority of its victims.

Spiders were also a source of griet for parents. Poisonous spiders posed a significant threat. There was no reliable antivenin. A single bite from one of the more deadly species was said to produce uncontrolled vomiting, torpor, and serious heart problems. Some of them even produced venom capable of eating away the tissue itself, a particularly gruesome process known as necrosis. This process invited infection by aggressive microorganisms like those that produce gas gangrene. Even man's best friend possessed the potential to bring great suffering to ancient communities. For centuries dogs played important roles as skilled hunters and personal guardians, but canine companions were also an incessant source of consternation. The Classical world was unable to control the spread of infectious diseases such as rabies. Without controls, stray dogs were free to roam the countryside and busy city streets where they could intimidate, terrorize, and maul at will.

The Latin word *rabies* is derived from the frenzy that characterized the unfortunate victims of this disease. The Greeks understood the danger of rabid dogs and appropriately named the disease obtained from the bite of a sick animal hydrophobia, because those who suffered from it displayed an intense fear of water.

Ancient physicians readily acknowledged the sad fact that rabies was incurable. Most doctors simply prepared their patients for imminent death. However, some such as

Celsus, a first-century (A.D.) medical writer, preferred a more aggressive approach:

... a most distressing disease, in which the patient is tortured simultaneously by thirst and by dread of water. In these cases there is **very** little hope for the sufferer. But still there is just one remedy, to throw the patient unawares into a water tank which he has not seen beforehand. If he cannot swim, let him sink under and drink, then lift him out; if he can swim, push him under at intervals so that he drinks his fill of water even against his will.<sup>4</sup>

Recognizing the dangers of dehydration, some ancient doctors submerged their patients in cold water, hoping to force them to consume fluids. This was undoubtedly an unpleasant procedure, but dangerous diseases called for desperate measures. The cold water may have helped to rehydrate the patient, but rabies was still a lethal disease. Very few people survived it.

For those bitten by rabid dogs, physicians cauterized the flesh around the bite and tried to allay the severity of any symptoms by intentionally bleeding their patients. This strange procedure, known appropriately as phlebotomy (from the Greek words *phleps*- "blood vessel" and *tom*- "cut"), may have actually helped those suffering from bad infections in antiquity; for, with a sudden loss of blood volume, the concentration of fever-promoting factors in the blood drops and the body may temporarily lose the ability to elevate its temperature. Uncontrollable fever was a major cause of death in the ancient world, so bleeding one's patient may have helped to control potentially life-threatening circumstances.

Dangerous forces of nature, problems with meeting basic human needs like shelter and sanitation, and chance encounters with venomous or rabid creatures were major sources of morbidity and mortality in antiquity, but man's battle with bacteria and viruses was clearly the most devastating aspect of ancient life. Scholars estimate that as much as 60 percent of the Greco-Roman world may have died from infectious diseases alone. Many of the illnesses that killed vast numbers of people in antiquity are curable today. In earlier times overcrowded cities, inadequate health care, and a limited understanding of basic epidemiology created hazardous environments, where the spread of infectious disease was rampant. For , tuberculosis flourished in large cities, where it transformed healthy, vibrant people into pale and emaciated phantoms, ghoulish victims known for the persistent habit of spitting up clotted blood along with bits of lung tissue. For this reason, it was known in antiquity as the wasting disease. Disease and suffering were commonplace in the ancient metropolis, bustling as it was with visitors from all around the Mediterranean. Typhus, influenza, measles, leprosy, and a host of other diseases dominated the narrow streets, marketplaces and crowded tenements, where city dwellers quickly grew accustomed to the sights, smells, and sounds of unimaginable human suffering. Close quarters and intimate personal contact provided a perfect environment for the rapid spread of diseases. Epidemics in antiquity rapidly descended on communities without any warning, ravaged cities in a short time, and then disappeared, leaving a host of frightened survivors. Thucydides, a Greek historian, gave us a glimpse of the disturbing social effects of one of these plagues; his account of an epidemic at Athens is both a testimony to the courage of those who endured the limits of human suffering and a ghastly reminder of the fragile nature of our laws and customs:

Words indeed fail one when one tries to give a general picture of this disease; and as for the suffering of individuals, they seemed almost beyond the capacity of human nature to endure . . . The most terrible thing of all was the despair into which people fell when they realized that they had caught the plague; for they would immediately adopt an attitude of utter ho-

pelessness, and, by giving in this way, would lose their powers of resistance . . . they died like flies. The bodies of the dying were heaped one on top of the other, and half-dead creatures could be seen staggering in the streets . . . the catastrophe was so overwhelming that men, not knowing what would happen next to them, became indifferent to every rule of religion or law . . . seeing how quick and abrupt were the changes of fortune which came to the rich who suddenly died and to those who had previously been penniless but now inherited their wealth, people now began openly to venture on acts of self-indulgence which before then they used to keep dark.<sup>5</sup>

Epidemics brought out the worst in everyone. Lawlessness was an unfortunate side effect of widespread disease and added to the greater tragedy. Thucydides caught the plague but managed to survive. Modern historians believe the disease that ravaged Athens at this time was typhus or smallpox. Regardless of its pathogenic origin, the plague at Athens, like other epidemics, wreaked utter havoc on its helpless victims.

This particular plague exacted a costly toll on the Western world. Foremost among the Athenian citizens who succumbed to its ravages was Pericles, one of the greatest democratic reformers of all time. Under his bold leadership, Athens was transformed physically and politically into a democratic state, envied and emulated by succeeding generations of Westerners, including the founding fathers of the United States, who used Athens as model for the American Constitution.

Pericles was born in 494 B.C., when the Athenian democracy was only a few years old. At that time, the wealthiest members of society still exercised the most control over the affairs of state. As he matured, Pericles became known for his belief in the dominance of reason over religious superstition. He befriended Anaxagoras, a well-known secularist, and at the age of thirty-one embarked on a political career. During this time he supported constitutional reforms that took power from the ruling elite and gave it to the average citizen. As a member of one of the most prominent families in Greece, he could have easily been satisfied with the status quo and maintained the influence of the richest Athenians, but he decided instead to transfer power to the masses and thereby altered the course of human history.

Known as an intellectual political figure, Pericles stood firm in his conviction that reason would triumph over superstition and believed that the rule of the people was the most desirable form of government. Donald Kagan, a prominent historian of ancient times, said: "Pericles tried to shape a new kind of society and a new kind of citizen, not by the use of force or terror but by the power of his ideas, the strength of his personality, the use of reason, and his genius as a uniquely persuasive rhetorician."<sup>6</sup>

Pericles possessed all the traits of an ideal democratic leader: He was intelligent, well spoken, genuine, and he refused to use terror to frighten the citizenry into supporting him. He was the opposite of the classical tyrant, yet not everyone agreed with him; just a few decades after his death, the great philosopher Plato saw serious philosophical flaws in the democratic way of life that he supported. Despite opposition from his contemporaries, Pericles pressed forward with his plans and ultimately gave the citizens of Athens the greatest autonomy they would ever have.

For all the good he did, Pericles' personal affairs were tumultuous, and his life did not end well. He divorced his wife a few years after their marriage, he frequently fought with his own sons over finances, several of his closest friends and confidants were exiled, and he died from the plague before he could guide the state toward its democratic goal. He was not a young man when he died—he was in his midsixties—but his life certainly ended prematurely. Had he been given a few more years to set things straight, he might have prevented the rapid descent of Athenian democracy into political oblivion—a disaster that took the Greeks the better part of two millennia from which to recover.

Epidemics like the one that killed Pericles were far more common than most historians are willing to admit. Surviving texts paint a grim picture of the frequency of such outbreaks. According to Livy, a trusted Roman historian, the city of Rome endured nearly fifty epidemics in roughly 250 years. If this same data can be applied to other large urban centers of the same era—and I think it's fair to do so—we can conclude that large cities suffered widespread plagues approximately once every five years or so. The typical city in antiquity probably lived through a dozen or so serious epidemics in a single lifetime ... if they were lucky.

Warfare and various forms of social unrest only exacerbated the occurrence of epidemics in large urban centers. In one particular instance, a city-wide epidemic during a time of war drained Rome of its fighting reserves and thereby drastically influenced the course of political events. Afraid of attacks, rural inhabitants exacerbated the plague by crowding into the city:

It was an unhealthy season and in both town and country there was a great deal of sickness. Cattle suffered as much as men, and the incidence of disease was increased by overcrowding, as farmers together with their livestock had been taken into the city for fear of raids. The smell of this motley collection of animals and men was distressing to the city folk, who were not accustomed to it; the farmers and yokels, packed as they were into inadequate quarters, suffered no less from the heat and lack of sleep, while attendance upon the sick, or mere contact of any kind, continually spread the infection . . . Most of the leading men, the majority of the Senate, almost everyone of military age were down with the disease.<sup>7</sup>

Epidemics may have been the most sensational manifestations of disease in antiquity, but they were by no means the most frightening. Most of the diseases we now consider treatable were once lethal and caused alarming and sometimes even gruesome symptoms. Tetanus is a good example.

Tetanus-causing microorganisms living in the soil infect wounds and bring on dreadful symptoms. Patients with tetanus suffer from extremely painful, unremitting muscle rigidity, caused by an exposure to a potent toxin produced by the bacterium responsible for the disease. Typically, tetanus toxin causes the muscles in the face to spasm and thereby assume a fixed position: The jaws become completely immobile, the eyebrows are raised, the eyelids close tightly, the forehead becomes wrinkled, and the mouth is pulled to the sides of the face. Generalized seizures force the body to assume a number of ghastly positions; sometimes the head is forced backward against the shoulder blades, sometimes it is thrown forward and held against the chest. For this reason the Greeks called the disease *tetanos* (from the word meaning "to stretch"). Tetanus patients also endure potentially fatal arrhythmias and dangerous changes in blood pressure.

The Western world has limited the spread of tetanus through the use of a simple vaccine, but Mediterranean cultures of the past bear the scars of this terrible disease. In Classical society, tetanus humiliated and tortured before killing the infected. A simple farming injury, like a small cut, could result in death. With little hope for recovery, people were forced to watch their loved ones spend their final days in complete anguish.

Unfortunately, tetanus was not the only disease that caused extreme pain and humiliation in the ancient world. Sexually transmitted diseases (STDs), most of which are now curable, were far more lethal in antiquity. A simple antibiotic or antiviral medication given today can successfully treat many such illnesses or at least control the severity of the symptoms they produce. As a result, STDs, with the obvious exception of HIV, have become more of a nuisance than a serious threat. This was not the case

for our Western ancestors.

How common were sexually transmitted diseases, and how were they spread in antiquity? Our ancient texts give us some disturbing clues. The Greco-Roman world considered prostitution a necessary aspect of life, and prostitutes of all socioeconomic levels, whether streetwalkers or expensive courtesans, were an integral aspect of ancient society. To compound the problem, male promiscuity was typically ignored. Married men were often expected to have lovers, and infidelity was generally tolerated. Prominent aristocratic women themselves sometimes had lovers— primarily the sons of well-connected aristocrats—but this was an exception to the widespread rule that women were expected to remain sexually chaste before and after marriage. Social customs unfostered the spread of STDs, all of which were incurable.

Herpes and gonorrhea were especially prevalent; of all the STDs, they are mentioned the most frequently in Classical medical texts. The Greeks and Romans also suffered from chlamydia and genital warts (in general, life in antiquity was far more warty than it is today), and more people had chronic problems with urination and sexual function. An excerpt from the Hippocratic corpus graphically illustrates the widespread nature of STDs in antiquity—There were also other fevers which I shall describe. Many had aphthae and ulcers in the mouth; many had discharges around the pudendal area; while sores and tumours both external and internal occurred, some about the groin. Moist ophthalmia occurred which was both chronic and painful.

Excrescence on the eyelids, both internal and external, occurred and, in many cases, impaired vision: the name "figs" is given to these. There were many cases of growth on other ulcers and on the pudenda. Carbuncles were common during the summer and other septic lesions and large pustules. Many suffered from extensive herpetic

lesions.<sup>8</sup>

Most of the symptoms mentioned here indicate some form of sexually transmitted disease; even the eye disturbances mentioned, the "moist ophthalmia," can be the result of diseases like chlamydia and herpes. When it comes to STDs in antiquity, there is only one piece of good news: The total absence of syphilis-like symptoms in surviving ancient texts causes scholars to believe it was a New World disease that spread to Europe long after the fall of Classical civilization.

Despite modern advancements in medicine, not all STDs are treatable. For example, herpes, a painful disease affecting the sexual organs, produces periodic outbreaks of painful sores on the mouth and genitalia. When the sores appear on the surface of the skin, the disease can be communicated to other individuals by sexual contact. Modern antiviral medications mediate the severity of these outbreaks, but herpes infections are still entirely incurable. Hippocratic physicians of the fifth century B.C. also described the painful symptoms of this disease but spoke of hideously advanced cases not often seen today. They used the Greek word *herpes* to describe the "creeping" of ulcerous lesions along the skin.<sup>9</sup>

Without access to effective treatment, herpes lesions grow in size and quickly spread. In antiquity, this painful disease caused extensive tissue damage, permanent sexual dysfunction, and complications from dangerous secondary infections. Accordingly, Hippocratic doctors considered it a serious malady.

Poisonous snakes, lurking scorpions, rabid dogs, infectious diseases, and natural disasters all stimulated human fears in antiquity by creating an atmosphere of constant uncertainty; premature death was a persistent threat that left the Classical world with an intimate awareness of the fleeting nature of existence. The uncertainty of life created considerable angst for the Greco-Roman psyche. However common it might

have been for people to die from these various "natural" causes, they were not the only source of fear; other, more predictable, manmade threats to survival also taxed ancient society.

Warfare and violence, the darlings of imperial power, were ever-present elements of Classical civilization. The Classical war machine recruited, trained, and efficiently extinguished countless lives, young and old. Ancient warfare was an immensely effective means of acquiring resources, and many strong city-states engaged in battles meant to establish and affirm rights to wealth and property. The Greco-Roman world embraced war, even to the point of making it a god.

Warfare in the Mediterranean consisted of a series of violent exchanges between city-states competing for limited natural resources. Life in antiquity was so closely tied to the agricultural calendar that battles were often waged at specific times of the year, when manual laborers were not needed to carry out the important tasks of planting or harvesting. Small urban populations frequently united neighboring city-states in order to bolster their interests and strengthen their collective influence. Some of these confederations were dissolved with time, while others became powerful political entities. From humble beginnings, cities like Athens and Rome developed vast empires, capable of warfare on a grand scale. In Rome's case, by the end of the first century A.D., city used its professional army, the first of its kind, to control most of the territory bordered by the Mediterranean Sea, large parts of Europe, and even bits of Asia.

Of course, warfare before the invention of gunpowder was a bit more up close and personal. Armor, made of various skins and metals, protected the vital organs, but a soldier's protective gear did not make him invulnerable. Severed limbs and broken bones were exceedingly common, as were deep puncture wounds from arrows and spear points. Forceful blows to the head, though less common, were usually fatal. In fact, damage to any vital organ—the liver, lungs, heart, or brain—inevitably guaranteed a soldier's death. Bowel lacerations could be cleaned and repaired, but the bacterial infections that followed were typically fatal. Many soldiers died on the field of battle, but many more died hours or even days later after languishing with massive infections.

Gruesome battle wounds left an imprint on the creative work of antiquity. Graphic depictions of violence are a standard characteristic of the works of many authors. For example, Homer's *Iliad*, the first Western epic, is replete with detailed descriptions of horrifying war wounds:

Drawing his sword with the silver nails, the son of Atreus (Menelaos) sprang at Peisandros, who underneath his shield's cover gripped his beautiful axe with strong bronze blade upon a long polished axe-handle of olive wood. They made their strokes at the same time and Peisandros chopped at the horn of the helmet crested with horse-hair at the very peak. Menelaos struck him as he came onward in the forehead over the base of the nose, and smashed the bones, so that both his eyes dropped, bloody, and lay in the dust at his feet before him.<sup>10</sup>

It's unlikely that many modern Westerners have ever seen such a horrendous sight, but it is safe to assume that Homer's audience found the episode to be a realistic portrayal of ancient combat; they were well acquainted with such gruesome injuries.

The number of soldiers killed at any particular battle varied widely in antiquity. Wars between smaller Greek cities typically resulted in just a few casualties. However, some conflicts involved hundreds of thousands of soldiers, and warfare regularly killed scores of young men. Even by today's standards it's difficult to imagine the carnage of some of the larger battles. For example, at Cannae, where the Roman army

suffered a humiliating defeat at the hands of Hannibal, roughly 70,000 soldiers died. To put it another way, the Romans lost more sons in a single day, on a single battlefield, than America lost in roughly a decade of war in Vietnam. Livy described in horrific detail the appearance of the battlefield the day following the Roman defeat:

At dawn the next morning the Carthaginians applied themselves to collecting the spoils and viewing the carnage, which even to an enemy's eyes was a shocking spectacle. All over the field Roman soldiers lay dead in their thousands, horse and foot mingled, as the shifting phases of the battle, or the attempt to escape, had brought them together. Here and there wounded men, covered with blood, who had been roused to consciousness by the morning cold, were dispatched by a quick blow as they struggled to rise from amongst the corpses; others were found still alive with the sinews in their thighs and behind their knees sliced through, baring their throats and necks and begging who would to spill what little blood they had left. Some had their heads buried in the ground, having apparently dug themselves holes and by smothering their faces with earth had choked themselves to death. Most strange of all was a Numidian soldier, still living, and lying, with nose and ears horribly lacerated, underneath the body of a Roman who, when his useless hands had no longer been able to grasp his sword, had died in the act of tearing his enemy, in bestial fury, with his teeth.<sup>11</sup>

Accounts of these battles are astounding; the loss of life was often immense; the psychological impact immeasurable.

Ancient warfare consumed vast resources, but it also swept away many of history's most important players. One of these men, the Roman emperor Julian, was taken to Hades by the god of war at a particularly pivotal time in the development of Western civilization; a time when the forces of paganism made one final attempt to throw off the yoke of Christianity forever.

Julian was born in 331 A.D., in the powerful city of Constantinople. His father was the half brother of Constantine the Great, the emperor who gave Christianity legitimacy, and was therefore a potential contender to the highest seat of Roman power. Julian's political rivals recognized his family's threat when he was very young, and wasted no time in assassinating his father along with eight of his relatives. Julian and his half brother were spared because they were so young. These murderous acts left Julian a frightened orphan; his mother died just a little while after he was born, so the future emperor was raised in the midst of an incredibly hostile environment.

Despite his turbulent youth, Julian became one of the most important figures of Roman history. He is remembered not because of what he actually did, but because of what he nearly accomplished. Modern scholars know him as Julian the Apostate, the defamatory title he was given by the Christians who wrote about him after he died. An apostate is a Christian who has come to the belief that faith in Jesus is meaningless; the early church was entirely intolerant of those who opposed its views, and took aggressive steps to maintain the political and economic authority it had won under Constantine the Great. Mother Church often viewed less traditional (heretics) and other religious followers (pagans) as a direct threat to its authority; this included members of its own flock, who decided their religious faith was pointless (apostates), as did Julian when he was a young student of literature.

Julian kept his paganism secret for many years, until the Emperor Constantius, the man responsible for the murders of his family members, died, thus making Julian the most powerful man in Rome. Once his authority was uncontested, he immediately began an attempt to restore the worship of the traditional Greco-Roman pantheon as the state religion of the Roman Empire. He genuinely believed in the authority of the ancient gods and thought that Zeus himself had given him a sign of his personal appro-

val. He tried to restore temple sacrifices throughout Italy and Greece and disallowed Christians from becoming teachers of the Classics—believing they would distort them. He even proclaimed universal religious tolerance, something the Christians vehemently opposed.

The programs Julian initiated temporarily curtailed the power of the church and might have eventually pushed it to the periphery of Western religious practices, if the emperor had lived long enough to see his pagan rebirth come to fruition. However, shortly after coming to power he was killed in combat while fighting the Persians. The most powerful members of the church immediately seized the opportunity to restore their religion to its position of political power and quickly reversed Julian's decrees. If Julian had not been swallowed up by the Classical war machine, the Enlightenment might have taken place a thousand years before it actually did, and Western society would not still be struggling with the separation of church and state. War was always an important element of the ancient world, but even when there were no actual battles to be waged or melees to be fought, the Greeks and Romans created their own forms of violence. From the infancy of Western society, blood sport was an extremely popular form of entertainment. In Greece, boxers bludgeoned each without mercy, in matches that often ended in death. Athletic competitions, like the Olympic games, temporarily brought together warring city-states under a flag of truce. The Greeks so admired athletic prowess that the best of their mythic heroes even competed in races and boxing matches.

The Greeks adored matches of strength and speed, but their Italian neighbors preferred a rougher sort of sport; Roman gladiators lived to spill each other's blood in the hot sands of the arena. These violent circuses celebrated the martial triumphs and general benevolence of great statesmen and emperors, who paid tremendous expenses to provide the masses with festive holidays overflowing with blood sport. The violence and death of athletes and gladiators was considered a socially acceptable catharsis. In what appears to us to be an ironic perversion, peace and prosperity were celebrated with violence and death.

What's important to remember about the Roman arena is the audience; everyone, regardless of social class or standing, was invited to witness the action. Roman politicians even distributed food to the poor masses that attended the events—hence the phrase "bread and circuses." There were no R ratings or V-chips in antiquity. The violence of the arena was never simulated. It was real. When gladiators tried to chop each other to bits, they weren't faking it. The Romans watched men kill each other and cheered.

By the age of thirty, the average male citizen of the ancient world lived a life that was radically different from that of his modern counterparts: Youth was a time of arduous physical labor, when he learned the rigors of an agrarian existence and the unyielding demands of subsistence farming; in his late teens he became eligible for military service, where he would likely participate in numerous campaigns; he regularly pushed his body to its physical limits, trying to maintain his sanity in the midst of unforgiving hand-to-hand combat; his wounds—if he survived them—were a badge of honor; they meant that both at home and abroad he was a survivor. The accidents, injuries, and illnesses that claimed the lives so many of his family and friends only hardened him to the realities of survival.

Women also lived vastly different lives in antiquity: Upon reaching puberty, most cultures deemed them ready for marriage; thirteen-, fourteen-, and fifteen-year-old girls were typically paired with mature men in their late twenties or early thirties. Growing up at home, girls learned to manage domestic affairs and assume the same

duties as their mothers. As young brides, women faced the looming uncertainty of childbirth, with its 30 percent mortality rate, and the reality that half of their offspring would die before the age of five. After enduring miscarriages, stillbirths, and infant death, the typical wife was often likely to witness the demise of her "luckier" children at the hands of illness, accidental trauma, and warfare.

How did Western civilization manage to bear up under the pressure of such difficult circumstances? How did it endure incredible emotional and physical strain in the midst of a world that seemed so uncaring and so arbitrary? Was there a solution to the problem of human suffering that included something other than an early death or suicide? The answers to these questions may be found, paradoxically, in the source of the anguish itself. The natural world, with all its disasters, accidents, strife, and diseases, provided a solution for pain, a soothing balm for anguish, a means of lightening one's burden: As the Greeks and Romans discovered, nature created pain and suffering, but it also created drugs.

## 2 Ancient Medicines

The art of medicine resulted from the discovery of drugs, not reasoned inquiry...  
Remedies save the sick, not words.

—Celsus

Extreme suffering demands extreme relief. Distress, anguish, and grief dominated life in antiquity, where children died prematurely, disfiguring diseases overwhelmed and ravaged cities, famine devoured the helpless and frail, and grim war inflicted mortal injuries on scores of its conscripted agents. The environment was rife with potential for torment; pain was a simple fact of life. Plague, malnutrition, and injury drove men and women to seek some brief respite from the pangs of an all too mortal existence. Accordingly, Mediterranean cultures sought refuge in medical traditions gleaned from years of experience and experimentation. Drugs that were derived from plants, animals, and minerals provided a much-needed reprieve from numerous diseases, numbing Greco-Roman society enough to endure the slings and arrows of outrageous Fortune.

Drug craft was arguably the Classical world's greatest resource. Its complex reci-

pes and prescriptions have survived, carefully tucked away in Greek and Latin medical treatises, preserved under the watchful eyes of monks, scholars, kings, popes, and other literate individuals with more than just a passing interest in the history of medicine. Medieval manuscripts, currently gathering dust in museums and libraries across Europe, contain the musings of physicians on the oldest attempts to heal injuries and fight illnesses. These works of Classical medical writers and natural historians show us that an intricate relationship once existed between human society and its surroundings. Mediterranean cultures had no means of synthesizing their own pharmaceuticals; they lacked the chemical know-how to produce even the least sophisticated medications. A simple aspirin tablet was more than a millennium and a half away from being a reality, but the ancient world was never entirely bereft of pharmaceutical aid. This is because they always had a large supply of ready-to-use botanicals; instead of Pfizer, they had Mother Nature.

Classical Greek and Latin medical texts are filled with recipes for simple and compound treatments for everything from gout to intestinal parasites. These texts contain seemingly endless lists of ingredients—botanical species, elusive minerals, and a whole host of animal products—that were combined in a variety of ways to treat the symptoms produced by diseases and injuries. Drug components such as a plant's leaves, roots, or seeds were crushed, macerated, mixed together, added to alcohol, oil, or water, and then applied externally or administered internally. Greek and Roman physicians mastered the preparation of an endless assortment of ointments, oils, salves, and dissolvable pills, all of which could be used to treat the sick.

The science behind these drugs often seems strangely modern, lending legitimacy to the adage that "there is nothing new under the sun." Botanical curatives fought disease with the same biochemical strategies as modern pharmaceuticals, despite the latter's development through modern technology and postindustrial know-how. For example, pine resin was used successfully to clean out wounds in the same manner antibiotic ointments like Neosporin are applied to cuts and lacerations today. Both make it difficult for to grow in wounds and therefore prevent them from becoming infected.

Drugs not only healed the sick and injured, they were also used to manipulate human physiology when necessary. For example, pennyroyal and rue regulated menstruation, white hellebore induced vomiting, Bermuda grass prevented nausea, fennel helped against flatulence, and aromatic substances like myrrh and frankincense kept rotting corpses from stinking during long, hot funeral services. Medicaments were much more than just cough syrups and painkillers; they included all substances derived from the natural world that could possibly be used by humans in internal or external applications. Just as no modern household would be complete without a medicine cabinet properly crammed full of analgesics, antipyretics, allergy medicines, hand creams, eyedrops, prescription drugs, and a host of other medications, drugs were an invaluable and amazingly ubiquitous aspect of ancient life as well.

For those living in antiquity, a drug referred to more than just an item found in a physician's medicine box. *Pharmakon*, the Greek word we translate as "drug," and the source of English words like *pharmacy* and *pharmacology*, once denoted medicines, poisons, perfumes, unguents, and any other concoction that could be applied to the human body. A *pharmakon* could be either helpful or harmful; the Greeks preferred not to distinguish between lethal and non-lethal substances, because most beneficial drugs were also deadly, just as they are today. When used in large doses or administered inappropriately, most drugs will kill you. In antiquity, many physicians knew that the drugs they used could be lethal under certain circumstances.

For the Romans, a single generic word for "drug" was insufficient: In Latin, *medicamenta* represented "healing drugs," while the more ominous word *venena* signified "poisonous drugs." But they did little to distinguish the practice of medicine from the administration of drugs. That is, "to practice medicine" and "to administer drugs" synonymous expressions to the Latin-speaking community; both came from the same word, *medeor*. is entirely antithetical to modern medicine, where, from a linguistic standpoint, doctors prescribe medications within the greater context of practicing medicine. The Romans didn't make that distinction; for them, "giving drugs" was the act of "healing."

To the Greeks and Romans "drug" meant anything that could possibly be used to influence the human body. They obtained many of these substances from their immediate surroundings, so long as the local climate and soil were amenable and farmers could successfully cultivate them. Those that would not grow in their native soil were imported, like frankincense and myrrh, exotic gum resins that came from Arabia. This utilitarian approach to the environment may be difficult to appreciate today; most Westerners have never had the need to figure out which of the weeds growing in their backyards can be used to treat a headache, ease the symptoms of the flu, or prevent pregnancy. Most of us are unaware that myrtle can be used for bowel and bladder problems or that elderberry is an effective laxative. We just don't go around chewing bark, drinking plant juices, or swallowing macerated roots. Most twenty-first-century Westerners, with the obvious exception of modern herbalists, consider wild plants strictly off limits unless they have been grown specifically for the purpose of human consumption. You wouldn't put your rosebushes in the medicine cabinet, but the oil they produce was practically a panacea for the ancient world; the Romans used it to treat headaches, swollen testes, and problems with the eyes.<sup>1</sup>

Nature is no longer a source of medications for modern Westerners; we rely almost exclusively on years of laboratory experiments rather than the knowledge of traditional medicine.

The Greeks and Romans could not live in isolation from nature. The realities of their premodern existence forced them to experiment with the raw materials that happened to be at hand. Doctors discovered cures by wedding their knowledge of certain us drugs to a fearless spirit of trial and error. This pioneering courage helped them to develop an extensive communal database of useful drugs, which was used by generations of Europeans long after the fall of the Roman Empire.

Pliny the Elder was especially interested in preserving this botanical knowledge in his lengthy work, the *Natural History*. The tome is a tribute to Pliny's lifelong endeavor to expose the secrets and mysteries of nature. In it he fervently praised the efforts of preceding generations to find wild substances that could be used as drugs:

There was nothing left untried or unattempted by them, and furthermore nothing kept secret, nothing which they wished to be of no benefit to posterity... they have scoured also trackless mountain heights, unexplored deserts and all the bowels of the earth, finding out the power of every root and the uses to which can be put mere slim threads of vegetation, and turning to healthful purposes that which the very beasts refuse to touch as food.<sup>2</sup>

Greco-Roman society relied upon the knowledge and experience of preceding generations to treat the sick and advance the science of healing. And where their knowledge was inadequate, they searched for other possible medicines by means of experimentation; they simply tried things out on their patients.

Celsus, a Roman medical author of the first century A.D., wrote about the use of

natural medications and the quest for effective drugs. He recorded fascinating methods of treatment and discussed recipes for medications used throughout the Mediterranean region. Not much is known about his life, but his medical treatise *De medicina* is an excellent encyclopedic treatment of the topics of health, disease, surgery, and medications. His interest in the repair of wounds inflicted by battlefield weapons may indicate that he was some sort of army surgeon or that he had access to the writings of a physician attached to the Roman legions. Like Pliny, he provided a glimpse into the practical nature of pharmaceutical experimentation in antiquity:

For even if there happened nowadays some unknown form of malady, nevertheless the practitioner had not to theorize over obscure matters, but straightway would see to which disease it came nearest, then would make trial of remedies similar to those which have succeeded often in a kindred affection, and so through its similarities find help.<sup>3</sup>

Whenever a new or obscure disease threatened the population, physicians tinkered with the drugs they understood in order to find some form of treatment. In a world without medical malpractice and compensatory damages, doctors were free to take almost any step toward finding a cure.

Medical experimentation was not confined to Roman society. Hellenistic Greeks in Egypt performed vivisection on condemned criminals. These doctors would cut open the body while the person was alive in order to observe the appearance and activities of the living organs. The idea of forcibly violating a living person for the sake of knowledge did not conflict with traditional Egyptian mores. In Greece and Rome, however, vivisection was never tolerated; that fact may seem odd when one considers the penchant for violent athletic competitions and public executions. Mediterranean cultures must have experimented with pharmaceutical plants for centuries before the emergence of written records. Anthropologists argue that Early Neolithic societies respected and valued anyone with a specific knowledge of medicines and drugs.<sup>4</sup>

The earliest human healers employed magic and herbal drug lore as standard tools of their thriving trades. It has been suggested that these shamanistic medicine men may have actually been mostly women, an idea that helps to explain the roots of the Circe myth. Regardless of the gender of these drug pioneers, Early Neolithic cultures apparently made use of strong, mind-altering chemicals like the juice derived from the opium poppy.<sup>5</sup>

Potent evolved alongside human populations for thousands of years and often became critical to human survival. The interactions between early humans and plants that could be used as drugs led to the folklore and pharmaceutical traditions of antiquity.

Once the medicinal utility of plants had been properly established, the art of medicine came to rely almost exclusively on drugs. Greek physicians labored to advance the development of fields such as anatomy, rudimentary physiology, and basic pathology, but pharmacy was the core of medical practice. Doctors then were cast from a different mold than those of the modern world. From its inception, medicine was considered to be a discipline best suited to philosophers. There were no official medical schools, degrees, or certifications; doctors were learned individuals who obtained a knowledge of their craft from already established physicians. Their education was not limited to medicine or anatomy, but could include things like mathematics, logical reasoning, and ethics. For example, Pythagoras, although best known now for his contributions to geometry, was a well-known physician. Many of these philosopher-doc-

tors worked diligently to advance the study of medicine along its slow but steady path toward enlightenment, but all physicians, regardless of their skill or talent, depended heavily on age-old drug traditions.

Several ancient physicians made such significant contributions to the practice of medicine that their names are readily recognized, even today. For example, under the influence of Hippocrates (fifth century B.C.) and his dedicated students, the art of medicine made great strides and gained tremendous social status in eastern Europe and western Asia. Their greatest accomplishments were the secularization and organization of professional medicine. The Hippocratics rejected superstitious beliefs that combined the activity of demons with the course of disease. They also created a standard theory of human physiology based on the observations of the fluid excretions doctors encountered during the process of disease. In a sense, Hippocrates took the first active step toward a completely rational discipline of healing. There are few reliable details about the life of Hippocrates, and much of this information is purely anecdotal. In fact, scholars are certain that a single man did not write all of the treatises attributed to Hippocrates. This suspicion has produced years of academic debate over which works are genuinely his and which were written by his students or later generations of Hippocratic physicians. Whatever the case may be, his supporters' zeal for practicing medicine with an eye for a rational model of human physiology and pathogenic processes is legendary.

Hippocrates is undoubtedly best known for the oath taken by his followers. It has become the model for medical oaths used throughout the Western world. Of course, drugs are an important part of the oath because of its abiding concern with the preservation of life:

I swear by Apollo Physician, by Aesclepius, by Health, by Panacea and by all the gods and goddesses, making them my witnesses... I will use treatment to help the sick according to my ability and judgment, but never with a view to injury and wrong-doing. Neither will I administer a poison [*pharmakon thanasimon*, "deadly drug"] to anybody when asked to do so, nor will I suggest such a course.<sup>6</sup>

The debate over physician-assisted suicide is not strictly a modern phenomenon. Hippocratic medicine of the fifth century B.C. was well aware of the responsibility of the physician and the lethality of drugs. Hippocratic physicians settled such issues by forbidding the use of poisonous drugs or any sort of lethal dosage. If you had a terminal disease in antiquity and wanted to kill yourself, you had to buy the poison and administer it yourself.

Hippocrates was succeeded by a number of excellent physicians and philosophers, including Theophrastus (372-288 B.C.), the Lesbian who became the most prominent student of Aristotle. Although he wrote works on a number of subjects, his extensive investigation of plant life completely overshadows all his other endeavors, to the extent that he is commonly known as the father of modern botany. His two famous treatises on plants, known by their Latin titles *Historia plantarum* (*Inquiry into Plants*) and *De causis plantarum* (*Explanations of Plants*) are two vast repositories of contemporary data on the botanical world. They cover subjects such as plant structure, cultivation, utility, and medical applications. Physicians and natural scientists used these documents for centuries as valuable resources.

Dioscorides (first century A.D.), a Greek physician who may have been attached to the Roman army, composed one of the oldest surviving drug manuals, specifically written for trained professionals. His *De materia medica*, or *Materials of Medicine* in English,

is full of information on plants, animals, and minerals and their usefulness in medicine. One of his near contemporaries, Scribonius Largus, attended the Roman army under Claudius and wrote a similar work in Latin titled *Compositiones*, or *The Prescriptions*. It has never been translated into English, thanks to its incredibly esoteric nature. Editions of this work can be found collecting dust in university libraries. It, too, contains details on ancient pharmacy and the complex prescriptions used in the treatment of disease and injury as well as a number of entries on the use of drugs in the treatment of Roman gladiators.

Hippocrates' greatest admirer, a Roman physician named Galen (second century A.D.), became one of history's greatest intellectuals as well as an expert in ancient drugs. To his credit Galen wrote extensive medical treatises in order to promote the dispersion of medical knowledge throughout the Mediterranean world. Although Galen practiced medicine in Rome as the personal physician to the emperor Marcus Aurelius, he wrote in Greek, his native language, which was the lingua franca, and much better suited to the developing medical vocabulary of antiquity. Galen gained an incredible reputation and vast following after his death.

The greatest proof of his impact on medicine is the fact that his works were so carefully preserved for so many centuries. More of Galen's writings than of any other Classical author. They surpass Plato, Aristotle, and any other historian, philosopher, or Christian author in length by far. His writings were standard medical texts, along with the works of Hippocrates, until as late as the American Civil War. Galen helped advance our understanding of human anatomy with his detailed dissections and experiments. Galenic medicine became a unitary standard for practitioners in Europe and America until as late as the nineteenth century, when many of his theories came into question, especially his humoral pathology, which was based on Hippocratic doctrines and taught that all disease was the result of an imbalance of blood, phlegm, bile, or black bile.

Galen's lengthy works remain accessible only to those with an understanding of ancient Greek—and a lot of patience. The nineteenth-century edition of his complete works contains thousands of pages of untranslated pharmaceutical treatises. Classicists have avoided them altogether because of the highly technical and scientific information they contain. The most recent edition of the Galenic corpus was published at a time when European and American angst over recreational drug use began to come to life.

Galen's brilliance can be seen in his examination of the recurrent laryngeal nerve. According to our sources, he publicly demonstrated that this nerve was involved in the production of vocalization (i.e., speech). After cutting into a live pig and exposing the nerve, he carefully placed a ligature on it—at which time the pig famously stopped squealing—and then restored the animal's voice by releasing the ligature. With such prescient medical experiments he amazed his contemporaries and secured himself a spot on the imperial staff.

Under the direction of antiquity's greatest doctors, three major approaches to disease and injury came to constitute the physician's art: diet, surgery, and drugs. Doctors relied on each of these divisions to treat their patients, but were so heavily dependant upon the use of medicines that the drug recipes preserved by our surviving medical texts are complex, detailed, lengthy, and from time to time a bit far-fetched.

However exotic these remedies may seem—and despite the many times they appear to be just so much hoey—ancient recipes occasionally reveal a spark of genius; surprisingly, the Classical world's understanding of useful botanicals dwarfs its obvious ignorance of modern chemistry, biology, and pharmacology. Many of their me-

dicines were highly effective and show great potential as dependable curatives today.

From garden-variety botanicals like cabbage and radishes to more exotic species like saffron and yarrow, antiquity's herbs, trees, and shrubs were an incredibly abundant source of valuable curatives. All parts of a plant were considered potential resources; from the roots of the mandrake to the leaves of pennyroyal to the flowers of the iris and fruit of the mulberry, doctors used anything and everything, as long as it might have a positive effect on the patient. No part of the plant was off limits. They even resorted to deadly drugs like hemlock and aconite, because, on occasion, they happened to prove efficacious in limiting the progression of disease or alleviating suffering. The efficacy of any particular plant remains difficult to determine by medical historians, but the fact is that many of these plants possess strong, physiologically active chemicals, and their presence often supports the claims of ancient physicians and drug sellers.

Classical society also learned to exploit the animal kingdom in its pursuit of potential drug sources. Again, nothing was too strange or disgusting to be used in the pursuit of health; from animal excrement, body fluids, and congealed fat, to ground-up organs, secretions, and dangerous venoms. They considered using every sort of animal, whether it had wings, hooves, or fins. They even used human by-products, like the organs of recently slaughtered gladiators and the urine of anyone healthy. Their abiding belief that nature provided all sorts of cures for man's ills convinced them that insects, birds, reptiles, mammals, fish, and crustaceans potentially possessed substances capable of alleviating human suffering. For example, locusts were used to assist those with problems urinating, helped to alleviate gout, and dog urine treated leprosy. Some of these curatives were undoubtedly ineffective, like turtles blood and vulture poop, but many were highly efficacious. The most often prescribed animal product was honey, an incredible preservative; when used in medicine it possesses the wonderful capacity to stifle the growth of bacteria, fungi, and other possible pathogens. But bees were not the only miracle workers; many animals produce species-specific chemicals that have beneficial effects on human physiology, and many of them were discovered by ancient physicians.

Ancient doctors didn't end their search for medicines with the animal kingdom. They literally left no stone unturned; they mined the depths of the earth looking for minerals and precious metals having some degree of medical potential. Many common metals such as iron and copper doubled as curatives. Physicians even used by-products like lead monoxide, derived from processing metallic ores, as powerful wound treatments and medicaments. Many of these substances worked extremely well because of their intrinsic toxicity. For example, white lead, known today as lead carbonate, was used in plasters and other externally applied salves to treat wounds and ulcers. It probably killed any sort of microbial growth in the wounded tissue, which would have assisted the healing process. Despite the beneficial effects such toxins might have on a pathogen, heavy metals like white lead are poisonous to human tissue and must be used with caution. Greek and Roman physicians knew of the dangers inherent in using these substances and generally relied on them for external applications alone.

Exotic botanicals, strange animal products, and toxic metals were all used as medicaments in antiquity, but common herbs, trees, and shrubs were undoubtedly the mainstay of the art of medicine. As a result, farmers grew their own medicinal species right alongside fruits, vegetables, cereals, and other crops necessary for sustenance. Virgil, author of the *Aeneid*, shared practical advice on the cultivation of medicinal plants in his pastoral work the *Georgica*.

In one passage, he tells his audience to cultivate a potent narcotic-producing plant alongside their common grains:

When the balance makes the hours of daytime and sleep equal [the fall equinox], and now parts the world in twain, half in light and half in shade, then, my men, work your oxen, sow barley in your fields, as late as the eve of winter's rains, when work must cease. Then, too, is the time to hide in the ground your crop of flax and the poppy of Ceres [the opium poppy].<sup>7</sup>

Classical scholars, reluctant to label the great poet some sort of drug dealer, assume his advice pertains to the use of poppy seeds rather than opium; after all, poppy seed confections were quite popular in antiquity—not to mention totally innocuous. However, Virgil showed that he personally valued the plant for its narcotic, mind-altering qualities: "A crop of flax parches the ground; oats parch it, and poppies, steeped in Lethe's slumber." Lethe was the river of forgetfulness in ancient mythology, where the souls of the dead were purged of their memories. The phrase "Lethe's slumber" is a fitting description of the effects of opium on the body. Passages like this show that the writers of the Classical world truly appreciated the potent medicinal qualities of plants and actively promoted their cultivation.

At the height of early western civilization medicinal plants were a common element of living. Doctors, drug sellers, and much of the agricultural community shared an understanding of the value of specific plants and their healing potential. Medical texts tell us much about the meticulous selection of particular species, the extraction of certain substances from different parts of these plants, and the complex combination of numerous ingredients to make compound drug mixtures. Anyone could prepare and mix drugs in this world. Some relied exclusively upon the valuable knowledge they inherited from their ancestors, some listened to drug merchants busily peddling their wares in the marketplace, while others put their faith in doctors who claimed to have more experience with drugs and a superior understanding of their properties. Despite the presence of so many experts, overdoses and poisonings were a simple fact of life. The demand for drugs was high, and markets teemed with drug sellers from the Mediterranean lands and beyond, all looking to find buyers for their powders, spices, and oils.

Hellebore is an excellent example, if not the archetype, of all medicinal plants in antiquity; for centuries it was one of the most highly valued plants used in medicine. Hellebore left its mark on the pages of every genre of ancient literature; authors mention it with reverence across hundreds of years of literature.

The Classical world used hellebore for one simple reason; it was a powerful purgative. It purged the mind of madness, it purged the body of ill humors, and it purged the guts of corruption. More scientifically, hellebore induced violent vomiting and abundant diarrhea and appeared to bring mentally ill patients to their senses; it was part of a grand attempt on the part of Classical doctors to rid the body of something perceived to be harmful, such as an abundance of a theoretic humor, like black bile. It is difficult to say if there is any true medical basis for the humoral pathology that was so widespread in antiquity, but the theory was so commonly accepted that one must assume it had practical origins. For example, blood, phlegm, bile, and black bile, the canonical four humors of the human body, are much the same fluids that modern physicians deal with on a daily basis: humans tend to excrete blood, mucus, and other "juices" that could very well fit these four categories.

Two different species of plants actually shared the common name "hellebore." Known to the Classical world as black hellebore and white hellebore, both were poisonous,

both were used as purgatives, and both had similarly profound effects on the body. Ancient physicians distinguished the two by the direction of the purge they induced; White hellebore purged upward, and black hellebore purged downward. Pliny gives us a glimpse of the unsettling procedure involving the use of white hellebore as a purgative:

For seven days previously the body must be prepared by acid [pungent] foods and by abstinence from wine; on the fourth and third days before, an emetic must be taken, and the preceding day there should be abstinence from dinner. White hellebore is given in a sweet medium, although most suitably in lentils or pottage . . . Vomiting begins after about four hours, and the whole business is over in seven.<sup>9</sup>

Three hours of sustained, forceful retching is far more than most modern Westerners are willing to endure. Using harsh emetics over a period of days is certainly dangerous, as witnessed by the fact that some ancient authors mocked the traditional use of purgatives and hellebore-prescribing doctors, which they believed were more dangerous than helpful. Excessive use of both types of hellebore caused stupor and convulsions. But despite the horrible effects of the drug on the body, and its potential for lethal overdose, it was among the most popular and widespread curatives in antiquity, which may be a result of the prevalence of intestinal parasites. Any drug that caused the mucosal lining of the digestive tract to slough off would have been an excellent treatment for parasites of all kinds.

Plants like hellebore could be used by themselves or along with other drugs in compound remedies. These complex concoctions were often made from intricate recipes containing, in some cases, dozens of substances. The practical applications of these multicomponent drugs were numerous and varied. For example, wound salves were invaluable tools in the ancient world, where the treatment of terrible war wounds was commonly required of Greek and Roman doctors. The proper care of traumatic injuries became an exact science, requiring attention to detail, indomitable courage, and rigorous professionalism.

Celsus recorded some of the more interesting details of battle-related wound care:

Sometimes the abdomen is penetrated by a stab of some sort, and it follows that intestines roll out. When this happens we must first examine whether they are uninjured, and then whether their proper colour persists. If the smaller intestine has been penetrated, no good can be done, as I have already said. The larger intestine can be sutured, not with any certain assurance, but because a doubtful hope is preferable to certain despair; for occasionally it heals up. Then if either intestine is livid or pallid or black, in which case there is necessarily no sensation, all medical aid is in vain.<sup>10</sup>

For serious wounds like this, Roman doctors quickly stanching any bleeding, cleansed exposed tissues with vinegar and various caustic substances, and then carefully closed lacerations with linen sutures or metallic staples. The plaster, a sort of drug cream, was then applied to these wounds in an attempt to stop what doctors called "inflammation," the body's response to potentially lethal bacterial infections. Celsus gives us a recipe for one of these wound plasters:

The best of these [wound treatments] is the plaster called bar-barum. It contains scraped verdigris 48 grms., litharge 80 grms., alum, dried pitch, dried pine-resin, 4 grms. each, to which is added oil and vinegar 250 c.cm. each.<sup>11</sup>

This cream was applied directly to the wound, with the hope that it would protect

repaired tissues from any form of corruption or decay. It contains an interesting mix of elements and chemicals, each of which would have contributed to limiting the spread of pathogenic microorganisms. No bacterial or fungal pathogen could possibly sustain itself in such an environment.

Despite such procedures for treating wounds, ancient doctors were often helpless against the onslaught of opportunistic bacteria, especially those that cause gas gangrene. When microorganisms gained access to exposed tissues, especially in the limbs, physicians were forced to take desperate measures in an attempt to prevent the rapid spread of rotting tissue:

. . . between the sound and the diseased part, the flesh is to be cut through with a scalpel down to the bone . . . When the bone is reached, the sound flesh is drawn back from the bone and undercut from around it, so that in that part also some bone is bared; the bone is then to be cut through with a small saw as near as possible to the sound flesh which still adheres to it; next the face of the bone, which the saw has roughened, is smoothed down, and the skin drawn over it.<sup>12</sup>

Amputation was an option only when infection was limited to the extremities; inflammation following injuries to the head and trunk typically portended a fatal outcome. In addition, amputation was never entirely reliable or even significantly successful. Removing affected limbs frequently resulted in a downward spiral, including further infection, additional surgical intervention, difficult complications, and eventually death.

Ancient doctors relied heavily on drugs to stave off the spread of "corruption" (i.e., infection), but they also used them as a means of altering basic human physiology. Potent botanicals and toxic metals were not only useful for killing bacteria and fungi, but also for regulating important bodily processes, like blood pressure, neural activity, and organ function. Greeks and Romans even used plants to tinker with the human reproductive cycle. Contraception and abortion, controversial subjects in antiquity as they are today, were common aspects of medicine. Infants, owing to a particular physical weakness or overwhelming economic issues of the family, were frequently exposed. Exposure, as practiced by the Greeks and Romans, entailed binding the legs and feet of the newborn and leaving it in an uninhabited area. This process quickly resulted in the demise of the infant, and was used therefore as an alternative to manual or chemical abortion. When women did not desire to carry their pregnancies to term, they would introduce objects and poisonous chemicals into their reproductive tracts in order to induce termination. These "abortions" were perfectly legal, but as Soranus, a Roman physician of the first century A.D., indicates, they were a topic of debate for physicians and midwives, some of whom refused to be involved in the process. Abortion wasn't the only method of attempting to control reproductive activity in Greco-Roman times. In fact, much drug craft was concerned exclusively with attempts to manipulate menstruation and thereby prevent a viable pregnancy. Some doctors gave advice on women's reproductive health, but most deferred to midwives, a group of semiprofessional women with expertise in gynecology and obstetrics. Unfortunately, the gender restrictions on education meant that most midwives would have been unable to write or even to find an audience for their writings. What we know about gynecology in antiquity derives exclusively from the writings of male physicians, who had far less experience with female reproductive problems and parturition issues than contemporary midwives.

Soranus wrote an extensive treatise on gynecology, the only one of its kind to sur-

vive. In it, he lists recipes for several compound remedies that were used to induce abortions and reveals an abiding interest in protecting patients from any unnecessary suffering:

Another vaginal suppository which produces abortion with relatively little danger: Of wallflower, cardamom, brimstone, absinthium, myrrh, equal quantities, mould with water. And she who intends to apply these things should be bathed beforehand or made to relax by sitz baths; and if after some time she brings forth nothing, she should again be relaxed by sitz baths and for the second time a suppository should be applied . . . one must, however, beware of things that are too powerful and of separating the embryo by means of something sharp-edged, for danger arises . . . <sup>13</sup>

Soranus's prescription is a curious combination of ingredients; this strange mixture probably altered the uterine environment enough to make it unable to sustain a viable embryo; this drug, and others like it, allowed women to terminate unwanted pregnancies without resorting to dangerous surgical procedures. Drugs like Soranus's vaginal suppository must have had a certain degree of success in order to remain in use. Many of the plants and minerals physicians used had profound effects on the body, and much of ancient medicine, despite its apparent quiriness, actually worked.

The use of castoreum is an example of the efficacy of some of the stranger sorts of drugs used in antiquity—things that most of us would laugh at today. Castoreum is a fluid derived from small glands that flank the genitals of the male beaver, a mammal once common in Europe that was eventually hunted to near extinction. Doctors and drug sellers removed these glands, processed the fluids they contained, and added them to certain compound drug mixtures. <sup>14</sup>

The Romans used this drug, known to them simply as *cas-toreum* (literally meaning something like "beaver juice"), to treat persistent fevers and painful headaches. In fact, Pliny implies that the drug was in such high demand that medical writers were forced to correct falsehoods—urban folklore, so to speak—concerning the beaver and the source of its valuable biochemicals:

Equally remarkable is the might of Nature in those creatures also which are amphibious (in a literal sense), such as the beaver, which they call *castor* and its testes *castoreum*. Sextius, a very careful inquirer into medical subjects, denies that the beaver himself bites off his own testes when it is being captured; he says that on the contrary these are small, tightly knit, attached to the spine, and not to be taken away without destroying the creature's life. <sup>15</sup>

Apparently, some thought the glands were external, but Pliny makes it clear that this was not the case. Those who collected castoreum knew they were part of the beaver's internal organs and could only be harvested by sacrificing the poor animal.

Was castoreum effective as a medication? Advice on the pharmaceutical utility of anything associated with an animal's private parts certainly smacks of charlatanism, and must generate healthy skepticism in a modern audience. After all, what could these glands possibly produce that would be of benefit to those suffering from headaches? The answer is simple: Beavers are fond of chewing on willow bark, a tree that naturally contains salicylic acid, the chemical used to make modern aspirin, which is itself a great fever reducer and painkiller. By feasting on willow bark, these beavers may have accumulated high concentrations of salicylic acid in the special glands located in their anal-genital region, where the drug was probably metabolized or perhaps stored. This process would have made the glands an excellent treatment for headache

and fever; it appears that doctors were prescribing a primitive form of aspirin when they recommended beaver juice.

How ancient physicians came to learn of the usefulness of animal tissues will probably remain a mystery forever; trial and error seems ridiculously out of the question, but somehow they managed to learn that this particular gland was a potent analgesic. The actual chemistry of castoreum was entirely irrelevant to ancient doctors. The Greeks and Romans didn't need to know the molecular makeup of their drugs in order to put them to good use; they just needed drugs that worked. And many of the prescriptions found in their medical texts did exactly that—they got results.

Ancient drugs generally worked in one of two ways; they either suppressed the growth of microorganisms and parasites, or they directly altered human physiology. Substances like pine resin, honey, and by-products of metal processing all created an environment hostile to biotic growth and replication when added to wounds. Bacteria, fungi, and parasites were responsible for much of the illness and suffering in antiquity, and bacteriostatic drugs like these aided patients by preventing opportunistic colonization by pathogens.

Other drugs had a more direct effect on the human body. Some altered blood pressure and respiration rates; others increased gut motility, deadened nerves, dried up mucous membranes, or induced sleep. Most of these chemicals were secondary metabolites, powerful family of biologically active substances derived from plants. Several were unmistakably narcotic, some were relatively harmless, most were toxic when given in large quantities, and a few of them were downright deadly.

Secondary metabolites, the potent chemical defenses of the plant kingdom, have significant effects on human physiology. Modern botanists classify these substances on the basis of obvious similarities in their chemical structures. Accordingly, there are three families of secondary metabolites: terpenes, phenolics, and nitrogen-containing compounds. Pharmacognosy texts use more descriptive language when referring to these potent chemicals; they speak of large families of biologically active substances such as glycosides, volatile oils, and alkaloids.

Glycosides are compounds that release sugar during hydrolysis. Digitoxin and digoxin are two potent glycosides found in the leaves of different species of plants known as foxglove (*Digitalis purpurea*, *D. lanata*). Both chemicals have been used successfully in the treatment of congestive heart failure due to their ability to strengthen cardiac muscle activity. Volatile oils are a mixed bag of aromatic secondary metabolites that quickly convert to a gaseous state at room temperature. Peppermint and rose may be among the more common plants that produce volatile oils, but the juniper and pine also produce potent oils used in ancient medicine. Also, Wormwood (*Artemisia absinthium*), a plant used for centuries as an additive to wine and other alcoholic beverages, produces a powerful volatile oil with narcotic qualities. Alkaloids are physiologically active nitrogenous compounds. They have been traditionally labeled with an —ine ending; nicotine, atropine, cocaine, caffeine, and morphine are all alkaloids. Drugs that make up this family have profound effects on human physiology and are among the most widespread pharmaceuticals and illegal narcotics of botanical origin.

As the use of plants and plant-derived substances in pharmacy began to fall out of fashion in the early twentieth century, stopped searching for the active ingredients hidden in ancient curatives and turned to the manipulation of well-established chemicals. As a result, much of our information on the drug potential of these plants has been seriously curtailed. Ethnobotanists around the globe tend to focus on the use of plants in non-Classical traditions, like those used by the indigenous populations of Central and

South America, but Classical manuscripts still hold tremendous potential for the rediscov-  
ery of novel antibiotics and other drugs.

Despite the current loss of interest in using ancient botanicals to cure modern di-  
seases, it is clear that the Greco-Roman world benefited tremendously from the use of  
medicines acquired from nature. Plants were the best available source of chemicals  
that helped to fight disease in the midst of the great suffering and anguish that charac-  
terized antiquity. Without botanical drugs, medicine in Greece and Rome would have  
been largely ineffective, and ancient life would have been far more unbearable.  
From birth to senescence, all segments of Classical society experienced natural  
curatives; from purging a patient to sanitizing a soldier's wounds to controlling one's  
reproductive cycle, antiquity exposed its members to a constant barrage of potent  
chemicals and potentially deadly pharmaceuticals. These drugs helped to relieve  
Western society of its tedious physical burdens; drugs healed the sick, assisted the  
injured, and covered up the ugliness of day-today life.

Healing the body was an invaluable aspect of Classical civilization. Drugs, when they  
worked, brought about seemingly miraculous changes in health. Physicians and philo-  
sophers like Hippocrates, Theophrastus, Dioscorides, Celsus, and Galen, all labored to  
expose the secret healing capacities of natural products. Substances derived from  
plants and animals were the mainstay of ancient medicine; without them, the Classical  
world would have experienced far more pain, both physically and emotionally.

Drugs were a godsend to the sick and wounded in antiquity, as they are today, but  
they also served other, nonmedical purposes. Several of these potent substances  
possessed the ability to affect the mind as well as the body. Juices derived from plants  
like the opium poppy, wormwood, and even hemlock contained chemicals that acted  
on the central nervous system, where they altered pain and sensory perception. These  
drugs could induce states of sedation and extreme euphoria, and were wholeheartedly  
embraced by the ancient world. The harsh living conditions in the Classical world  
took their toll on the psyche as well as the body, and in an effort to alleviate mental  
anguish the Greeks and Romans turned their attention to the same plants that brought  
them miraculous healing. Antiquity had its medications, but it also had its recreational  
drugs.

### **3 Greeks, Romans, and Recreational Drugs**

Here is the leaf that begins all life worth having.

—Gilgamesh

The mind can never be separated from the body; the miracle of cognition springs from the interaction of tissues, cells, and biochemical machinery, as does any other component of human physiology. Chemicals regulate "thinking" no differently than they control more mundane bodily functions such as blood pressure, immunity, or reproduction. Euphoria, depression, excitement, anxiety, pleasure, and pain are all nothing more than complex chemical reactions occurring between a host of molecular agonists, antagonists, and their evolutionary programmed receptors.

The science of molecular biology may be modern, but the Greeks and Romans understood the value of elementary substances found in plants and fully appreciated their ability to affect the body and the mind. Ancient civilization depended no less than does the modern world on a cadre of stimulants, antidepressants, analgesics, sleep aids, and mood enhancers, all based on the complex interactions of neurochemicals and cell receptors; two thousand years ago the world was ignorant of the exact science behind their drugs, but they were all well aware of the fact that plant products could dramatically alter the body's natural processes, especially cognition. Recreational drug use in the Classical world is a touchy subject for most scholars. For a variety of reasons, the topic is largely taboo. It's a bit difficult for many serious academicians to imagine that the great poets, sculptors, and statesmen of Western tradition might have used mind-altering drugs. The strong tendency of our culture to con-

demn casual drug use on moral grounds usually prevents historians from looking at antiquity with any sort of unbiased perspective. Despite a wealth of evidence that recreational drugs were, in fact, part of the mainstream culture of the Classical world, the topic is actively ignored by the Ivory Tower.

Classicists spend much of their time laboring diligently over the proper translation of Greek and Latin texts but are ironically notorious for fudging the depictions of morally undesirable topics; anything related to sex, drugs, and rock-and-roll is inevitably avoided, whitewashed, or just plain censored. For example, the first literal translations of Aristophanes, the infamously bawdy comic poet and author of the antiwar comedy *Lysistrata*, are only now beginning to roll off the presses, after years of Victorian-inspired prudery among academics.

Despite this traditional squeamishness about the topic of recreational drugs, a wealth of ancient literature shows that the Greco-Roman world actively indulged in numerous mind-altering substances of homegrown and foreign origins. Plants were the source of the pleasure-inducing drugs used to elevate the mood and enhance the senses. Opiates, anticholinergics, and psychotropic fungi were the drugs of choice in antiquity, but a number of unrelated toxins were also used to create the out-of-body experiences that the Greeks and Romans so craved. It may not be pleasant for some of us to admit it, but the texts clearly show that our most original and respected thinkers flourished within a culture that wholeheartedly embraced recreational drug use.

There can be no doubt that the Greeks and Romans clearly understood the mind-altering potential of specific plants. Theo-phrastus, the father of botany, considered the psychotropic activity of plants to be a unique characteristic of certain species: "And in relation to our own persons, apart from their effects in regard to health, disease and death, it is said that herbs have also other properties affecting not only the bodily but also the mental powers."<sup>1</sup>

His statement is much more a declaration of common sense than some sort of keen scientific observation; it smacks of public opinion rather than any esoteric body of knowledge possessed by medical specialists and suggests a familiarity with the effects of nonmedicinal drugs. Theophrastus was stating the obvious when he said that drugs could affect the mind and body in ways unrelated to their use in medicine, a fact that his audience took for granted.

Recreational drugs were a highly visible component of ancient life. Merchants and traders bought and sold narcotics along with other medicines in marketplaces, where the general public had ready access to a variety of exotic plants. Drug vendors and herb collectors not only sold mind-altering drugs, but also provided quasi-professional advice on matters of preparation and dosage. Psychotropics, sedatives, and analgesics, a mainstay of the ancient drug economy, were never considered odd or inappropriate for consumption by the masses. For example, Pliny classified the opium poppy as one of the "garden variety" plants cultivated by typical Roman families. In other words, nature's strongest narcotic was very much at home in Italian gardens, where it was planted somewhere between innocuous parsley plants and hearty native cabbages. Methods for administering drugs were a bit less diverse in the ancient world than they are today. Most people took recreational substances orally after mixing them with wine, which was the most common method for medical prescriptions as well. The overwhelming majority of drugs were taken in this way, but the Classical world also figured out other interesting methods for ingesting their drugs.

Subcutaneous and intravenous injections were entirely unknown, but that didn't stop the Greeks and Romans from finding different ways of getting potent pharmaceuticals into their blood streams. For example, drug mixtures were forcefully pushed

into the nostrils, in a method that could best be described as "snorting." This process exposed the mucosal lining of the nasal passages to whatever drugs they didn't want to ingest directly. The Greeks and Romans also used a variety of suppositories, both anal and vaginal, where drugs could be readily absorbed.

Classical scholars and ancient historians will tell you that the Greco-Roman world didn't "smoke drugs in the modern sense of the word, but they are entirely wrong. Most ancient civilizations were well aware of the fact that one can assimilate the active principles of plants into their bodies through the process of inhalation. Greeks and Romans intentionally exposed themselves to the vapors of burning plants during the ancient practice of "fumigation," a process whereby the drug user breathed in the fumes of various substances, anything from ordinary incense to potent herbs. This was a commonplace activity in recreational, religious, and medical settings. For example, according to Herodotus, the first Greek historian, the ancient Scythians threw parts of the marijuana plant (*Cannabis sativa*) onto hot rocks and thereby exposed themselves to potent mind-altering fumes, a process that made them boisterously jovial. Fumigation was a bit like second-hand smoking—not in a twenty-first-century sort of sense, but in a crowded boardroom meeting in the late 1960s sense, from which one would emerge stinking of cigarettes and a bit bleary-eyed. The Greeks and Romans also smoked in the modern sense of the word, directly inhaling the vapors of burning plants. For example, Pliny tells us that burning anise and breathing in its smoke through the nostrils was a cure for headache.<sup>2</sup> Although the Romans certainly didn't sit in coffee shops, slowly nursing prepackaged cigarettes while sipping cappuccinos—and in that way didn't actually "smoke" in the modern—they were well aware that inhaling the smoke from certain plants could be of benefit. The Classical world understood that some drugs, whether mixed in wine, snorted, or smoked, could readily alter consciousness and considered the dramatic changes in behavior that characterized these psychotropic substances to be a form of madness or insanity. Potent drugs and hallucinogenic poisons enabled their users to violate the limits of propriety by temporarily placing them in states that were clearly out of synch with the rest of society. This pharmacologically induced psychosis made drug users rave in a manner that was typically considered to be a sign of mania. Such insanity was not always the desired result of psychotropics; citizens of the ancient world typically used different types or smaller amounts of recreational drugs to induce mild euphoria, with no additional psychological side effects. Doctors, philosophers, and natural scientists traditionally recognized the potential for botanical drugs to have different effects on their users, including variations in potency due to the level of dosages and the natural strength of different species:

... one is edible and like a cultivated plant, having a berry-like fruit, and there are two others, of which the one is said to induce sleep, the other to cause madness, or, if it is administered in a larger dose, death. The same thing may be observed in other plants which are widely different.<sup>3</sup>

In the ancient world, drugs could have light, moderate, or dangerously severe effects. Plants could be helpful, harsh, or even harmful, depending on a various factors.

Antiquity's recreational drugs possessed phenomenally powerful psychotropic capacities. They were certainly no less mind-altering than most modern street drugs, including heroin, LSD, and hallucinogenic mushrooms. The Greeks and Romans were fascinated by the potentially drastic effects of their botanicals and strove to preserve an understanding of these psychotropic substances for later generations. For example,

Pythagoras and Democritus journeyed to Egypt, Ethiopia, Arabia, and Persia, visiting sects of drug-using wise men, known as Magi—the very same religious group that visited Jesus according to the Gospels—and wrote extensively about the potent psychotropic substances with which they experimented.<sup>4</sup>

Pliny delights in vivid descriptions of these powerful mind-altering drugs and the many diverse reasons for which they were used:

The Magi use it [*aglaophotis*] . . . when they wish to call up the gods , . .  
[*Achaemenis*]... is of an amber colour, leafless and found among the Taradastili of India; criminals ... if they drink it in wine, confess all their misdeeds because they suffer tortures from divers phantoms of spirits that haunt them . . .  
... the kings of Persia take it [*theombroton*] in drink for all bodily disorders and for instability of intellect and of the sense of justice . . .  
The *ophiusa* . . . [grows in Ethiopia and] . . . causes such terrible visions of threatening serpents that fear of them causes suicide; wherefore those guilty of sacrilege are forced to drink it.  
The *thalassaegle* . . . [grows along the Indus and] . . . causes men to rave, while weird visions beset their minds.  
... the *hestiateris* is a Persian plant, so named from its promotion of good fellowship, because it makes the company gay; it is also called *pro-tomedia*, from its use to gain the highest position at Court.<sup>5</sup>

Most of the plants mentioned here are unidentifiable today, but their effects on the brain were clearly of a psychotropic nature. Pliny makes it appear that these substances were intentionally used to induce euphoria, giddiness, and hallucinations, in the same manner as most recreational drugs today. People from all walks of life used them, from commoners to kings, and nowhere in the text are we able to detect a moral stigma attached to their use. After all, Eastern kings used potent drugs to embolden themselves and revitalize their tired spirits. One of these passages even implies that drugs helped to clarify the minds of their regal users and assisted them in making better judgments while on the throne.

The Greeks and Romans were just as comfortable as the Eastern world with the nonmedical use of drugs; in antiquity, the use of narcotics was never the purview of any particular social order. From commoners to aristocrats, from slaves to important government officials, everyone had access to mind-altering drugs, and nobody felt ashamed to admit their dependence on narcotics. When potentially mind-altering drugs appear in ancient literature, they are never met with a flurry of apologies or any sort of embarrassment; they were just a common aspect of ancient life. For example, Plutarch, the renowned biographer of history's most prominent Greeks and Romans, tells us of an incidence of drug use during the Roman civil war of the first century B.C. that aptly illustrates antiquity's attitude of detached indifference to the subject:

He [Julius Caesar] then marched against Domitius who was holding Corfinium with a force of thirty cohorts. Caesar pitched his camp near the city and Domitius, despairing of being able to defend the place, asked his doctor, who was a slave of his, to give him poison. He took the dose that was given him and drank it with the intention of putting an end to his life. Soon afterwards he heard that Caesar was behaving with the most remarkable kindness to his prisoners; he then began to bewail his fate and to reproach himself for having been too hasty in coming to his resolution. His doctor, however, cheered him up by informing him that what he had drunk was not poison at all, but only a sleeping [hypnotic] draught. Domitius was delighted.<sup>6</sup>

Hypnotics are a specific class of sleep-inducing drugs that include strong narcotics and sedatives. The passage is interesting for two reasons; not only was there no apparent social concern for using strong narcotics, but it also seems that the slave had a readily available supply of the drug just for the general's personal use. Perhaps Domitian was accustomed to taking the drug as a sort of sedative, a pharmaceutical means of dealing with the rigorous politics of the first century B.C., just as Persian tyrants consumed drugs to meet the demands of kingship.

Drugs may have been a potent coping mechanism for tired generals and Eastern potentates, but the pharmaceutical promise of euphoria had its limits in antiquity—just as it does today. That is, our texts show that the Classical world was well aware of the phenomenon known as drug tolerance. Theophrastus warned his readers of this easily observable fact: "The virtues [powers] of all drugs become weaker to those who are accustomed to them, and in some cases become entirely ineffective"<sup>7</sup> Although the Greco-Roman world had no concepts like drug addiction or substance abuse, they clearly recognized the body's tendency to grow accustomed to certain drugs, thus creating a requirement for higher doses in order to achieve the same results.

The aforementioned passage is critical to our understanding of ancient drug use, because it implies that there was a segment of the population that took drugs frequently enough to induce tolerance. In other words, antiquity had its own chemically dependent addicts. But because ancient legislators never outlawed the sale of narcotics nor declared nonmedical drug use to be immoral, drug addiction in the modern sense of the word never truly existed. Greeks and Romans clearly abused drugs—in a modern sense—but they just didn't consider the behavior associated with heavy recreational drug use to be of social or spiritual concern; persistent drug users didn't present significant social obstacles. In fact, it may seem strange to us that drug sellers were consistently criticized for adulterating their products and selling valueless drugs, but drug users were never portrayed in a bad light. Accordingly, there are no words in Latin or Greek for "junkie," "hophead," or "dope fiend." Those are modern concepts. The opium poppy (*Papaver somniferum*) is one of the oldest known cultivated plants, and may even be the first botanical substance used for both medical and recreational purposes. Neolithic settlements bear witness to the long history of human involvement with opium, where remains of the poppy have been found in Swiss pile-dwelling villages. The earliest evidence for the presence of poppy cultivation reaches back as far as the fourth millennium B.C., but it is likely that opium was used far earlier than that. Many Near Eastern cultures provide us with information regarding the widespread presence of the opium poppy in the ancient world, including Sumerians, Babylonians, Assyrians, and Egyptians, who knew about the valuable applications of the poppy and actively promoted its cultivation throughout their lands.

Farther west, archaeological remains from Mycenae, in Greece, and the island of Crete, both of which had Bronze Age cultures, bear striking depictions of the opium poppy. Signet rings and broach pins from royal tombs show vivid representations of the poppy's capsule, which was the recognized source of the drug. Depictions of the capsule were meant to symbolize the juice of the poppy, much like fruits were made to represent the trees from which they came. These artistic images signify the widespread presence of opium in early Greek times. Late Bronze Age Cypriot peoples made small vases shaped like the poppy capsule for purposes of trade with Egypt. Scholars believe their distinct shapes provide us with an explanation of the contents they once held; merchants from Cypress probably sold these compact containers, filled with opium dissolved in wine, to their customers in

Egypt. Their small size may indicate that they were specifically designed for personal use. Such evidence points to the existence of a vibrant drug trade in the Mediterranean, long before the rise of Classical Greco-Roman society. Egypt eventually became famous for its cultivation and preparation of drugs, and was undoubtedly one of the best sources of opium in antiquity. The Greeks, who traded with the eastern , inherited much of their traditional awareness of the potency of botanicals from the Egyptians. They may have learned of the analgesic and sleep-inducing qualities of opium from the physicians and poppy cultivators in the land of the pharaohs, or they may simply have picked up the habit from Crete, Cyprus, or parts of Asia Minor, where the drug was also popular. Regardless of its exact geographical origins, the poppy eventually made its way to Greece and Italy, where it was warmly embraced by Hellenic and Italic cultures and quickly absorbed into their art and literature.

Extracting opium from the poppy is an age-old practice. Today's poppy farmers in Afghanistan collect opium in a manner almost identical to that used by the Greeks and Romans two thousand years ago. The process is relatively simple but requires a pinch of agricultural know-how and some botanical savvy. Pliny the elder described the process of collecting opium:

From the dark poppy a soporific is obtained by making incisions in the stalk, when buds are forming (as Diagoras advises), or when the flowers are falling (as Iollas recommends), at the third hour of a clear day, that is to say, when the dew on the plant has dried up . . . Both this juice and that of any other plant is gathered in wool, or if there be but little, by scratching it off... Poppy juice however being copious thickens, and squeezed into lozenges is dried in the shade; it is not only a soporific, but if too large a dose is swallowed the sleep even ends in death. It is called opium.<sup>8</sup>

Evidence like this not only makes it clear that opium was a valuable and widespread commodity in the ancient world but also alerts us to the fact that great civilizations of the past, unlike modern Western nations, felt no compulsion to criminalize strong narcotics. Pliny, a well-respected member of the Roman aristocracy, was not ashamed to possess such a detailed understanding of the best methods for producing narcotics. Recreational drugs did not bear the stigma assigned to them by the modern West.

The juice of the poppy contains numerous intoxicants that attracted the drug-loving Greco-Roman world. The most potent are morphine and its close chemical relative, codeine. Morphine, which derives its name from Morpheus, the Greek god of dreams, is an alkaloid that acts upon groups of highly specific receptors found in the human brain involved in pain and pleasure sensation. In fact, the human nervous system possesses its own biochemical machinery that specifically binds the chemical constituents of opium in a basic lock-and-key fashion. Scientists call these brain molecules opioid receptors because they bind morphine and a number of related chemical messengers. Once these receptors are activated, they bring about a myriad of changes in brain function; these alterations are responsible for the analgesia and euphoria felt by those who are under the influence of opiates.

Morphine levels in opium tend to fluctuate, like the alcohol in different wines, so samples of raw opium latex typically vary in strength. The efficacy of any particular batch of opium in antiquity relied almost exclusively on the morphine concentrations found in the plant's capsule from which the drug was taken, so determining dosages of the drug was an unreliable process. Unintentional overdoses of strong drugs like

opium strengthened the need for antidotes made from numerous plants. The morphine found in opium acts on the brain to enhance feelings of pleasure and to decrease pain perception, but, as any morphine user will tell you, the drug doesn't abolish pain sensations altogether; it simply mitigates the response to pain. That is, morphine acts upon neural pathways involved in *pain interpretation* rather than just *pain perception*. Under normal circumstances, the nervous system relays information about bodily injury to the brain, where different nuclei interpret these signals and determine the proper response. Under the influence of opium, pain-sensing nerves send their messages directly to the central nervous system, but the brain perceives these signals in a different biochemical light; that is, thanks to opium we feel pain but we just don't care.

This makes morphine an incredibly effective treatment for traumatic injury.

The true power of opium, the source of its lasting grip on the soul of humanity, is certainly this profound ability to relieve pain; no drug, no form of medicine, no man-made chemical, no school of Eastern meditation, no shamanism, no alternative means of healing—crystals, positive thinking, and all—can even begin to rival the analgesic capacity of opium. Thousands of years of human history reveal it to be the best of all narcotics in the truest sense of the word (*narc-* from the Greek for "to numb"). For the founders of Western society, life without opium would have been impossible. Opium enabled humanity to push beyond the pain of existence; it enabled its users to look beyond mundane agony to a world of sublime serenity. Classical writers tell us this precious narcotic caused a deep and intense stupor, like that brought on by excessive alcohol intoxication:

A man who drinks his wine like a thirsty horse lapping up its water, Senselessly babbles, and can't pronounce his words properly. The drunkard lies there at the bottom of his cup, not saying a word, Completely stupefied, like a man who just drank the drug opium.<sup>9</sup>

The idea here is that opium placed its user in a mental stupor; it was not a coma, but a state of intense lethargy characterized by mental detachment. Latin authors joined words like *sopor* (sleep), *somnus* (sleep), and *stupor* (torpor) to descriptions of poppies and opium. *Sopor* and *somnus* both denote types of sleep, but the former signified a deep or overpowering sleep while the latter referred to regular nighttime sleeping. The Romans typically referred to the dazed state of opium intoxication as *sopor*. English reflects similar ideas in its use of words like "stoned" and "high," which are universally recognized as specific terms of drug-related vocabulary.

Opium's physical effects were so widely recognized in Italy that the Roman world created its own epithet for the poppy. They referred to it as *soporiferum papaver*, the sleep-inducing poppy. Although the Latin language also possessed the adjective *somniferum* to represent the concept of "sleep-inducing," *soporiferum* dominates literary references to the poppy, which shows that the Romans tried to distinguish the strong narcotic effects of opium from the nonnarcotic effects of other drugs that induce sleep. Once again, the ancient world was unashamed of its intimate familiarity with the effects of opium intoxication and aimed to clarify rather than disguise them. The physiological effects of opium were universally understood in antiquity, due to the ubiquity of the drug, but it has largely disappeared from public view today, and therefore few people know much about its intoxicating effects. Fortunately for the English-speaking world, a nineteenth-century gentleman, Classical scholar, gifted writer, and self-proclaimed opium user devoted an entire work to the effects of the drug. Thomas De Quincey's *Confessions of an English Opium-Eater* is a masterly depiction

of the profound psychological effects of the narcotic. It describes the opium trip in astounding detail and preserves the exotic experiences of using the world's most popular drug. De Quincey believed opium created a "paradise" for those who used it. Accordingly, he called the druggist who introduced him to opium an "unconscious minister of celestial pleasures!"<sup>10</sup>

He took draughts of opium dissolved in alcohol, a popular nineteenth-century version of the drug known as laudanum, which banished his pain and granted him profound feelings of serenity. De Quincey denied that any form of depression followed opium use and vehemently defended the opium user's ability to function normally within society, a blatant contradiction to the modern view of the habitual drug user as a dysfunctional and potentially dangerous individual.

The poppy, in Greek *mekon*, in Latin *papaver*, was cultivated for its seeds as well as opium, but the use of the plant's name is usually a reference to the drug. Greek and Roman physicians typically used the name of the poppy with the drug itself, and thus they rarely speak of the actual process of collecting latex and preparing the crude opium. Their prescriptions of painkilling medications typically list the poppy as the recipe's primary anodyne and frequently omit any awkward or unnecessary details that would tend to confuse their audiences.

From the word *mekon*, the Greeks developed a number of highly charged terms. For example, *mekonion* and *mekoneion* both represented the juice derived from the poppy capsule, or opium. The former was even used to denote the bowel contents of newborn babies, something known today as meconium, because of its dark brown color and sticky texture. Opium must have been ubiquitous in antiquity, or the Greeks would not have made such a linguistic hullabaloo about the obvious similarities.

The English word "opium" derives from its Latin ancestor *opium*, which was itself taken from the Greek word *opion*. *Opion* originally signified the "juice" of any plant, but eventually it came to mean just the juice of the poppy. In other words, the Greeks referred to their popular drug of choice as "juice," just as marijuana today is euphemistically known as "weed." Although common expressions like this generally indicate some sort of taboo associated with the terms they come to represent, the Greeks used the word *opion* because it was the most widely recognized plant juice of their culture. Stated simply, the drug opium was so well known in antiquity that the Greeks just referred to it as "the juice."

The Greeks also used the term *diakodion* for opium. *Kodya*, the root of this philologically queer word, means "plant capsule" and was commonly used to represent the opium poppy's distinctively shaped, seed-filled structure. In this way, it seems opium was occasionally associated with the poppy's most prominent feature—the source of the drug. The preposition *dia*, can simply intensify a word it precedes, so in English *diakodion* might have been something like "head"... not any old head of a plant, but *the Head*. It was quite rare to refer to opium this way in writing, which may tell that *diakodion* some sort of slang term for the drug, used only in private circles, and directly akin to our use of "bud" for marijuana.

In his *Peloponnesian War*, Thucydides shows that opium was valuable enough to tempt brave men to risk their own lives. The Greek word for "poppy (*melton*)" in this passage has traditionally been translated "poppy seed" to avoid portraying the Greeks as drug users. In a heated battle at Pylos, the Athenians besieged the Spartans, hoping to starve them into submission, but a number of brave helots, the servants of the Spartans, managed to sneak lifesaving provisions onto the island and into the hands of their grateful masters. Thucydides tells us that the poppy was one of these valuable provisions, but modern Classicists want us to believe this episode had nothing to do with drugs:

The fact was that the Spartans had called for volunteers to bring into the island ground corn [wheat], wine, cheese, and any other form of food useful in a siege . . . There were many ready to take the risk of doing so . . . *Divers also swam in under water from the harbour, dragging behind them by a cord skins containing poppyseed mixed with honey and pounded linseed.*<sup>11</sup>

Translations like this make it appear that the wounded Spartans were desperate for baked goodies topped with tasty poppy seeds. In reality, the Spartans had been caught up in hand-to-hand combat with the Athenians and were defending themselves against a relentless assault, so they undoubtedly had many injured soldiers who were in dire need of medical attention. If we translate the word "poppy" (*melton*) as "opium," the passage makes much more sense. The brave divers risked their lives to bring their comrades opium in order to treat the sick and wounded. The context of the rest of the passage appears to bear this out, for opium was so foul tasting that it was often mixed with honey, and linseed oil was a common ingredient found in salves and poultices designed to treat wounds. It's far more reasonable to conclude then that the helots were trying to sneak medical supplies to their injured countrymen, not poppy seeds. The Spartan warriors were in need of painkillers, not pastries. Aristotle, the famous philosopher, student of Plato and personal tutor of Alexander the Great, also wrote about the powers of opium—not the powers of poppy seeds. In a short work titled *On Sleep*, he discussed altered states of consciousness, including stupor, drowsiness, and normal sleep:

. . . considering the things that induce sleep; they all, whether potable or edible, for instance *poppy*, mandragora, wine, darnel, produce a heaviness in the head; and persons borne down and nodding all seem affected in this way, i.e. they are unable to lift up the head or the eyelids. [italics added]<sup>12</sup>

It is clear from the passage that his audience must have had some exposure to the drug as well. Otherwise, it would be odd for him to try to use it as an illustration of his point. Like Thucydides, Aristotle used the Greek term *melton* here to refer to the drug. Once again, the passage makes little sense with any other translation of the word; poppy seeds do not have the same effect as mandrake, a strong anesthetic, or large quantities of wine. In fact, poppy seed confections would never cause a person to enter the stupor described here. Aristotle was certainly referring to opium in this passage, and he used the generic word "poppy" to do so. He assumed his audience would understand that it was the drug, not the plant, to which he was referring.

When the Romans wanted to place special emphasis on the actual juice of the poppy, rather than mention just the plant itself, they used the exquisite term *lacrimae papaveris*, or "tears of the poppy." Such expressive terminology sounds far better suited to poetry than medical treatises, but physicians employed it as a technical term to represent the juice of the opium poppy. "Poppy tears" was medical jargon for opium.

The various contexts in which the word "poppy" (*papaver*) is embedded in Latin literature make it possible to conclude that most of these passages refer explicitly to the opium poppy (*Papaver somniferum*) and not its nonnarcotic relatives. Sometimes Roman authors speak of the medicinal value of opium as a treatment for pain, but much of the time the drug appears as a nonmedical means of altering consciousness. That is, like their Greek neighbors, the Romans used opium for recreational purposes. This is significant because all three of our surviving authorities on Roman agriculture, Cato, Varro, and Columella, mentioned the poppy and discussed various issues surrounding

its usefulness and cultivation. These three men wrote extensively about the proper use of land and resources for farming and compiled agricultural manuals—early farmer's almanacs—a type of prose composition that became quite popular in Rome. Farmers were the backbone of ancient civilizations and typically remained more conservative than their cosmopolitan counterparts. For example, Cato the Elder, one of the aforementioned authors, was known near and far as a paragon of old-time virtues and traditional values. He was a bit of a xenophobe who didn't trust his Greek neighbors, but one thing he did trust was opium. Cato unabashedly encouraged farmers to plant poppies, no doubt as an alternative to buying expensive painkillers in the Roman markets, for he was notoriously cheap.

Poppies made a limited number of appearances in the works of Latin poets like Catullus, Ovid, Horace, Propertius, and Virgil, but they truly impressed the natural historian Pliny, who mentioned them over fifty times in his own writings. Pliny described all aspects of the plant, including specific physical descriptions, the proper way to collect opium latex and medicinal uses of the drug. When he referred to opium, he typically used the Latin word for "poppy" (*pa-paver*). And lest we should be led astray by scholars who want us to think that the Romans valued the poppy just for its scrumptious seeds, we should consider that Pliny used the Latin word *opium* and its derivative *meconium*, which can only refer to the drug opium, several dozen times in his *Natural History*.

Like the opium poppy, wormwood (*Artemisia absinthium*) is another plant that contains psychotropic chemicals. It is one of several hundred related plants belonging to a single genus known as *Artemisia*. In antiquity, it was widely recognized for its incredibly bitter taste; wormwood's pungent aroma and hideously noxious flavor gave it such a bad name that even the author of the biblical book of Revelation made it an apocalyptic tool of the divine wrath of God upon sinful mankind:

And the third angel sounded, and there fell a great star from heaven, burning as it were a lamp, and it fell upon the third part of the rivers, and upon the fountains of waters; and the name of the star is wormwood; and the third part of the waters became wormwood; and many men died of the waters, because they were made bitter.<sup>13</sup>

Wormwood, southernwood, mugwort, and Roman wormwood are all unremarkable shrubby plants. Common wormwood (*Artemisia absinthium*) has been used for centuries as a mental stimulant and anxiolytic—a drug that quiets anxiety. In addition, the Greeks and Romans made a special wine with this bitter plant. According to Pliny, ancient physicians prescribed wormwood wine far too frequently, but this perceived abuse of the drug did not prevent him from discussing the best method for making it.<sup>14</sup>

The chemical responsible for wormwood's physiological effects is something called thujone. This drug produces mind-altering effects in humans, commonly described as feelings of self-confidence and an impression of artistic inspiration. On a molecular level, thujone is simply a potent neurotoxin. This means that wormwood consumption can be a dangerous proposition, but this risk seems to have eluded the Classical world entirely. The fact that thujone is so soluble in alcohol explains why the Greeks and Romans boiled leaves from the plant in wine in order to make their drug. The emerald green of wormwood's volatile oil enticed some of Western civilization's greatest thinkers and inspired many of its artists.

Common wormwood wasn't just a street drug. It was nothing less than a household commodity in antiquity. Plautus, the famous Roman playwright, used the plant to hi-

highlight the stupidity and ignorance of one of his characters, who didn't know—unlike everyone else in Rome—that wormwood came from Pontus.<sup>14</sup>

After all, why would they have called it Pontic wormwood? This foolish character was obviously "out of the know" and lacked proper social refinement. Ovid; the Roman poet, while in exile in Pontus also couldn't help but mention the famous plant; it grew like a weed there:

We have no trees but only stunted  
sickly things no taller than brushes, so that the land  
is bare as the sea, browner, but otherwise  
the same waste space. Springs here bubble forth  
with sulfurous water that leaves you thirsty as ever.  
And the birds don't sing but only croak like frogs or chirp  
Like the bugs that swarm in wormwood—the only crop  
of this accursed place.<sup>16</sup>

He may have been critical of the region's depressingly un-Roman attributes, but he did acknowledge that wormwood was at least a useful agricultural commodity.

Lucretius, a first-century B.C. Epicurean poet, mentions wormwood in his great work *On the Nature of Things*. He tells us that the unsavory odor of wormwood and other particularly stinky plants could be detected by rubbing their leaves between one's fingers.<sup>17</sup> Doing this would have liberated wormwood's volatile oil and thereby produced a strong odor. Of course, wormwood certainly smelled bad, but it also tasted terrible. Lucretius presents a vivid picture of the means Roman physicians used to fool the discriminating taste buds of a sick child:

But even as healers, when they essay to give loathsome wormwood to children, first touch the rim all round the cup with the sweet golden moisture of honey, so that the unwitting age of children may be beguiled as far as the lips, and meanwhile may drink the bitter draught of wormwood, and though charmed may not be harmed, but rather by such means may be restored and come to help . . .<sup>18</sup>

Once again, like opium, foul-tasting drugs were often mixed with honey in order to make them a bit more palatable. Wormwood wine must have been quite harsh on the palate, but this never stopped the ancient world from drinking it.

Lucretius' s interest in wormwood may not have been just a passing fancy. Jerome, a later Christian scholar, tells us that Lucretius suffered from fits of insanity brought about by a drug that his wife gave him. This juicy story is tempting, because we know that absinthe, an alcoholic concoction made from wormwood, was banned in the early twentieth century, due to the suspicion that it deranged chronic users. The neurotoxin responsible for the narcotic effects of the plant is undoubtedly responsible for perceived alterations in behavior and personality. Whether Lucretius was personally involved with wormwood or not, one thing is certain: Tradition has it that some sort of drug use drove him temporarily insane.

The madness associated with a strong neurotoxin like that found in wormwood was not the only psychedelic chemical experience available to the world of antiquity. Marijuana was a common drug, possibly imported by Roman merchants from the Scythians or even India. In fact, cannabis was so popular that the ancient world used it in both human medicine and animal husbandry. According to Pliny, the juice of the plant was used to kill parasites, numb the pain of arthritis, and settle the stomachs of

domestic animals.<sup>19</sup>

That's right, the Romans gave cannabis to their cattle; it may be for a modern audience to accept such practices, but Roman farmers were practical—and if it hadn't helped their animals, they would never have used it. As a drug, marijuana was effective in treating a number of morbid conditions. Many potent psychotropic substances were considered to be potentially poisonous, but cannabis was never vilified; the ancient world clearly trusted the drug as much as they did any other safe medication.

Marijuana, opium poppies, and wormwood all contain potent chemicals that change perception, but they were not the only mind-altering drugs available in antiquity. The Greeks and Romans also used anticholinergics, a group of strong chemicals characterized by an ability to interrupt normal neural transmission. Two of these drugs, atropine and scopolamine, are frequently used by modern anesthesiologists in a chemically purified form, but they were originally found in a large family of plants known by the common name nightshade. A variety of species like henbane (*Hyoscyamus niger*), belladonna (*Atropa belladonna*), mandrake (*Atropa mandragora*), and jimson weed (*Datura stramonium*) produce atropine, scopolamine, and other potent alkaloids that were used to produce hallucinations, euphoria, and generalized delirium. These plants thrived in the Mediterranean, and Theophrastus was well aware of their potent effects:

Of the plants called *strykhnos* [possibly belladonna] one induces sleep, the other [jimson weed] causes madness . . . The kind which produces madness . . . has a white hollow root about a cubit long. Of this three twentieths of an ounce in weight is given, if the patient is to become merely sportive and to think himself a fine fellow; twice this dose if he is to go mad outright and have delusions; thrice the dose, if he is to be permanently insane . . . four times the dose is given, if the man is to be killed.<sup>19</sup>

Anticholinergic drug-producing plants like belladonna and jimson weed caused changes in mental perception and cognition but were also potentially lethal; they possessed the benign ability to elevate one's mood, which made them excellent recreational drugs, but they were also quite deadly.

The psychotropic effects of anticholinergics have been well documented by the modern world, particularly in cases of severe atropine and scopolamine intoxication. Physicians use the acronym CAS (central anticholinergic syndrome) to describe symptoms that result from overdoses with these drugs; they include hallucinations, psychosis, delirium, confusion, disorientation, and generalized stupor. In other words, when the Classical world talked about the ability of certain drugs to cause mania and insanity, they weren't resorting to hyperbole. Nightshade plants literally drove their users to the brink of insanity, allowing them to visualize both the most pleasant and the most horrific aspects of the human imagination.

Hallucinations and delirium, as modern cognitive phenomena, are generally associated with negative experiences, like acute psychosis. However, mental derangement can also be distinctly pleasurable. Many ancient cultures actively sought out drugs that induced mental confusion, for the sake of their perceived "spiritual" potentials. Hallucinogens and other psychotropics create the impression that abstract creations of the mind, things like heaven, hell, spirits, and demons, can be visualized and perhaps even personally experienced; hallucinogens breathe life into the fears, hopes, and dreams of mankind—they traditionally pave the way for divine visions. The potential for metaphysical transcendence offered by anticholinergics was an inescapable temptation for Classical cultures. These plants gave the ancient world the

chance to interact more closely with the gods they created and worshiped. The mind-altering activity of anticholinergics, as appealing as it must have been, often came with a significant cost. However, like many other toxic substances, the widespread use of these drugs proves that their benefits far outweighed the obvious risks. Nightshade plants had too much to offer Classical civilization; their utility forever ensured their place in ancient society. Pliny the dangers involved in using them, but he felt no moral responsibility to refrain from discussing the proper methods for using them:

"It [henbane] has the character of wine, and therefore injures the head and brain. Use is made of the seed as it is or when the juice has been extracted from it. The juice is extracted separately also from the stems and leaves. They also use the root, but the drug is, in my opinion, a dangerous medicine in any form. In fact, it is well known that even the leaves affect the brain if more than four are taken in drink. An oil is made from the seed, as I have said, which by itself if poured into the ears deranges the brain."<sup>21</sup>

Despite his cautionary warning about plants like henbane, Pliny still felt comfortable enough to describe the proper means of isolating and harvesting them.

The Romans spread their interest in psychotropic drugs like henbane to their neighbors in the Mediterranean. They took their narcotics with them to the limits of their frontiers, where these medical and recreational substances undoubtedly served to distract the soldiers who served to secure the borders of Roman political power. For example, the Romans probably introduced—or at least reinforced—the widespread use of mind-altering drugs to the peoples of Britain. According to one scholar, mandrake, opium, and henbane were all found near Oxford at an archaeological site dating to the Iron Age and Roman settlements." The presence of other hallucinogenic compounds that predate the Roman occupation make it likely that the locals were well aware of the power of certain plants, but the Romans certainly approved of the practice of using drugs for recreational and religious reasons.

Many of the psychotropic substances taken from botanicals in antiquity may have been hazardous, but, once again, they were neither criminalized nor deemed immoral. Pliny considered the nightshades to be just another group of potent mind- and body-altering ; his nonchalant approach is clearly a reflection of antiquity's objective approach to drug use.

The maniacal rush caused by high doses of anticholinergics must be something similar to that experienced while under the influence of LSD. After taking a large quantity of anticholinergic drugs, the skin quickly flushes, the mouth becomes dry, and vision is impaired. The person becomes restless, giddy, disoriented, and somewhat confused. This bewilderment can be quickly transformed into a potentially nightmarish experience characterized by frightening hallucinations, severe agitation, and complete psychosis. Depending on the dosage administered, coma and seizures can follow, which is undoubtedly why the Romans considered the drug to be highly dangerous. Regardless of such obvious hazards, Classical cultures actively used anticholinergic chemicals found in common plants to induce drastic mind-altering states. The nightshade trip, with its promise of temporary insanity, was pleasurable enough to necessitate the widespread dissemination of specific knowledge concerning its use and outrageous effects.

Nightshade was easy to identify in antiquity, so those who resorted to taking it were well aware of what they were getting into, but mushrooms were an entirely different story. The ancient world recognized the psychoactive properties of certain fungi and

the seemingly magical power they possessed, but they were equally aware of the fact that they could also be lethal. Classical authors repeatedly warn against the use of certain mushrooms and provide complicated remedies for those who found themselves poisoned by them. Antidotes for mushrooms are often the same as those for nightshade, which is a good indication that the Greeks and Romans believed their hallucinatory capacities to be somehow related. Mushrooms were so prevalent that even emperors were fond of them. In fact, at the time of his demise, it was widely believed that the Roman emperor Claudius somehow died of mushroom poisoning. Opiates, anticholinergics, and mushrooms were certainly among most popular drugs in antiquity, but the Greeks and Romans also experimented with a wide variety of toxins derived from plants, substances that most cultures accept as strictly poisonous; most of these drugs were deadly when used in excess, but many could be used to induce altered states of mind—at a low dosage. For example, hemlock (*Conium maculatum*), was used by the Athenians as a standard tool for carrying out executions, contains strong chemicals capable of suppressing the vital activities of the central nervous system. It can be lethal, as Socrates discovered, but taken in small quantities the drug can also produce in the body useful effects commonly perceived to be pleasurable or even euphoric. In other words, hemlock, antiquity's attempt at lethal injection, could also have been used as an excellent sedative; taken in wine, after a hard day's work, it would have calmed the nerves, relaxed tense muscles, and taken the edge off the stress of everyday life. As crazy as it sounds—Greeks sitting around sipping hemlock toddies—this is exactly what the literary evidence on poisons and antidotes seems to indicate.

The use of toxic plants was a complex subject in antiquity, where doctors and street vendors debated the specifics about the proper administration of many potentially fatal substances. In what appears to be a dizzyingly complex world of poisons, antidotes, and counterpoisons, Greek and Roman authors demonstrate a vast understanding of the use of these drugs, despite their potential lethality. Pliny's report on one drug is particularly intricate:

An overdose of this juice (from the plant known as rue) possesses poisonous qualities . . . Strangely enough, it is neutralized by the juice of hemlock; so there are actually poisons of poisons, and hemlock juice is good for the hands and face of those who gather rue. Any sort of rue, however, is even by itself a powerful antidote, the pounded leaves being taken in wine, especially against aconite and mistletoe; likewise, whether given in drink or in food, against poisonous fungi.<sup>23</sup>

The context of this quote is extremely complex, especially for a modern audience that is largely inexperienced in the use of botanical curatives; Pliny says rue can be used as an antidote against aconite and mistletoe, both of which contain lethal toxins, but he adds that it can also be poisonous itself, unless one uses another dangerous poison, hemlock, while gathering it. The passage is a bit confusing but it shows us that the ancient world was truly invested in the use of drug plants, and that their knowledge of plants as varied as rue, hemlock, aconite, and even mistletoe, was exceptionally detailed. Scholars—who are not pharmacists—love to translate these texts and provide erudite commentaries on the political events reflected in them, but they rarely ask utterly simple questions about the motives for ingesting such odd substances.

For years, ancient literature on the use of antidotes has been marginalized, if not entirely ignored, by the Classics community. For example, the works of Nicander, an obscure Greek poet who probably lived sometime in the late second century B.C., are

seldom topics for serious discussion among noted scholars. His *Alexipharmaca* is generally considered to be a short and uninspired didactic poem on the dangers of specific poisons and the various medicines used to counteract their harmful effects on the body. Most academics consider the work a clever but unimpressive treatise on the use of antidotes administered in cases of poisoning, when crafty political rivals did away with their enemies by slipping them a Mickey Finn. Although murder by poison was certainly not uncommon in antiquity—especially in Rome with the eventual rise of powerful aristocratic families and the decline of republicanism—it's a bit of a stretch to think that Nicander's work is nothing more than an extensive examination of the art of homicide. Many of the drugs mentioned in the *Alexipharmaca*, opium for one, were potent psychotropics, and thus excellent candidates for use as recreational drugs. In fact, there are so many references to poisons in the work, and such explicit descriptions of the symptoms involved in using these drugs, that it's safe to conclude that the *Alexipharmaca* is not about poisons at all; on the contrary, it makes much more sense if we look at it as a work on the treatment of intentional drug overdoses, rather than malicious poisonings. In addition, when medical authors listed antidotes to common poisons, like opium, henbane, wild mushrooms, hemlock, and something euphemistically known as "bull's blood," they most likely were talking more about the treatment of overdoses than political intrigue.

Good examples of our misinterpretation of ancient antidote texts present themselves in Nicander's *Alexipharmaca*. For example, in one passage Nicander describes the symptoms of exposure to "arrow poison," a potent battlefield toxin used on weaponry to increase the likelihood of an enemy combatant's death. However, he claims the remedies are made specifically for those who ingest the drug. It is striking that he fails to mention anything about warfare, weapons, or battle injuries, but refers directly to those who drink arrow poison.

There are even means of promptly averting the oppression caused by deadly arrow-poison, when a man is overcome with anguish from drinking it. First, his tongue begins to thicken from the root and weighs upon the lips which are heavy and swollen about the mouth; he suffers from a dry expectoration, and his gums break open from the base. Often too, his heart is smitten with palpitations, and it is his fate that all his wits are stunned and overthrown by the evil poison; and he makes bleating noises, babbling endlessly in his frenzy; often too in his distress he cries aloud even as one whose head, the body's master, has just been cut off with the sword; or as the acolyte with her tray of offerings, Rhea's priestess, appearing in the public highways on the ninth day of the month, raises a great shout with her voice, while the people tremble as they hearken to the horrible yelling of the votary of Ida. Even so the man in his frenzy of mind bellows and howls incoherently, and as he glances sidelong like a bull, he whets his white teeth and foams at the jaws.<sup>24</sup>

It's hard to believe that ancient malefactors slipped arrow poison into each other's drinks so frequently that poets like Nicander were able to describe their victim's symptoms in such vivid detail, yet this is exactly what Classical scholars want us to believe. On the contrary, it's far more likely that the symptoms of arrow-poison intoxication were well known because Greeks and Romans commonly used the toxin as a recreational drug, and therefore, the general public was familiar with the effects of overdoses. Nicander's audience, the educated, erudite, and priestly classes of his community, were very much aware of the fact that drugs could be used to alter consciousness, but they also knew their potential lethality. This passage is just one of Nicander's many descriptions of the dangerous effects of popular recreational drugs, something the Classical world used to numb the pain and hardship of life.

This passage has another significance. It's no coincidence that Nicander, who is believed to have been a priest of Apollo, compared arrow-poison intoxication to the strange behavior of certain religious acolytes. The odd manners and activities of rapturous worshipers was a favorite topic of Classical poets, historians, and playwrights alike. In fact, Nicander helps to show us that drugs and cultic practices often went hand in hand, and many episodes of crazed behavior in Classical literature can be directly linked to the influence of drugs.

The mother of all drug-using cults in antiquity, the cult of Dionysus the god of the vine, was heavily steeped in the dark lore surrounding the god's frenzied devotees and their mysterious, ritual ecstasy. Euripides, the great fifth-century Athenian tragedian, even wrote an entire play on the topic called the *Bacchae*. In it, he tells the sad story of Pentheus, a Theban king who refuses to worship the god Dionysus and pays for his impiety with his life. At the opening of the play, Dionysus, whose followers engage in strange, orgiastic rituals, has already spread his influence across the East and now threatens to invade mainland Greece with his novel religion; despite the god's surging popularity, Pentheus arrogantly denies him a place of honor in the Greek pantheon. As a result, Dionysus drives the king out of his mind, dresses him up as a woman under false pretenses, and then inspires a group of his celebrants, including Pentheus's own mother, to tear the sacrilegious tyrant to pieces. Of course, all of this trickery is possible because Dionysus has the power to induce mania, as Euripides' chorus tells us:

Women, the man [Pentheus] stands within the cast of our net.  
He will come to the Bacchae and pay the penalty of death  
Dionysus, now the deed is yours—for you are not far off.  
Let us punish him! First put him outside the mind.  
Instill a light-headed frenzy. Since, if he reasons well,  
He definitely won't be willing to dress in a woman's costume.  
But if he drives off the road of reason, he will dress up.<sup>25</sup>

Not only was Dionysus able to instill his followers with ecstatic frenzy, but he also had the power to drive his enemies out of their minds. In fact, you could say he was the god of temporary insanity. As a manic deity. Euripides claims Dionysus actually possessed his followers, who in essence drank up the god as they would a glass of wine—or perhaps wine mixed with recreational drugs. From within these divinely possessed individuals, the god worked his maddening magic and gave mortals profound insight: "The god is also a prophet: for the ecstatic and the manic have mantic powers in large measure. When the god enters someone in force, he causes him in madness to predict the future."<sup>26</sup>

It's remarkable that Dionysus was portrayed as a god who transferred his power to his followers by entering within their physical bodies. For, in the Greek religious pantheon, possession was truly anomalous. Except for the spirit of the war god Ares, or perhaps the prophetic aspects of Apollo, the Olympians never traditionally possessed anyone; they persuaded, commanded, tricked, and confused mortals in order to get their way, but they were entirely unaccustomed to the idea of close communion with the flesh of any mortal, which was certainly beneath them. However, Dionysus actually possessed his followers, and Euripides' Greek audience clearly equated this act with the use of mind-altering drugs. For example, concerning Pentheus, Euripides writes: "You are mad and most painfully so: some drug has caused it, and no drug can cure it."<sup>27</sup>

The connection between drug use and insanity is undeniable. Euripides' audience obviously understood that some drugs made their users appear to be mad. This made it easier for the Greeks to embrace the Eastern aspects of the worship of Dionysus, precisely because they understood that Dionysus's followers were filled with the god and thereby made ecstatic, in the same manner as their own recreational drugs had the power to bring individuals under their manic control.

The connection between Dionysus and psychotropic drugs is an ancient one. Drugs appear to have been an important part of these gatherings wherever they took place; even the Roman authorities suspected members of the cult practicing in Italy of using strong drugs in their secretive ceremonies. And why did they use these drugs? Did Dionysus's followers rely upon recreational drugs to enhance their spiritual experiences? It's difficult to say with any certainty because their practices were so secretive, and we may never know exactly what happened, but the traditional symbolism surrounding the figure of Dionysus establishes a direct link between the cult and drug use. For example, the Greeks typically associated Dionysus with several specific plants, including ivy, grapevines, and bryony. Wherever depictions of the god appear in Greek art, or wherever he surfaces in ancient texts, we find depictions and representations of these vines as well. Each of these plants produces mind-altering intoxicants, but only the use of wine has managed to stay in vogue, so scholars typically emphasize the use of alcohol when discussing bacchanalian ecstasy.

This oversight is an unfortunate accident of history. Wine may cause a temporary derangement of certain cognitive abilities, but it is difficult to accept the notion that the Greeks may have associated its use with mania or temporary insanity. In fact, it is much likely that the sort of ecstasy found in our sources came from drugs made from ivy and bryony, as we see in Pliny:

There is a white vine, which the Greeks call variously *ampelos leuce* [common bryony] . . . The root, famous for many uses, is pounded and taken in doses of two drachmae for snake bite. It removes spots and blotches on the face, freckles, bruises and scars . . . It is given also in drink for epilepsy, as well as for nervous disorders and giddiness . . . In larger doses, however, even the root itself sometimes disorders the senses.<sup>28</sup>

The ancient world knew that certain botanical substances could induce states of altered perception, and in some cases could produce mental derangement that was closely akin to insanity. It's likely that the followers of Dionysus relied upon these recreational substances to achieve the ecstatic states characterized by the worship of their beloved divinity.

The link between Dionysus and psychotropic drugs is significant for one important reason: Athenians celebrated this unique god by performing tragedies. Drama and Dionysus were inseparable entities in antiquity, bound together by annual festivals where the playwrights of Greece met and competed with each other. At the base of the mighty Acropolis, in Dionysus's magnificent theater, some of the greatest authors of Western civilization produced their plays for audiences enamored of myths and legends. The power of these performances must have been truly mesmerizing. To see Sophocles Oedipus walk on the stage, or the maddened Furies of Aeschylus chasing Orestes, or the crazed Medea of Euripides must have been incredibly momentous. Further archaeological and literary studies of the use of psychotropics in ancient cult practices may lead to the conclusion that the imaginary world of the stage would never have been possible without the use of psychotropic chemicals.

Recreational drugs had a significant impact on ancient society, but they are still—and

probably always will be—the ugly duckling of studies. Drugs are an academic hot potato. Few Classicists ever choose to study this scandalous topic, and far fewer will ever choose to admit the prevalence of drugs in ancient society. However, one thing is certain: There are too many references to recreational drugs in the texts to ignore their influence on the Classical world. The Greeks and Romans used opium, anticholinergics, and numerous botanical toxins to induce states of mental euphoria, create hallucinations, and alter their own consciousness; this is an indisputable fact. It should not be surprising that our ancestors resorted to chemical recreation. Nor should we be afraid to admit that some of the most distinguished members of the ancient world used recreational drugs. After all, these people lived in a time that demanded much more of the psyche as well as the body; and pharmaceutical bliss was nothing more or less than a gift, a chance to relieve the heavy burden imposed by the dreadful living conditions of Classical civilization. As Aldous Huxley said most eloquently:

That humanity at large will ever be able to dispense with Artificial Paradises seems very unlikely. Most men and women lead lives at the worst so painful, at the best so monotonous, poor and limited, that the urge to escape, the longing to transcend themselves if only for a few moments, is and has always been one of the principal appetites of the soul.<sup>29</sup>

We should not retreat to the comfort of our traditional moral strongholds when trying to understand the past; we should allow the ancient world to reveal itself for what it was, recreational drugs and all.

## 4 Promethean Euphoria

For though a man have sorrow and grief in his newly-troubled soul and live in dread because his heart is distressed, yet, when a singer, the servant of the Muses, chants the glorious deeds of men of old and the blessed gods who inhabit Olympus, at once he forgets his heaviness and remembers not his sorrows at all.

—Hesiod

The firm cultural foundation of Classical civilization was its elaborate mythology; gods and heroes dominated the literature of antiquity. Thousands of stories about divinities and human champions, in oral and written forms, captured and preserved the traditions, customs, and social values of the past. Myths were much more than just fictional bits of entertainment; they were, in essence, the distillations of antiquity's most central beliefs. The gods of the Classical world, perhaps more than the deities of any other culture, were just men clothed in the figurative vestments of immortality. They were exceptionally anthropomorphic, and thus striking reflections of the ancient world itself. The gods sang, danced, and celebrated just as the Greeks and Romans did; they cried, cursed, and fought the same as well. And when they were wearied, they also indulged in drugs.

Mind-altering substances were just as much a part of ancient myth as they were of daily life in antiquity. Painkilling juices of botanicals made their way into stories of gods and heroes, where they held great sway over the outcome of monumental cosmic events. Drugs were used in glorious battles to heal wounded heroes, at banquets to enhance metaphysical vision, and in famous contests to slay monsters and achieve great glory. Without drugs, Greek and Roman myths would never be the same, and much of the Western world's vibrant and thrilling cultural heritage would be lost.

The impact of drugs on myth manifests itself in a specific subset of legends that could best be labeled "narco-mythology." These sorts of stories contain bits of drug lore, traditional pharmaceutical wisdom, and references to botanicals, all of which are integral to the advancement of the plot or the clarification of the myth's significance. Without drugs the narco-mythology of antiquity would make little or no sense.

Like the Greeks and Romans of everyday life, antiquity's anthropomorphic gods had their own forms of recreational—and performance-enhancing—pharmaceuticals. Ambrosia and nectar, ambiguous substances known collectively as the "food of the

gods," were mysterious celestial bits of nutriment; they often appear as food and drink, but their effects on the gods were much more like drugs than anything else. Ambrosia and nectar were only meant for immortals; the gods selfishly guarded their secrets and rarely allowed anyone but themselves and their divine offspring to experience their potent effects.

The root of the Greek word *ambrosia* means "immortal", and the literary concept it embodied was the death-defying existence enjoyed by divine personages. Gods, lesser divinities, their half-human children, and some special animals connected with the gods all enjoyed the sweet taste of ambrosia and nectar in Homer's *Iliad* and *Odyssey*, but the powers that be prevented average humans from experiencing the bliss they offered. Nectar and ambrosia staved off the inevitable process of physical corruption and corporeal decay that brought Death, that great nemesis of the pitiful race of humans. These wondrous substances sustained, enhanced their beauty, and literally preserved their divine lifeblood.

In antiquity, the gods didn't have blood, nor did they eat food or drink wine as humans did; their immortal veins were filled with ichor, a sort of divine plasma, a life-giving fluid; the presence of this ichor in their bodies distinguished them from simple mortals. It kept them alive and stood as a symbol of their deathless existence. The gods preserved their divine physiology by sating their hunger and thirst with hearty draughts of celestial nectar, a substance well suited to their immortal bodies and the sacred ichor that flowed through their veins. Nectar and ambrosia gave the gods strength, beauty, and, ultimately, immortality; like drugs, they made the gods larger than life.

The Classical world invented the idea of ambrosia and nectar in order to help explain the troubling fact that Zeus, Poseidon, Hades, and all the other gods, despite their obvious anthropomorphic characteristics, were essentially ageless and entirely immune to the ravages of disease and death. The existence of manlike gods who lived forever was a difficult concept for a world so familiar with physical suffering and death. Ambrosia and nectar miraculously sustained the gods and enabled them to live for an indefinite amount of time; they facilitated the divine lifestyle. However, these queer substances were not just a literary invention, created to solve an implausible intellectual conundrum concerning the inevitable mortality of beings possessing corporeal flesh. Ambrosia and nectar were, for all intents and purposes, the divine equivalent of strong narcotics; they were the drugs of choice for the undying. Ambrosia and nectar were passed around at the heavenly banquets where gods indulged their appetites and slaked their thirsts, just as the Greeks passed around opium and henbane mixed in wine at their parties. The Classical world could relate to ambrosia because they had their own sort of divine beverages; they had life-preserving narcotics.

Ambrosia and nectar appear frequently in the *Iliad* and the *Odyssey*, they play a prominent role in the action of many important stories. In these narratives, ambrosia and nectar shared numerous common characteristics with the recreational drugs used by the Greeks and Romans. The similarities are uncanny: Like opium, wormwood, and nightshade, ambrosia and nectar were consumed at festivals and on important occasions for the sake of recreation and leisure. The food of the gods was also associated with nighttime and dreaming; it was used in burial rituals and was even an ingredient of mythic cosmetics. Ambrosia and nectar also enhanced sexual allurements and staved off the pangs of hunger, just like their real counterparts.<sup>1</sup>

In a sense, ambrosia and nectar were catchall terms meant to reflect the drug culture of the Classical world that invented such introspective myths about anthropomorphic

deities. It seems fitting that the Greco-Roman gods should have indulged in the same recreational substances as their mortal creators.

Textual examples of the striking similarities between ambrosia and the narcotics available in the Classical world show the close parallels that exist between the food of the gods and the drugs of common men. In the following passages, the dramatic scenarios are nearly identical. In the midst of the tragic personal loss of a loved one, both ambrosia and opium are used to achieve two very specific effects: When consumed, they induce memory loss and stifle the appetite.

The first example is an episode from the *Iliad*, when Achilles mourns the recent battlefield death of his close companion:

The son of Kronos [Zeus] took pity on them as he watched them mourning and immediately spoke in winged words to Athene: "My child, have you utterly abandoned the man of your choice? Is there no longer deep concern in your heart for Achilleus? Now he has sat down before the steep horned ships and is mourning for his own beloved companion, while all the others gone to take their dinner, but he is fasting and unfed. Go then to him and distill *nectar* his chest, and delicate *ambrosia*, the weakness of hunger will not come upon him" . . . She dropped the delicate *ambrosia* nectar inside the breast of Achilleus softly, so no sad weakness of hunger would come on his knees . . . [italics added]<sup>2</sup>

Ambrosia gave Achilles—the son of a goddess—great strength and made him forget his pangs of hunger. It worked much more like a drug than any sort of food or drink. Like a dose of morphine or perhaps heroin, ambrosia made Achilles "comfortably numb." It made him forget the great loss of his close friend.

The second passage is a bit of narrative from the myth of Demeter and Persephone. In this story, Demeter wandered the world disguised as a human, in search of her daughter Persephone, who had recently been abducted by Hades, the god of the underworld. At one point in the narrative, she came across a family with a small, sick child; they extended her their hospitality, and in doing so unwittingly entertained a goddess. As she entered their abode, she did something strange:

As she [Demeter] was about to pass within the lowly dwelling, she plucked a smooth, slumberous *poppy* that grew on the waste ground; and as she plucked, 'tis said she tasted it forgetfully, and so unwittingly stayed her long hunger. . . they set out a repast—curds liquefied in milk, and apples, and golden honey in the comb. Kind Ceres [Demeter] abstained, and gave the child *poppies* to drink in warm milk to make him sleep. [italics added]<sup>3</sup>

Like Achilles, the drug made the goddess forget her hunger. Not only did she unwittingly sample the opium herself, but she gave some to the sick child—a kind gesture and an attempt to relieve his suffering. Ambrosia and opium were "drugs of consolation." They enabled their respective users, immortal and mortal, to overcome Promethean Euphoria death and successfully cope with significant personal loss. The loss of appetite caused by these magical substances was merely a pleasant side effect, but clearly reflects a well-known pharmaceutical phenomenon, a unique characteristic of the chemicals found in the poppy. Strangely enough, ambrosia killed pain and stifled the appetite just like opium... almost as if the Greeks meant for the gods to have their own way of dealing with the difficulties in their own lives.

The likenesses between ambrosia and certain well-known recreational drugs in antiquity are far too numerous and detailed to ignore or explain away as strange bits of literary coincidence; ambrosia was nothing more or less than the divine drug of choice. Homer gave the gods their own drugs of consolation that directly mirrored the

psychotropic substances used by his contemporaries; ancient society was free to embrace the use of mind-numbing botanicals, so their gods were, too. Incorporating elements of drug use into the myths of the gods further validated their anthropomorphic essence.

The gods of the Greco-Roman world certainly possessed euphoria-inducing painkillers, just like the mortal world over which they ruled, but ancient narco-mythology also tried to explain the origins of the popular drugs used exclusively by lowly humans. One important story, the legend of Prometheus, is a conspicuous example of antiquity's attempt to explore its own drug heritage. The myth of Prometheus not only explains the origin of a specific drug, but even metaphysically justifies its profound narcotic effects. The story of Prometheus, the god who brought wisdom to mortals, is a myth of intoxication; for the Greeks, enlightenment and mind-altering drugs went hand in hand.

In order to understand the value of the Prometheus myth, and most other narco-myths, it's important to remember that Greek gods were fashioned with intellectual tools developed in an age of suffering. Like their gods, mortals, or "bread eaters" according to Homer, needed a chemical boost every now and then, precisely their lives were so difficult. Due to the anthropomorphic framework within which they were created, the Greek gods were just as demanding and arrogant as humans, and sometimes even downright brutal; they interfered in human affairs committing such dastardly crimes as rape, theft, and murder without even a semblance of propriety or mercy. The chief of these gods, Zeus, was no lover of mortals. In fact, the Greeks portrayed him as a merciless, man-hating tyrant:

The gods desire to keep the stuff of life Hidden from us. If they did not, you could Work for a day and earn a year's supplies; You'd pack away your rudder, and retire The oxen and the labouring mules. But Zeus . . . thought of painful cares for men.<sup>4</sup>

If it weren't for Zeus, life wouldn't have been half-bad for mortals. It was well within his powers, as the chief Olympian deity, to alleviate the immense suffering of mankind, but the lightning-wielding king of heaven preferred to watch the race of men struggle on its own. Zeus was no Jesus. He took great pleasure in watching them reel in anguish... except for his numerous lovers and the bastard sons he furtively produced.

Into this dour world of perpetual divine torment and unceasing woe, Classical traditions injected a ray of hope; the Greeks created the myth of Prometheus. A great redeemer, his life story was a source of inspiration in times of depressing darkness. His name meant "foresight." He was the son of a god; however, unlike many of his brothers and sisters, he actually cared for mortals and tried to protect them. Some myths even portray Prometheus as the creator of humanity. According to Greek legends, he was the greatest advocate of the human race—man's salvation from the miserable, distressing existence forced upon them by the cruel gods and merciless Fate.

Prometheus pitied the poor wretches who suffered most acutely under Zeus's harsh reign. As a result of his empathy, he tried to lighten mankind's toilsome burden. Unfortunately for him, his charity earned him the wrath and punishment of the king of all gods. To chasten him for his mercy toward humans, Zeus bound him to a rock by unbreakable chains, high in a remote mountain range, where, in solitary confinement, an eagle came to eat his liver every day, which grew back in the evening, so the kindly god could be properly tortured again the next morning, a particularly vindictive punishment.

Prometheus clearly suffered for humanity's sake. Despite his philanthropy, the gods viewed his punishment as fitting; in the words of Hephaestus, the god who forged the chains that held him fast to the mountainside, he deserved what he got:

Such is the reward you reap of your man-loving disposition. For you, a God, feared not the anger of the Gods, but gave honors to mortals beyond what was just... Many a groan and many a lamentation you shall utter... For the mind of Zeus is hard to soften with prayer...<sup>5</sup>

The myth of Prometheus is tragic; it's an account of the painful road of premodern life, a highway where the flowering hopes of men were often crushed mercilessly beneath the heel of unchecked and unrestrained power. And that is why it was also a story of hope; it was also a tale about the origins of painkilling drugs—the mind-numbing saviors of humanity. According to the myth of Prometheus, drugs brought comfort to lowly humans, the victims of tyrannical oppression and divine self-interest.

Prometheus committed two unpardonable sins in the eyes of the powers that be—and both were just variations on a single theme. His great failing was his lack of respect for authority. He blatantly challenged the executive branch of the kingdom of the gods, and thus questioned Zeus's right to rule. In fact, Prometheus thought Zeus was a bit of a simpleton and tried to humiliate him in front of all the other gods; Prometheus tried to force Zeus's hand—to make him show his inadequacy as a king—he tried to deceive him into making a bad decision. It was a divine test meant to reveal Zeus's shortcomings as a ruler, a bold gambit that should have succeeded... but didn't:

For at Mekone, once, there was a test when gods and mortal men divided up an ox; Prometheus audaciously set out the portions, trying to deceive the mind of Zeus. Before the rest, he put pieces of meat and marbled inner parts and fat upon the hide, and hid them in the stomach of the ox; but before Zeus the white bones of the ox, arranged with skill, hidden in shining fat.<sup>6</sup>

Prometheus offered Zeus the bones rather than any desirable cuts of meat, inedible bits of the bull that were hidden in fat, a ruse meant to expose the leader's ignorance. In testing whether Zeus would know he had been tricked, Prometheus directly challenged his ability to lead the gods. He gave Zeus a choice that was bound to reveal some sort of serious inadequacy in his mental capacity. He set two things before the supposed omnipotent Ruler of Heaven; One thing looked ostensibly good on the surface, but contained nothing of real value; the other was something truly good that had been stuffed inside an unappealing exterior. Whichever one of these things Zeus didn't choose would be given to mortals. Zeus chose the inferior offering—and consequently, the good gift was given to mankind. In a single stroke of genius, Prometheus revealed the leader of the gods as fallible and stripped the divinity of his sovereignty and bestowed it upon the race of humans. Unfortunately, things didn't turn out well for Prometheus. The all-wise Zeus really had seen what was coming. He knew the trick Prometheus was trying to play, but secretly plotted to punish humanity along with its divine advocate, so he went along with the ruse and deliberately chose the inferior gift. Then, in a great theatrical display of righteous anger, he cursed mankind with perpetual ignorance; he withheld fire, the symbol of all skill and wisdom that could possibly assist the survival of the human race. Humans were forever doomed to suffer, without any source of energy, and without the hope of salvation. This vengeful act reestablished order and the absolute authority that accompanied the reign of Zeus.

Of course, Prometheus couldn't just sit by and watch the race of mortals die as a result of divine indifference to their suffering, so he committed another great crime after

the test at Mekone; he stole fire from the gods and gave it back to man. Once again, this outraged Zeus. The king of heaven decided that enough was enough. For the crime of challenging his authority, he decided to punish Prometheus along with the entire race of mortals: The gods chained Prometheus to a rock and then gave mankind the greatest possible curse imaginable... the female of his own species.

As if mortals didn't have enough trouble already, Zeus gave them wives—something they did not previously possess according to the myth. This form of punishment makes little sense unless we consider that Greek myths originated in a male-dominated society where women's roles were highly restricted and females were a constant source of masculine anxiety.

Prometheus's pity for humans managed to infuriate the most powerful god of the Greek pantheon and further alienate the rest of the Olympians. The gods viewed his theft of fire as an act of treachery; from their perspective, he stole their divine wisdom, and then bestowed it on unworthy and undeserving mortals: "Now, play the insolent; now, plunder the God's privileges and give them to creatures of a day. What drop of your sufferings can mortals spare you? The Gods named you wrongly when they called you Forethought; you yourself need Forethought to extricate yourself from this contrivance."<sup>7</sup>

Whether or not Prometheus deserved to be punished for appears from our perspective to be an act of charity is difficult to answer. One thing is certain: He suffered for humanity's sake. His tremendous pain was the price he willingly paid to lighten man's burdensome existence.

. . . It was mortal man  
to whom I [Prometheus] gave great privileges and  
for that was yoked in this unyielding harness  
I hunted out the secret spring of fire  
that filled the narthex stem, which when revealed  
became the teacher of each craft to men,  
a great resource.<sup>8</sup>

Prometheus was well aware that his love for mortals was an affront to the gods. He must have been aware that his theft of fire would never have gone unnoticed, yet he fearlessly persisted. Prometheus may have taken some obvious pleasure in confounding the Olympians, but this could not have been his sole motivation for stealing fire. Surely, he knew that Zeus would humiliate him; he must have expected the tremendous torture he would endure.

Chained to a rock on the heights of a distant mountain, far away from sympathy or solace, Prometheus died a new death with the dawn of every day. It wasn't enough for Zeus to kill him once; he had to put him to death perpetually. Day after day, Prometheus suffered only to await the same punishment on the morrow. Why was Prometheus willing to put up with such a fate? After all, he was a god, one of the immortals; he didn't need to suffer. Like his divine brothers and sisters, he feasted on nectar and ambrosia, and his veins were suffused with ichor, not mortal blood. He was invulnerable and worthy of so much more, yet he chose to stand against the king of the gods. Prometheus divested himself of his divine privilege in order to taste of the sufferings of mankind. Taking a page from another prominent Western myth, "he was hated for our sakes; and with his , we are healed." The gods focused their hatred of mankind on Prometheus—all for the sake of his unconditional love. In Prometheus's own words:

You see me a wretched God in chains, the enemy of Zeus, hated of all the Gods that enter Zeus's palace hall, because of my excessive love for Man.<sup>9</sup>

It's not easy to lay down one's life for a friend, much less to lay it down endlessly. Prometheus did what no other immortal could; he took upon himself the inadequacies of the human race.

The resonance between the Prometheus myth and Christianity's account of the crucifixion is too obvious to ignore. The story of Prometheus preceded the Christ myth by hundreds of years and is most likely a major contributor to the West's romantic interest in portrayals of the *savior* figure. Several other mythic figures conform loosely to this messiah mold; Dionysus, the god of wine, intoxication, and ecstasy, and Persephone, the goddess of death and resurrection, are two excellent examples of the ancient savior figure, but Prometheus was the most notable advocate of human welfare. Like Jesus, another son of a god, Prometheus paid a price for man's happiness; his punishment was the direct result of his love for humanity. In antiquity, not many pagan gods showed an all-encompassing love for mortals. He was one of the first self-sacrificing messiahs of Western literature.

But there's something even more notable about the myth of Prometheus than its kinship with Christianity's messiah. Prometheus's special fondness for humans and the heavy price he paid to raise humanity out of primitive ignorance is not just a story of personal redemption; it's also about pain relief. On the surface, it's an account of supernatural deliverance; however, something far more mundane lies buried within its narrative fabric. It's not just about a loving god suffering for mortals; it's also about drugs... , analgesics. It's a myth of chemical redemption. To disregard the narcotic elements of the story is to ignore its essence, and what makes it a part of traditional Greek narco-mythology.

Every divine savior figure is ultimately headed for the altar of personal sacrifice, and Prometheus was no exception. Guilt, sin, and pain can only be redeemed with blood. Many ancient societies made ritual offerings of animals as a means of procuring atonement; it was their way of averting the wrath of gods. The Greeks gathered at different times of the year, whether the occasion was a festival honoring a specific god like Athena or Poseidon or perhaps a time of need when the crops required some divine encouragement from Demeter or the city was about to undertake a war and needed the guidance of Ares. During these times Hellenic peoples traditionally offered bulls or rams, among other animals, on the altars of their temples, hoping that the animals used in sacrifice would gain the god's favor. The sacrifice was considered holy or sacred, the act of spilling the blood of the victim was a necessary step toward purification and divine favor—and it also meant the community was able to feast on meat.

Prometheus's blood was also consecrated; it was a potent life-giving substance. However, its potency was much more than just a symbol of redemption—or, in the Greek way of thinking, a cleansing of pollution. According to the myth, once his blood was shed it magically transformed into a revitalizing drug, a transubstantial means of salvation. Prometheus's dripping blood became a plant, not just any houseplant or weed, but the source of a potent, painkilling, euphoria-inducing drug:

It [the plant] shot up first-born when the ravening eagle on the rugged flanks of the Caucasus let drip to the earth the blood-like ichor of tortured Prometheus. And its flower appeared a cubit above ground in colour like the Corycian crocus, rising on twin stalks; but in the earth the root was like newly-cut flesh. The dark juice of it, like the sap of a mountain.<sup>10</sup>

The Greeks called the dark juice of this plant the "drug of Prometheus." It granted the men who consumed it great strength and endurance. It was even said that anyone who used it would be unaffected by pain, including injuries from weapons and fire.

Of course, there can be no question about what the drug of Prometheus actually was. It appears no different from good old-fashioned opium, the blessed juice of the poppy plant. There are too many similarities to deny that the two were the same. The drug of Prometheus was produced and harvested just like opium, it looked just like opium, and it acted just like opium. No drug is similar in so many ways. In addition, the place Prometheus contended with Zeus was called Mekone, which in Greek means "poppy." Prometheus's blood gave birth to the poppy, and the poppy gave birth to painkilling opium. Prometheus enlightened mankind by giving it narcotics.

Unfortunately for Prometheus, becoming a savior figure is always a difficult career move. The first step in any messiah's journey is death; after this, the only thing that remains is communion, the intimate and mysterious identification of the divine world with mortal reality. Resurrection is more of an afterthought than a necessity; it enables the traditional mythic figure of the dying god to perform his or her own personal act of communion. The mythic savior suffers, dies, and opens a sort of gateway to a deeper spiritual union between gods and men; this remarkable conjunction of two such disparate beings typically results in the heightened awareness of both parties. Feeling pain, the god becomes mortal; filled with the essence of divinity, the mortal sees the world from a heavenly perspective. In this way, salvation is all about the elevation of the soul above the realm of physical pain and mental suffering; Prometheus gave the world a means of transcending the miseries of mortal existence. Prometheus was no exception to the rule. His divine ichor, the substance that filled his veins and gave him life, produced the opium poppy, which was itself a portal to celestial vistas. In taking it, the Greeks were consuming the blood of the Titan, the god who loved mankind and endured the punishment of Zeus in order to alleviate their pathetic suffering, just as Christians drink wine that has become the blood of Christ. What greater expression of oneness could this myth possibly produce? The poppy was the physical manifestation of the relationship between a world and its redeemer. Opium was the gift of life, stolen from the gods themselves and given to mortals to ease their burdens. The narcotic was the highest form of celestial communion; it was their pharmaceutical salvation.

The union of drugs and religious performances may sound strange to a modern Westerner—unaccustomed as he or she will be to the traditional sacraments of the pagan or pre-Christian world. Seventeen centuries of institutional Christianity have obscured the Western world's association of psychotropic experiences with religious exercises. However, in antiquity priests and spiritual wise men got high in order to commune with cosmic authorities. The Classical world was thoroughly convinced that mind-altering drugs were an avenue to spiritual realms that were typically inaccessible to mortals, and that people who were completely intoxicated were closer to the gods than the rest of us; their madness was a sign of their proximity to the divine. In fact, the Greeks and Romans trusted and feared the sayings of people driven out of their minds, whether accidentally or intentionally. To be cursed by a madman was a truly dangerous prospect in antiquity. Even famous prophets and seers are typically depicted as walking a fine line between sanity and madness.

Pliny, due to his vigilant search for scientific truth, was skeptical of the authenticity of the narco-religious experience, but his criticism of the public's gullibility is strong proof that most people believed the drug trip was a means of contacting the gods.

Writing about a plant known for its delirium-inducing powers, he said:

"The root of halicacabos is taken in drink by those who, to confirm superstitious notions, wish to play the inspired prophet, and to be publicly seen raving in unpretended madness."<sup>11</sup>

There was a receptive audience for the drug-addled seer, and such people must have had significant credibility or Pliny would never have tried to condemn what was in his view nothing more than superstition. Today, a spectacle like this—a person raving in public about the gods while under the influence of something like LSD or opium—would be reported to the police; in antiquity, people didn't dismiss drug-inspired insanity, they looked upon such chemical lunacy as a truly religious experience.

The lively combination of psychotropics and religious experience was not at all out of step with ancient traditions; mixing drugs, religion, and sacred myths was commonplace. The oracles of the gods, the worship of Dionysus and his ecstatic followers, and the drug-induced initiation of the devotees of the Eleusinian mysteries (whom we will encounter in chapter 8 because of their association with Athens) are all long-established examples of the blending of Classical religion with the use of potent drugs. But polytheistic paganism didn't have a monopoly on chemically inspired sacraments. On the contrary, Judaism, with its voluminous mythological corpus and its traditions that were venerated by the Greeks and Romans for their ancient heritage, was at one time directly linked with the use of psychotropics.

Plutarch, in *Table Talk*, a sort of mock philosophical dialogue, discussed how Jewish sacraments of the pre-Christian era reflected the union of the religious practices surrounding the god of Abraham with the public worship of Dionysus, the god of intoxication and ecstasy. According to Plutarch both gods were associated with the same delirium-inducing plants, both used similar religious symbols and sacred implements, both used music in the same manner during worship, and the priests of the Jews wore garments very similar to those used in the worship of Dionysus.<sup>12</sup>

Plutarch even claimed there was a direct linguistic connection between the Hebrew word for the Sabbath and the Greek word *Sabi*, which was used to denote the crazed, intoxicated followers of Dionysus.

Plutarch's assertions might sound far-fetched to the modern ear, but it's important to remember that he was two thousand years closer to the actual events surrounding traditional Jewish worship than we are today. In addition, Jewish rituals, well preserved in religious texts, clearly show the possibility that early Judaism actively incorporated hallucinogenic drugs into its religious practices. For example, according to the Torah, Jewish priests encountered the presence of the Almighty in their Tabernacle, an enclosed tent that had its own "altar of incense" where the smoke of certain burning botanicals would have filled the lungs of the high priest with their potent fumes—much like the Greco-Roman practice of fumigation. In fact, when the high priest was communing with Yahweh, his fellow priests tied a rope to his leg just in case he passed out or died while experiencing the glory of God; that way they could safely pull him out of the smoke-filled tent.

In the book of Exodus, the God of Israel commanded that the priests burn a compound mixture of plants on the altar of incense when they approached him. According to the Septuagint, the Greek translation of the Hebrew holy books, the plants were identified as myrrh, frankincense, an additional aromatic called galbanum, and finally

a plant called *onyx* in Greek.<sup>13</sup>

Theophrastus said that galbanum was an especially "poisonous" (*pharmakodes* in Greek) plant, which could also be translated as "strongly medicinal," or perhaps even "toxic."<sup>14</sup> By inhaling fumes from these plants the high priest might have been setting himself up for a face-to-face encounter with the god of Moses.

It would be interesting to investigate Plutarch's claims that Judaism and the worship of Dionysus had common origins, but his *Table Talk* ends abruptly with a significant lacuna, a hole or interruption in the manuscript. It's particularly queer that the single most controversial part of his work should be inexplicably missing, but it's doubtful that any of the Christian monks who copied ancient texts like his would be interested in passing on information that called into question their traditional beliefs to such an extent. It wouldn't be the first time that Christians took it upon themselves to decide which Classical texts merited transmission to their contemporaries. Monks were responsible for copying all the great Classical texts during the Middle Ages—before the printing press, when handwritten copies of important works were the only means of passing on an author's words to posterity—even if the writings were the product of the pre-Christian world and presented conflicting approaches to life. Despite the connections of religious practices with the use of painkilling, recreational, and other sacramental drugs, most Classical scholars will deny that psychotropic substances ever had a significant or enduring influence on the creation of ancient myth. However, for the persistent skeptic, unwilling to admit that the Greeks freely mixed their myths with their drugs, the story of Odysseus and the Cyclops, Polyphemus, provides us with yet another example of antiquity's abiding interest in traditional narco-mythology. In this episode in the *Odyssey*, and his men encounter a rustic giant, a huge, brutish man with one eye, who preferred to eat his guests rather than show them any sort of hospitality. Trapped in this monster's cave, wily Odysseus conceived a brilliant plan: he would put the barbaric creature to sleep and then blind him by destroying his one large eye. Of course, it wouldn't have been easy to put the beast to sleep, but, fortunately, Odysseus happened to be toting around a strong sedative:

. . . but I [Odysseus] had with me a goatskin bottle of black wine,  
sweet wine, given me by Maron, son of Euanthes . . .  
. . . this was a sweet wine, unmixed, a divine drink. No one of his  
servants or thralls that were in his household knew anything about it, but only himself and  
his dear wife and a single housekeeper. Whenever he drank this honey sweet red wine, he  
would pour out enough to fill one cup, then twenty measures of water were added, and the mi-  
xing bowl gave off a sweet smell; magical. . .<sup>15</sup>

Odysseus's black wine, a gift from Maron, the priest of Apollo—the god whose priestesses, the oracles, were known to enter into states of mental delirium—must have been especially potent. After all, it required twenty dilutions just to make it potable, and was capable of fully anesthetizing even a giant like Polyphemus. Odysseus's magical wine was so strong that he and his men were able to pierce the eye of the Cyclops with a sharpened timber while he was under its powerful hypnotic influence. Some scholars will argue that the special wine of Apollo's priest was just undiluted, and therefore quite strong. However, the narrative indicates otherwise.

The Cyclops in this story wasn't just drunk; he was drugged. Homer described the wine he drank as honey sweet, the same way he spoke of the narcotic used by the Lotus-Eaters. In fact, Odysseus said the wine was "magical," the very same Greek word used to describe the songs of the Sirens. Also, when the Greeks and Romans indulged

in recreational drugs like opium, wormwood, or mandrake, they always mixed their psychotropics with wine. Classicists assume that the wine was said to have been unmixed—that is, it was pure wine without any added water—but that does not mean it did not contain any sort of drug. After all, medical authors, when speaking about wines containing narcotics, don't refer to them as mixed or unmixed, but merely add the name of the plant to the word for wine. For example, "wormwood wine" could be mixed with water or taken straight. In the story of the Cyclops, the dark color of Odysseus's sleep-inducing beverage indicates that it probably contained other substances or drugs, like opium or mandrake. This would have given the wine the dark color and the potency required to put Polyphemus to sleep, thereby enabling Odysseus to save his men.

Despite the objections of modern scholars, even the Cyclops himself seems to have understood the uniquely narcotic nature of Odysseus's wine. After tasting the wine and experiencing its pleasant effects, he says:

Give me still more, freely . . .  
For the grain-giving land of the Cyclopes also yields them  
wine of strength, and it is Zeus' rain that waters it for them;  
but this comes from where ambrosia and nectar flow in abundance.<sup>16</sup>

The Cyclops, already familiar with undiluted wine, was genuinely impressed by the potency of this particular concoction and demanded that Odysseus give him more. By his own admission, Odysseus's secret stash of black wine was something with which Polyphemus was unfamiliar; as a giant, a cave-dwelling barbarian, he was obviously unaware of the potent mixed beverages made by the race of mortals. For him, this wine was nothing less than the powerful drinks of the gods. He was inexperienced with ambrosia and had never tasted the intoxicating wonder of recreational drugs. Authors other than Homer recognized the connection of drugs with the myth of the Cyclops. Hundreds of years after the death of the famous bard, another poet reiterated the same principles while recasting the story of the Cyclops. Theocritus, the third-century B.C. bucolic poet, wrote an inventive idyll in which he gave voice to Polyphemus. In this short work, the giant sings of his love for Galatea, a sea nymph for whom he had a monstrous, unrequited affection. He soothes his pain with a song in which he celebrates his genuine feelings for Galatea and laments her inability to find him appealing:

O my white Galatea, why do you spurn your lover?  
... I fell in love with you, my sweet, when first you came  
With my mother to gather flowers of hyacinth  
On the mountain, and I was your guide. From the day  
I set my eyes on you up to this moment, I've loved you Without a break; but you care nothing,  
nothing at all.

I know, my beautiful girl, why you run from me: A shaggy brow spreads right across my  
face From ear to ear in one unbroken line. Below is a Single eye, and above my lip is set a  
broad flat nose.<sup>17</sup>

The giants sorrow is heartfelt, but the poem stays true to the theme of intoxication that so dominates the Homeric version. For example, in Theocritus's idyll, Polyphemus mentions the poppy (*mekon*), as one of the love tokens he wishes to offer his beloved. This is significant because the opium poppy in myth was directly connected with the first night of the goddess Venus's marriage, when it is said that she used the drug be-

fore consummating her union:

Do not hesitate to partake of the commonly used poppy With its milky-white juice mixed with honey flowing from the comb. On the occasion that Venus was first brought to her long-ging husband, She drank it: she was considered a bride from that time onward.<sup>18</sup>

The association of the milky white juice of the poppy—also known as opium—with this important marriage ritual is striking. Classicists tend to shy away from any clear explanation, but it may very well have been the case that opium was given to young brides in antiquity, on their wedding night, in order to soften the pain of their first sexual encounter. The myth may reflect actual customs, rather than just an interesting story. If this is indeed the case, then Polyphemus' s reference to the poppy is a fine bit of innuendo.

This particular idyll was addressed to Nicias, a personal acquaintance of Theocritus, who was in fact a physician. Since Nicias would have prescribed medications on a daily basis, it's not surprising to find references to drugs in this idyll, but the poem's first few lines resonate with the primitive narco-mythology of the Polyphemus narrative. These opening verses spell out the need for pain relief in antiquity, while emphasizing the Classical world's heavy reliance upon drugs and the desire to alter one's own consciousness:

Nicias, there is no remedy [drug] for love, no liniment,  
As I believe, nor any balm, except the Muses.  
Theirs is a gentle, painless drug, and in men's power  
To use; but it is hard to find. You know this well,  
I think; you are a doctor, and one whom the nine  
Muses love above all. This at any rate was the way  
My countryman the Cyclops eases his pain,  
Polyphemus long ago, when he loved Galatea,  
When the down was fresh about his mouth and temples.  
He loved, not with apples, roses, or curls of hair,  
But in an outright frenzy . . . But he found the cure [drug]: he would sit  
On some high rock, and gazing out to sea would sing.<sup>19</sup>

Polyphemus's soothing, painkilling narcotic, something Theocritus's audience must have been familiar with or the comparison would have fallen on deaf ears, was the act of retelling the story of his love. Once again, as Ovid claimed in his works written in exile, we find a direct association between the Muses and chemically inspired pain relief. It appears as if ancient audiences were aware that drug intoxication and poetic inspiration were similar psychological phenomena.

There are dozens of other stories and legends from antiquity, in addition to the Prometheus and Polyphemus narratives, that could be aptly classified as members of the Classical world's narco-mythology. Myths surrounding gods like Persephone, Apollo, Demeter, and Dionysus are filled with references to psychotropic botanicals. Many tales of heroes like Jason and Hercules have pharmaceutical elements that could never be removed without drastically changing them. Some mythic characters simply bore the names—for etymological or other reasons—of specific plants, like the Spartan boy Hyacinthus. He was Apollo's beloved young lover until killed by a poorly thrown discus. A beautiful flower sprang up from the place where his blood stained the ground. The accounts of magical transformations linked with these figures are nothing less than spectacular testimonies to the power of drugs to alter consciousness. Ovid

captured this sentiment in his version of the story of Glaucus, a mortal who was magically transformed into a sea creature by a potent plant:

Could some god have done it or  
The juices of some plant? And yet what plant  
Could have such power? I picked some stalks and chewed  
What I had picked. The juice, the unknown juice,  
Had hardly passed my throat when suddenly  
I felt my heart-strings tremble and my soul  
Consumed with yearning for that other world.  
I could not wait. "Farewell," I cried, "farewell,  
Land never more my home," and plunged beneath  
The waves.<sup>20</sup>

Ovid's narrative reads very much like the first-person account of some great trip. Once again, without the presence of some potent narcotic the meaning and significance of this myth, like many others, would simply disappear.

An ancient myth about a young boy named Narcissus, as told by Ovid, is one of the best examples of the incredible linguistic and cultural power of Classical narco-mythology. According to legend, Narcissus, a beautiful sixteen-year-old boy, spurned the advances of anyone who happened to show an interest in him. One of his admirers cursed this immoderately aloof behavior and begged the gods to punish him accordingly. The goddess Nemesis heard the pleas of this scorned lover and imposed upon Narcissus a particularly miserable fate; he was to fall in love with someone he could never obtain, just like those he scorned.

According to Ovid, one day Narcissus stumbled across a poisonous pool of water, where no animal dared to satisfy its thirst. Unaware of the potency of the pool's contents, he drank the magical water, and it created in him a burning desire for his own reflection:

The boy lay down, charmed by the quiet pool, And, while he slaked his thirst, another thirst Grew; as he drank he saw before his eyes A form, a face, and loved with leaping heart A hope unreal and thought the shape was real. Spellbound he saw himself, and motionless Lay like a marble statue staring down . . . All he admires that all admire in him, Himself he longs for, longs unwittingly, Praising is praised, desiring is desired, And love he kindles while with love he burns.<sup>21</sup>

Smitten with his own reflection, Narcissus stayed at the pool where he slowly languished without food, painfully wasted away, and eventually died. His infamous self-love is the root of the psychological complex known today as narcissism, a personality disorder that condemns its victims to a state of perpetual self-admiration and an overestimation of their own abilities. In the place where Narcissus perished, Ovid says there grew the flower that bore his name, the narcissus, today's daffodil.

Of course the modern world looks at the daffodil as a simple decorative flower, while antiquity saw it as a potent drug. They recognized its mind-altering potential and used parts of the plant to make a number of medications. Pliny tells us a little about the narcissus plant, including its use in medicine and the origin of its name:

Of the narcissus there are two kinds used by physicians: one with a bright flower and the other with grass-green leaves. The latter is injurious to the stomach, so that it acts as an emetic and as a purge: it is bad for the sinews [literally, *nervis inimicum*, or "injurious to the ner-

ves and sinews"] and causes a dull headache, its name being derived from the word [in Greek] *narce*, torpor, and not from the youth in the myth."<sup>22</sup>

According to Pliny the plant derived its name from its painkilling properties. The narcissus plant probably earned its name through its capacity to numb the mind; Narcissus's reaction to drinking the poisoned water must have been similar to the effects of the daffodil on its users. Elsewhere in the *Natural History*, Pliny also tells us that the narcissus caused delirium.

The myth of Narcissus makes sense when placed within the botanical context from which it springs. The ancient world knew that the daffodil caused madness and therefore used the story of Narcissus as a sort of etiological explanation for the potency of the plant. Ovid expanded on the traditions surrounding the daffodil when he included the story in his *Metamorphoses*. The pool of water responsible for Narcissus's demise is a representation of the use and effects of mind-altering drugs. Around this body of water, which no animal will touch on account of its potency, the ground is plush with "herbs" (*herba* in Latin) or "grass" (*gramen*). Both of these words in Latin can be used to represent the botanicals of ancient medicine and magical practices. In addition, Narcissus's physiological response to drinking the water is unmistakably akin to the typical response seen during an exposure to psychotropic substances; he is confused, delirious, and ecstatic and seems to hallucinate. Ovid understood the profound effects of mind-altering drugs, as we see in chapter 6, and wove this knowledge neatly into the tapestry of his version of the myth.

The narco-mythology of the story of Narcissus was not without scientific merit. The daffodil's (*Narcissus pseudonarcissus*) physiologically active alkaloid, appropriately named narcissine, is almost certainly responsible for the plant's reported narcotic qualities. The daffodil was capable of inducing delirium and could even result in psychological states that were commonly believed to be a form of madness. Classical poets used their understanding of the plant's psychotropic capacities to better illustrate the myth of the young boy who fell in love with his own reflection. The story of Narcissus would make absolutely no sense without the daffodil; it's all about plants and their narcotic qualities.

Looking at myths like that of Narcissus, the Cyclops, and Prometheus makes it clear that drugs were an integral part of ancient storytelling. Pharmaceuticals were a powerful means of procuring a sought after anesthesia, a valuable solution to the world's harsh conditions and the difficult reality of living with pain. Mind-altering narcotics influenced countless lives, especially those of poets and bards who sought some external source of inspiration.

The myths of antiquity are replete with drug references. Even the gods themselves relied upon stimulants to procure their own bit of heaven; nectar and ambrosia infused them with an eternal existence. Using drugs was merely one of many anthropomorphic aspects of life as an immortal. Recreational drug use bled into the narratives of a number of ancient myths, just as any other aspect of life did.

Mythmaking was just one avenue of creative expression colored by drug use. Anywhere Classical civilization encountered pain, it relied upon narcotics to relieve it. This dependence on drugs manifested itself in the glorious tales of heroes, monsters, and gods. Narco-mythology was a distinct subset of the traditional myths surrounding the Olympian gods and the Greco-Roman pantheon. Drugs were inspiration for characters, such as gods, demigods, and divine heroes. The Greeks and Romans did not recoil from the fact that their divinities and heroes used drugs; they merely incorporated this drug use into their traditional narratives and storylines. To

understand ancient myths is to understand ancient society, where even the heroes and gods were no strangers to drug use.

## 5 Drawing Down the Moon

When she drinks, when she eats, when she has intercourse with someone else, I will bewitch her heart... I will bewitch her breath ... until she comes to me.

—From the *Greek Magical Papyri*

The Greeks created many types of heroes; whether they were gods, semidivine champions, or just anthropomorphic representations of natural forces, these larger-than-life supermen performed miraculous feats of strength, wisdom, and skill. They reflected the norms and biases of Greco-Roman culture within the framework of the narrative story. Some of these immortals were endowed with magical abilities, and many of them were known as oracles, seers, and sorcerers, but the art of magic itself was not just a figment of the ancient literary imagination; it was very much a reality. In the Greco-Roman world, real people—who used real drugs—practiced magic openly and were recognized as sorcerers by their contemporaries. Most of the time their practices were tolerated, while at times they were persecuted, but regardless of their ever-changing public image, magicians were always an integral aspect of Classical civilization. The men and women who practiced the arts of sorcery, conjuration, and divination were not fictional characters; they were ordinary people living ordinary lives, who used ordinary drugs to create the mystical transformations for which they were so well known.

Sorcerers, witches, and magicians are seen as grotesque curiosities from an uninformed past by much of the modern Western world, but magic workers were not always confined to the realm of fables and ghost stories. At one time, they were valued members of society, whose professions reach back as far as the shamans of early human prehistory. In Classical antiquity sorcerers were nothing more or less than men and women who took advantage of the powers of recreational drugs in order to gain some form of mental and metaphysical transcendence—and for perfecting the incredible mind-expanding capacities of drugs they were honored and respected members of society.

In antiquity drugs provided the common man with the power to perform amazing enchantments. Psychotropic substances weren't just a means of recreation; they were valuable tools that granted witches, priests, and miracle workers the ability to alter reality, and to thereby force nature to conform to the demands and desires of mortals. Sorcerers walked the streets of Athens and Rome plying the tricks of their trade for anyone willing to shell out a little cash. Some of them were genuine, some were charlatans, the majority were harmless, and a few, particularly those who had an emperor's ear, altered the course of history.

Magicians and sorcerers may seem nothing more than quacks and mountebanks to the modern world, but they were important members of Classical society; the Greeks and

the Romans frequently placed their faith in those who claimed to be masters of what would now be called the black arts. Magicians claimed to have special insight into the workings of nature, the gods, and the invisible entities that shaped the world. Despite the Greco-Roman world's avowed faith in logic and mental discipline, it often called upon the services of these specialists, who used their powers to foresee the future, draw down the moon, and even raise the dead.

Classical magicians can be divided neatly into practitioners Eastern and Western persuasions, but they were all interested in drugs to varying degrees. Eastern magicians derived their practices from ancient religious traditions rooted in Persia, while Western sorcerers evolved within the long-established customs of drug-friendly Greeks and the Etruscans, the pre-Roman inhabitants of Italy. Based on the common faith in the power of magic, Classical authors peopled their myths with stories of sorcerers and witches, immensely powerful individuals who could manipulate the laws of nature at will. Throughout much of ancient literature, these potion-wielding sorcerers—be they heroes or villains—showed tremendous skill in the use of mind-altering drugs, transformative substances, and poisonous plants. On stage or in real life, they relied upon drugs as a mainstay of their art.

The modern English word "magic" is derived from an Eastern sect of wise men known as the Magi, a group of people more like philosopher-priests than actual magicians. Their beliefs developed under the guidance of Zoroastrianism, one of the world's oldest and most venerated religious traditions. As Pliny, a rational skeptic of the craft of sorcery tells us, Eastern magic was incredibly influential in the West:

. . . I have often indeed refuted the fraudulent lies of the Magi, whenever the subject and the occasion required it, and I shall continue to expose them . . . Nobody should be surprised at the greatness of its [magic's] influence, since alone of the arts it has embraced three others that hold supreme dominion over the human mind, and made them subject to itself alone. Nobody will doubt that it first arose from medicine, and that professing to promote health it insidiously advanced under the disguise of a higher and holier system; that to the most seductive and welcome promises it added the powers of religion, about which even today the human race is quite in the dark; that again meeting with success it made a further addition of astrology, because there is nobody who is not eager to learn his destiny . . . magic rose to such a height that even today it has sway over a great part of mankind . . .<sup>1</sup>

Here, Pliny best represents the views of the Roman aristocracy, detached as it was from the affairs of the common man, but he often reflects social undercurrents generated by the cultural biases of his generation. From his perspective, the teachings of the Magi were a blend of medicine, religion, and astrology. Ritualistic healing, religious rites, and fortune-telling were a big part of their agenda. As a natural historian of sorts, Pliny was undoubtedly put off a bit by their exaggerated and unproven claims. Despite this, he was never one to omit fabulous stories or outrageous accounts, so the Magi earned a sizable amount of space in his works.

It's no wonder that the Magi, with their interest in telling the future and reading the stars, found their way into the stories of the Bible, where they are reported to have made a trek to Judea in order to inquire about the birth of a god-man and to give him gifts. Of course, being the good magicians that they were, they offered the messiah frankincense and myrrh, two valuable drugs used by sorcerers, doctors, and priests alike. Once again, this particular group of magicians came from Persia, a kingdom far beyond the reaches of Western culture, and managed to influence much of Western history; their role in the Gospel of Matthew meant that the figure of the magician would be forever ensconced in Christian mythology.

Western magical traditions, particularly those that developed in Greece, were distinct from the practices of the Eastern Magi. Native Greek magicians included a motley group of individuals such as diviners, wandering priests, miracle workers, and anyone who could perform certain important magico-religious rites. What distinguished these men from the Magi was the fact that their practices sprang from Greek culture itself, and were inextricably bound up with the use of drugs. In fact, *pharmakeus*, one of several words for "sorcerer" in the Greek language, borrowed its name from *pharmakon*, the term for "drug." When translating *pharmakeus*, scholars typically force themselves to choose between the meanings "druggist" and "sorcerer," but this is only because the English language does not have a single word that combines the meanings of both terms into a single concept. The distinction between the act of dispensing drugs and the practice of magic is a modern phenomenon, and is inapplicable to the Greco-Roman tradition of the sorcerer. The Greeks saw the use of drugs and the practice of magic as a single, inseparable, entity.

Our inability to translate *pharmakeus* into English makes it difficult to appreciate the native Greek conception of magic, but examples of these Western sorcerer-druggists in ancient literature will shed some light on the role of magicians and magical rites. For example, Theocritus wrote a short idyll full of descriptions of sorcery and magical practices. In it a woman, Simaitha, and her slave, Thestylis, perform a magical rite in an attempt to regain the affections of Simaitha's former lover (Delphis). The ritual is complex, to say the least, and provides a fascinating glimpse into some of the practices of ancient magicians. Simaitha, the narrator of the poem, performs the ceremony as she utters a mysterious incantation, meant to draw back her estranged lover. Much of the rite involves the use of drugs:

Where are my bay leaves? Thestylis, fetch them.  
Where are my love charms? Wind fine red wool  
Around the cup, so that I may bind my unkind love to me.  
Eleven days now he has stayed away the brute,  
And does not even care if I am alive or dead—  
Not even a knock at the door. How cruel he is . . .  
The Arcadians have a herb, coltsfoot, which drives insane  
All the swift mares and their foals on the mountains there.  
So may I see Delphis, stung like them into madness,  
Leave the sleek wrestling school and come to my house . . .  
But now I shall bind him with these love-charms. If he still  
Torments me, I swear by the Fates it's Hades doors he'll beat upon;  
Such is the power of the noxious drugs I keep in my box.<sup>2</sup>

Was Simaitha acting as a witch or a druggist? The answer is both. She wasn't relying upon witchcraft alone—witchcraft, that is, in the traditional medieval sense of the work of a potion-mixing, demon-possessed enchantress (the Middle Ages, dominated as it was by the dictates of the Christian church, is really where we get our current concept of the "witch")—nor was she acting as just a druggist or poison dispenser. She was doing both; she was practicing the art of the *pharmakeus*. Sorcerers relied upon numerous drugs to carry out their crafts. For example, aphrodisiacs and love potions were commonly used by witches in antiquity to heighten arousal and promote physical intimacy. Many sources speak of the capacities of specific plants to enhance the sexual experience, but little research has been done to show whether or not these drugs actually worked. Some of these substances might have enabled their users to be more receptive to the prospect of sexual intercourse, but

their exact physiological effects are poorly understood. The popularity of sexual stimulants may itself indicate that some of these drugs successfully stimulated the libido, but specific details regarding their effectiveness remain largely unknown. Theocritus's poem about the use of drugs to attract an estranged lover shows that ancient magic relied upon botanicals as a means of altering consciousness. Recreational drugs weren't just recreational; ancient sorcerers used them as a valuable tool of their trade.

If we use Simaitha's actions as a model for the exercise of magic, then the *pharmaheus* appears to have been someone who relied upon his or her knowledge of drugs to change various aspects of their immediate environment, things that were typically beyond the control of most people, such as future prosperity or the well-being of enemies. In other words, Western magic was all about control and manipulation. In this particular case, Simaitha and her slave performed a ritual that was meant to alter the mental state of Delphis. They used the powers of drugs to change his mind about former lover, all in an attempt to reawaken his sexual interest, a desperate endeavor to force the young man to do an about-face and return to the arms of poor, jilted Simaitha.

This particular magical performance involved the process (akin to smoking) called fumigation, which, as mentioned in chapter 3, was the ceremonial incineration of a collection of botanicals. In this particular case, the plants that were used happened to include a number of strong drugs, like bay leaves (laurel), a plant that almost certainly had narcotic qualities at some point in history. An intrepid Classicist once unsuccessfully chewed on a bundle of laurel leaves in order to test the Greek notion that they were psychotropic, but no real research has been done on them. In fact, the priestesses of Delphi, the oracular voices of Apollo, also used laurel in their mantic practices. Simaitha and her slave, much like these priestesses of Apollo, employed mind-altering substances to achieve their own ends. And from this episode, it appears that the job of the *phar-makeus* was to change mental perceptions of the world—those of their audience as well as their own—by employing strong narcotics; it would certainly seem to others that they had power over nature.

Recreational drug use and the practice of magic were closely related in the Greek world; mind-altering drugs had their own special enchantment in the eyes of the Hellenic people. In fact, drugs and magic were a single, unified, conceptual entity, as we can see from much of the language employed to describe the activities of the sorcerer. Magical formulas can be found in a collection of Greek and Demotic texts called *The Greek Magical Papyri*. These texts consist of fragmentary spells, incantations, and curses dating from Classical times, and show that there was no boundary between drug use and the exercise of magic. Many of the entries in these texts, filled as they are with strange drug recipes and mysterious rituals, are indistinguishable from similar material found in today's medical texts. For example, the following excerpt from the *Greek Magical Papyri in Translation* reads just like any prescription found in the writings of ancient doctors like Dioscorides, Celsus, or Galen:

A prescription to cause a man to sleep; it is very good: apple seeds, 1 stater, 1 dram; mandrake root, 4 drams; pound together; add fifteen measures of wine to it; put it in a glass vessel and guard it! When you wish to give it, you should put a little in a cup of wine, and you should give it to the man.<sup>3</sup>

This magical text is virtually identical to the drug prescriptions found in medical texts, but it is part of a collection of rites and rituals belonging to so-called sorcerers, magicians, and diviners. Of course, mandrake, with its strong sedative components,

worked well as a sleep-inducing drug for anyone in antiquity, whether a reputable physician or a magician prescribed it. Drugs like mandrake were obviously valuable to doctors—they used it to anesthetize their patients—but it's a bit more difficult to guess what a sorcerer would need with such a prescription.

Some of the material found in the magical papyri closely resembles the drug lore of Classical medical texts; however, much of it makes little sense and is often a bit befuddling. Many of the formulas have the same object, namely to bring about a change in some individual, or to alter one's surroundings, but the methods used in these magical performances are highly varied, and the materials are often strange:

To make a woman mad after a man: You should bring a live shrew-mouse, remove its gall and put it in one place; and remove its heart and put it in another place. You should take its whole body. You should pound it very much while it is dry; you should take a little of what is pounded with a little blood of your second finger and the little finger of your left hand; you should put it in a cup of wine, and you should make the woman drink it. She is mad after you.<sup>4</sup>

Using drugs to alter someone's mental state is certainly a reasonable prospect, but formulas like this one contain much more superstition than anything sensibly rational. Obviously, the alcohol may have had some effect on libido, but the use of a "shrew-mouse" is a surprise. The use of strange ingredients and ceremonial objects makes it difficult for scholars to determine the degree of efficacy of these performances. It leaves us with the distinct impression that the Greeks and Romans were somewhat gullible.

It's easy to dismiss much of the occult sciences as the irrational ramblings of primitive societies, but we can often be misled by our modern scientific arrogance. For example, in this instance, several ancient medical texts composed by reputable authors mention the use of antidotes in cases of poisoning with "shrew-mouse." What does this mean exactly? Were the Greeks and Romans obsessed with eating small rodents, which somehow then poisoned them, and thus required the extensive use of antidotes? Not quite; the answer to this riddle is much more simple, and once again makes it appear that magic and drugs were a single inseparable entity.

Our surviving magical papyri attest to the use of code words to represent specific drugs, which were inserted in magical texts in order to prevent the uninitiated from replicating the drug formulas. For example, in magical performances, the "blood of Hephaistos" was actually wormwood, and the "semen of Helios" was white hellebore—both of them dangerous and potentially lethal drugs. It's likely then that the "gall of a shrew-mouse" might have been some potent intoxicant, used in this magical performance to induce amorous feelings, as a sort of aphrodisiac. If this were indeed the case, it would certainly explain why physicians considered it their duty to come up with antidotes to overdoses for "shrew-mouse."

Many of the obscure entries in the magical papyri make much more sense when we begin to examine the prominent role of drugs in the performances of the magical rituals they describe. For example, one of the incantations found in these papyri includes a prayer wisdom from Apollo that clearly involves the use of hallucinogens. The text tells us that laurel berries and a member of the nightshade family were used, along with the following formula:

Laurel, Apollo's holy plant of presage  
Whose leaves the scepter-bearing lord once tasted  
And sent forth songs himself, leios,

Renowned Paian, who live in Kolophon,  
Give heed to holy song. And quickly come  
To earth from heaven and converse with me.  
Stand near and from ambrosian lips inspire  
My songs; come, lord of song, yourself; renowned  
Ruler of song. Hear, blessed one, heavy  
In wrath and stern. Now, Titan, hear our voice,  
Unfailing one, do not ignore. Stand here,  
Speak presage to a suppliant from your

Ambrosian mouth, quickly, all-pure Apollo.<sup>5</sup>

The prayer, or incantation, was meant to bring some sort of revelation to the one who recited it. Passages like this make it appear as if the *pharmakeus* used drugs to enter a spiritual or metaphysical realm, where he or she could find answers to some of life's more difficult questions.

The association of pharmaceutical plants with magic manifests itself throughout ancient literature. Magic artfully combined drugs and metaphysics in a single discipline. Western sorcerers were adept at the use of specific drugs and knew their mind-altering effects, and they even showed tremendous respect for the botanicals they used. One of the entries in the magical papyri mentioned above demonstrates the incredible respect Egyptian magicians felt for the tools of their trade:

Among the Egyptians herbs are always obtained like this; the herbalist first purifies his own body. First he sprinkles with natron and fumigates the herb with resin from a pine tree after carrying it around the place 3 times. Then, after burning *kyp̄hi* [Egyptian; compound recipe containing numerous aromatics] and pouring the libation of milk as he prays, he pulls up the plant while invoking by name the daimon to whom the herb is being dedicated and calling upon him to be more effective for the use for which it is being acquired . . . "You were sown by Kronos, you were conceived by Hera, you were maintained by Ammon, you were given birth by Isis, you were nourished by Zeus the god of rain, you were given growth by Helios and dew. You are the dew of all the gods, you are the heart of Hermes, you are the seed of the primordial gods, you are the eye of Helios, you are the light of Selene, you are the zeal of Osiris, you are the beauty and the glory of Ouranos, you are the soul of Osiris' daimon which revels in every place, you are the spirit of Ammon. As you have exalted Osiris, so exalt yourself and rise just as Helios rises each day. Your size is equal to the zenith of Helios, your roots come from the depths, but your powers are in the heart of Hermes, your fibers are the bones of Mnevis, and your flowers are the eye of Horus, your seed is Pan's seed. I am washing you in resin as I also wash the gods even as I do this for my own health. You also be cleaned by prayer and give us power as Ares and Athena do. I am Hermes. I am acquiring you with Good Fortune and Good Daimon both at a propitious hour and on a propitious day that is effective for all things."<sup>6</sup>

These sorcerers obviously held the world of pharmacologically active plants in high regard. The number and range of gods found in this passage are truly impressive. Some of these gods are Egyptian, while others are Greek, but the author was unwilling to leave out any powerful supernatural power, so he mixed them all together. When it came to the acquisition of potent drugs, the valuable tools of the magician's trade, sorcerer-priests placated anyone and everyone, demons and divinities alike. After all, the plants got their powers from the gods, and the magicians got their powers from the plants, so everything ultimately had a divine origin. Ancient sorcerers took their craft seriously; it was an art they believed was inspired by the gods.

Of course, the sorcerer's professional enthusiasm is admirable, but it's important to

remember that the magic they worked was not always conducive to widespread social acceptance. Sorcerers were feared as well as respected. The Classical world believed that magic workers could cause just as much pain as they could pleasure, and the literature is filled with a genuine trepidation for magic's potential. As a result, many of the most fearsome villains found in Greco-Roman writings were practitioners of magic. Spell-casting rogues and their disreputable practices were the stuff of legend; sorcerers fascinated, horrified, and titillated the Greeks and Romans. Classical authors drew upon this excitement surrounding magicians to create some of the most colorful fictional characters of all time.

Medea, a prominent figure in several popular plays, is an excellent example of the stereotypical character of the dreaded sorceress. In fact, she may be the most lovingly despised fictional personage of all time. An infamously merciless, fictional Eastern princess, and the prototypical example of a "woman-scorned," she was someone that could easily stand toe to toe with the bravest of heroes or the cruelest of monsters. And why did she make ancient audiences shudder? Why was she so angry? To make a long, long story short, she was jilted by Jason, her ambitious husband, a thankless and ineffective cad, who would never have gotten anywhere without her constant advice and assistance. As an expert in the manipulation of drugs, she used her savvy to build a reputation for her weak and ineffective husband. She made him the hero he was, only to be repaid for her efforts with marital infidelity. First he married her, and then he went out and arranged another union with a Western princess, all in order to solidify his position and to ensure his future wealth. Infidelity like that would make anyone act spiteful, so why did Medea get such a bad name? Because her revenge was extreme by any measure; in order to get back at Jason, she killed their children—right in front of Jason—and incinerated his royal paramour. In a horrifically brilliant gesture of spite, she deprived conniving husband of his legacy and then escaped in a chariot provided by Helios drawn by serpents.

So, what did the Greeks think of all this? They thought she was a murderess, a cruel barbarian from the East who didn't respect the mores of civilized Western society. As a fictional character with amazing powers, audiences feared her; as a foil for evil, she was a favorite literary symbol for Greek authors.

It's difficult, but maybe we should feel a bit of sympathy for even a child killer like Medea. After all, her fate was sealed by the whims of the immortals when she was just a young girl. The Greek belief in the overwhelming influence of Fate, the guiding hand of the cosmos, gave them the impression that mortals were bound to walk a fixed path in life, an idea that is very much in opposition to the concept of free will that dominates modern Western culture. In short, Medea didn't have a choice; the gods made her fall in love with Jason when he was just an up-and-coming hero, trying desperately to make a successful transition from youth to manhood in the midst of a world filled with painful labors. Jason was certainly no Hercules; he lacked true courage and heroic resolve. Nevertheless, he was beloved by the gods, so they made Medea fall in love with him in order to guarantee that he would make a name for himself. In other words, the poor girl was just a talented pawn. What's even worse is that she was, in so many ways, a much more powerful figure than her pathetic husband.

According to the myths surrounding Medea, she possessed incredible potential, even from her youth. She happened to be a descendant of Helios, the sun god, and like her famous aunt Circe she wielded tremendous powers. Medea was adept in the use of drugs and poisons. Apollonius, a Greek poet who related the story of Jason and his heroic companions, praised her botanical knowledge and the abilities she derived

from the use of plants:

There is a maiden, nurtured in the halls of Aetes, whom the goddess Hecate taught to handle magic herbs with exceeding skill—all that the land and flowing waters produce. With them is quenched the blast of unwearied flame, and at once she stays the course of rivers as they rush roaring on, and checks the stars and the paths of the sacred moon.<sup>7</sup>

Imagine that. Medea's knowledge of drugs allowed her to control the very forces of nature. That was real power in antiquity, the ability to manipulate one's environment with impunity—and the Classical world both despised and admired her profound abilities at the same time.

As the story goes, Medea was smitten with love for Jason and promised to assist him on his quest to recover the famous Golden Fleece, a priceless treasure that was guarded by a monstrous serpent. Before he could even get to the fleece, however, Jason had to do something else, something any hero would find daunting. He had to yoke together a pair of fire-breathing oxen, plow the ground with them, sow the furrows with dragon's teeth that would instantly grow into earth-borne warriors, and then kill these supernatural soldiers. Of course, he would never have succeeded, at least not without Medea's help.

The obstacles in his way may have seemed insurmountable, but Medea possessed the means of enabling Jason to accomplish everything he needed to do to become a real hero. She possessed the drug of Prometheus discussed in chapter 4. Apollonius describes this mysterious substance as if it were some sort of divine narcotic, with properties similar to that of opium; it made Jason courageous, strong, and single-minded, at least for a short time. The drug of Prometheus transformed the young, inexperienced boy into a mighty hero, "and terrible prowess entered into him, unspeakable, dauntless; and his hands on both sides thrilled vigorously as they swelled with strength... And often hither and thither did he leap high in the air tossing in his hands his shield of bronze and ashen spear."<sup>8</sup> Under the drug's influence, Jason quickly yoked the bulls, planted the teeth, and killed the freshly grown warriors. And presto, a hero was born. Medea's narcotic strengthened his resolve, bolstered his masculinity, and perfected his martial skill.

After accomplishing this task, Jason followed Medea to the Golden Fleece, where the young maiden's skills with drugs saved the day once again. She used more drugs with effects similar to those of opium to put the giant snake to sleep. This gave Jason a short window of opportunity to obtain the prize:

... and all around the potent scent of the charm [drug, Greek *phar-makon*] cast sleep; and on the very spot he let his jaw sink down; and far behind through the wood with its many trees were those coils stretched out.

Hereupon Jason snatched the golden fleece from the oak, at the maiden's bidding; and she, standing firm, smeared with the charm [drug *pharmakon*] the monster's head, till Jason himself bade her turn back ...<sup>9</sup>

As the Medea narrative progresses, it becomes clear that she, in fact, did all the work while Jason got all the credit. Without her knowledge of drugs, he would have quickly been devoured. It's therefore certainly no wonder that she was furious when she found out he was making arrangements to throw her away and wed someone else.

The story seems simple enough, but there's traditionally been one problem with the interpretation of Medea as a mythic character: Scholars, struggling with the indivisi-

ble nature of pharmacy and magic in Greece, have tried for years to turn the poor girl into an ordinary, modern witch. They can't resist the temptation to cast her in a supporting role in *Macbeth*. This anachronistic reading of our Classical text taints modern translations, most of which portray Medea not as an expert in drug use, but as a hocus-pocus-working witch. Translators are fond of using words like "bewitch" and "charm" to cast her in this role. For example, when she assisted Jason with the fire-breathing bulls, one modern English version reads: "I will bring to Hecates temple charms to cast a spell upon the bulls."<sup>10</sup>

The "charms" this translator spoke of are literally "drugs," or *pharmaka* in Greek. Medea actually said she would bring "drugs" to the temple, which would "mesmerize" the bulls, and thereby facilitate their control by Jason. As a matter of fact, Apollonius never actually said Medea was skilled in the magical arts; on the contrary, he said she understood the powers of drugs. He says she was "drug-sawy," or *polypharmakon* in Greek—there's a big difference.

Modern scholars often present Medea as a witch in the modern sense because she exhibits strange behavior; she sneaks about at night looking for dead bodies, and thereby seems to call for such a label. In the words of one translator: "[Medea] having often aforetime wandered there in quest of corpses and noxious roots of the earth, as a sorceress is wont to do . . ."<sup>11</sup>

The word translated here into English as "sorceress" is *pharmakis* in Greek. It's merely the feminine form of *pharmakeus*, the very same word that Classicists also gave the dual meanings of "poisoner" and "druggist." She wasn't selling drugs in the marketplace, so scholars traditionally portray Medea as a "witch." This definition comes about mostly because of the mysterious qualities and powers of her drugs and their seemingly magical effects. In other words, if it looks like our conception of a "witch," then it probably is one, right? Well, not quite. In the Greek mind, she was a just a proficient wielder of drugs.

Labeling Medea a "witch" is unfortunate, because it masks the impact of drugs in these myths. Medea was no witch; she was an angry young woman who happened to have an expert knowledge of potent poisons and mind-numbing narcotics. She didn't perform magic tricks; she used drugs to get her way, and she specifically used something akin to opium as the story of the golden fleece shows.

It's important to see Medea's use of drugs as the source of her magical power.

Otherwise much of the reality behind the myth escapes our notice. For example, at one point in the story of her exploits, Medea is so distraught at her predicament—she is ultimately forced to choose between the man she loves and her family—that she contemplates killing herself by ingesting poison. There are no "charms" in this section of the narrative, no "spells," no "bewitching incantations" . . . just drugs; Medea turns to drugs to find a solution to life's problems: "She . . . brought a casket wherein lay many drugs. some for healing, others for killing, and placing it on her knees she wept. And she drenched her bosom with ceaseless tears, which flowed in torrents as she sat, bitterly bewailing her own fate. And she longed to choose a murderous drug to taste

it..."<sup>12</sup> Medea was not a "witch" in the modern sense of the word; she was a *pharmakeus*, wielder of natural substances that could drastically alter one's mood, affect one's surroundings, and transform the world.

The Greeks and Romans were intimately familiar with the astonishing potency of narcotics, the powerful tools with which Medea could "draw down the moon" from the heavens. This may make them seem to be merely superstitious, but, on the contrary, the Classical world was well aware of the immutable laws of mathematics and physics—after all, they created the scientific method itself. They knew the moon was

not an object that could be plucked from the sky like some overripe apple. Classical civilization was not peopled by idiots; they understood the incredible psychological effects of narcotics and their impact on human perception. Mind-altering drugs amplified the mind's capacities, created visions, and gave flight to the ancient world's imagination; in this way, drugs enabled the Greeks and Romans to draw down the moon. With drugs as the source of the ancient sorcerer's supernatural powers, the myth of Medea perfectly illustrates the means whereby antiquity was able to rise above the harsh reality of its pre-modern existence. Medea's drug made her lover into a god; he was invulnerable, completely impervious to attack:

. . . Medea meanwhile took from the hollow casket a charm [drug] which men say is called the charm [drug] of Prometheus. If a man should anoint his body therewithal . . . surely that man could not be wounded by the stroke of bronze nor would he flinch from blazing fire; but for that day he would prove superior both in prowess and might.<sup>13</sup>

Drugs made Jason utterly insensitive to pain. Under their influence he could endure terrible wounds and even painful burns. They gave him tremendous courage as well; with this chemical help Jason grew in stature, strength, and standing. Of course, like any narcotic, the effects of Medea's drugs were temporary. Jason felt like a real hero for a short period of time, and this newfound confidence transformed him into a formidable warrior.

Jason's transformation is a beautiful example of the real purpose of recreational drugs as we see them in ancient literature. Plants, and the potent chemicals they produce, give their users the ability to become something much more than mere mortals; they endow them with the potential to transcend normalcy and become heroes: "And at dawn steep this charm [drug] in water, strip, and anoint their body therewith as oil; and in it there will be boundless prowess and mighty strength, and thou wilt deem thyself a match not for men but for the immortal gods."<sup>14</sup>

Jason thought he was equal to the gods in strength, and for a moment he was. He fought fire-breathing bulls, and stole antiquity's holy grail. Those aren't the actions of a common man; they are the deeds of a hero. At least he felt like a hero... until the stuff wore off... and then he was just Jason.

Medea wasn't the only popular, fictional witch in ancient literature. Circe, her aunt, also understood the power of drugs, and used them to cause considerable trouble for Odysseus and his men. Even though Medea was able to perform spectacular deeds with her drug magic, Circe certainly would take first prize in any magic contest. She was able to transform men into beasts, and then back again.

In the hands of ancient poets, Circe's dreams became oracular; she foresaw the future in the shadowy, dim world of her sleep. Drugs gave her the power to anticipate the events of tomorrow; visions of the future bombarded her senses with painful clarity:

And here they [Jason and Medea] found Circe bathing her head in the salt sea-spray, for sorely had she been scared by visions of the night. With blood her chambers and all the walls of her palace seemed to be running, and flame was devouring all the magic herbs with which she used to bewitch strangers whoever came; and she herself with murderous blood quenched the glowing flame, drawing it into her hands; and she ceased from deadly fear.<sup>15</sup>

Circe looked to the future, and discerned coming events. Ancient writers knew of her association with drugs, and therefore gave her dreams to interpret, as if they clearly understood the connection between mind-altering drug use and lucid dreaming. Cir-

ce's dream gave her the ability to shape her own destiny. In a sense, Greek myth presented drug-induced visions, like this one, as a true means of personal liberation.

According to Apollonius, drugs gave Circe the ability to wrestle with the future. Most of us are trapped in the present, helpless victims of the random events that accompany each new and unpredictable day. From a Greek perspective, drugs gave Circe the ability to change the world. She became famous for her capacity to transform humans into animals and vice versa. This power was by no means just some abstract notion generated by her drug-addled psyche. It was real; Circe forcefully transformed the world:

And beasts, not resembling the beasts of the wild, nor yet like men in body, but with a medley of limbs, went in a throng, as sheep from the fold in multitudes follow the shepherd. Such creatures, compacted of various limbs, did earth herself produce from the primeval slime when she had not yet grown solid beneath a rainless sky nor yet had received a drop of moisture from the rays of the scorching sun; but time combined these forms and marshaled them in their ranks; in such wise these monsters shapeless of form followed her.<sup>16</sup>

Circe's drugs gave her true power. She didn't follow divine commands, she issued them; and when she talked, nature listened and obeyed. Circe and Medea are two fictional representations of the ancient witch. They were entirely imaginary, but the power they wielded was based upon the lives of real sorcerers, magicians, and witches, who shared the ancient world with everyone else. Sorcerers and witches weren't universally persecuted, nor were they burnt at the stake as a means of scaring the masses into conforming to prevailing orthodoxy. At times their activities were called into question by local magistrates, and sometimes they were even brought before judges. For example, Apuleius, a second century A.D. poet-philosopher, who wrote a famous work on magic, *The Golden Ass*, was brought up on charges of having used sorcery to convince a rich woman to marry him. He was acquitted, but the event was undoubtedly troublesome to the poor poet. Despite legal actions like this one, sorcerers were generally considered integral and valuable members of ancient society, whose "abilities" were respected and sometimes even revered. Some members of the Classical world believed these witches could actually heal the sick, grant heavenly visions, and raise the dead, while others like Pliny were a bit more skeptical, but one thing is clear: Sorcerers and witches in antiquity derived their power primarily from drugs.

The Greek *pharmakeus*, whether villain or hero, was an incredibly enigmatic figure: As a fictional character in myth and plays, or as a wonder worker who practiced magic for paying customers, the sorcerer was both feared and respected. Witches and magicians simultaneously intrigued and terrified the Western world and eventually disappeared from the pages of history. Fiction writers preserve them for the modern world as a literary type, but they no longer roam the streets, markets, or common gathering places of today's urban centers; the Western world no longer relies upon the valuable services of drug-dispensing sorcerers, and, as a result, magic workers have become almost entirely extinct outside the realm of parlor games and card tricks. Much of the magic of ancient and even medieval religion has largely disappeared from the organizations of the Catholic and churches. This may be the result of secular science, or perhaps changes in cultural attitudes toward demons and spirits generated by the skepticism of the Enlightenment. For this reason, it is difficult for scholars, students, and interested readers to identify with the immense respect for drugs and magic displayed by the founders of Western civilization. The modern world's failure

to grasp the essence, impact, and value of the ancient *pharmakeus* very much wrapped up in our modern war against drugs. Drugs have become anathema to a healthy society, and so have their users. As a result, we see nothing beneficial in the potential of pharmaceuticals to provide insight, visions, miraculous transformations, or any other sort of magic. This puts us at a serious disadvantage when we try to translate and interpret any document written by the Greeks and Romans; we often see the big picture but fall short of the fine nuances created by antiquity's union of drugs and sorcery.

## 6 The Divine Gift of Mind-Bending Intoxication

Those who can not visit the mind's Antipodes at will (and they are the majority) must find some artificial method of transportation.

—Aldous Huxley

The Muses were Greek goddesses of poetic inspiration. There were nine of them, and their divinity was unassailable; they were the daughters of Zeus himself, the chief Olympian deity, and Mnemosyne, the goddess of memory. Hesiod, an early Greek poet who lived sometime around 700 B.C. and wrote about traditional Hellenic gods, tells us that the entry of the Muses into the world brought a blessed forgetfulness of pain and a rest from sorrow.<sup>1</sup> He wrote that the Muses celebrated the ways of immortals and filled musicians and poets with inspiration. Countless artists upheld the ideal of the Muses and began their literary works with dedications to these goddesses of poetic inspiration. By directly invoking the assistance of the Muses, ancient writers acknowledged the seemingly supernatural effects of poetry, music, and art.

All sorts of intellectuals, poets, historians, writers, and philosophers looked to the inspiration of the Muses as a means of giving their work the spark it needed. Each of these nine daughters of Zeus held sway over a particular art. For example, Clio presided over history, Erato over lyric poetry, Melpomene over tragedy, and Calliope over epic poetry. The Classical world trusted that the Muses filled their devotees with some form of celestial grace. They transformed mundane human writings into something divine.

In order to worship the Muses properly—they were goddesses after all—the Greeks created sanctuaries where the arts of writing and music were honored and preserved for the sake of the education and the well-being of the Greek-speaking world. The most famous of these was the great Museum of Alexandria, in Egypt. Here Greek scholars performed groundbreaking research and gave rousing lectures. This scholarly research, performed in honor of the Muses, prepared the Western world to embrace the wisdom of preceding generations and forge ahead with accumulated insight. In this way the cult of the Muses was responsible for the preservation and extension of all our traditional cultural values, customs, and principles. As a home for artistic inspiration and philosophical inquiry, the museum was a forerunner of the modern university.

Hesiod writes that the Muses left their homes on the lofty peaks of Mount Helicon at night to carry their songs of inspiration to mortals.<sup>2</sup> This picture seems all too appropriate, when we consider that nighttime and dreaming are closely related concepts in antiquity as they are still today. Classical authors typically softened the crude linguistic distinction between dreams, visions, and divine epiphanies. In fact, much of the mythological narrative found in Greco-Roman literature reflects a keen likeness to the symbolically charged atmosphere of the typical dreamscape; anyone who has read the story of Odysseus and the Cyclops, or Aeneas's trip to the underworld, cannot help

to have noticed the surreal quality of the images and characters found therein. Dreams, visions, and hallucinations were an avenue of discovery for the Greeks—especially when they sought self-knowledge.

The Muses induced a sort of creativity that was akin to dreaming, ecstasy, or intoxication; it was a form of divine inspiration that compelled Classical authors to create the masterpieces we call classics. The idea of divine intoxication is missing in today's most common religions, but in antiquity it was a palpable element of Classical education and the work of the literate. Many authors personally dedicated their works to this ideal, feeling that their inspiration was a gift from above, and many of them believed the Muses had personally kindled their inner artistic passions. The power of the gods to inspire dreams and visions was inseparable from human creativity; two thousand years ago, before genetics and neuroscience, the Western world believed that human genius was a celestial gift, not an inborn talent or a factor of neurological development. Modern distinctions between imagination, creativity, dreaming, and hallucinations would have been foreign to Classical civilization, and that is precisely why the Greeks and Romans believed the process of drug intoxication was nothing less than a means of opening an avenue of communication between the divine world and the realm of mortals.

Recreational drugs (using the term "recreational" only to represent the modern concept of nonmedicinal drugs) were just another means of invoking the Muses in antiquity. Priests used them in their temple ceremonies, sorcerers used them to manipulate nature, oracles used them to predict the future, and commoners used them during their initiation into mystery cults. In each case, psychotropic substances enabled their users to breach the limits of human imagination in order to experience the spiritual world of the divine cosmos. For this reason, it should not seem strange to us that ancient literature is full of references to drugs and drug experiences. Classical authors, like their contemporaries, would have looked upon mind-altering drugs as just another source of divine inspiration—a Chemical Muse.

Of course, antiquity's fondness for altered perception presents the modern West's mainstream antidrug culture with a serious conundrum. Accepting the fact that Classical authors had firsthand experience with narcotics is a difficult (if not impossible) act; it's a blatant violation of academia's sacred space—that strange inextricable nexus where Classical scholarship and modern morality meet. The very thought that antiquity's greatest intellectual figures might have embraced, promoted, or even merely condoned the use of recreational drugs is nothing less than cultural blasphemy. Drugs have become the eighth deadly sin, and nobody wants to see those who founded Western civilization as potential junkies, hopheads, or stoners. Just mentioning the use of drugs in antiquity tends to ruffle the feathers of nervous Classical scholars and historians, who have struggled for centuries to uphold the reputation and dignity of these now legendary authors.

Imagine how our views of the past would change if we knew that Plato enjoyed using psychedelics as a devotee of certain mystery religions, or that Alexander drank opium at his rowdy banquets, or that Julius Caesar smoked weed while preparing to cross the Rubicon, or that Jesus and his apostles were fond of eating mind-altering mushrooms as they gathered in the Garden of Geth-semane to talk about crazy concepts like loving one's enemy and allowing prostitutes to practice their craft unimpeded. Seeing these men as drug users would destroy our current standards of morality. Ancient princes, philosophers, and saviors flourished in a society that embraced the intellectual, social, and political freedoms associated with recreational drug use. Of course, few academicians would even consider the possibility that the collected

thoughts of the Classical world had been heavily influenced by the use of psychotropics. Despite innumerable references in the literature to plants containing mind-altering chemicals, despite precise descriptions in the same works of the effects of these psychotropic substances on humans, and despite the documented use of narcotics in Classical medicine, modern scholars of all strains are culturally united by their unwillingness to admit that drugs had a significant impact on the evolution of Western literature.

Regardless of modern preoccupations with the moral implications of recreational drug use, there exists a wealth of evidence that how Greek and Roman authors intentionally employed drug imagery and narcotic literary mystique to enliven and invigorate their works; they wrote and talked about drugs, and did so with impunity. The fact that Classical fiction and nonfiction are replete with descriptions of specific drugs, instructions on how to use them, and examples of people and fictional characters who did so is the greatest proof of the ubiquity of the drug culture.

Many famous writers in antiquity relied upon a detailed understanding of mind-altering drugs, hallucinogens, and euphoria-inducing substances to create spectacular stories that appealed to their drug-savvy audiences; myths, legends, and fantastic narratives were the peculiar "magic" of ancient literature, and drugs were often the magician's lovely assistant. Under the guidance of the Classical genius, narcotics made the impossible possible.

From early Greek epic poetry to imperial Roman satire, drugs permeate all genres of ancient literature. References by Classical writers to pharmaceutical terms and the many plants that produced mind-altering substances used by Greeks and Romans are innumerable. One could easily devote an entire scholarly dissertation to the influence of drugs on many of antiquity's greatest authors, writers like Plato, Euripides, Plautus, and Cicero. One could also write on the role of drugs in ancient comedy, tragedy, rhetoric, or even love poetry. Perhaps a publication on the use of drugs by famous Classical statesmen based on the biographical writings of authors like Plutarch and Suetonius would arouse the public interest. Regardless of the particular approach available to scholars and writers, the potential for research and discovery in the field of ancient drug use is seemingly limitless.

To begin to get a taste of the profound impact of drugs on ancient literature, this chapter will focus on three highly influential Classical authors—with a view to the impact that recreational drugs had on their works—and, therefore, on the development of Western civilization as well. These men, Homer, Virgil, and Ovid, are three of the most influential authors of all time. Finding references narcotics in their works is easy. All three mention specific drugs by name and describe the effects of these potent, mind-altering substances on those who used them.

If you want to begin with the best and most influential author of the Classical world, you start with Homer. Not much is actually known about his life, but most Classicists will tell you that he was a blind bard who entertained the archaic Greek world with oral performances of epic tales. These stories were sung in a melodious fashion at banquets and celebrations, where audiences ate, drank, and reclined while listening to the triumphs and tragedies of their predecessors.

Homer is credited with the creation of two great epics that forever changed the world. Modern scholars question whether he actually composed both the *Iliad* and the *Odyssey*, but the ancient world almost uniformly credited both works to him. The poems were produced in the late eighth century B.C., and took as their subject the mythology surrounding the siege of Troy by the Greek confederation and the tragedies and triumphs of a few of its main characters. Greeks and Romans, who lived

centuries after Homer, studied the *Iliad* and the *Odyssey* as young schoolchildren and were enamored of the stories' great heroes.

From Aeschylus to Aristophanes, from Alexander to Augustus, from Demosthenes to Cicero, the founders of Western civilization embraced the *Iliad* and the *Odyssey*, drug references and all. Homer was well aware of the effects of chemical euphoria; intoxication, supernatural inspiration, and visionary experiences are consistent themes throughout much of his work. For example, in one particular section of the *Odyssey* Homer relates the story of a group of humans who sat around all day getting stoned and forgetting all their troubles, a strange society known as the Lotus-Eaters. The members of this tribe of mortals were more than content to spend all day in a forgetful stupor; they experienced a potent form of lethargic entrancement, brought on by their penchant for gobbling down lotus plants. The plant killed any motivation they might have and held them in absentminded bliss. The story is certainly entertaining, but it is also direct proof of the fact that the ancient world understood the special allure of psychotropic and narcotic substances.

Odysseus relates the strange tale of how he rescued some of his men from the temptations of the Lotus-Eaters' amnesic lifestyle. They refused to rejoin their comrades after sampling the seductive plant and experiencing the lackadaisical life it promoted. Odysseus says:

My men went on and presently met the Lotus-Eaters, nor did these Lotus-Eaters have any thoughts of destroying our companions, but they only gave them lotus to taste of. But any of them who ate the honey-sweet fruit of the lotus was unwilling to take any message back, or to go away, but they wanted to stay there with the lotus-eating people, feeding on the lotus, and forget the way home.<sup>3</sup>

Odysseus's men did not want to leave their new peacenik friends. The lotus made these warriors feel good enough to want to lay down their weapons, give up the honorable Greek life, and spend the rest of their mortal existence reclining in the shade while consuming euphoria-inducing narcotics. That certainly doesn't sound like such a bad life, but it was entirely unfit for true Greek heroes, especially the comrades of the great Odysseus.

The episode with the lotus-eaters betrays an underlying tension that might have existed between various elements of the Greek world during the time of Homer. The eighth, seventh, and sixth centuries B.C., an age that celebrated the violence of the battlefield, probably produced its own distinct social group of pacifist drug users, men who saw nothing of value in continuously running off to war with neighboring city-states. In all likelihood, Homer drew upon cultural examples of the civil strife he observed in his own generation, in order to construct the image of the lotus-eaters, a group of men who may have been members of Greece's earliest countercultural movement.

The significance of the story of the Lotus-Eaters cannot be overestimated. In archaic Greece, warriors and martial virtue were central to the preservation and integrity of Hellenic culture; for a group of men to abandon their weapons and seek a life of intoxication, relaxation, and forgetfulness would have been an affront to the very fabric of life. Yet that is exactly what Homer tells us happened in the *Odyssey*. The mere existence of such a story, embedded as it is in one of the two "national" epics of the Greeks, is a great surprise. Perhaps some Greeks of this war-ridden period were already arguing for some form of serious social change.

Whether or not Homer's Lotus-Eaters were the ancient equivalent of the hippies of

the 1960s, Odysseus was certainly unwilling to sacrifice any of his soldiers to the hypnotic powers of a drug, so he dragged them back to their ships kicking, screaming, and "tripping" all the way. Their emotional response to his brazenness, an outpouring of negative emotions, is highly charged and very much like the reaction we would expect from someone using narcotics to self-medicate against the dreadful psychological pain of a decade of fruitless warfare. Odysseus killed the pleasurable trip of these vets, but did so with the intent of returning these backsliding soldiers to their previous, honorable, warrior lifestyle. He says:

. . . I myself  
took these men back weeping, by force, to where the ships were,  
and put them aboard under the rowing benches and tied them fast,  
then gave the order to the rest of my eager companions to embark  
on the ships in haste, for fear else might taste of the lotus  
and forget the way home . . .<sup>4</sup>

By returning them to their lives as soldiers, Odysseus was able to regain the affection and loyalty of his crew. The men returned against their will, but once back on board the ships and away from the lotus plant, they felt as good as new. It's clear from the narrative that Odysseus recognized that the drug was exercising an incredible influence over his men. After all, they were trying to make their way home after ten years of brutal warfare, and were undoubtedly susceptible to the allure of a strong mind-altering substance.

Odysseus's men used the profound effects of psychotropics to forget the harsh reality of their existence as soldiers. In this way, Homer was simply relating a common cultural phenomenon that has remained an important aspect of human history up to the present day: Traumatized vets frequently seek the solace offered by mind-altering chemicals (including alcohol) to heal the deep psychological wounds of prolonged and seemingly fruitless warfare.

In order to manifest such profound effects on the minds and motivations of Odysseus's men, the lotus must have possessed an amazingly potent, euphoria-producing chemical; across the Mediterranean to the south of Greece, the Egyptians of the same period recognized that the plant could be used to alter normal perception, and perhaps even arouse sexual appetites. Although modern science is unaware of the specific species of Homer's lotus, or its chemical actions at the molecular level, it's obvious that it produced some sort of neurotoxin that acted on the pleasure centers in the brain. After all, Odysseus was forced to drag away his men and then tie them up. Their reactions tempt us to conclude that they suffered some form of immediate and profound affinity for the potent substances produced by this tantalizing recreational plant. Perhaps it was their way of treating their own post-traumatic stress disorder. Odysseus's refusal to allow his men to decide their own fates is telling; he clearly recognized that his men were under the influence of a potent mind-altering substance and were not therefore able to make decisions regarding their return home; he knew their new mind-numbing experiences would only inspire them to flee the brutal lifestyle of the archaic Greek warrior. Accordingly, as their leader, and a man deeply enamored of the martial virtues that his times, Odysseus dismissed their capacity for judgment and took an active role in setting them back on their previous course. The swiftness of his actions may show that Odysseus had some previous experience with disenchanting vets, or at least the strong narcotics they used to dull the stress they would have experienced after years of hand-to-hand combat.

Homer's fictional characters obviously had experience with drugs, but it's important

to recognize that the members of Homer's audience were also no strangers to the use and effects of psychotropics. The story of Odysseus's long voyage home is filled with drug references, episodes of intoxication, and wondrous "trips". Homer never felt the need to explain how drugs affected their user to his audience. His audience was already intimately familiar with the concept of drug-induced euphoria, hallucinations, and pain relief.

Myths in the *Iliad* and *Odyssey*, stories like those of the Lotus-Eaters, the Sirens, and the Cyclops, betray the archaic Greek world's intimate awareness of the seductive pleasures of mind-altering substances. Homer didn't merely allude to drugs and drug use in his works, but mentioned them explicitly, along with the names of specific plants. In fact, drugs are major players in much of the *Odyssey*. Homer relied upon the image of drugs and drug users repeatedly in his poetry. If we were to remove these references, the continuity of Homer's stories would be broken.

The story of Odysseus's encounter with Circe, the mischievous poison-brewing immortal we met in chapter 5, who turned men into animals, relied exclusively upon the transformative capacities of drugs to develop its narrative thread. In the *Odyssey* Circe turned Odysseus's men into animals by giving them drugs, and then maliciously held them captive once they were adequately incapacitated. In order to rescue his comrades, Odysseus used a powerful antidote, a drug given to him by the god Hermes, which directly counteracted the power of Circe's potions. Hermes caught up with Odysseus before he reached the dwelling of Circe and carefully warned him about the dangers of his imminent encounter with the powerful drug maiden. Fortunately for Odysseus, the god had something else in mind for the hero:

She will make you a potion, and put drugs in the food, but she will not even so be able to enchant you, for this good medicine [drug] which I give you now will prevent her . . . <sup>5</sup>

Hermes' divine antidote might have worked by counteracting Circe's drugs, or it might have just given Odysseus a greater magical power. That is, Hermes' drug was more potent than other drugs typically encountered by mortals. This section of the *Odyssey* certainly makes it sound as if the best drugs came from the gods.

It's important to recognize that Circe originally transformed Odysseus's men into animals by spiking their food and beverages with drugs. The use of botanicals in this story is not implied; it is explicit. If we were to remove the drugs from the story, she would have had no means of capturing his men, and the narrative would have ended abruptly. The story is all about drug use; Homer's audience must have understood this—or at least taken it for granted. Once again, drugs were an everyday reality in antiquity, and Homer's audience did not find them odd or unusual. There are far too many references to drugs and mind-altering substances in the *Odyssey* to deny the important role of narcotics in Homeric society. Those who listened to epic poems in antiquity obviously understood the power of drugs.

The significance of botanicals goes far beyond Homer's use of drugs as important literary elements of epic poetry. The rabbit hole is much deeper than that; drugs were probably an inseparable part of epic recitation itself. Based on evidence taken from the *Odyssey*, it appears that Homeric audiences used narcotics while listening to the tales sung by their ancient bards. A single, invaluable reference in Homer provides this insight. In the fourth book of the *Odyssey*, Homer tells us that Helen, the infamous wife of Menelaus, whose was the pretext for the Trojan war, mixed an Egyptian drug called nepenthe with the wine she offered to her guests while they sat listening to stories of heroes. The story reveals some interesting things about ancient

Greek entertainment that are typically overlooked by Classicists, and shows us something quite reasonable: The Greeks appear to have used drugs while listening to the great stories of epic bards—their version of 3-D glasses for moviegoers, only much better.

The neperthe passage from the *Odyssey* tells us three very important things about Homeric performance when we try to determine whether his audience used drugs. First, Helen and her guests fully appreciated the mind-numbing power of potent narcotics. Neperthe caused extreme euphoria:

Into the wine of which they were drinking she [Helen] cast a medicine [drug] of heartsease, free of gall, to make one forget all sorrows, and whoever had drunk it down once it had been mixed in the wine bowl, for the day that he drank it would have no tear roll down his face, not if his mother died and his father died, not if men murdered a brother or a beloved son in his presence with the bronze, and he with his own eyes saw it.<sup>6</sup>

It would take an extremely potent narcotic to numb one's mind to this degree. Neperthe may have been something like opium, which was a common drug in Egypt, or it may have been some sort of hallucinogen or even some unknown toxin. It clearly brought about a form of numbness desired by Homer's audience. The archaic Greek world, rife as it was with conflict and death, shows that it craved some form of release from the tensions of a world whose economy and culture were both propped up by warfare.

The second conclusion we can draw from this episode is that the Greek world associated the use of drugs with narrative entertainment. Helen offered her guests the neperthe immediately before they dined and indulged in the evenings amusements:

Now when she had put the medicine [drug] in, and told them to pour it, taking up the story again she began to speak to them . . . "Sit here now in the palace and take your dinner and listen to me and be entertained."<sup>7</sup>

Homer's audience listened as Helen entertained her guests with something that would have made them feel right at home; she gave them a taste of good old-fashioned Greek hospitality. She gave them narcotics.

The third point we can glean from this episode is that the Greek world found the whole experience of taking drugs and listening to stories to be extremely pleasurable. Homer's characters found Helen's drug-inspired entertainment to be particularly gratifying, even to the point of distraction, as one of them reveals to her husband:

Son of Atreus, do not keep me with you here for a long time, since I could well be satisfied to sit here beside you for a year's time, without any longing for home or parents, such strange pleasure do I take listening to your stories and sayings . . .<sup>8</sup>

This particular guest's fondness for the drug experience reminds us of the episode of the Lotus-Eaters; he was personally overwhelmed with the power of the narcotic and found that not only did he want more but he was powerless to return to regular activity while under its relaxing influence.

With respect to the "big picture" of drug use in archaic Greece, Homer makes it appear as if the Greeks were accustomed to mixing drugs with the wine they served at banquets, where they proceeded to tell stories to their thoroughly stoned audiences. It must have been great fun to listen to the legends of monsters and gods while under the influence of a strong narcotic. The drug undoubtedly enhanced the audience's ability

to envision the strange and exotic creatures of the mythic landscape. Homer wasn't the only author of epic poetry who was interested in drugs. After all, Virgil (70-19 B.C.), the author of the patriotic Roman epic the *Aeneid*, was intimately familiar with the effects of opium and wrote about its sleep-inducing qualities in several of his works. In one passage from the *Eclogues*, a collection of short pastoral poems, he speaks of poppy capsules (*summa papavera*), the source of opium.<sup>9</sup> By mentioning the head of the poppy, Virgil would have reminded his Roman readers—as he would have reminded the Greeks—of the mind-altering effects of the drug derived from that part of the plant. Elsewhere Virgil discussed the ideal growing conditions required for the opium poppy.<sup>10</sup> The poppy he mentioned must have been *Papaver somniferum* because he associated the plant with Ceres, the goddess often portrayed in literature and art as carrying the opium poppy. He also told his readers that an intelligent farmer must take advantage of the opportunity to grow poppies.<sup>11</sup> After all, farmers used their own home-grown drugs to treat their families, slaves, and cattle. Opium was a valuable analgesic that would have come in handy in the rural countryside.

Virgil's most revealing reference to drugs and chemical intoxication is found in the fourth book of the *Aeneid*. In this particular section of his poem of Roman nationalism, Dido, the Carthaginian queen, falls in love with the great Trojan hero Aeneas, only to be abandoned by him as he departs from Carthage to fulfill his god-given destiny of founding Rome. In a rage, the scorned queen contrives her own suicide; she tells her sister of an elaborate plan to destroy the tokens of her former lover by building a great pyre and burning on it everything that reminds her of him. However, the plan is all a hoax. Dido really intended to do away with herself along with Aeneas's belongings—in one glorious, spiteful conflagration.

Before she kills herself, Dido tells her sister about building the pyre and convinces her that the whole undertaking is part of a magical rite meant to lure Aeneas back to her side. As part of this deception, Dido gives her plot legitimacy by claiming the mystical authority of a Massylian priestess who guarded the temple of the Hesperides and practiced similar magic acts. Dido's description of her is quite revealing:

Thence a priestess of Massylian race has been shown to me, warden of the fane of the Hesperides, who gave dainties to the dragon and guarded the sacred boughs on the tree, sprinkling dewy honey and slumberous poppies. With her spells she professes to set free the hearts of whom she wills, but on others to bring cruel love-pains; to stay the flow of rivers and turn back the stars; she awakes the ghosts of night.<sup>13</sup>

According to Dido, this priestess possessed incredible power and performed wondrous deeds, but the only tools of her trade mentioned here by Virgil were "honey" and "sleep-inducing poppy." Once again, modern Classicists prefer to believe Virgil's *soporifer-umque -papaver* was actually "poppy seeds," but only opium can induce the physical stupor implicit in the Latin word *sopor*, and honey was often mixed with opium to mask its awful taste. Classicists don't want to say either that drugs were being used by these fictional characters or that Virgil knew about such things. The *Aeneid* justified the tyrannical authority of Augustus, who was quite the moralist of his day.

Politics aside, Virgil's description of the priestess and her magic is certainly a poetic reference to the power of mind-altering drugs; they could make anyone forget anything. The temporal and spatial distortions they produced must have seemed to make

the stars and the rushing waters of a river stand still. Even Thomas De Quincey, with his opium-induced nightmares filled with ghosts from his past, must have felt the same poetic magic under opium's spell.

Virgil's Massylian priestess guarded the sacred temple with her honeyed opium; she possessed the secret rites of the poppy. As a mortal, she transcended the natural limits of human power, and like the Muses, she shared the secrets of the gods. Virgil's narcotic imagery is far too realistic to be coincidental. He clearly understood the potency of opium and its effects on the human mind—and some might even argue that he must have used it himself in order to write about it in this way.

Virgil, like most ancient authors, appreciated chemical intoxication; he was well aware of the mind-altering powers of botanicals and their drastic, mood-transforming capacities. In fact, an entire book of the *Aeneid* is devoted to the concept of substance-induced experiences. In book 7, thanks to the jealousy and wrath of the gods, Aeneas and his men enter into a bloody conflict with local Italian tribesmen. Although their king initially embraced Aeneas and his men when they arrived in Italy, and promised to unite them with his own people, the queen of heaven, bearing ill will toward the long-suffering Trojans, sent one of the Furies to incite strife and warfare between the two groups. Of course, the Trojans and the Italians then entered into the epic combat that became the subject matter of the rest of the *Aeneid*.

A pharmaceutical fog envelopes the action of book 7, where both the Trojans and the local Italian tribesmen act as if they are clearly out of their senses; much of the narrative is peppered with references to botanical drugs, magical transformations, ecstatic insanity, delirium, and states of altered consciousness. For example, in one section, the Fury Allecto, a hideous and deadly Gorgon, instills the Latin queen Amata with a raging, psychotic ferocity. Of course, she uses good old-fashioned drugs to accomplish this, which Virgil, borrowing from the Greek tradition, poetically depicts as venomous snakes:

In that moment Allecto, gorged with the poisons [drugs] of the Gorgons, went straight to Latium and the lofty Palace of the king of the Laurentines and settled on the quiet threshold of the chamber of Amata... Taking one of the snakes from her dark hair the goddess Allecto threw it on Amata's breast to enter deep into her heart, a horror driving her to frenzy and bringing down her whole house in ruin.<sup>13</sup>

The serpent's poison mimics the actions of a strong drug, bringing Amata to the brink of insanity. Virgil describes the episode as if he were relating a story about the effects of narcotics. He says the "drug," or *venerium* in Latin, "thrills her [Amata's] senses and wraps her bones with fire."<sup>14</sup> After she takes it, she flies into a maniacal rage. Virgil associates her actions with those of the ecstatic Bacchantes, and uses striking imagery to depict the queen as someone overcome by an intoxicant:

... when the maddening poison of the serpent had soaked deep into her flesh, the unhappy Amata, driven out of her mind by her monstrous affliction, raged in a wild frenzy through the length and breadth of the city ... in the fever of her madness, [she] held high a burning torch in the midst of them and sang a wedding hymn ... rolling her bloodshot eyes.<sup>15</sup>

Amata's drug-addled frenzy is just one example of the power of intoxicants found in book 7 of the *Aeneid*. Virgil used the theme of chemical madness to set the stage for his narrative, and clearly relied upon his audience's understanding of the potency of certain psychotropic drugs. In a sense, it is impossible to appreciate the vivid ima-

gery of the *Aeneid* without understanding the controlled madness of the drug trip.

Virgil was not the only great Roman author to exploit his audience's understanding of drugs. Ovid, a distinguished poet who wrote of amorous pursuits and incredible transformations, also relied upon the theme of intoxication in his works. In fact, there is sufficient evidence to show that Ovid probably used drugs himself. In order to understand this best we must forgo convention and begin at the end of his life's work; we must turn to the poet's last miserable years, a time when his muse spoke most poignantly, a time when his own poetic skill condemned him to a life of solitude.

Ovid spent the conclusion of his life in bitter exile. As a love poet, his early works exposed and embellished the secret affairs of the human heart; he spoke of heated passion, sexual desire, lust, and envy. His *Amores*, or *Loves* in English, a presumably autobiographical account of the poet's own sportive intrigue, was a grand testimony to his obvious literary genius. The *Heroides*, an inventive collection of fictional letters written in the guise of scorned or betrayed women, illustrates Ovid's command of declamation. The *Ars amatoria*, or *The Art of Love*, was a didactic three-part treatise on the ins and outs of erotic passion.

Ovid enjoyed success as a poet in Rome for many years, despite the political storms of the first century, as powerful aristocratic families started to transform the republic into an empire. Rule by a single person, known as a tyranny in antiquity, suited Ovid just fine until he ran afoul of the newly established monarchy. Ovid's sexually charged poetry did not sit well with Augustus Caesar (63 B.C.-14 A.D.), the first official Roman emperor, a bold but somewhat simple man whose reign was characterized by the methodic emasculation of the Roman Senate and repeated attempts to legislate public morality. Despite the fact that Ovid was the preeminent poet in Rome, Augustus exiled him in 8 A.D. Ovid claimed he was banished because of *The Art of Love*. Ovid also admitted committing an "indiscretion" that gave Augustus cause for anger. Whatever he actually did—he never said what it was and with whom he happened to do it—it ended up getting him exiled; and exile was a contemptible fate for someone like Ovid, enamored as he was of the cosmopolitan lifestyle. He was sent to Tomis, a distant, godforsaken outpost on the coast of the Black Sea, an unsophisticated and truly barbaric frontier hellhole that would have intimidated even the likes of Wyatt Earp. There Ovid composed his final poems, sad accounts of his bitter exile. Tomis situated far beyond the civilizing influence of Rome and lacked the creature comforts to which any Roman citizen would have been accustomed, such as clean water, efficient sewage systems, bathing facilities, educated physicians, and even public roads. Without a strong central authority, life on the frontier was an ideal environment for bandits, brigands, and murderers. For Ovid, who like Voltaire and Baudelaire was a bit of a dandy, life in such a savage, untamed place seemed unbearable.

One of the gloomy poems that came out of his exile, an excerpt of a collection known as the *Tristia*, meaning "sorrows," blamed his ill fate on an overwhelming obsession with writing poetry. His personal muse, cruel mistress that she was, became the cause of his great calamity as well as the source of his only remaining joy. Ovid admitted that his own poetry got him kicked out of paradise, but he also confessed that writing while in exile was his only means of personal fulfillment.

In the *Tristia*, Ovid likened his poetic inspiration to a form of crazed intoxication. He even compared his strange attraction to writing with the chemically induced mania of Homer's Lotus-Eaters. Most important, he superimposed two recreational activities: writing poetry and drinking opium. Writing and narcotics have one thing in common: they both involve reverie. Ovid's joyous inspiration was his muse, but, on a darker note, he openly acknowledged her potentially ruinous power:

If I'd known the harm I'd suffer from her and her sisters  
I'd never have set my hand to their holy game— but what to do now?  
I'm hooked. Creative inspiration has got me. Though verse-ruined,  
I'm mad enough to love verse still.<sup>16</sup>

Creative inspiration captured Ovid. He was unable to break the bonds that shackled him to his poetic muse. In this very same poem, Ovid—much in the vein of Homer—links chemical intoxication with poetic inspiration. On the surface, the association appears to have been purely metaphorical:

. . . When Ulysses's [Odysseus's] companions savoured  
the exotic lotus, their palates relished the taste that undid them . . .  
So I relish the books that have hurt me, love the weapon that inflicted my wounds.<sup>17</sup>

As the lotus soothed Odysseus's crew, writing helped Ovid forget his miserable existence. With this in mind, the intoxication metaphor makes a subtle metamorphosis; Ovid's obsession with his poetry, his inspiring Muse, quietly became something like a chemical addiction. For, in another passage from the same poem, Ovid compares the peace of mind he acquires from his poetry to the feelings one gets after drinking opium.

Perhaps this obsession may be seen as madness;  
but the madness has some utility, it forbids  
the mind to be always brooding over its troubles,  
makes it oblivious to present ills . . .  
As though I were drinking a draught from soporific Lethe  
I lose all sense of adverse days . . .  
So I'm right to revere the goddesses who have lightened my burden.<sup>18</sup>

"Soporific Lethe" is just another way of saying "opium" in Latin poetry. Virgil had already established this euphemism prior to Ovid's composition of the *Tristia*. In the *Georgics*, a substantial didactic poem meant to teach and celebrate the arts of farming and animal husbandry, Virgil uses the term "Lethe's poppies" (*Lethaea papavera* in Latin) when referring to a sacrifice offered for the dead.<sup>19</sup> Lethe was the river of forgetfulness, where, according to ancient myth, the memories of past lives were purged from recently departed souls. In English we derive words like "lethargy" from the same root. It makes perfect sense that the poppy was connected with the legendary river of forgetfulness; Virgil also describes the plant as being "filled with Lethe's sleep," an expression meant to capture the soporific powers of opium, which served as a sort of chemical amnesia.<sup>20</sup> Ovid used Virgil's poetic description of opium to describe the effect his poetry had on his weary mind. His poetic Muse made him forget about all his troubles in exile, almost as if he were back home drinking the special, lethargy-inducing concoction made from the opium poppy. He wasn't just saying he wanted to drink from the river Lethe. That would have made him forget everything, including his life and even his poetic art; he only wanted to vanquish his pain, his "adverse days," something he could have obtained by consuming a recreational drug such as opium.

Ovid could have found opium in most markets in Rome, so mentioning a drink made from the drug wouldn't have shocked or confused his audience. There was no

shortage of wine mixed with opium. It was used as an analgesic for just about every serious ache or pain known to humans, and could have been found in most Roman households.

There are serious ramifications to Ovid's familiarity with opium in the *Tristia*. The poet clearly understood the power of recreational drugs and directly compared their effects with the skill and inspiration of the artist. In the midst of his misery, he yearned to forget. He associated the sleep-inducing forgetfulness obtained by drinking opium with the inspiration he received from his poetic muse. There can be no confusion here: Ovid unified chemical and poetic insight; writing was like drinking opium, it made him forget his suffering.

Ovid's description of the precise effects of opium is proof that he was no stranger to the power of the drug. At the very least, this particular poem shows us that he was well aware of its specific effects on the body. Because he compared opium to mental inspiration, it's likely that other Romans valued the psychological effects of their psychotropic plants. His poetry whispers in the ears of his reader the hidden heart of the poet; it reveals something of the of his own inspiration. It reveals the love poet's respect for a form of inspiration that can best be described as the Chemical Muse.

Further evidence of Ovid's intimate relationship with opium—not to mention other recreational drugs—surfaced in his early works as well as in the poetry he wrote while in exile. His description of the cave of Sleep is a perfect example. In the eleventh book of the *Metamorphoses*, Ovid transports his reader to a place of dreamy wonderment, the cave of the king of somnolence, the god known as Sleep. He tells us that complete silence pervades the god's realm; no living thing makes a sound, for once inside the cave of Sleep, bodies find rest and minds submit to stupefaction. On a couch of ebony, Sleep lies in glorious slumber, surrounded by the shapeless forms of dreams. Unlike the kingdom of Pluto—the Roman Hades—with its ravenous canine guardian Cerberus, the cave of Sleep requires no sentinel; for, Ovid says, all who enter succumb to the overwhelming power of the sleep-inducing plants that grow at its entrance:

[in the cave] . . . a little stream, a branch of Lethe, trickles, with a murmur over the shiny pebbles, whispering Sleep! Before the doors great beds of poppies bloom and other herbs, whose juices Night distils to sprinkle slumber over the darkened earth.<sup>21</sup>

Poppies, other sleep-inducing plants, and even the river Lethe itself—known in myth as the universal source of forgetfulness—are all found near the cave entrance. The symbolism is openly suggestive.

References to poppies and other drug-producing plants reinforce Ovid's depiction of the cave as a source of sleep and somnolence. Using metaphors like these, we can see that Ovid assumed his reader had an adequate understanding of the specific effects of opium and other soporifics. Both Ovid and his Roman audience must have understood the narcotic powers of opium, or the passage would make little sense.

The Roman stage is set, but what about Ovid himself? How do we know he personally used opium, or other drugs? The evidence for his own familiarity with narcotics can be summed up in three ways. First, he mentions opium frequently in his works and makes numerous references to drug-induced states, including intoxication, stupor, and hallucination. Second, he demonstrates an intimate familiarity with the physiological effects of opium. Third, he repeatedly admits to trying other drugs and even indirectly implicates them as a source of his own physical problems—or at least those of his narrative persona.

Ovid was even familiar with the agricultural techniques for collecting opium, and he also knew something about its side effects. In an important passage about an encounter of the goddess Ceres with a poppy plant, Ovid says that the poppy ended her hunger. Does this mean that Ceres dined on the poppy as if it were her evening meal, a sort of botanical repast, and was therefore no longer hungry? Certainly not. She was no longer hungry because she brushed against the plant and then tasted of the opium that oozed from the head of the poppy. In scientific terms, the alkaloids found in opium act on receptors in the brain to stifle hunger. Ovid understood the side effects of the drug and incorporated this knowledge into his rendition of the myth. Ovid understood opium, but he was also familiar with a few other recreational drugs. The Romans possessed numerous drugs capable of augmenting feelings of sexual arousal, and Ovid was—by his own account—familiar with these aphrodisiacs. In fact, on several occasions, he indicated that he had a good bit of personal experience in such matters.

Ovid warned his readers repeatedly about the potential dangers of aphrodisiacs. He was passionate about the use of stimulants and made it seem as if his knowledge of them came from personal—or at least from the personal experience of his narrative persona. Concerning his experimentation, Ovid says:

There are those who recommend the use of harsh drugs, aphrodisiacs; but based on my own assessments, such herbs are poisonous.<sup>22</sup>

Ovid may have tried to use sexual stimulants on himself. It certainly seems that he was suspiciously familiar with their use. After all, no "love poet" worth his salt could afford not to be in his day. Drugs and sex were bedfellows in antiquity, and Ovid would not have been very convincing as a master of all things erotic if he had had no experience with the popular sexual stimulants of his own time.

Aphrodisiacs may have had a bad effect on Ovid's health. His numerous references to drugs, in addition to his familiarity with sexual stimulants and his descriptions of the specific side effects of narcotics, all make it difficult to view *Amores* 3.7—his lament on a failed sexual encounter—as anything other than a personal struggle with drug-induced impotence. Ovid's narrative persona in this famous poem failed to achieve an erection, despite the alluring advances of an attractive lover. Attempting to sort out the causes of his newfound flaccidity, he points to the use of malicious drugs as the cause of his unfortunate dilemma:

She whispered endearments, calling me master,  
and all the natural rapturous utterances as well.  
But my body, as if drugged with chill hemlock,  
was paralyzed and failed to achieve my intent.  
I lay like a dead tree-trunk, a mere spectacle, a useless weight,  
and it was unclear whether I was body or ghost.<sup>22</sup>

Hemlock, the plant used to kill the philosopher Socrates, contains a number of alkaloids and is highly poisonous. These chemicals act on the central nervous system; when administered in small doses, hemlock acts as a sedative and anticonvulsant. The narcotic effects of the plant virtually ensured its use as a recreational drug in antiquity. Classical medical authors frequently included hemlock in sections of their writings concerned with antidotes for the ingestion of poisons. Nicander, in his *Alexipharmaca*, a work devoted to the proper administration of antidotes, makes it seem that it was

not uncommon to see hemlock users stumbling along streets in a drug-addled stupor:

Take note too of the noxious draught which is hemlock, for this drink assuredly looses disaster upon the head bringing the darkness of night: the eyes roll, and men roam the streets with tottering steps and crawling upon their hands; a terrible choking blocks the lower throat and the narrow passage of the windpipe; the extremities grow cold; and in the limbs the stout arteries are contracted; for a short while the victim draws breath like one swooning, and his spirit beholds Hades.<sup>24</sup>

This is obviously a description of a hemlock overdose and not intentional poisoning. Nicander makes it appear as if the spectacle of hemlock intoxication is far too common to be the result of attempted homicide. Once again, his audience was probably familiar with the antics of the intoxicated as well.

Ovid's description of his stymied encounter, along with his general mistrust of aphrodisiacs may, in fact, indicate that he suffered from sexual dysfunction resulting from chronic stimulant use. If nothing else, we can be sure that he was at least aware of their existence and even knew some of the dangers surrounding their use and abuse. His detailed understanding of recreational drugs points to personal experience, but being a poet gives him a certain anonymous freedom; poetic license prevents modern scholars nailing down the exact events that shaped his personal life.

Ancient writers knew about the specific, mind-altering effects of strong drugs and wrote under the presumption that their audiences also shared their appreciation for recreational plants. Drugs and drug use were very much part of the public domain in antiquity—a fact that remains hidden in plain sight, so to speak, from twentieth-century scholars.

Two thousand years ago drugs were a readily accessible means of ascending the heights of human imagination. Priests and priestesses weren't the only people who used psychotropics to gain insight; from the common man on the street, to famous authors and poets, antiquity met its need for inspiration by using chemicals freely grown on their humble farms and openly sold in their busy markets. Writers looked upon drugs as an invaluable literary foil, well aware that their audiences would be able to appreciate references to narcotics and their effects. Drug use was just another aspect of ancient living, no different from drinking wine on a daily basis, bathing in public baths, or wrestling nude in the gymnasium. The Greeks and Romans looked on psychoactive botanicals as a means to an end; they were a source of inspiration, a Chemical Muse.

## 7 The Pharmacology of Western Philosophy

The world is my idea.

—Arthur Schopenhauer

Occasionally history gives birth to an exceptionally unique person, someone destined to leave a revolutionary imprint on his or her native culture. These prodigies typically prefer to pitch their intellectual tents well beyond the limits of commonly accepted ways of thinking. They tend to challenge the status quo and those who defend it with entirely new approaches to questions of ethics, government, science, and philosophy. Not surprisingly, most of them end up exiled or executed.

Western civilization has had its share of remarkable intellectuals who labored to make sense of the world. From Socrates, Plato, and Aristotle to Nietzsche, Wittgenstein, and Sartre, philosophers have generated ideas that forever altered the West's intellectual development. Historians and Classicists like to stuff these unique sages into abstract philosophical categories in an attempt to adequately describe and simplify the essence of their complex ideas. We call their ideas existential, mechanistic, deterministic, or some such adjectival nonsense, which makes it easier to digest their work without losing a sense of normalcy.

A few intellectuals defy all attempts at classification, particularly the ancient philosophers who helped to shape the early history of Western ideas and thereby established the dominant direction of intellectual thought in Europe and the New World. Some of these early Greek philosophers were as odd as they were brilliant; in fact, in modern parlance, we would better describe a few of them as sorcerers, quacks, or miracle workers, rather than philosophers. They led eccentric lives, made peculiar statements, and stirred up strong feelings, from contempt and resentment to messianic praise. They also shared some queer similarities, some of which reflect a shared interest in the power of drugs, magic, and intoxication. Thanks to their efforts, the roots of Western philosophy reach deep into the fertile soil of the human imagination, where shamanism, divination, and narcotic experiences have held sway for thousands of years.

Diogenes Laertius, who lived in the third century A.D., wrote a lengthy work on the lives of many of antiquity's most renowned philosophers. The volume of the valuable material he provides about these philosophers is overwhelming. His work comprises ten books, covering the lives of pre-Socratic philosophers (that is, philosophers whose ideas were prominent before the birth of Socrates) from as early as the seventh century B.C. Notably, his history of Greek philosophy does not begin with academic institutions, professorial collegiality, or even traditional philosophy. Instead, he opens

his work with a discussion of diviners, magicians, and secretive mystery cults, many of which occupied the interest of early Greek thinkers.

Diogenes claimed that the intellectual discipline known as philosophy arose with the early Greeks, but he readily admitted that other ancient authorities believed it came from barbarian (non-Greek) sources. Sorcerers, priests, and members of ancient cults were all possible alternative founders of philosophy:

"But the advocates of the theory that philosophy took its rise among the barbarians go on to explain the varied forms it assumed in different countries. As to the Gymnosophists and Druids we are told that they uttered their philosophy in riddles, while bidding men to revere the gods, to abstain from wrongdoing, and to practice courage."<sup>1</sup>

The Gymnosophists were a group of Indian wise men whose name means something like "naked philosophers." Due to the considerable distance between the Mediterranean and India, Greco-Roman knowledge of Indian philosophy was somewhat limited. However, thanks to Julius Caesar's repeated attempts to subjugate his northern neighbors, plenty was known about the Druids, who practiced the ancient religion of the Celtic populations of western Europe.

Unfortunately, there are few written accounts of the actual religious practices of the Celts in Gaul, so much of what we know about them today comes to us through the filter of their Roman conquerors, who were clearly biased by their perception of the Celts' inferior technology and lack of national organization. Both the Gymnosophists and the Druids had some share in the origins of philosophy, according to our ancient sources, but Diogenes could not bring himself to conclude that their speculations about the natural world gave birth to the discipline that so captivated Greek civilization. Like many of his contemporaries, Diogenes believed in the superior nature of his own culture and was slow to acknowledge the contributions of other races. Philosophical speculation also had a long history in Egypt. The early kingdoms of the Egyptians far predated the world of the first Greeks, but Diogenes was also stubbornly reluctant to credit his southern neighbors with the invention of philosophy. Like the Gymnosophists and Druids of Asia and Europe, Egyptian wise men belonged to a group of priests, magicians, and diviners who speculated on all aspects of the natural world:

They [Egyptian philosophers] say that matter was the first principle, next the four elements were derived from matter, and thus living things of every species were produced. The sun and the moon are gods bearing the names of Osiris and Isis respectively . . . they hold that the universe is created and perishable, and that it is spherical in shape They say that the stars consist of fire, and that, according as the fire in them is mixed, so events happen upon earth; that the moon is eclipsed when it falls into the earth's shadow; that the soul survives death and passes into other bodies; that rain is caused by change in the atmosphere.<sup>2</sup>

Egyptian philosophers studied everything from religion and the afterlife to astronomy and meteorology. Egyptian magic, astrology, and temple worship clearly influenced the development of the natural philosophy in North Africa. And the knowledge gleaned by these priestly wise men did not exist in a vacuum; Egyptian philosophy inspired much of the cultural development in the Hellenic world and was always a source of curiosity and intellectual interest to early Greek philosophers. The Greeks admired the long history of Egyptian civilization, and assimilated much of their knowledge of nature and natural phenomena.

Of course, Diogenes claims that the earliest philosophers were actually Greeks. He

says that Pythagoras was the first sage to call himself a philosopher and that native Greek philosophy was originally divided into two prominent schools:

But philosophy, the pursuit of wisdom, has had a twofold origin; it started with Anaximander on the one hand, with Pythagoras on the other. . . The one school was called Ionian, because Thales, a Milesian and therefore an Ionian instructed Anaximander; the other school was called Italian from Pythagoras, who worked for the most part in Italy.<sup>1</sup>

It's interesting to note that Ionia (in Asia Minor) and Italy are not actually a part of mainland Greece. Early in Greek history, when philosophy began to emerge as a distinct discipline, the Greeks lived in colonies that stretched across parts of western Asia and southern Italy. The Greek-speaking peoples who lived in these areas began the first investigations of the natural world, and were therefore considered the earliest Greek philosophers. Long before Socrates, Plato, and Aristotle arrived, the Greeks were musing about logic, ethics, science, and metaphysics all across the Mediterranean, from modern Turkey to the shores of Italy.

Ancient philosophy was never exclusively confined to the Greek world; much of what we call Greek philosophy today had its origins in the religion, astrology, and magical practices that spread across Europe, North Africa, and large parts of Asia. What we find in Greek philosophy, even in the writings of later philosophers like Plato and Aristotle, is a conglomeration of centuries of religious, astrological, and magical speculations. The earliest Greek philosophers were known to the Classical world as sages, and these men brought the age-old beliefs of their predecessors to bear on the development of what ultimately became known as philosophy.

One of these ancient Greek wise men, Epimenides, led a particularly curious existence. Although we are uncertain about the exact dates of his life, we know that his work flourished sometime in the seventh or sixth century B.C. and that he established quite a reputation as one of antiquity's greatest intellectuals. In addition to being a renowned philosopher and healer—philosophy and medicine were indistinguishable disciplines in pre-Classical Greece— Diogenes says he was also a "root cutter."

In antiquity, root cutters and drug sellers were often lumped into one amorphous category; it was their job to gather botanical drugs and supply them to the general population. Theophrastus, the father of botany, tells us that root cutters were a bit eccentric when it came to the art of collecting potent drugs, but gives them due credit for coming up with the best methods of obtaining many dangerous and potentially lethal substances.

Further we may add statements made by druggists [drug sellers] and herb-diggers [root cutters], which in some cases may be to the point, but in others contain exaggeration. Thus they enjoin that in cutting some roots one should stand to windward,—for instance, in cutting *thapsia* others, and that one should first anoint oneself with oil, for that one's body will swell up if one stands the other way. Also that the fruit of the wild rose must be gathered standing to windward, since otherwise there is danger to the eyes... These and similar remarks may well seem to be not off the point, for the properties of these plants are hurtful; they take hold, it is said, like fire and burn.<sup>4</sup>

Some of the most common medicinal drugs used in antiquity were severely toxic, so the act of collecting them became its own art. For example, hellebore, one of the ancient world's cure-alls, was notoriously difficult to obtain, as Theophrastus says:

"For hellebore too soon makes the head heavy, and men cannot go on digging it up for long; wherefore they first eat garlic and take a draught of neat wine therewith,"<sup>5</sup>

From this description, it sounds as if hellebore either gave its collectors severe headaches or made them a bit tipsy. Harvesting dangerous plants such as hellebore was a skill, probably handed down from generation to generation.

Root cutters like Epimenides weren't just pharmaceutical technicians of the Classical world; they didn't just harvest the juices and powders of medicinal plants and send them to the drug sellers who worked in the marketplace. They were preoccupied with activities involving some of these substances. For example, root cutters performed their own secretive rituals when collecting potent drugs like mandrake, known in antiquity to be a powerful anesthetic:

"It is said that one should draw three circles round mandrake with a sword, and cut it with one's face towards the west; and at the cutting of the second piece one should dance round the plant and say as many things as possible about the mysteries of love."<sup>6</sup>

Classical surgeons used mandrake to put their patients to sleep, but the drug was more than just an anesthetic, it was also a valued aphrodisiac. Even the Bible shows us that mandrakes were a highly valued sex drug in the ancient world. In the Song of Solomon, the only erotic treatise in the biblical canon, mandrakes appear within the context of a famous seduction scene, a titillating first-person poetic narrative that involves a woman's bold attempt to attract her mate. The biblical connection between mandrakes and sex is undeniable; even in the book of Genesis the plant becomes the center of a scandalous lover's triangle, and thereby comes to be associated with pleasure, bribery, attraction, intercourse, and fertility.<sup>7</sup> Mandrake probably worked well as an aphrodisiac because it generated feelings of intense euphoria in addition to stimulating the libido. It may seem odd to the modern world, but biblical patriarchs and kings used recreational drugs like mandrake, just as early Greek philosophers did; when Jacob, Solomon, and Epimenides were not spreading their own wisdom and political influence, they were taking strong drugs. If our accounts of ancient root cutters are accurate, they probably spent some of their time dancing around psychotropic plants while swinging a sword and shouting loudly about sex. Antiquity has handed down the tradition that Epimenides had his own special drug of choice. Apparently, he discovered a plant that was capable of—among other things—suppressing his appetite; the drug consumed much of his time and attention, and became a part of the legend connected with his life:

"Demetrius reports a story that he [Epimenides] received from the Nymphs food of a special sort and kept it in a cow's hoof; that he took small doses of this food, which was entirely absorbed into his system, and he was never seen to eat . . . Some writers say that the Cretans sacrifice to him as a god; for they say that he had superhuman foresight."<sup>8</sup>

Epimenides' drug sounds like it may have been some sort of strong stimulant; it enabled him to travel and teach his philosophy without suffering from serious hunger or fatigue. Drugs like cocaine, and to a much lesser extent, caffeine, act in a similar manner.

Although there is no literary evidence of the ingestion of the coca plant in the Greco-Roman world—it is a New World species—it is likely that Epimenides discovered

his own potent stimulant. This wouldn't have been an oddity in antiquity; the Classical world had its own effective stimulants. For example, squill (*Urginea scilla*) contains several chemicals that act as cardiac stimulants and mild narcotics. The Greeks and Romans weren't ignorant; they knew how to perk themselves up.

The description of Epimenides and his drug of choice may surprise the student of ancient philosophy, who imagines that Greek philosophers paced the halls of marble academies, closely followed by a cadre of admiring, wide-eyed students; on the contrary, it appears as if Epimenides traveled from place to place, toting around his private stash, which he consumed while expounding to the locals. It must have worked; his fellow countrymen thought he was a real genius, and perhaps even a god.

Epimenides' behavior didn't get him permanently thrown out of academia. Instead, he made prominent friends, some of whom shared his interests in intellectual oddities such as reincarnation, root collecting, and the ability to predict the future and advise others on the outcome of unknown events. Perhaps the most historically significant member of his associates was Pythagoras, the author of the great geometrical theorem that bears his name.

Modern audiences may assume that Pythagoras was just a nerdy mathematician, the first guy who figured out that the square of the hypotenuse of a right triangle is equal to the sum of the squares of the remaining sides, but the truth about his life is far more colorful. Pythagoras had his own group of devoted followers—his apostles who lived their lives according to his teachings, an interesting mixture of beliefs in reincarnation, magic, and vegetarianism, which survived long after his death.

Pythagoras was certainly one of the Classical world's most important thinkers. He made discoveries in mathematics, geometry, music that remain foundational

innovations of their respective fields even today.<sup>9</sup> Like Epimenides, he was a bit of an eccentric. He traveled extensively, delved into the secret societies of foreign cultures, and used his journeys to learn about all aspects of intellectual life. Pythagoras possessed a voracious appetite for everything cerebral; he investigated just about anything, including natural science, medicine, mathematics, metaphysics, magic, religion—and, yes, drugs, too. According to Diogenes, he jumped headlong into exotic cult rituals and practices:

While still young, so eager was he for knowledge, he left his own country and had himself initiated into all the mysteries and rites not only of Greece but also of foreign countries . . . he learnt the Egyptian language . . . and he also journeyed among the Chaldaeans and Magi. Then while in Crete he went down into the cave of Ida with Epimenides; he also entered the Egyptian sanctuaries, and was told their secret lore concerning the gods.<sup>10</sup>

Pythagoras was initiated into the local mystery religions, as were many ancient Greeks, but he took an extra step that most of his contemporaries didn't: he traveled to Egypt where he persuaded the priests to teach him their practices—which should not be taken lightly, for Egyptian priests closely guarded their magical and sacramental secrets and didn't just let any old stranger into the inner circles of their mysterious cults. In addition, he cared enough about such things to learn the Egyptian language, which most Greeks happily avoided due to the fact that it was completely unrelated to anything resembling their own tongue.

Pythagoras also associated with the Magi, those Persian wonder workers, whose beliefs originated in Zoroastrianism and centered on the use of potent drugs. Like the Egyptian priests he worked with the Magi and received instruction in the arts of drug use, astrology, and magic. Pythagoras probably knew more about drugs and sorcery

than any of his Greek contemporaries. It's no wonder that the ancient world held him in such awe as to consider him worthy of his own religious following. Pythagoras was a mathematical genius, a brilliant philosopher, a trusted doctor, and a drug-taking wizard.

Pythagoras's initiation into numerous religious cults is valuable because it shows us that he was actively involved in the use of psychotropics. Mystery cults went hand in hand with sex, drugs, and the ancient equivalent of rock and roll; music, intoxication, and religion were birds of a feather in the ancient world. Pythagoras, along with other educated gentlemen of his time, investigated the rites, eccentricities, and celebrations of these mystery cults, but Pythagoras took his interests further; he immersed himself in the practices of foreign religions as much as he did the local ones and thereby became an expert in esoteric pharmaceutical knowledge. Pliny's discussion of botanical drugs is replete with references to Pythagoras and his sometimes strange behavior. For example, in one passage Pliny tells us that Pythagoras recommended hanging squills in the doorway to "counteract the use of harm-causing drugs."<sup>11</sup> What this means exactly is a mystery; was his squill recommendation a sort of antidote against attacks with poison, or was it a means of preventing powerful drugs from getting the best of their users? The latter is probably closer to the truth because it is much more likely that Pythagoras was concerned with using drugs safely than assassination attempts. In fact, much of the ancient literature associated with antidotes has been mistaken for remedies against poison-wielding murderers, when it is likely to be much more about the prevention of overdoses and potentially deadly polypharmaceutical mixtures.

Pythagoras relied heavily on drugs in his medical practice as well as in his recreational and religious pursuits. He believed drugs could cause diseases just as they could end them. For example, he taught that oracle could cause jaundice and edema, while he believed anise could prevent epileptic seizures.<sup>12</sup> Drugs weren't just playthings for serious philosophers like Pythagoras; they were the key to understanding health and sickness, both physical and spiritual.

Pythagoras was a strange and somewhat unpredictable genius, but his interests in drugs and cult religions do not mean that he was on the fringe of ancient society. Secret initiations, like those involving the Mysteries of Eleusis, were relatively common in ancient Mediterranean societies, and some were widespread. The worship of Dionysus, for example, was universal; the festival of the Bacchanalia became synonymous with the raucous behavior of its initiates and was a constant source of scandal. The Romans would later accuse participants of sexual excess, and even murder. Pythagoras would not have been a newcomer to the drug-using cults he found in Egypt, and studying in the land of the Nile would have nourished his interest in narcotics; Egypt was, after all, an important center of opium production, and the country's priests were infamous for their detailed knowledge of drugs.

Spending his time with soothsayers, diviners, magicians, and priests wasn't a hindrance to Pythagoras's career as a philosopher; due to his association with mystery cults and eastern Magi, later generations of Greeks were quick to label him a sorcerer, according to Diogenes and Pliny, but his reputation as an upstanding philosopher remained unsullied for hundreds of years. Magician or not, religious leader or not, drug user or not, one thing is certain: Pythagoras was one of the most respected wise men of his time. His views of reincarnation and vegetarianism remained influential long after his death. In fact, Pythagoreanism was a dominant philosophical force in the Western world for centuries, and was certainly a powerful and respected rival of

other Greek and Roman philosophies.

Pythagoras wasn't the last Greek intellectual to embrace the use of drugs. Empedocles, who lived in the sixth century B.C. and was enamored of something called elemental theory, also used . His works are foundational for anyone interested in the development of Western philosophy and science. His work, and the work of other philosophers interested in the basic fabric of the universe, are indispensable to all our sciences, particularly chemistry. Pre-Socratic philosophers like Empedocles sought to find the simplest substances of which everything in the universe was composed. Some thought that water was the basic element, others fire; Democritus, who according to Pliny was also interested in drugs, proposed that "atoms" (from Greek *a-* "not" and *torn-* "to cut") were the indivisible elements of all matter. That's right, the atomic theory was invented two-and-a-half millennia ago by a man known as "the laughing philosopher."

Empedocles' theory of the four basic elements, which included air, earth, water, and fire, became the foundation upon which Greek science built its understanding of the world. From zoology to physics, from botany to medicine, philosophers working in all disciplines applied the canonical theory to whatever they happened to be studying. It was used as a means of explaining the most basic actions of the physical universe. For example, it explained meteorological phenomena, human physiology, and even cosmology. Hippocratic physicians, and later Galen, adapted the theory to medicine and thereby derived the ancient notion of the four humors. The theory of the four basic elements was the precursor of our modern periodic table and all the advances that have followed closely in modern chemistry.

Empedocles may have fashioned a unified theory that explained the existence and molecular activity of matter, but he was never too distinguished as a scientist-philosopher to ignore mind-altering substances. As a matter of fact, he was quite convinced that drugs could solve just about all of humanity's problems. Diogenes quotes him as saying:

And thou shalt learn all the drugs that are a defence to ward off ills and old age, since for thee alone shall I accomplish all this. Thou shalt arrest the violence of the unwearied winds that arise and sweep the earth, laying waste the cornfields with their blasts; and again, if thou so wilt, thou shalt call back winds in requital. Thou shalt make after the dark rain a seasonable drought for men, and again after the summer drought thou shalt cause tree-nourishing streams to pour from the sky. Thou shalt bring back from Hades a dead man's strength.<sup>13</sup>

Empedocles was so engrossed with his research into botanical substances that he claimed to have discovered a sort of fountain of youth. He said that his drugs were so potent that they were capable of nothing less than transforming mere mortals into something akin to the lesser divinities of Greek myth.

None of the available texts tell what Empedocles was actually taking, but whatever he was prescribing, it succeeded in attracting followers:

"I am revered and tens of thousands follow [me], to learn where is the path which leads to welfare, some desirous of oracles, others suffering from all kinds of diseases, desiring to hear a message of healing."<sup>14</sup>

In a way, Empedocles was more of a messiah than a philosopher. He claims to have possessed the secret to well-being and the power to predict the future. After a while, the attention and the chemicals may have gone to his head. Or in his own words: "All

hail! I go about among you an immortal god, no more a mortal."<sup>15</sup>

Nevertheless, Empedocles' intellectual influence is undeniable. The Western world profited tremendously from his theories about the natural world. His speculations on the basic elements that make up the universe paved the way for the science of chemistry and the rediscovery of the atom. Later philosophers and scientists, who built upon the idea that the physical universe could be explained by the interaction of various indivisible "things" all built upon, advanced, and granted his doctrines a bit more sophistication, yet all elemental theory harks back to his initial investigations. Men like Epimenides, Pythagoras, Empedocles, and Democritus prepared the ground so that famous Greeks like Socrates, Plato, and Aristotle could take up the torch and run with it into cultural arenas like ethics, metaphysics, and rudimentary science. Their work was indispensable to the advancement of Western civilization. Yet modern scholars have largely overlooked their interest in drugs and magic. It may be too distressing in the current antidrug environment to admit that the use of mind-altering drugs was important for the development of Western ideas.

Drugs are not the only controversial element in early Greek philosophy. From its dark and distant past, philosophy developed in the shadows of magic, astrology, and divination, so it's not unreasonable that the label "sorcerer" stuck with Pythagoras and Empedocles. This makes good sense when we consider that magicians, sorcerers, and potion-wielding wise men were the ancient precursors of the Classical philosopher. The handful of early Greek thinkers whom we remember today just didn't fit any particular mold in their time; they occupied a historical limbo, somewhere between the world of the future philosopher and that of the past shaman. They were revolutionaries whose ideas gave birth to entire civilizations. Empedocles and Pythagoras helped to focus antiquity's attention on some of the most basic questions of early scientific inquiry, human ontology, and societal ethics. Their teachings became an integral aspect of what eventually became the intellectual and academic powerhouse known as Classical Greek philosophy.

Without the pre-Socratic philosophers, there would never have been a Socrates; and without Socrates, Plato would never have written his dialogues, or established the Academy, or even influenced Aristotle. Platonic and Aristotelian philosophy—the schools of philosophical inquiry that so shaped the intellectual development of the Western world—were direct descendants of these earlier philosophers. Likewise, without root cutters, druggists, magicians, and sorcerers, many of the pre-Socratics would not have made philosophical advances, like the introduction of a basic atomic theory, unless they had at some time learned of their beliefs.

From the ideas of Greek philosophers, the Western world inherited a wealth of social and cultural potential. In antiquity, Greek thoughts surpassed the norms of Mediterranean civilization. For example, Greek philosophers gave shape to our modern understanding of things as rudimentary as the spherical earth, the eclipses of sun and moon, and the movements of planets in space.

The impact of the novel approach of the Hellenic world to human cognition is as broad as it is profound. Modern science is based on the principles of investigation laid down nearly two and a half millennia ago by Greek philosophers. Aristotle's approach to the scientific method, as a reason-based means of formulating and testing an hypothesis, is the foundation of all scientific investigation today; there is no laboratory, no university research station, no doctor's office, that does not draw on the work of Aristotle.

The musings of Greek philosophers resulted in the creation of general scientific inquiry and the existence of specific scientific disciplines. Thanks to the Greeks, the We-

stern world began the study of physics, anatomy, biology, zoology, botany, meteorology, and numerous other fields we take for granted. Of course, Europe did not always embrace or advance ancient Greek learning; for long periods of time, Western society seemed to do much more backsliding than make any sort of progress. In fact, the papacy did much to stem the tide of Greek learning that began to swell in the Classical period. However, despite the best efforts of the Christian church during the Middle Ages to extinguish the flame of Greek rational thought, ancient philosophy continued to inspire the greatest thinkers and artists of the Renaissance and the Enlightenment. After a thousand years of stagnation and regression, following the fall of the Roman Empire and lasting through the Middle Ages, Europe rekindled its interest in Classical learning, and creative thinking was born anew.

Thanks to the strange behavior of the early pre-Socratic sorcerer-philosophers, the Classical world created a philosophical foundation upon which Western civilization could build truly free. Epimenides, Pythagoras, and Empedocles weren't the only philosophers to embrace a culture familiar with drugs, but they were some of the earliest. Contrary to what most novices to the study of history assume, searching for examples of intoxicated Western intellectuals is no Herculean labor. Alcohol, the most widespread intoxicant made by humans throughout all history, was of course ubiquitous in antiquity. Wine mixed with water was the beverage of choice for anyone from aristocrats to field slaves; it quenched the thirst while providing a source of intoxication. Unmixed, or neat, it was a potent tool for social intercourse when served at the famous Greek symposia, riotous drinking parties characterized by widespread debauchery. At these bouts of overindulgence, great thinkers like Socrates and Plato worked out the finer points of ethical philosophy; they drained their cups and debated topics like justice, love, honor, and art.

Alcohol was certainly a familiar and accepted aspect of Greek social life, but contrary to the beliefs and persuasions of most modern scholars, Greek wine was not just mixed with water. Greek and Latin pharmaceutical texts clearly show that the Classical world indulged in a number of exotic wines that contained strong narcotic additives such as opium and henbane. Of course, when ancient authors spoke of "mixed wine"—and they did so frequently—American and European Classicists immediately jumped to the conclusion that the wine they were speaking about was mixed only with water. Modern academics, especially seminarians, teach that wine was so heavily watered it was more like grape juice than anything alcoholic; this helps them to justify the common misconception that Plato and Jesus were sober fellows. However, the intoxicating effects of the wines that we encounter over and over again in our Classical texts cannot be attributed to anything but the most potent of psychoactive substances. One modern scholar, Carl A. P. Ruck, tried to argue this point with his colleagues when he wrote:

"Ancient wine, like the wine of most early peoples, did not contain alcohol as its sole inebriant but was ordinarily a variable infusion of herbal toxins in a vinous liquid. Unguents, spices, and herbs, all with recognized psychotropic properties, could be added to the wine."<sup>16</sup>

In response to his theories on drug use during the practice of certain mystery cults, Ruck was quickly blacklisted and forever banished from the respectable realm of serious scholarship, along with his students. We shall hear more about his unpopular scholarship later.

Classicists do not like to hear that the ancient world, along with its greatest philosophers and statesmen, heartily embraced the use of mind-altering drugs. This is

a response to the clash of modern conservative Western cultural values with the liberal practices of the Greeks and Romans. Queen Victoria might have used marijuana to alleviate the pain of her menstrual cramps without damaging her reputation, but modern Victorians want to gloss over the use of narcotics and psychotropics by respected historical figures.

Modern academics may miss the point entirely, but Plato was well aware of the power of intoxication and the benefits of altered states of consciousness. In one of his dialogues, the *Phaedrus*, he spoke of madness as potentially a great boon for humanity and even linked it with the activities of the gods:

"In reality, the greatest of blessings come to us through madness [mania], when it is sent as a gift of the gods."<sup>17</sup>

As the dialogue continues, he discusses several forms of this madness or mania, one of which he explains is a gift of the Muses:

And a third kind of possession and madness comes from the Muses. This takes hold upon a gentle and pure soul, arouses it and inspires it to songs and other poetry, and thus by adorning countless deeds of the ancients educates later generations. But he who without divine madness comes to the doors of the Muses, confident that he will be a good poet by art, meets with no success, and the poetry of the sane man vanishes into nothingness before that of the inspired madmen.<sup>18</sup>

Plato drew upon ancient Greek concepts of madness and divine inspiration to come to the conclusion that there was indeed something otherworldly about the work of poets. In other words, great artists were filled with an inspiration from an external source, presumably the beautiful, or the divine. Intoxication, inspiration, madness, and possession were so closely linked in Classical times that they almost become a single idea; a concept that Plato attempted to define and explain as a gift bestowed upon lowly humans by the omnipotent gods.

Mania could also be a result of taking drugs in antiquity, a process that made inspiration on demand directly accessible. The ancient world, with all its diviners, sorcerers, mantics, prophets, seers, and oracles, embraced any avenue whereby mortals could somehow come into contact with the otherworldly. Insanity was a state of higher inspiration, not a pathological process of the brain; the Greeks and Romans often looked upon madness as a blessing, to be treated with respect and admiration, not a medical or moral curse that necessitated confinement and treatment.

The ancient world never distinguished between the delusions of a drug trip and the insanity of an organic brain disease. Poets and medical authors alike used the word "mania" in Greek to describe both the effects of psychotropic drugs and typical insanity. Ancient physicians use the same vocabulary as philosophers to speak of the mind-altering effects of certain drugs. The striking absence of any specialized vocabulary used to differentiate insanity from the temporary madness caused by drugs suggests that the Greeks considered the madness of intoxication to be no different from clinical psychosis or the inspiration of poets.

In many ways, the influence of the Muses, according to the Greek way of thinking, was identical to the intoxication caused by drug use. For example, Plato says that when the Muses first appeared to humanity, some men were so overcome with their song that they refused to eat or drink, but just sang themselves to death; from these maddened men, says Plato, came the tribe of locusts, in like manner emerge from the ground, only to sing their seasonal song and then die.<sup>19</sup> These Muse-inspired men

were no different from Homer's Lotus-Eaters. Their drugs, figurative or literal, stifled their hunger and pain; all they wanted to do was sing their songs and die.

So the influence of the Muses closely resembled the madness-inducing drugs of antiquity; they placed men in an inextricable trance, inspired them, and then claimed their lives. Plato cast the Muses in the same role as that of the lotus plant in order to draw upon the common image of Homer's Lotus-Eaters. The influence of the Muses worked its magic by completely overwhelming the senses of its users. Perhaps ancient philosophers like Plato saw a closer connection between human creativity and chemical euphoria than does the modern world. And lest we should think the connection between mental inspiration and drugs was purely accidental, Plato spells things out when he describes the human soul as like a chariot pulled by two horses that are fed on nectar and ambrosia, the divine narcotics.<sup>20</sup>

Any critical examination of early Greek philosophers, especially the pre-Socratics, will show that drugs indeed played a foundational role in the history of Western intellectual pursuits. As Plato so aptly shows us, the effects of mind-altering substances were viewed in the same light as both madness and divine inspiration. By the time Socrates, Plato, and Aristotle began to influence the Mediterranean world, the idea of drugs as vehicles of a beneficial insanity had already become part of the linguistic culture. The transition from the cultic practices, magic performances, and drug use of Pythagoras and Empedocles to the heavy drinking bouts of the Classical symposia is a natural one; Greek philosophers understood the value of mind-altering substances in assisting creativity. By the fifth century B.C., intoxication—from any source—and mental inspiration were nearly indistinguishable concepts. In this way, Greek philosophy is much indebted to the plant kingdom, as well as the thousands of years of mankind's experience with drug use that preceded the Classical world. If the human race, at some point in the distant past, had not started using narcotics, antiquity might never have given birth to philosophy... and you and I would not be living in a world influenced by the innovations that followed.

## 8 Democracy, Free Speech, and Drugs

The slave is doomed to worship Time and Fate and Death, because they are greater than anything he finds in himself, and because all his thoughts are of things which they devour.

—Bertrand Russell

Recreational drug use and free speech were among the valued civil liberties preserved by the government in Athens of the fifth and fourth centuries B.C. There rich and poor alike eventually shared equally in the blessings of the world's first radical democracy. *Demokratia*, or the "rule" (*krat-*) of the "people" (*dem-*), was a simple idea that slowly emerged following bitter class struggles that had plagued the prosperous city of Athens. Before democratic reformers gave a political voice to all Athenian citizens, Athens was a place where rich aristocrats, under the guidance of well-to-do tyrants, suppressed any potential for socioeconomic mobility among the masses and even made slaves of those who could not pay off their debts.

Democracy began as an answer to the disparity of power that existed between the upper and lower classes. As a novel form of government, it eventually came to its peak in the late fifth century, when the city enjoyed its most prosperous era; the art for which Athens is best known, the greatest Greek literary achievements that are studied even today, and the pristine white marble buildings such as the Parthenon all came from this golden age of Classical civilization, a time when democracy thrived. Athenians living under this novel form of government valued their liberty (*eleutheria*) above all else, which was a valuable sociopolitical construct that guaranteed them the ability to participate in their own governance and the freedom to conduct their private lives without outside interference. Free expression, access to legal redress, and unimpeded drug use for private or public purposes—among other liberties—were all manifestations of this free society.

The political ideology we call democracy was the creation of reformers, men who strove to give power and autonomy to the entire citizen body. It wasn't written in stone, nor was it handed down to the masses by a priestly class as the word of god, nor did it have any sort of political or social precedent; tyrannical dictatorships and absolute monarchies fill more pages of recorded human history than does democracy or democratic republics. Democracy was a flexible response to material inequality and its unavoidable correlative, harsh political oppression. Athenians saw democracy as an answer to the tyrannical stranglehold of the wealthy.

Democratic ideology, the historical offspring of fifth century Athenian politics, consistently adapts to the ever-changing tide of human affairs, but democracy itself is about one thing: the protection of the underprivileged—something that becomes all too apparent when democratic governments cede authority to the efforts of those who favor absolute power. Democratic governance ideally protects the poorest citizens

from the whims, cruelties, and self-serving dictates of the wealthiest members of society.

Athenian democracy didn't spring up overnight; protecting the poor and underprivileged is never an easy or rapidly accepted idea. During the sixth and fifth centuries B.C., strained relationships between economic classes culminated in popular support for serious reforms and substantive legislation proposed by a handful of democratically inclined leaders. For example, Solon (early sixth century B.C.), a man considered to be one of the earliest reformers in , first took the bold step of eliminating debtor slavery and introduced the idea of legal protection regardless of economic status. When speaking of life in Athens before Solon's democratic legislation, Aristotle said, "Not only was the constitution at this time oligarchical [rule by a handful of power-sharing, wealthy despots] in every respect, but the poorer classes, men, women, and children, were the serfs of the rich."<sup>1</sup> began the process of protecting the rights of Athenian citizens.

Before democracy emerged in Europe, aristocratic tyranny and kingship held sway over most civilizations. Power was typically concentrated in the hands of just a few of society's wealthiest individuals, who often ruled through acts of butchery, malice, and oppression. Monarchies, oligarchies, and the tyrannical rule of aristocrats saw no benefit in protecting the average citizen from abuse by the privileged classes. Money and property meant power, and the average citizen didn't have the means to hire men to fend off his enemies. By himself he was impotent; but as a member of a power-sharing group he was safe. Solon didn't single-handedly create democracy, but he set a traditionally tyrannical government on the path toward democratic empowerment. Unfortunately, Athens fell victim to the ambitions of tyrants and demagogues after Solon instituted his early reforms. Cleisthenes (late sixth century B.C.), another prominent democratic leader, expelled these rulers and initiated his own set of reforms. They moved Athens in an even more democratic direction than those of Solon. Ephialtes (mid-fifth century B.C.) and Pericles (495—429 B.C.) followed the political examples set by Solon and Cleisthenes and initiated additional progressive democratic legislation with the hopes of quelling further attempts by the wealthy aristocracy to take back control of the government. Thanks to reformers like these men, a series of social and political events was set in motion that ultimately culminated in the brief and brilliant incarnation of the delicate notion of individual autonomy. By the late fifth century, the time of Pericles, Athens supported a truly unique belief in the ability of humanity to govern itself freely. According to one scholar, democracy's value resided largely in the personal freedoms it preserved:

The Periclean vision valued intelligence and talent and was not embarrassed to reward both with public honor. It cherished the arts as a powerful force for public education and as a delight in themselves. It reconciled the tension between liberty and equality by rejecting the imposition of equality by state control (as in Sparta), and insisting on freedom of opportunity as the road to both equality and honor . . . It demanded participation and sacrifice from its citizens while retaining a wide space for private activities where the state had no claim. It recognized the right of each citizen to pursue his own road to happiness . . .<sup>2</sup>

Democracy was the Classical world's response to material inequality: it was a living ideal that tapped into the true potential of freedom and personal liberty. Democratic reformers believed that human expression was fundamental to the success of government. Compliance with a general standard of accepted behavior or speech is a modern phenomenon.

In Athens, for almost two centuries at least, democracy flourished in spite of repeated attempts by wealthy and influential aristocrats to assume total control of the government. Unfortunately, in 322 B.C., the Macedonians used aggressive military force to abolish Athenian democracy and to impose an oligarchy. With the fall of Greek independence at this time, radical democracy disappeared from the face of the earth. The Western world today has a number of democratic governments, but no true democracies. The United States is not a democracy; it's a democratic republic, a tight confederation of states that willingly submits to a centralized authority. Americans vote for representatives such as the president and members of Congress, and then pay them to conduct the affairs of state on their behalf, including the creation of legislation and declarations of war. Athenians, unlike citizens in democracies of the modern era, had a direct hand in the actions of their government; they ran things without the middlemen, without extensive bureaucratic impediments, and without the political leverage of wealthy groups and rich individuals. For this reason historians often refer to the Athenian system of governance as a "radical democracy," a title that aptly distinguishes it from the representative democracies of the present day. The Athenians protected their freedoms by maintaining the integrity of their political assemblies. In democratic Athens of the fifth century, there were two bodies that directly administered state affairs, the *ekklesia* (assembly) and the *boule* (council). These groups worked in conjunction to make laws and establish policy. As partners in government, the two assemblies managed to steer the state in matters that would typically be relegated to either the privileged few or the reigning tyrant. The assembly and council were significantly different from modern congresses, senates, and parliaments: They were directly democratic, not representational. In other words, Athenian citizens themselves made their own legislative decisions, and in doing so, they helped to prevent political power from falling into the hands of professional politicians, men who they knew would use their positions to earn money in exchange for government cooperation in business affairs—incidentally, they called such people sycophants, and hauled them into court whenever they could. In fact, Athenian governance was specifically designed to employ nonprofessional statesmen in order to encourage honesty and integrity within its administrative ranks. The assembly was open to all adult male citizens whose parents were also native Athenians. In the middle of the fourth century this amounted to roughly 10 percent of the entire population, or about 30,000 of the 300,000 people who lived in Athens. The discrepancy between what the Greeks considered total equality and what the modern West thinks of the same lies entirely in the sad historical fact that much of the ancient world considered women, slaves, and foreigners to be undeserving of enfranchisement.

Athenian democracy didn't embrace the entire population of the city, but it did give revolutionary power and incredible privileges to those it considered citizens.

When the assembly met, any citizen of Athens could stand, be recognized, and make proposals concerning the topic at hand, regardless of his personal background or educational training. After adequately debating the issues on any particular day's agenda, assembly members voted on the proposals under consideration. In this way, anyone could influence legislation and policy-making decisions without recourse to bribes and favors. The only requirement for full participation in Athenian government was citizenship in local *demes*, which were demographic divisions of the communities that made up the city and its outlying regions, something akin to modern voting districts.

Members of the deme also made up the council, a body of five hundred men selected

by lot from local neighborhoods. Their inexperience, coupled with the short terms they served in office—they served for one year, with two-term limits—both helped to guarantee they had some interest in advancing the common good. They met to determine the issues that would be raised at the meeting of the assembly. In this way, the council served the important function of establishing the agenda for the assembly. The council also watched over the activities of elected officials and made sure the assembly's decisions were properly executed. In this way, it served to guide and support the activities of the much larger assembly.

The Athenians did not have a monopoly on public assemblies in antiquity, but their assembly and council were definitely unique among the governing bodies of their neighbors; Sparta was controlled by a rigid monarchical government, while Corinth was ruled by tyrannical aristocrats, and much of the rest of the Hellenic world swore allegiance to either Greek tyrants or the Persian king.

Thanks to democratic reformers like Solon, Cleisthenes, Ephialtes, and Pericles, Athenian assemblies prevented any single individual or small group of individuals from hoarding power. The rate and inexperience of the temporary citizen-statesmen who served in the assemblies (especially the council) prevented most attempts at a hostile takeover of the government by the wealthy aristocracy. Average citizens were encouraged to participate in important decision-making processes that determined the fate of the Athenian people and their resources. Classicists believe that roughly 6,000 people attended the assembly at any given time. Those who stayed at home during these meetings were considered to be *idios* (meaning "by oneself"); modern English derives the word "idiot" from this concept. To the Athenian, only idiots neglected what was going on in the government.

Athenian democracy was a novel approach to governance. The assemblies were the tools of the people, the practical manifestation of genuine independence. In them the citizen had a voice, and at the heart of Athenian democracy was the valuable concept of complete individual liberty, or *eleutheria* (interestingly enough, there is no modern English equivalent of this term). The Athenians believed that all citizens should be free to express themselves, both in public and private spheres of life. The concept of absolute personal freedom ensured the protection of each citizen from the dominance of any ideological group or political association—or "clubs" as they were known in antiquity.

Self-rule may seem as foreign to Westerners today as it was to the rest of the world when the Athenians first set out on the path toward radical democracy. Just imagine a world in which declarations of war were made by a majority vote, where laws were written by ordinary people—mostly working-class poor—who were generally interested in the prosperity of the citizenry, and where entire communities sat as juries to determine the outcome of important legal cases. Radical democracy had little room for paid representatives, interest groups, or lobbyists; real political power rested firmly in the hands of the voting majority.

Herodotus recognized the unique nature of a political system specifically designed to give control of the government to the . In his *Histories*, political and anthropological look at the most prominent societies of his day, Herodotus created a fictitious conversation between several Persians, who ostensibly debated the merits of different types of government, including monarchy, oligarchy, and democracy. One of these men said:

Contrast with this [monarchy] the rule of the people: first, it has the finest of all names to describe it—equality under law; and, secondly, the people in power do none of the things that

monarchs do. Under a government of the people a magistrate is appointed by lot and is held responsible for his conduct in office, and all questions are put up for open debate.<sup>3</sup>

This speaker made it clear that autonomous rulers can be unjust, but the rule of the people is always subject to scrutiny. Criticism from the masses curtailed corruption and the abuse of power. In other words, democracy protected humanity from itself.

The concept of individual liberty that so characterized the rule of democracy in Athens manifested itself best in ancient theaters. Athenian playwrights were champions of free speech. The tragedies and comedies written during the height of this democratic period (the fifth century) criticized, questioned, and lampooned all aspects of life in Athens. Nothing was sacred—from sex and marriage to murder and betrayal, from illegitimate wars to the inadequacies and personal flaws of prominent citizens. The stage in Athens was a place where citizens could explore public approval, apprehension, disregard, and distrust for the social and political events of their city. Tragedians and comic playwrights became the voice of the people; they were agents of public debate in a society that dearly valued the concept of public scrutiny. Although Greek playwrights sometimes alienated significant portions of the population, their words were sacrosanct; their plays were performed as part of a religious ceremony—the worship of the god Dionysus—and were ideally entirely unrestricted. Greek poets stepped on toes because they were free to do so.

Athenians were not only free to speak their minds, they were also free to indulge in the use of mind-altering drugs. Citizens of Athens embraced mind-altering substances, whether for medicinal, religious, prophetic, or recreational uses. In the "free society" that emerged during the fifth and fourth centuries B.C., recreational drugs were abundant, inexpensive, and bore no moral stigma. In fact, the Eleusinian mystery cult, known for its use of psychotropic drugs, was nothing less than a state-sponsored institution.

As a result of such a liberal approach to mind-altering substances, narcotics readily found their way into contemporary Greek drama, which echoed the sentiments of the citizens. References to pharmaceuticals pepper the writings of authors like Euripides and Aristophanes, two playwrights who used the theater as a means of scrutinizing and satirizing the virtues and shortcomings of Athenian society. On stage they criticized everything from politicians and prostitutes to public policy and the futility of war. Their plays were viewed by all Athenian citizens and became a popular avenue of social and political criticism. They overflow with cultural references peculiar to their own times, like the names of controversial politicians, powerful aristocrats, local celebrities, and even popular philosophers. For example, Socrates was a frequent comedic foil for Aristophanes, who turned much of the population against the philosopher. Understanding ancient comedies and tragedies often requires the assistance of serious scholars willing to explain the gossip and dirty laundry they contain, as well as the peculiar social contexts that made them so funny or so tragic. Due to their vocal criticism of Athenian culture and mores, Euripides and Aristophanes weren't always liked by everyone, but their works were widely respected; along with a handful of other playwrights, they set a high standard for future generations of poets and authors. Most important they were both considered mavericks due to their willingness to question tradition and authority.

Aristophanes was a champion of the stage. He lived around -386 B.C., and is undoubtedly the most abrasive Classical playwright whose work has survived. He was popular during his life for his open criticism of those who supported the wars that plagued his generation, and is today best known for his ribaldry and scandalous talk about sex.

Aristophanes is often considered the father of comedy and a pioneer of the theater. Classical scholars have just recently begun to translate his works word for word; for hundreds of years, much of his language was considered too coarse for the common reader, and was therefore censored, bowdlerized, or just simply ignored. English translations of the past century avoided the inclusion of any of his foul verbiage by translating Aristophanes' dirty words into French or Italian (I don't know what that says for France and Italy, but it speaks volumes about American and British prudery).

In the last two decades, Jeffery Henderson, a personable and unassuming Classics scholar, forced this issue on the academic world. He dared to write an entire book about Aristophanes' scandalous depiction of body parts and their biological functions. Henderson's *Maculate Muse: Obscene Language in Attic Comedy* is packed full of Greek references to "dicks," "cunts," "assholes," and all the nasty things Aristophanes said you can do with them, like "fondle," "mount," or "fuck" them. As a result of his research, scholars are now just beginning to render Aristophanes' expletives and coarse sexual dialogue into colloquial English.

As a vocal critic of Athenian society, Aristophanes loved scandal, believed nothing was sacred, and forced his dialogues to the limits of propriety; perhaps this is why he was so popular. He took great delight in depicting some of the most prominent statesmen, philosophers, and poets of his time in a much less-than-flattering light. In fact, historians use his works to glean insight into the public perception of controversial figures like Socrates, whom other sources often set on pedestals. Like successful comedians of today, Aristophanes understood what the Greeks really thought about each other, and was not afraid to make such criticism public.

The stock-in-trade of Aristophanes' work is his everyday realism. For example, on stage his characters acted out all sorts of bodily processes, no matter how banal, disgusting, or unpleasant; they farted loudly, got larger-than-life erections, labored with difficult bowel movements, and even joked about oral and anal intercourse. His comedies exposed the most private and intimate aspects of the human condition and thus revealed the "civilized" Greeks for what they really were—foibles, prejudices, inadequacies and all. His wives hated and schemed against their husbands, browbeaten men who feared and loathed their marital wardens in return; on stage his cowards feigned bravery, his fools pretended to be wise, and just about everyone else was entirely selfish and absolutely untrustworthy. In short, they were all too human.

Aristophanes' realism sheds light on the opinions, fears, and biases of his audience; his characters—warts and all—reflect the public mores of the democratic society in which he lived and worked. They also tell us something about the common Greek's views on poisons, medicines, and narcotics. Aristophanes' works show us that drugs were just as much an integral part of ancient democratic society as philosophical inquiry and personal freedom.

Aristophanes' plays tell us a few interesting details about drug use in democratic Athens. They reveal that the Athenians believed drugs could be used to heal the sick, commit murder, and even induce altered states of consciousness."<sup>4</sup> For example, one of his characters claimed that a certain Athenian woman was able to drive her husband mad with drugs (*pharmakois*)—something that would have been possible only if she possessed truly psychotropic substances.

Athenians considered drugs to have the potential to be simultaneously beneficial and deadly, but this duality never necessitated any sort of attempt to push them to the periphery of Athenian society by making them illegal or considering them immoral. The world's first democracy embraced the use of potent chemicals without feeling compelled to attach any sort of stigma or opprobrium to . The only laws in Athens against

drug use involved their use as weapons; as long as the Athenians didn't kill anyone with them, they were free to use any drug or substance as they desired.

It's likely that Athenians embraced the use of drugs because of the prominent role of plants in ancient medicine. After all, Aristophanes and his contemporaries had lived through one of the worst plagues in history and relied upon drugs to treat the symptoms of the various infectious diseases they encountered. Aristophanes frequently satirized seemingly macabre topics like disease and death in his plays; he skillfully used comedy to purge his audience of the profound fears that must have been generated by the plethora of infectious diseases and epidemics of the time.

Aristophanes didn't just make light of grave illnesses; in the *Wasps* he talked about using drugs to alleviate common but embarrassing problems like strangury, a condition caused by prostate enlargement and various urogenital infections, which involves humiliating symptoms such as difficult and frequent urination. Theophrastus claimed that the plants known as horse celery and marsh celery were effective against strangury.<sup>5</sup> They may have contained some chemical that shrank the prostate.

Whether or not these plants were truly efficacious, it's clear that Aristophanes respected the capacity of drugs to bring healing and comfort to the afflicted. For an audience living at the dawn of Hippocratic medicine, Aristophanes' references to healing drugs were simple reflections of everyday life. The playwright and his audience clearly understood the value of the botanicals and their ability to drastically alter human physiology.

Aristophanes also made it clear that drugs could be as destructive as they were helpful. His plays show us that any good-for-nothing rascal could easily use botanical substances, in a shady or nefarious way, to kill off his enemies or malefactors. In the *Thesmophoriazusa*, a play about the celebration of a "women's only" festival, one of Aristophanes' wily—and unnamed—female characters tries to convince her compatriots that they should kill the tragic Euripides with poison because of his blatant misogyny:

"I therefore propose that one way or another we brew up some kind of destruction for this man, either poisons [drugs] or some other technique whereby he gets destroyed."<sup>6</sup>

Greek playwrights typically placed poisons in the hands of female characters—the commonly accepted deviants of ancient comedy—more often than their male figures, and were quite fond of the image of the drug-savvy, powerful witch frequently portrayed in Greek mythology. In one sense, drugs were an equalizing force on the Classical stage; anyone could use them, regardless of status, sex, or political authority. Even a woman or a slave could find a way to poison a husband, a master, or an enemy. Drugs were as the weapon of choice for those incapable of using brute force.

Of course, Aristophanes never distinguished drug users from poison users, which makes it seem as if his Athenian audience saw no need to attach any sort of moral judgment to one's knowledge or experience with drugs. In democratic Athens, there was no crime in knowing about drugs, or even possessing them; drugs only became a problem when they were used to harm others, as seen in the *Constitution of Athens*, a treatise on the government of Athens written by Aristotle. Aristophanes, being an Athenian himself, understood this fact and let it color the content and force of his plays. As in any age or generation, the cultural and countercultural currents of his society all helped to shape his art. Drugs were all around him, in the marketplace, in the streets, in doctor's stalls, in the city, and on the farm. Just like his audience, Aristopha-

nes felt free to include references to drugs in his works without heaping scorn on those who used them peacefully. Staying consistent with the prevailing mores of his time, Aristophanes only implied that drugs were bad when they were used as poisons. Plato, a fellow citizen of Athens and contemporary of Aristophanes, demonstrated similar sentiments in a work of his known as *The Laws*, a discussion of the legal foundation of his proposed ideal government. In it he wrote about the appropriate punishment of anyone who intentionally or unintentionally used drugs to harm any citizen. All of Plato's laws on pharmaceutical homicide focused upon two key aspects of drug use, namely, personal intent and pharmaceutical expertise. That is, he believed the laws of the perfect society should be written to punish those who killed, injured, or simply harmed others with drugs only when they did so with malicious intent, or if they had any sort of previous training in the use of drugs—presumably this would also show the crime was intentional. It may seem odd to a modern audience, but Plato wanted to inflict the greatest punishment on those who harmed others intentionally, even when they didn't actually kill or seriously injure their victims:

"If a doctor poisons a man without doing either him or any member of his household fatal injury . . . and is found guilty on a charge of poisoning, he must be punished by death. If the culprit is a layman, the court is to decide the proper penalty or fine to be inflicted in his case."<sup>7</sup>

Drug use was not the legal issue in Plato's mind; real crime sprang from ill intent. Drugs were everywhere; medicinal and recreational substances came from plants, after all, so it would have seemed silly to consider granting them some sort of moral status. However, homicide was a reality of the Classical world, just as it has been for all time, and poisons were potentially destructive weapons in the hands of criminals. Plato's ideas about drug use reflected the prevailing social mores of his generation. It may be difficult for a modern audience to understand the unrestricted use of potentially dangerous substances in antiquity, but this is because contemporary society does not value the same moral virtues as the Hellenic world. That is, the Greeks believed that moderation was among the outstanding virtues and would never have blamed a person's bad behavior on a substance. In fact, the Greeks taught that intoxication merely brought out the elemental aspects of an individual's native personality; in modern parlance, stupid is as stupid does. There was no room for blaming drugs or alcohol for one's actions; alcoholism wasn't invented until the twentieth century—thanks to the help of American missionaries, temperance fanatics, and prohibitionists.

As Aristophanes and Plato show us, the average Athenian drew a line in the sand when it came to a person's intentions: Using drugs on oneself was never called into question; providing them to others to use upon themselves was also not a problem; but using them to assault or kill someone else was nothing less than an egregious offense. In keeping with these two creative works, Athens never outlawed drugs; the city simply made it illegal to use them to kill or maim someone else. It appears that the majority in Athens never had a problem with drug possession, drug distributors, or even habitual drug users, but was merely intent on protecting its citizens from the threat of homicide.

Athens certainly recognized the medical potential of drugs, along with their concomitant capacity for serious bodily harm, but is there any evidence that their free society was acquainted with the potential of psychotropic drugs? The answer is a resounding yes. Once again, Aristophanes gives voice to the long-dead masses. In

*Thesmophoriazusae*, a play that pits the women of Athens against Euripides, a tragic playwright infamous for his frequently unflattering portrayal of women, Aristophanes shows us that psychotropic drugs were an integral part of Athenian society. In the scene discussed above, Aristophanes' satiric representation of Euripides sends a spy to an Athenian ladies-only meeting, where the angry women of the community have gathered to discuss a fitting punishment for the misogynist. His secret agent, a kinsman dressed in drag, tries to convince these implacable women that they are actually as evil as the playwright portrays them and thus should not attack poor Euripides. After addressing the group, the spy seems to garner some support, but one of the more aggressive women responds venomously: "By Aglaurus, ladies, you're not thinking straight! No, you're bewitched [literally, "drugged," *pepharmachth'* in Greek] or something else is badly wrong with you, to let this scum get away with slandering all of us so outrageously!"<sup>8</sup> According to Aristophanes, the women must have been out of their minds to believe this spy's argument, or at least on drugs. The Athenian audience clearly understood that drugs could alter one's perception enough to resemble madness; they were not afraid of using the analogy of drug-induced ecstasy to describe someone who was confused or just plain out of his mind. Aristophanes, in making references to drug-induced madness, shows that his contemporaries were well aware of the mind-altering potential of certain botanicals.

Interestingly enough, the translator of this passage, Jeffrey Henderson himself, wasn't ashamed to translate the Greek word for "pussy" literally, but gives us "bewitched" for a word that clearly derives from the Greek word *pharmakon* (drug), and most simply meant "drugged" or "having been given or having consumed drugs." Scholars still seem unable to acknowledge any aspect of antiquity's interest in drugs. Whether or not modern academics will admit it, this passage, along with another just a few lines later—the aforementioned passage about a woman who made her husband mad with drugs<sup>9</sup>—clearly establish that Athenians were well aware of the fact that drugs could be used to bring about altered states of consciousness.

Understanding Aristophanes' attempt to satirize the famous playwright Euripides is especially important when trying to establish a connection between drug use and democracy in Athens. The famous comedian not only painted the celebrated tragedian known for plays like the *Medea* and the *Hippolytus* as an incorrigible misogynist, but also implied that he was somewhat preoccupied with the topic of drugs. For example, Aristophanes claimed that Euripides' mother was a seller of "herbs." What this means exactly is uncertain. She might have hocked garden-variety herbs in the marketplace, a job that would have made her appear to have been excessively poor—an appropriate jab for any comic playwright—or she might have been an ancient druggist, perhaps even a root cutter, murmuring incantations while harvesting medicinal plants. Unlike most other professions, root cutters were frequently women—at least as far as Greek mythology was concerned. If Euripides' mother happened to be a drug seller, and this was the reason Aristophanes lampooned her, we would be forced to conclude that his contemporaries considered it peculiar to be involved in the drug trade in antiquity. Ancient drug vendors were notorious for the backhanded practice of adulterating their stock in order to increase their profits as Pliny mentioned.

Aristophanes didn't stop at abusing Euripides' poor mother; he went on to charge that the source of his strange behavior sprang from his close association with these very same herbs. One of Aristophanes' characters makes it seem that Euripides was perhaps a bit too intimate with some of these plants: "I therefore urge and advise all women to punish this man [Euripides] for his many crimes, for wild are his attacks

upon us, since he himself was raised among wild herbs.""" According to Aristophanes, Euripides' strange views could be explained by his exposure to "wild herbs" when he was young. As most Classicists would lead us to believe, Aristophanes' herbs were probably nothing more than cumin and rosemary, which is a naive assumption that fails to explain why these plants made Euripides so wild. Once again, scholars have tried desperately to defend ancient authors against the morally damaging allegation that they may have actually used drugs.

If there is any doubt that the herbs referred to here might be anything but mind-altering, drug-producing plants, Aristophanes brings home the point in another of his plays, the *Wealth*, where he uses the same word in a short passage that's all about intoxication, crazed celebrations, dancing, magical transformations, and chemical insanity. In this particular scene, one of the characters, believing he is about to become exceptionally wealthy, engages the chorus in a celebratory repartee, in which he pretends to be Polyphemus, the Cyclops, and then Circe, the drug-mixing sorceress; in both cases he dwells upon the theme of intoxication, highlighting the fact that drugs could drive one from one's senses ... in a good way. Aristophanes' character celebrated his impending windfall by acting like two ecstatic mythological figures, both of which used intoxicants to generate their out-of-body experiences. He felt as if he were the inebriated, passed-out Cyclops with his bag of herbs, or Circe's victims, transformed into real animals by her drugs:

And now I'll change to Circe's part, who mixed her drugs with baleful art; who late in Corinth, as I've learned, Philonides's comrades turned to loathsome swine in a loathsome sty, and fed them all on kneaded dung which, kneading, she amongst them flung. And turn you all into swine will I, And then ye'll grunt in your bestial glee.<sup>11</sup>

The speaker was nothing short of euphoric; he was so overwhelmed by the prospect of becoming rich that he felt much like the grunting, ecstatic pig-men, who ate up Circe's magic botanicals and then rolled around in the slop, squealing their heads off. And with that image, Aristophanes showed us that his herbs (Aristophanes actually uses the Greek word for "drug," or *pharmakon*) were a bit more than just mustard and thyme.

Now stop right there. This is all just poetry, after all, and poets are known for embellishment, right? Aristophanes wasn't really talking about the bliss of drug intoxication, was he? Scholars, especially Classicists, are quick to disassociate the personalities of great poets from the content of their works, as if ancient authors wrote in some sort of a vacuum and were entirely unable or unwilling to interject their own opinions into their art. Take Ovid, for example; academics tell us we can know nothing specific about his life or personality based on his voluminous poetry. They would have us believe that he wrote thousands of lines of poetry without ever allowing even a nuance of his personality to seep into his verses. This aloof, presumptive, arrogant, and wrongheaded formalist approach to literature fails to hold up when we look at drug references in our sources.

Theophrastus, the botanist who never bothered to get a poetic license, tied together psychotropic herbs, euphoria, and the "bestial glee" we find in Aristophanes' *Wealth* in a single passage on the plant dittany, one of antiquity's best-known curatives. About this particular plant Theophrastus says:

But dittany is peculiar to Crete. This plant is marvelous in virtue and is useful for many purposes, but especially for women in child-birth . . . the leaf is useful for many other purpo-

ses, but above all, as was said, against difficult labor in women; for it is said that either it makes labor quite easy or at least it confessedly makes the pains to cease.<sup>12</sup>

Theophrastus tells us here that dittany was used to treat labor pains. It probably acted as a smooth muscle relaxant, lessening the severity of uterine contractions. In whatever manner it worked, dittany was antiquity's forerunner of the modern epidural, a much-needed means of ameliorating the intense and sometimes dangerous pains resulting from the rigors of childbirth. But Theophrastus wasn't just interested in the drug's clinical applications; later on, in the same passage, he tells us that dittany was a favorite snack of the horned ruminants that roamed the Cretan countryside. He even says dittany was a scarce commodity because the local goats practically grazed it out of existence.

Why would goats be so exceptionally fond of a single herb? According to Theophrastus, their insatiable appetite was driven by the good feelings or "bestial glee" (from the same verb *philed-* in Greek) they felt when they ate it. That's right, this botanist used the same exact term as Aristophanes to describe the drug-induced euphoria of these goats. The typical argument against taking anything seriously from poetry falls short in this case. The Athenians in Aristophanes' audience were quite familiar with the concept of pharmaceutical bliss, chemical intoxication, bestial glee, drug euphoria... or whatever else you may want to call it. When Aristophanes talked about drugs, he knew their powerful potential to alter thinking.

Were there any deeper connections between the rule of the people and the power of psychotropic drugs? It may surprise us to know—or even consider the possibility—that democracy, free speech, and drug use went hand in hand in the minds of antiquity's greatest authors. Where can we find the best evidence for this? Once again, the connectedness of recreational drug use and free speech played itself out on the ancient stage, the common sounding board for public debate and social satire. And appropriately enough, Euripides, the tragic playwright who was apparently infamous for his close association with wild herbs, provides the best example of antiquity's marriage of drugs and free speech.

In Euripides' *Andromache*, the merits of democratically inspired free speech and the use of drugs were forever linked. The plot of this spectacular tragedy is quite simple. Andromache, the widow of Hector, the great Trojan prince killed by Achilles, was captured by the Greeks and taken as a war prize. She was a target of jealousy from Hermione, the wife of Achilles' son Neoptolemus, to whom she had been given as a sort of concubine. Andromache bore a son to Neoptolemus, the son of her husband's murderer, her captor's lawful wife, who no doubt viewed her son as a contender to the family inheritance. Hermione and her father Menelaus, the king of Sparta, came up with a plan to do away with Andromache and her troublesome child, but Neoptolemus's grandfather, Peleus, intervened on her behalf and saved the poor girl from certain death.

Early on in the play Andromache tells us that Hermione has trumped up some charges against her and pursuers her without any real justification. The accusations Hermione makes center on Andromache's supposedly malicious use of some mysterious drugs. Andromache says:

Within this house I've given birth to a boy,  
Bred to that same Achilles' son, my master,  
A hard life even at best, but up to now  
Hope led me on—the hope this little child

Might prove my strength and shelter against trouble.  
Except for her—Hermione from Sparta!  
Since my lord married her and snubbed a slave-wife,  
I'm persecuted cruelly. She's behind it,  
Charging I've made her unable to conceive  
With secret drugs and dosings, made him hate her.<sup>13</sup>

Apparently Hermione made the claim that Andromache was secretly giving some sort of potent drug to Neoptolemus, that altered his understanding of reality enough to make him despise his lawful wife. Hermione's accusations even imply that Andromache may have been using the drugs on her as well, causing her to be infertile. Whatever happened to be going on between husband and wife here, Neoptolemus was simply no longer interested in her sexually; perhaps he was unable to achieve an erection thanks to Andromache's narcotics.

Whatever the truth of the matter, the charge of using drugs to harm was taken seriously, for the people of Achilles' hometown thought it was a significant enough charge to arrest Andromache. Of course, she saw through Hermione's scheme and let her know the real reason for her marital problems:

It wasn't drugs that made your husband shun you: The plain fact is, you're hardly fit to live with. There's your witchcraft. It's not beauty but Fine qualities, my girl, that keep a husband.<sup>14</sup>

Andromache's response is anything but a serious defense against the charge of malicious drug use. She doesn't seem to deny anything at all; she's far more interested in informing Hermione that her own inadequacies are to blame for her husband's lack of interest, not drugs. Nowhere in the play does Andromache make any sort of antidrug speech or even talk about the issue at all. It's almost as if Euripides were trying to leave his audience with the impression that Hermiones charges were in error but not entirely baseless.

Andromache took the accusation so lightly as to prove that it wasn't worth denying. This is in keeping with the prevailing attitudes toward drugs we see reflected in Plato and Aristophanes. Once again, malicious intent was the real issue, not possession or indulgence in drugs.

As the play progresses, Euripides slowly introduces the important topic of free speech, something the audience would have appreciated. He does so by boldly contrasting the behavior of the tyrannical Spartans with that of Peleus and Andromache. Menelaus and Hermione, both Spartans, were part of a ruling elite, a select group of the powerful few, who used force and violence to maintain their control of the masses. On the other hand, Peleus and Andromache were representatives of justice, propriety, and free speech; both were unafraid of the tyrant Menelaus and his demanding daughter, and both were willing to disagree publicly with them.

This juxtaposition makes sense when we consider that *Andromache* was written when Athens was at war with Sparta. The two city-states held dramatically different political and social ideologies, and thus the war between them became very much a struggle between the champions of opposing cultural ideals. From the Athenian perspective, Athens was the home of democracy; Sparta was ruled by a brutal and oppressive militaristic regime. Euripides' audience understood that the war with Sparta was a war against antidemocratic forces, and therefore they would have felt compelled to sympathize with Peleus and Andromache. You can distinctly hear the

voice of the idealized Athenian populace in Andromache's diatribe against Menelaus:

Repute! repute! repute! how you've ballooned  
Thousands of good-for-nothings to celebrity!  
Men whose glory is come by honestly  
Have all my admiration. But impostors  
Deserve none: luck and humbug's all they are.  
So you're the commander-in-chief of the Greek elite  
That wrested Troy from Priam—you, you piddler!  
You, for the mewlings of your darling daughter  
Come snorting so importantly, up in arms  
Against a woman already down, in bondage . . .  
People that seem so glorious are all show;  
Underneath they're like anybody else.  
Unless they have money, of course. Oh, money's something!<sup>15</sup>

Andromache's voice was the voice of the deme; she was Lady Liberty, passionately speaking out against the abuses and oppression of Spartan tyranny.

After Peleus discovered the ill intentions of Hermione and Menelaus, he also spoke his democratically inclined mind:

Where's there a man that doesn't find you odious, You citizens of Sparta, devious schemers, Masters of falsehood, specialists in evil, Your minds all warped and putrid, serpentine? How iniquitous your prosperity in Greece! Name any foulness and it's yours: assassins; Your palms a tetter of itchiness; your tongues Off scavenging one way and your minds another. Damn your Spartan souls!<sup>16</sup>

The play presents Peleus and Andromache as the champions of free speech, unafraid to voice their opinions in the face of threats and accusations from Menelaus, an abusive dictator. Euripides' audience would have appreciated the contrast more than any other Greeks of the time.

Euripides' *Andromache* also sought to capture the essence of individual liberty and the powerful capacity of radical democracy. Once again, Peleus, the champion of justice and equality stands up to the great tyrant:

When the public sets a war memorial up  
Do those who really sweated get the credit?  
Oh, no! Some general wangles the prestige!—  
Who, brandishing his one spear among thousands,  
Did one man's work, but gets a world of praise.  
Those self-important fathers of their country  
Think they're above the people. Why they're nothing!  
The citizen is infinitely wiser,  
Gifted with nerve and purpose, anyway.<sup>17</sup>

Of course, the power-hungry Spartan king remained cold as stone, unaffected by the voice of democracy. Menelaus coarsely summed up the contempt he and all other dictators, tyrants, and kings had for Athenian ideals like free speech and free expression:

For all your blather I don't care a hoot.  
Shrill as you are, you're a feeble shadow in front of me.  
All you can ever do is talk, talk, talk.<sup>18</sup>

When it came right down to it, Menelaus believed in brute force, as did any absolute ruler in antiquity. He thought Peleus had far too much reverence for the riffraff; the common man was the tyrant's greatest enemy in the ancient world, just as he is today.

*Andromache* is essentially a staged production of the epic clash of two mighty political ideologies; it illustrates the opposition that existed in antiquity—and always will exist—between governments based on absolute power and those empowered by the rule of the majority. The democratic voices in the play stood for justice, equality, and personal liberty; the forces of tyranny could only preach violence and oppression. The greatest objections that the Spartans could raise against the representatives of democracy were that they talked far too freely and that they used drugs.

Sparta was the ancient world's most glaring example of the horrible abuses inherent in totalitarian rule. The city annexed and enslaved its neighbors, who came to be known as helots, and preserved its authority by imposing an incredibly militaristic regime on its own citizens. Kings ruled Sparta, but the rigid structure and control of private affairs guaranteed that its citizen-warriors would always remain dominant over its ever-bulging population of slaves. Male children were taken away from their parents and put into military units, where Spartan youths encouraged them to fend for themselves and endure the extreme limits of privation and physical punishment. Spartans even persuaded their citizens to maim and kill helots with random acts of violence, in order to maintain an environment characterized by constant fear, something that effectively prevented serious thoughts of rebellion by their slaves. Freedom was only a dream in Sparta, where the government was very effective in rooting out most physical pleasures and certainly anything considered a luxury. This was easily achievable due to the rigorous mind control and indoctrination designed by the Spartans to manipulate their own people. For example, the first century A.D. biographer Plutarch writes that the Spartans "honor Fear, not as something harmful, like the supernatural powers that they seek to ward off, but because in their opinion the state is held together above all by Fear."<sup>19</sup> Fear of punishment allowed the government to control all aspects of Spartan life. Fine foods, like those served in Athens, were frowned upon; the Spartan diet was infamous for its total lack of flavor, probably as a result of their traditional stew that was not much more than blood and salt. Spartan dress was never anything more ostentatious than a simple cloak—something that would have embarrassed any fashion-conscious Athenian. Artistic and intellectual pursuits, like philosophy, were strictly forbidden. Literary pursuits were considered dangerous, and young men "learned to read and write no more than necessary . . . their whole education was aimed at developing smart obedience, perseverance under stress, and victory in battle."<sup>20</sup> Even women, although given certain freedoms under Spartan rule, were encouraged to behave in accordance with the militaristic ideal, a very masculine notion. In short, the only value held in esteem by the Spartan state was patriotism; individuality was considered a danger. According to Donald Kagan, an expert on Greek democracy, the rigid structure of Spartan society was a response to the constant threat of helot revolt:

"To cope with this threat the Spartans turned their polis (city-state) into a military academy and an armed camp, giving up the normal pleasures of life and devoting themselves entirely to the state . . . They excluded money, the arts and sciences, philosophy, aesthetic pleasures, and the life of the mind in general, for all these things might foster individualism and detract from devotion to the polis."<sup>21</sup>

The Spartans feared any personal freedoms might encourage their slaves to rise against them, so they actively prohibited attempts at individuality. The psychological conditioning performed on Sparta's citizenry and its servants included the control of everything from personal attire, to cultural and intellectual pursuits, to free speech, and even to the use of intoxicants. The Spartans believed mind-altering substances, like books and art, were a threat to their totalitarian rule.

Under the guise of moderation the Spartans prevented their own citizens from indulging in any nonmedicinal substances. For example, like all Greeks, they drank wine, but only in the slightest quantities. Intoxication was equivalent to a lack of self-control, a serious and punishable offense in Sparta. They taught this lesson by making public examples of the helots:

In other ways, too, Spartiates' treatment of helots was callous and brutal. They would force them, for instance, to drink quantities of unmixed wine and then they would bring them into messes [where they met for communal meals] to show the young men what drunkenness was like. They would also order them to perform songs and dances which were vulgar and ludicrous, while excluding them from ones fit for free men.<sup>22</sup>

Young Spartans had to be shown what drunkenness was, because their own people were afraid to experience it themselves. Intoxication was a sign of immoderation, and that could mean ruin and disgrace for any Spartan. Spartan society was no friend to the Dionysian concept of ecstasy, and most Spartans would have felt seriously out of place in Athens, where the magical intoxication of wine and strong drugs was just another aspect of daily life. They didn't like drug-wielding sorcerers either. The Spartans would never have attended decadent and immoderate Athenian festivals that celebrated the out-of-body experience.

Free speech and the use of mind-altering substances were prohibited in Sparta, but they were commonplace in Athens, where neither was looked upon as an oddity, a vice, or a social ill. The Athenians preached moderation, but they also believed that their citizens should be allowed to see the negative effects of overindulgence for themselves. They performed religious ceremonies in which total intoxication was the norm, but they also expected the masses to use mind-altering substances responsibly. They certainly didn't perceive drug or alcohol use to be an attack on the government.

Euripides' depiction of drug use in the fifth and fourth centuries was not confined to *Andromache*. famous playwright talked elsewhere about instances of drug use that were somehow directly or indirectly associated with democratic values. For example, in the *Medea*, drug-dispensing heroine of the play, after intentionally poisoning her husband's paramour, flees to the palace of Theseus, the king of Athens, where she is sure to receive sanctuary and empathy. Euripides didn't invent the association of Athens with drug use; he merely brought to life the practical connections between a free society and drugs in a way that would inspire strong Athenian interest in personal freedom. In talking so frequently and so freely about drugs and poisons, Euripides helps us to see the views of everyday, ordinary Athenians on this mundane topic. It's important to recognize that Euripides and Aristophanes were not simply wasting their breath whenever they mentioned drugs to their Athenian audiences, nor were they counterculture, touting the benefits of psychedelic experiences. On the contrary, when it came to drug-induced euphoria, they were preaching to the choir. Citizens of Athens knew what drug trips were all about. For hundreds of years, the city celebrated a yearly cult ritual known simply as the "Mysteries" because of the secrecy with

which the cultic practices were guarded, in which initiates were given mind-altering substances in order to experience real "visions" of the gods. At Eleusis, one of the Athenian demes, the Mysteries became a popular form of self-enlightenment, where worshippers of Demeter, the goddess of grain and agricultural fertility, became firsthand witnesses of the resurrection of her daughter Persephone, the queen of the underworld. The details of the Mysteries, including public discussions of the potion used to induce the "madness" experienced by the initiates, were much more like state secrets than any sort of religious mysteries.

Those who celebrated the Mysteries were threatened with death if they should reveal the particulars of their initiation ceremony.

Of course, the cultic practices surrounding the Eleusinian Mysteries are part of one of the most controversial topics in the field of Classics. Professors of Greek and Latin tend to avoid any discussion of what took place, and are rarely amenable to conversations about the means whereby the celebrants were able to induce hallucinations. In fact, the details have become a bit taboo among modern scholars; they obviously don't like to admit that Greek authors such as Sophocles and Pindar, who openly praised the Mysteries, were indirectly also endorsing drug use.

The modern scandal surrounding the Mysteries is the direct result of the research and writings of three scholars of vastly different backgrounds, who came together to investigate the strange activities of the Athenians at Eleusis. The collaborative team included Gordon Wasson, an ethnomycologist, Albert Hofmann, the Swiss chemist who discovered LSD, and Carl A. P. Ruck, a classicist with an interest in ethnobotany. Together, they contributed to a book titled *The Road to Eleusis*, a masterly treatment of the Mysteries that claims its initiates were using a molecular relative of LSD, derived from the ergot fungus that infests cereals, to enter a state of ecstasy in which they could actually "experience" the appearance of the goddess. Carl Ruck, a professor of Classics at Boston University, despite his admiration for the enduring value of his work on the topic, wrote about his connection with the publication of *The Road to Eleusis* in rather depressing tones:

One anonymous reader, before the book finally found a publisher, complained that "the author had had a good education at the best schools," but that somehow I'd gone wrong ... the work on Eleusis rarely earns even a disparaging footnote in treatments of Greek religion. More recently, the Eleusinian Mystery has been expropriated for the curriculum in Women's Studies, but despite the grain Goddess, ethnobotany is not on their agenda; and they, too, don't speak to me. Students who work with me have been warned that they will be blacklisted. My textbooks in grammar, as well, as if by contagion, are viewed by some as suspect and a threat to normalcy.<sup>23</sup>

*The Oxford Classical Dictionary*, a massive (and helpful) tome containing detailed entries on everything relating to the Greco-Roman past, a must-have for any real Classicist, fails to mention anything about drugs, LSD, or *The Road to Eleusis* in its discussion of the Mysteries. Because Ruck's thesis does not jibe with prevailing viewpoints, Classicists tend to ignore it altogether.

The cold reception the book received does not detract from the validity of its authors' discoveries. The Greeks at Eleusis drank a mixture of barley and water that somehow made them experience a temporary madness in which they saw miraculous images. According to Ruck, the celebration of the Mysteries was "the culminating experience of a lifetime," and its participants came to know the meaning of life, death, and rebirth. Athens guarded the ability of its citizens to enjoy an initiation into the mysteries by making its own public officials responsible for organizing and conduc-

ting the ceremonies, and thereby accepted the practice of controlled hallucinations. Because they viewed intoxication as a negative aspect of human behavior, the Spartans would never have sponsored such activity. Athenians, and other visitors to Athens, were free to take part in the ceremony, and free to experience severe drug intoxication, because they were protected by magistrates. The psychedelic experience of Eleusis was shielded by the Athenian government because free speech and personal liberties were paramount.

For the Greeks, democracy was the practical embodiment of a concept they called *isonomia*, a word that translates into English as something like "complete equality under the protection of the law." That's a mouthful for just one word, but the essence of its meaning is clear. The radical democracy of Athens was a refuge for the unrestrained exercise of personal autonomy and individual civil liberties.

Twenty-four hundred years ago the idea of democracy became a reality when the Athenians, alone of any ancient society, threw off the yoke of control by the wealthiest segment of their population. For over a hundred and eighty years, Athenian citizens cherished their own personal liberties in a world of monarchs, tyrants, dictators, and demagogues. Freedom was a reality only because democratic reformers saw the wisdom of direct representation as an answer to the folly of professional politicians; the aristocracy took a backseat to the whims of the common man, and for a brief period of human history, the masses took their lives into their own hands. Democracy preserved every citizen's right to public and private autonomy. Personal freedom, something the militaristic regime of the Spartans abhorred, was the defining characteristic of Athenian society: Athenians were free to propose and pass legislation, just as they were free to conduct their personal lives in whatever manner they perceived was best. They dressed as they wanted, they bought whatever they wanted, they ate, drank, and danced as they wanted, they said whatever they wanted, they associated with whomever they wanted, they created whatever forms of art they wanted, and they got drunk or stoned whenever they wanted.

The unstigmatized use of drugs was just one aspect of the ideal society the Athenians strove to achieve. For these Greeks, a free state allowed its citizens to make their own decisions, especially when it came to what they chose to do with their own bodies. Democracy and individual liberty went hand in hand; the freedom to consume alcohol or drugs was no less or more important to Athens than the right to speak one's mind or to vote in the assembly. Everything centered on personal liberties. As a result, philosophy, art, literature, and science all found protection and nourishment within the breasts of freedom-loving Athenians, who, unlike their Spartan counterparts, considered their individual liberties the foundation of a good society. Patriotism was not nearly as valuable as an individual's rights in Athens; those who lived in this democracy questioned their leaders, they questioned the wars in which they were engaged, they questioned their ancestors along with their traditions, they questioned their neighbors, and they questioned themselves, but they never questioned the necessity of maintaining the freedom to pursue their own happiness.

## Conclusion: The Western Pursuit of Happiness

It is impossible on our wretched globe for men living in society not to be divided into two classes, one of oppressors, the other of the oppressed.

—Voltaire

Freedom and liberty are among the most transient of political values; they make brief but brilliant appearances on the stage of history, enlightening and inspiring those fortunate enough to witness their birth, only to be swept away by the ideological tides that so characterize the instability of governments. True independence, the unrestrained exercise of free will, is always at war with tyranny. All of recorded Western history—beginning with social and political events that date back to the Sumerians and Babylonians, through the lengthy reign of the Egyptian pharaohs, to the crushing power of the Caesars, through the intolerant theocracy of the medieval church and even up to the events unfolding on the world stage today—is a testimony to the psychological conflict that pits civil liberties against state-sponsored control.

Wealth is the seductive power that fuels Western civilization's persistent rush to empire, a seemingly unavoidable trend of the past and present. Tyrants, dictators, and oligarchs alike have always been, and probably will always be, engaged in an unending struggle to gain control of the natural resources that drive society. The history of humankind teaches one important lesson, if it teaches anything at all: The survival and success of our species, just like that of the oldest bacteria that live in our oceans, depends entirely upon our ability to possess the goods that keep us alive; those with the power to acquire and maintain what is necessary for life inevitably gain political control over those who are dependent upon others to meet their needs.

The Greeks and the Romans were no fools; they understood the dynamic relationship between resources and power and readily exploited such knowledge to their own advantage. Most of Classical history, the roots of Western civilization, is a story of domination, brutality, and excess; our political ancestors spent much more of their effort gaining power over one another than creating free societies. Democracy is nothing more than an oddity, a form of government that appeared in an isolated city called Athens, only to be crushed by a tyrannical power—in this case the Macedonians. In the history of the West, personal freedom and civil liberty are very much exceptions to the rule of absolute authority.

Despite the gloomy political events that guided most of Western history, the emergence of freedom in Classical society, albeit brief, changed the course of European cultural development. The democracy of the Athenians possessed qualities that grabbed the attention of countless intellectuals and statesmen after it came of age in the fifth century B.C. The seemingly crazy ideals of personal freedom and individual autonomy, the core of Athenian democracy, inspired those who lived within the Greco-Roman world, though remaining on the sidelines during the age of medieval religious tyranny, until it reemerged in the Renaissance and Enlightenment, where these ancient ideas led to revolutions in governance and social policy.

The history of the West is not a spaghetti western, full of good guys and bad guys fittingly dressed in black and white. Democracy and the personal freedom it bestowed upon the poor disenfranchised was a deviation from the norm, a historical oddity; it

could best be described as an explosive reaction to the oppression of the human spirit, rather than the logical consequence of Western social evolution.

Whether governments are monarchic, oligarchic, or aristocratic in origin, they are all vulnerable to the revolutionary forces of democratic movements. The radical democracy of the Athenians was characterized by the personal freedoms it guaranteed; personal liberties were the hallmarks, or the visible manifestations, of democracy's tendency to eliminate cruel forms of social and political control. The valuable civil liberties deemed so important to the Athenian people include—but are not restricted to—free speech, equality under the law, and the right to the pursuit of happiness. Each of these freedoms is closely related to the important concept of personal autonomy. As history aptly demonstrates, when societies allow their citizens to express themselves freely and to live according to their own values, the exercise of civil liberties ensures the integrity of the democratic process and protects the common man from the oppression of the aristocratic elite.

Free speech has always been at the heart of democratic governance. In Athens, the freedom to speak one's mind was paramount; political speech was a personal liberty protected by the governing assemblies and the legislation enacted by famous democratic reformers. Debate and criticism were actively encouraged among the poor masses as well as the wealthy. Athenian entertainment was a forum for opening up social and political debate for all citizens. The stage was where the activities of leaders, prominent figures, juries, and public assemblies were held up to the people for scrutiny. Poets and playwrights played the valuable role of providing critical commentary for the Greek world. Athenians expressed their own voices on the stage and encouraged those who viewed tragedies and comedies to explore their own customs, mores, and political practices in a public setting. Theater performances, in keeping an eye out for social and political abuses, were a powerful instrument for free expression.

Access to legal redress was another recognizable hallmark of Athenian democracy. The right to receive a fair hearing before a jury of one's peers was a valued and protected aspect of democracy. Athenian jury trials were infamously chaotic undertakings, where the accused stood before hundreds of his or her fellow citizens, who, with a majority vote, could condemn or exonerate their neighbor. The decisions rendered by these juries were not always fair, by modern standards, but they were always available to those who came to them for protection; Athenian juries were a reliable means of combating abuses of power and privilege, and thus were an important aspect of individual civil liberties.

There was no anonymity in the Athenian legal system; and as a result, when the law was applied, nobody got lost in prison or disappeared without ever having recourse to a fair trial. Even Socrates, who faced politically motivated charges that stemmed from irrational concerns for public security, was given his day before his peers. The idea of incarcerating someone without due legal process was clearly a political abomination in the democracy of the fifth century. After all, that's what democratic reformers had labored to prevent in the formative years of the democracy; holding someone as a prisoner, without access to a jury, was something expected of tyrants and kings, not one's fellow citizens.

Jury trials and free speech are still recognized by Western governments as essential individual liberties, but the Classical world possessed additional freedoms that the modern world has intentionally left out of its democratic process. These personal freedoms were widely recognized two thousand years ago as necessary attributes of any individual's pursuit of happiness in democratic and republican governance. The free and unrestricted use of narcotics and psychotropic drugs is the greatest

example of a personal freedom that was recognized in antiquity but has since been aggressively curtailed. As members of a democracy, Athenians accepted the use of such substances in public and private spheres, but even in Rome Latin-speaking protected an individual's right to consume whatever substance he or she deemed necessary—regardless of its effects. In antiquity, there were no laws against personal drug use, only against the use of poisons to bring about murder. There certainly weren't any laws against the growth or sale of drugs. Only since the advent of prohibitionist and temperance movements has the Western world made it illegal to grow or consume any specific plant; the Greeks and Romans would have thought it ridiculous to outlaw any process found in nature itself.

It's important to remember that narcotics were entirely different "things" in antiquity. Drugs as we know them are a purely modern phenomenon. When Westerners today hear the words cocaine, heroin, and marijuana, they immediately think of substances... things you snort, inject, or smoke... things that can be regulated, banned, and criminalized. Drugs are looked upon as a vehicle of pleasure; and this view forces us to consider their morality or immorality. In antiquity, drugs were just plants and plant parts. Rose oil, pine resin, and juice of the daffodil root were treated equally as useful products of the natural world. Recreational drugs were never deemed good or bad.

They had no moral qualifications; they were just a part of nature.

Due the fact that Classical civilization looked upon drugs as just plant parts, the ancient world never felt obliged to distinguish between substances that make you stop coughing, substances that give you diarrhea, and substances that make you have strange dreams. Greeks and Romans recognized that pharmaceuticals could be used in a variety of ways, but never considered them to have any moral potential. Modern drugs are just the opposite; they are put into rigid, morally charged categories and given a thumbs-up or a thumbs-down, based on the relative degree of their specific mind-altering capabilities. For example, aspirin is good: It makes you feel less pain but doesn't mess with your consciousness. On the other hand, marijuana is bad: Though it makes you feel better it also changes the way you perceive things; and because it tends to make its users see things differently, modern society believe it spreads some form of moral taint. In antiquity, societies didn't care if a drug treated your pain, made you laugh, or caused you to puke. A drug was a drug, and everyone had the right to eat or drink whatever nature provided.

Although it may be difficult for a modern audience to understand—with the obvious exception of the Dutch—the right to use drugs and alcohol was an important aspect of personal freedom in the ancient world. The use of drugs was never an issue of character to the Greeks and the Romans; the existence, availability, and use of drugs were just simple facts of life. There was nothing wrong with numbing pain or inducing visions. Drug dealers weren't cultural terrorists, out to overthrow the accepted way of life, they were just merchants in a legal trade. Drug users weren't criminals and didn't hide; they were everywhere. People gave potent narcotic substances to their own children, and physicians actively encouraged the use of powerful drugs that are now considered controlled substances, in order to alleviate suffering and restore their patients to health. Ancient Western society, the source of democracy and scientific inquiry, was open to the benefits of using mind-altering substances and potent narcotics. Drugs played an active role in the very same cultures that gave birth to modern, democratic Europe and the Americas.

Drugs weren't an isolated cultural phenomenon in antiquity: they were an obsession. Much of the literature that survives from antiquity is devoted to the topic of drugs. In fact, there is far more written about pharmaceutical substances than any other single

subject in antiquity, including history, philosophy, mathematics, astronomy, art, or even religion. For example, in the time a person would need to read all of the drug books in Greek and Latin, one could easily finish the *Iliad*, the *Aeneid*, and the entire New Testament. Thousands of pages of the greatest physicians of the Classical world contain innumerable references to botanicals and animal products used in medicine. There is more information about common drugs opium, mandrake, and henbane in Classical literature than could be contained in the celebrated works of most ancient poets. Many people think that the Greeks and Romans spent all of their time embellishing their myths and expounding upon their philosophies, but this is not the case; these texts clearly show us that the ancient world devoted a great deal of its time to understanding the uses of physiologically active compounds.

Despite the volume of ancient literature concerned with the preparation and administration of potent botanicals, few academicians bother to familiarize themselves with the ins and outs of drug use in antiquity. The Greco-Roman fascination with narcotics, stimulants, and depressants is the last unexplored frontier of ancient history. While this topic holds great potential for discovery, deficiencies in scientific training found in Classics departments stretching from Europe to North America present scholars with an academic conundrum: Western universities and libraries possess thousands of pages of Greek and Latin manuscripts concerned with the use of pharmaceuticals, but few Classical scholars—none that I have personally ever found—have a background in the molecular biology, botany, or pharmacology, that is needed to unravel the riddles these books contain. Ironically, the modern world just doesn't have the intellectual background to comprehend or explain the wisdom of ancient society. Sadly, professors typically don't know what to make of pharmaceutical texts, so they tend to ignore them.

Disregarding Classical documents because of insufficient training is a dangerous proposition for modern academic institutions; the writings of antiquity contain the distilled wisdom of countless ages of human evolution and social progress and therefore provide information pertinent to the survival of the species. Ancient works on medicines and recreational drugs in Latin and Greek are a veritable gold mine of useful information. The potential for medical discoveries alone is phenomenal; the next treatment for diabetes or senile dementia may be hiding in the texts that Classicists are currently unwilling to examine and explore.

Despite the profound lack of interest in drug texts manifested by modern scholars, the race to find novel curatives consumes the time and attention of a myriad of researchers, biochemical prospectors, and large pharmaceutical companies. Right now, in forests and jungles across Central and South America, ethnobotanists are searching frantically for the next generation of antimicrobials, anesthetics, cancer cures, and other medicines. Much of this research is cutting edge and holds great promise for the future, as scientists have finally begun to value the knowledge possessed by so-called primitive cultures or groups of people who traditionally relied upon nature's botanicals for their healing.

Surprisingly, governments and big businesses are paying large sums to seek out, record, and examine the wisdom of these cultures, while ignoring the potential pharmaceutical discoveries that lie hidden in Classical texts. The chemicals and curatives found in plants used by the Greeks and Romans for generations may be hiding in plain sight, right under the noses of the academic departments. For example, is there any merit to Galen's assertion that tumors of the breast are easily cured? Is there a reason ancient physicians were far less concerned with heart disease? Were the Greeks and Romans well served by all the wine mixed with drugs that they consumed? It

would certainly benefit us to test such possibilities.

The potential for medical discoveries from untranslated Classical sources is an untapped resource of the modern world, but there is also tremendous value in learning about the social, cultural, and economic impact of drugs on early Western civilization. Understanding how the Greeks and Romans used drugs, and knowing why they used them, helps us to understand ourselves. Recognizing the value and prevalence of drugs in antiquity enables the modern world to see the peculiarities of its own culture and the influences of the age and time in which it flourishes.

The Greeks and Romans looked at the world in some ways that would shock, disturb, and challenge many of our modern values and . The difference can be summed up as a radical shift in the mental paradigm of Western thinking. The ancient world didn't impose universal standards of right and wrong on inquiry; reason and logic were the tools of the Classical thinker, who was typically free to create his own impression of the world around him. There was no monolithic monotheistic cultural matrix like Judaism, Christianity, or Islam that held together the disparate parts of ancient social life and presented its adherents with a divine plan for living. Nobody had all the answers; people questioned their world and the status quo with relative impunity. Drugs weren't legal because the ancient world was trying to be liberal; they were legal because there was no rational way for the ancient mind to perceive of them as illicit or immoral.

Because of the cultural disparities between the Classical world and modern Western society, our views on drugs differ drastically. A side effect of these differences can be seen in the unwillingness of the academic community to examine the topic of drug use in antiquity with objectivity. Classicists of the twentieth century consistently present the Greeks and Romans as though they were modern Westerners, content with the sweeping generalization that the use of mind-altering drugs was an evil that was practiced by an obscure few and would be legislated out of existence. This was certainly not the case.

If drugs were so vital to the development of Western literature and culture, what happened to make narcotics socially unacceptable in the late nineteenth and early twentieth centuries? Humans began looking at drugs as moral agents. At first, some of these substances began to be labeled good and bad. Of course, it was all a bit harum-scarum in the beginning; a few of the drugs we now definitely consider bad were considered good for a long time, but eventually we caught up with the little devils, and they, too, were remanded to the prison of chemical reprobates. For example, cocaine somehow slipped through the cracks in the midst of all the hubbub of the nineteenth century, and ended up for a while as an ingredient in what is now a popular soft drink. It's still quite useful as a topical anesthetic for some types of eye surgery... and this makes it a bit good, but it's generally considered bad. Confused? You should be. As it stands, you can take cocaine if you are having your eyes worked on, but not if you need a pick-me-up after work... unless you lived a hundred or so years ago, in which case you could drink it mixed in your soda or wine, any time of the day or night. It was even endorsed by the pope... before it became the scourge of humanity. So far, alcohol is the only drug that continues to elude the moral authorities—ever since prohibition ended, that is.

Of course, drug intervention, drug wars, and drug legislation are all strictly modern phenomena. The Western world has only recently embraced the billion-dollar war against drugs. Before the just-say-no crusade of the twentieth century was launched, the poppy, wormwood, cannabis, ivy, and the daffodil were plain plants. Somewhere between then and now, some of these plants have been forgotten, and others have become real monsters.

If history had shown us that drugs were truly agents of social degeneration, ugly and irredeemable menaces to civilized society, it would be easy to accept the judgment of the twentieth century that drug use is immoral, wreaking havoc on the innocent and sending otherwise good-intentioned people into downward spirals ending in crime, brutality, and death. Then and only then would drug use be worthy of total annihilation. However, because drugs have been such an integral part of Western development, and because so many important people in history have used them to their benefit, propositions like these seem unlikely. Plato, Julius Caesar, and Jesus did not view drugs as the menace as they are looked on today. Narcotics have not always been the boogeyman they are portrayed to be at present; on the contrary, they've been an ever-present aid to the Western world, a comfort and source of hope to societies marked by ages of physical suffering. In fact, there's plenty of literary evidence leading to the conclusion that the chemical constituents of analgesic and psychotropic plants have alleviated far more pain than they have ever caused. The image of the pharmaceutical demon generated by our contemporary antidrug policies is a myth; the founders of Western society would not be able to relate to our war against drugs. Unfortunately, the moral bent that so characterizes contemporary Classicists forces them to write histories that best promote the cultural agendas of our times, rather than the actual facts of the past. This approach to scholarship is dangerous because it hides some of the most valuable lessons of history. In addition, students who do not subscribe to this approach are generally ignored, passed over, or pushed to the periphery of their fields, where they are considered troublemakers and treated as pariahs. Blacklisting is not a cruelty of the distant, uninformed past; it's a very real phenomenon that flourishes within academic circles today, whether in the humanities or the sciences.

Rewarding students and professors for promoting the political and cultural agendas of the time and punishing them for deviating from the accepted norm is a dangerously slippery slope. At best, it is an unintentionally self-delusional approach to the nature of human society; at worst, it is a bold attempt to curtail freedom of thought by creating a fictional image of the past that best props up the current powers that be. Rewriting history in order to justify our modern conceptions is entirely contrary to the spirit of the ideal university—a place where people should be free to study, learn, and express themselves. Most important, an approach to the past that is meant to support our own views of the world is in direct contradiction to the thirst for knowledge and truth that so characterized the Greco-Roman world. Rewriting the history of Western civilization only obscures our understanding of the societies that gave birth to such important concepts as science, mathematics, philosophy, and democracy.

Modern scholars are guardians of the ideals that emerged from Classical civilization, but they are also stewards of the less attractive or currently unpopular aspects of ancient life. As academics in universities, their duties are best served when the public is able to learn everything about Classical civilization and to see Western civilization's founders for what they were . . . warts and all. Without an accurate depiction of the civil liberties that characterized ancient democracy—regardless of whether or not these freedoms correspond with modern ones—the West is doomed to repeat the mistakes of the past and perpetuate the dominance of fear and oppression that so characterize societies that restrict individual liberty. It's important for us to recognize that we Westerners, the beneficiaries of Classical civilization, actually look at drugs in an entirely different light than the civilizations that produced the ideals upon which our society is now based. Seeing the dramatic differences in attitudes now and then may enable the modern world to prevent itself from deviating from the path of progress forged by an-

cient cultures like the Greeks and Romans. Knowledge of the past has always been the enemy of oppression; Westerners need to recognize that our earliest founding fathers created the idea of democratic governance while embracing the use of potent drugs—the use of which was an invaluable aspect of their pursuit of happiness. Once we have accepted history, we will once again be on the road toward regaining the conceptual tools necessary to remain free from the unrelenting attempts of tyrants and aristocrats to curtail civil liberties and consolidate power.

## Notes

### 1. The Ancient Crucible

1. Juvenal *Satires* 3.193-36.
2. *Ibid.* 197-202.
3. Nicander *Theriaca* 160-3; 181-89.
4. Celsus *De medicina* 5.27.
5. Thucydides *The Peloponnesian War* 2:50-53.

6. Donald Kagan, *Pericles of Athens and the Birth of Democracy*, p. 7.
7. Livy *Ab urbe condita* 3.6.
8. Hippocrates *Epidemics III* 12.7.
9. *Ibid.* 2.4; 2.7.
10. Homer *Iliad* 13. 610-17.
11. Livy *Ab urbe condita* 22.51.

## 2. Ancient Medicines

1. Pliny *Natural History* 20.76. 21.10.
2. *Ibid.* 25.1.
3. Celsus *De medicina* Prooemium from book 1, section 37.
4. Catherine Perles, *The Early Neolithic in Greece*, p. 301.
5. Sarunas Milisauskas, *European Prehistory: A Survey*, p. 164.
6. Hippocrates *The Oath* 1-3; 16-20.
7. Virgil *Georgics* 1.208-212.
8. *Ibid.* i.77-78.
9. Pliny *Natural History* 25.24.
10. Celsus *De medicina* 8.16.
11. *Ibid.* 5.19.
12. *Ibid.* 7.33.
13. Soranus *Gynecology* 1.65.
14. Celsus *De medicina* 3.16; Scribonius Largus *Compositiones* 5.
15. Pliny *Natural History* 32.13.

## 3. Greeks, Romans, and Recreational Drugs

1. Theophrastus *Enquiry into Plants* 9.18.3.
- Pliny *Natural History* 20.73.
3. Theophrastus *Enquiry* 7.1 5.4.
- Pliny *Natural History* 25.13.
5. *Ibid.* 24.160-65.
6. Plutarch *Life of Caesar* 34.
7. Theophrastus *Enquiry* 9.17.1.
8. Pliny *Natural History* 20.76. See also Dioscorides *De materia medica* 4.64.
9. Athenaeus *The Deipnosophists* 5.221. My translation.
10. Thomas De Quincey, *Confessions of an English Opium-Eater and Other Writings*, p. 43.
11. Thucydides *History of the Peloponnesian War* 4.26.
12. Aristotle *OH Sleep* 456b, trans. J. I. Beare.
13. *Revelation* 8:10-11. King James Version.
14. Pliny *Natural History* 14.109, 23.52.
15. Plautus *Trinummus* 934—35.
16. Ovid *Epistulae ex Ponto* 3.1.19-24.
17. Lucretius *On the Nature of Things* 4.123-28.
18. *Ibid.* 1.936-42.
19. Pliny *Natural History* 20.97.
20. Theophrastus *Enquiry* 9.11.5-6.
21. Pliny *Natural History* 25.36-37.
22. John Creighton, *Coins and Power in Lute Iron Age Britain*. For an analysis of this evidence within the context of sacramental and religious drug use see Miranda and Stephen Aldhouse-Green, *The Quest for the Shaman*, p. 124.

23. Pliny *Natural History* 20.51.
24. Nicander *Alexipharmaca* 207-23.
25. Euripides *Bacchae* 847-53, trans. Stephen Esposito.
26. Euripides *Bacchae* 298-301, trans. David Kovacs.
27. *Ibid.* 326-7.
28. Pliny *Natural History* 23.16.23.
29. Aldous Huxley, *The Doors of Perception and Heaven and Hell*, p. 62.

#### 4. Promethean Euphoria

1. On festivals and important occasions see Homer *Iliad* 1.595-600; Horace *Ars Poetica* 374-76. On night and dreams see Homer *Iliad* 2.1-75 (*ambrosia* is translated here as "immortal"); Ovid *Metamorphoses* 592-615. On burial rites see Homer *Iliad* 19.37-39; Virgil *Georgics* 4.544-46. On cosmetics see Homer *Iliad* 14.169-74; Ovid *Medicamina faciei* 99-100. On sexual allurements see Homer *Iliad* 14.153-74; Ovid *Fasti* 4.1 51-54. On hunger see Homer *Iliad* 19.347-48; Ovid *Fasti* 4.531-48.
  2. Homer *Iliad* 19.340-8; 352-54.
3. Ovid *Fasti* 4.531-4; 545-8, trans. James Frazer.
  4. Hesiod *Works and Days* 42-66; 49.
  5. Aeschylus *Prometheus Bound* 29-35, trans. David Grene.
  6. Hesiod *Theogony* 536-41.
  7. Aeschylus *Prometheus Bound* 82-87.
8. *Ibid.* 107-11.
  9. *Ibid.* 120-23.
  10. Apollonius Rhodius *The Argonautica* 3.851-59.
  11. Pliny *Natural History* 21.105.
12. Plutarch *Quaestiones Convivales* 4.6.
  13. Exodus 30:34.
  14. Theophrastus *Enquiry into Plants* 9.7. 1 5. Homer *Odyssey* 9.196-97; 204-1 1.
  16. *Ibid.* 9.355; 357-59.
  17. Theocritus *Idylls* 11.19 and following.
  18. Ovid *Fasti* 4.151-54. My translation. 19. Theocritus *Idylls* 11. 1-11; 17-18.
  20. Ovid *Metamorphoses* 13, trans. A. D. Melville.
  21. *Ibid.* 3.415 and following.
  22. Pliny *Natural History* 21.128.

#### 5. Drawing Down the Moon

1. Pliny *Natural History* 30.1.
2. Theocritus *Idylls* 2. 1-6; 48-51; 158-61.
3. Hans Dieter Betz, ed., *The Greek Magical Papyri in Translation* PDM 14: 727-36, trans. Janet Johnson, p.234.
  4. *Ibid.* PDM 14:1206-18, trans. Janet Johnson, p.250.
  5. *Ibid.* PGM 2:64-184. trans. John Dillon and Edward O'Neil, p. 15.
  6. *Ibid.* PGM 4: 2967-3006, trans. Edward O'Neil, p.95.
  7. Apollonius Rhodius *The Argonautica* 3.528-33.
  8. *Ibid.* 3.1256-58; 1263-64.
  9. *Ibid.* 4.158-66.
  10. *Ibid.* 3.738-89.
  11. *Ibid.* 4.51-53.
  12. *Ibid.* 3.802-07. 13. *Ibid.* 3.844-50.
  14. *Ibid.* 3.1042-45.

15. Ibid. 4.662-69.
16. Ibid. 4.671 and following.

### **6. The Divine Gift of Mind-Bending Intoxication**

1. Hesiod *Theogony* 55.
2. Ibid. 9-10.
3. Homer *Odyssey* 9.91-97, trans. Richmond Lattimore.
4. Ibid. 9.97-102.
5. Ibid. 10.290-92.
6. Ibid. 4.220-26.
7. Ibid. 4.233-34; 238-39.
8. Ibid. 4.594-99.
9. Virgil *Eclogues* 2.47.
  10. Virgil *Georgics* 1.212.
  11. Ibid. 4.131.
  12. Virgil *Aeneid* 4.483-90, trans. H. R. Fairclough.
  13. Ibid. 7.341 and following, trans. David West.
  14. Ibid. 7.354-55.
  15. Ibid. 7.374-77; 397 and following.
  16. Ovid *Tristia* 4.1.27-31.
  17. Ibid. 4.1.31-33; 35-36.
  18. Ibid. 4.1.37-40; 47-49.
  19. Virgil *Georgics* 4.545.
  20. Ibid. 1.78. My translation.
  21. Ovid *Metamorphoses* 11.602-7, trans. R. Humphries.
  22. Ovid *Ars Amatoria* 2.415. My translation.
  23. Ovid *Amores* 3.7.11-16, trans. G. Showerman.
  24. Nicander *Alexipharmaca* 186-94.

### **7. The Pharmacology of Western Philosophy**

1. Diogenes Laertius *Lives of Eminent Philosophers* 1.6-7.
2. Ibid. 1.10-11.
3. Ibid. 1.13.
  4. Theophrastus *Enquiry into Plants* 9.8.5-6.
  5. Ibid. 9.8.6.
  6. Ibid. 9.8.8.
  7. Genesis 30; 14-24.
  8. Diogenes Laertius *Lives* 1.114.
9. Modern Classical scholars have tried to show that Pythagoras was not actually a mathematician. Their arguments remain largely unconvincing. One thing is certain about Pythagoras: Our ancient sources considered him a preeminent geometrician and a distinguished philosopher—some considered him the father of all Greek philosophy.
  10. Diogenes Laertius *Lives* 8.2-3.
  11. Pliny *Natural History* 20.39. My translation.
  12. Ibid. 20.73 and 20.83.
  13. Diogenes Laertius *Lives* 8.59.
  14. Ibid. 8.62.
15. Ibid. 8.66.
  16. R. Gordon Wasson, Albert Hofmann, and Carl A. P. Ruck *The Road to Eleusis*, p.52.

17. Plato *Phaedrus* 244 A.
18. *Ibid.* 245 A.
19. *Ibid.* 259.
20. *Ibid.* 246-7.

### **8. Democracy, Free Speech, and Drugs**

1. Aristotle *Constitution of Athens* 2. Trans. by F. G. Kenyon.
2. Donald Kagan, *Pericles of Athens and the Birth of Democracy*, p.258-59.
3. Herodotus *The Histories* 3.80.
  4. For drugs as medicines see *Knights* 906, *Wasps* 810, and *Plutus* 716. For drugs as poison see *Thesmophoriazusae* 430; For drugs as a means of altering consciousness see *Thesmophoriazusae* 561.
  5. Theophrastus *Enquiry into Plants* 7.6.3.
  6. Aristophanes *Thesmophoriazusae* 428-31, trans. J. Henderson.
  7. Plato *Lysis* 11.83.
  8. Aristophanes *Thesmophoriazusae* 533—39.
  9. *Ibid.* 561.
  10. *Ibid.* 453-56.
  11. Aristophanes *Wealth* 302-7.
  12. Theophrastus *Enquiry* 9.16.1.
  13. Euripides *Andromache* 24-33.
  14. *Ibid.* 205-8.
  15. *Ibid.* 319-28; 330-32.
  16. *Ibid.* 445-53.
  17. *Ibid.* 694-702.
  18. *Ibid.* 744-46. 19. Plutarch *Cleomenes* 9.
    20. Plutarch *Lycurgus* 16.
    21. Donald Kagan, *Pericles of Athens and the Birth of Democracy*, p. 140.
    22. Plutarch *Lycurgus* 28.
    23. R. Gordon Wasson, Albert Hofmann, and Carl A. P. Ruck. *The Road to Eleusis*.

## **Bibliography**

- Aeschylus. "Prometheus Bound." In *Greek Tragedies*, vol. 1. Translated by David Grene. Chicago: University of Chicago Press, 1960.
- Aldhouse-Green, Miranda and Stephen. *The Quest for the Shaman: Shape-Shifters, Sorcerers and Spirit-Healers of Ancient Europe*. London: Thames and Hudson, 2005.
- Apollonius. *The Argonautica*. Translated by R. C. Seaton. Loeb Classical Library. Cambridge, Mass.: Harvard University Press, 1988.
- Apuleius. *The Golden Ass*. Translated by E. J. Kenney. New York: Penguin Books, 2004.

- Aristophanes. *The Complete Plays*. Translated by Paul Roche. New York: New-American Library, 2005.
- . *The Complete Plays of Aristophanes*. Edited by Moses Hadas. New York: Bantam Books, 1962.
- . *The Acharnians, the Clouds, Lysistrata*. Translated by A. H. Sommerstein. New York: Penguin Books, 1988.
- Aristophanes. *The Lysistrata, the Thesmophoriazusae, The Ecclesiazusae and the Plutus*. Translated by B. B. Rogers. Loeb Classical Library. Cambridge, Mass.: Harvard University Press, 1966.
- . *Birds, Lysistrata, Women at the Thesmophoria*. Translated by Jeffrey Henderson. The Loeb Classical Library. Cambridge, Mass.: Harvard University Press, 2000.
- Athenaeus, *Deipnosophistae*. Translated by S. Douglas Olson. Cambridge, Mass.: Harvard University Press, 2006.
- Barnes, Jonathan. *The Complete Works of Aristotle*. Princeton, N.J.: Princeton University Press, 1995.
- Betz, Hans Dieter, ed. *The Greek Magical Papyri in Translation*. Chicago: University of Chicago Press, 1992.
- Bowersock, G. W. *Julian the Apostate*. Cambridge, Mass.: Harvard University Press, 1978.
- Booth, Martin. *Cannabis: A History*. Thomas Dunne Books, New York: St. Martin's Press, 2005.
- . *Opium: A History*. Thomas Dunne Books. New York: St. Martin's Press, 1996.
- Brunschwig, J., and Geoffrey E. R. Lloyd, eds. *Greek Thought: A Guide to Classical Knowledge*. Cambridge, Mass.: Harvard University Press, 2000.
- Bury, J. B., and Russell Meiggs. *A History of Greece*. New York: St. Martin's Press, 1975.
- Cato and Varro. *Cato and Varro on Agriculture*. Loeb Classical Library. Mass.: Harvard University Press, Cambridge, 1993.
- Celsus. *Celsus De Medicina*, 3 vols. Translated by W. G. Spencer. Loeb Classical Library. Cambridge, Mass.: Harvard University Press, 1971.
- Conrad, L. I., et al. *The Western Medical Tradition: 800 B.C. to A.D. 1800*. Cambridge: Cambridge University Press, 1996.
- Creighton, J. *Coins and Power in Late Iron Age Britain*. Cambridge: Cambridge University Press, 2000.
- Dalley, Stephanie, trans. *Myths from Mesopotamia: Creation, the Flood, Gilgamesh and Others*. Oxford: Oxford University Press, 1991.
- De Quincey, Thomas. *Confessions of an English Opium-Eater and Other Writings*. Edited by B. Milligan. New York: Penguin Books, 2003.
- Diogenes Laertius. *Diogenes Laertius Lives of Eminent Philosophers*. Translated by R. D. Hicks. Loeb Classical Library. Cambridge, Mass.: Harvard University Press, 1995.
- Dioscorides, *De Materia Medica* (3 vols). Max Wellmann (ed.). Berolini. Apud Weidmannos, 1958.
- Dodds, E. R. *The Greeks and the Irrational*. Berkeley: University of California Press, 1963.
- Edelstein, Ludwig. *Ancient Medicine*. Baltimore: Johns Hopkins University Press, 1967.
- Euripides. *Euripides III: Hecuba, Andromache, The Trojan Women, Ion*.

- (Andromache translated by J. F. Nims). Chicago: University of Chicago Press, 1958.
- . *Bacchae; Iphigenia at Aulis; Rhesus*. Translated by David Kovacs. Cambridge Mass.: Harvard University Press, 2002.
- Esposito, Stephen. *Euripides' Bacchae*. Nevvburyport: Focus Publishing, 1998.
- Evans, Alfred, et al. *Bacterial Infections of Humans: Epidemiology and Control*. New York: Plenum Medical Book Company, 1998.
- Galen. *Galen: Selected Works*. Translated by P. N. Singer. Oxford: Oxford University Press, 1997.
- Gow, A. S. F., and A. F. Scholfield. *Nicander: The Poems and Poetical Fragments*. Salem, Mass.: Ayer Company Publishers, 1988.
- Graf, F. *Magic in the Ancient World*. Cambridge, Mass.: Harvard University Press, 1997.
- Greene, David, and Richmond Latimore, eds. *The Complete Greek Tragedies: Euripides*, vols. 1-5. Chicago: University of Chicago Press, 1952—.
- Grieve, M. *A Modern Herbal*, 2 vols. New York: Dover Publications, 1971.
- Grmek, Mirko D. *Diseases in the Ancient Greek World*. Baltimore: Johns Hopkins University Press, 1989.
- Henderson, Jeffrey. *The Maculate Muse: Obscene Language in Attic Comedy*. Oxford: Oxford University Press, 1991.
- Herodotus. *The Histories*. Translated by Aubrey De Selincourt, with an introduction by John Marincola. New York: Penguin Books, 1996.
- Hesiod. *Hesiod and Theognis*. Translated by Dorothea Wender. New York: Penguin Books, 1973.
- . *Hesiod, the Homeric Hymns and Homerica*. Translated by H. G. Evelyn-White. Loeb Classical Library. Cambridge, Mass.: Harvard University Press, 1974.
- Hippocrates. *Hippocrates*. Translated by W. H. S. Jones. Loeb Classical Library. Cambridge, Mass.: Harvard University Press, 1984.
- . *Hippocratic Writings*. Lloyd. G. E. R. (ed.), translated by J. Chadwick and W. N. Mann. New York: Penguin Books, 1983.
- Homer. *The Iliad of Homer*. Translated by Richmond Lattimore. Chicago: University of Chicago Press. 1961.
- . *The Odyssey*. Translated by Robert Fitzgerald. Garden City, N.Y.: Doubleday Anchor Books. 1963.
- . *The Odyssey of Homer*. Translated by Richmond Lattimore. New York: Harper Perennial, 1967.
- Horace, *Satires, Epistles, Ars Poetica*. Translated by H. R. Fairclough. Loeb Classical Library. Cambridge. Mass.: Harvard University Press, 1991.
- Huxley, Aldous. *The Doors of Perception and Heaven and Hell*. New York: Perennial Classics, 2004.
- Iamblichus. *Iamblichus' Life of Pythagoras*. Translated by Thomas Taylor. Rochester, N.Y.: Inner Traditions International, 1986.
- Jackson, Ralph. *Doctors and Diseases in the Roman Empire*. Norman: University of Oklahoma Press. 1988.
- Jashemski, W. F. *A Pompeian Herbal: Ancient and Modern Medicinal Plants*. Austin: University of Texas Press, 1999.
- Juvenal. *The Sixteen Satires*. Translated by Peter Green. New York: Penguin Books. 1998.
- Kagan, Donald. *Pericles of Athens and the Birth of Democracy*. New York: Free Press, 1991.

- Kirk, G. S.. and J. E. Raven. *The Presocratic Philosophers*. Cambridge: Cambridge University Press. 1981.
- Livy, *The War with Hannibal*. Translated by Aubrey De Selincourt. New York: Penguin Books, 1965.
- . *The Early History of Rome*. Translated by Aubrey De Selincourt. New York: Penguin Books, 1971.
- Lloyd, G. E. R. *Magic, Reason and Experience: Studies in the Origins and Development of Greek Science*. Cambridge: Cambridge University Press, 1990.
- Lucretius. *Lucretius De Rerum Natura*. Translated by W. H. D. Rouse. Loeb Classical Library. Cambridge, Mass.: Harvard University Press. 1982.
- . *On the Nature of Things: De rerum natura*. Anthony Esolen (ed. and translator). Baltimore: The Johns Hopkins University Press, 1995.
- Madigan, Michael T., John M. Martinko. and Jack Parker. *Biology of Microorganisms*. London: Prentice-Hall International, 1997.
- Majno, Guido. *The Healing Hand: Man and Wound in the Ancient World*. Cambridge, Mass.: Harvard University Press, 1975.
- McGovern, Patrick E. *Ancient Wine: The Search for the Origins of Viniculture*. Princeton, N.J.: Princeton University Press, 2003.
- Milisauskas, Sarunas. ed. *European Prehistory: A Survey*. New York: Springer, 2002.
- Murray, Patrick R., et al. *Medical Microbiology*. St. Louis: Mosby, 1998.
- Nunn, John. *Ancient Egyptian Medicine*. Norman: University of Oklahoma Press, 1996.
- Ovid. *Heroides. Amores*. Translated by G. Showerman. Loeb Classical Library Cambridge, Mass.: Harvard University Press, 1996.
- . *Fasti*, translated by A. J. Boyle and R. D. Woodard. New York: Penguin Books, 2000.
- . *Fasti*. Translated by James Frazer. Loeb Classical Library. Cambridge, Mass.: Harvard University Press, 1989.
- . *Metamorphoses*. Translated by R. Humphries. Bloomington: Indiana University Press, 1983.
- . *Metamorphoses*. Translated by A. D. Melville, with an introduction by E. J. Kenney. Oxford: Oxford University Press, 1998.
- . *The Poems of Exile*. Translated by Peter Green. Berkeley: University of California Press, 2005.
- . *Amores: Medicamina Faciei Feminae: Ars Amatoria: Remedia Amoris*. Ed. by E. J. Kenney. New York: Oxford University Press, 1994.
- Perles, Catherine. *The Early Neolithic in Greece*. Cambridge: Cambridge University Press, 2001.
- Pinch, Geraldine. *Magic in Ancient Egypt*. Austin: University of Texas Press, 1994.
- Plato. *The Laws*. Translated by T. J. Saunders. New York: Penguin Books. 1970.
- . *Plato Euthyphro, Apology, Crito, Phaedo, Phaedrus*. Translated by Harold Fowler. Loeb Classical Library. Cambridge, Mass.: Harvard University Press, 1999.
- . *The Laws*. Translated by Trevor. J. Saunders. New York: Penguin Books. 1970.
- Pliny. *Natural History*. Translated by W. H. S. Jones. Loeb Classical Library. Cambridge, Mass.: Harvard University Press, 1989.
- Plutarch. *Plutarch Moralia*, vol. 8. Translated by Paul A. Clement and Herbert B. Hoffleit. Loeb Classical Library. Cambridge, Mass.: Harvard University Press, 1998.
- . *On Sparta*. Translated by Richard Talbert. New York: Penguin Books,

- 2005.
- Plautus, *Stichus, Trinummus or Three Boh Day, Truculentus, The Tale of a Travelling Bag, Fragments*. Translated by Paul Nixon. Cambridge Mass.: Harvard University Press, 1950.
- Sallares, Bobert. *The Ecology of the Ancient Greek World*. London: Duckworth, 1991.
- Scribonius Largus, *Compositiones*, Sergio Sconocchia (ed.). Leipzig: Teubner, 1983.
- Soranus. *Soranus' Gynecology*. Translated by Owsei Temkin. Baltimore: Johns Hopkins University Press, 1956.
- Taiz, Lincoln, and Eduardo Zeiger. eds. *Plant Physiology*. Sunderland: Sinauer Associates, 2002
- Theocritus. *Idylls*. Translated by Anthony Verity. Oxford: Oxford University Press, 2003.
- Theophrastus. *Theophrastus Enquiry into Plants*. Translated by Sir Arthur Hort. Loeb Classical Library. Cambridge. Mass.: Harvard University Press, 1980.
- Thucydides. *The Peloponnesian War*. Translated by Steven Lattimore. Indianapolis: Hackett Publishing Company, 1998.
- *History of the Peloponnesian War*. Translated by Bex Warner, with an introduction by M. I. Finley. New York: Penguin Books, 1972.
- Tyler, Varro, et al. *Pharmacognosy*. Philadelphia: Lea and Febiger, 1981.
- Virgil. *Aeneid*. Translated by H. B. Fairclough. Loeb Classical Library. Cambridge, Mass.: Harvard University Press, 1994.
- *Eclogues, Georgics, Aeneid I-IV*. Translated by H. B. Fairclough. Cambridge, Mass.: Harvard University Press, 1994.
- , *The Aeneid*. Translated by David West. New York: Penguin Books, 1991.
- Wasson B. G., Hofmann Carl A. P. Buck, and Albert. *The Bond to Eleusis*. Los Angeles: William Dailey Bare Books, 1998.

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