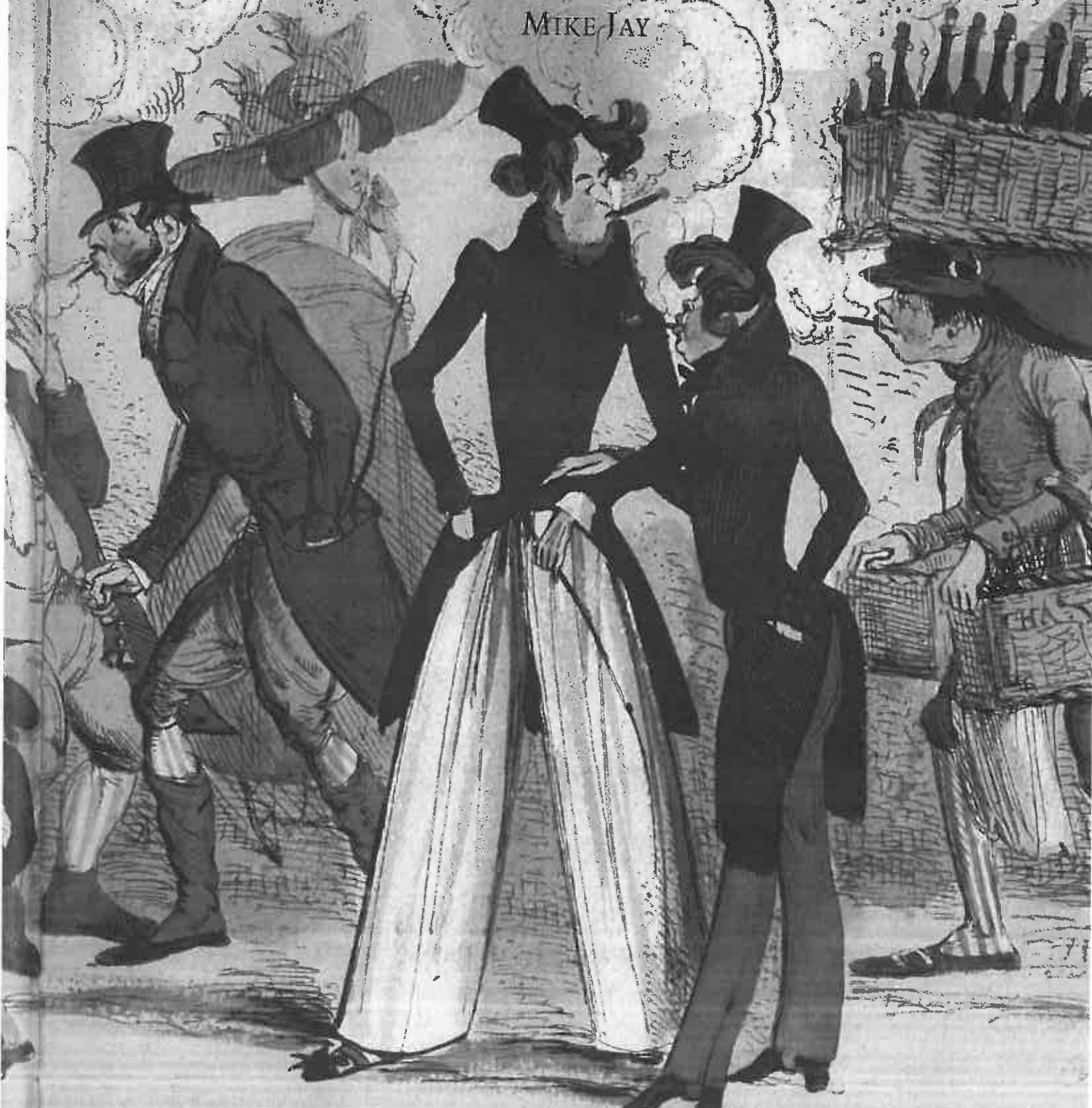


HIGH SOCIETY

Mind-Altering DRUGS in HISTORY and CULTURE

with 157 illustrations, 142 in colour

MIKE JAY





CONTENTS

Foreword 6

A Universal Impulse 8

High Societies - The Evolution of Drugs - Animal Intoxication - Drugs and Shamanism - Drugs and Culture - The Culture of Kava - The Culture of Betel - Drug Prohibitions - Drug Subcultures - The Cultures of Ecstasy

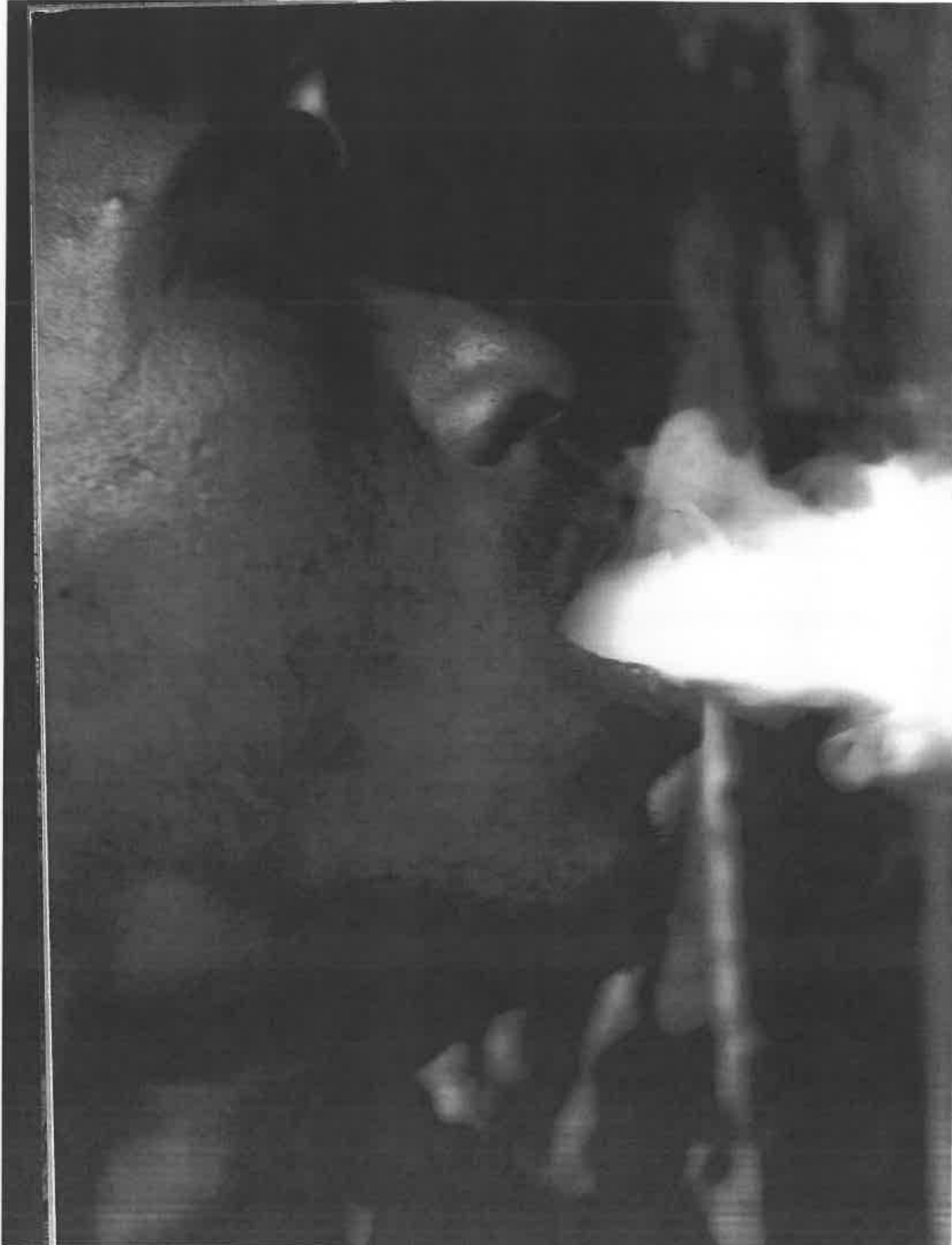
From Apothecary to Laboratory 48

What Is a Drug? - Drugs in Antiquity - Renaissance Herbals - Witches and Flying Ointments - The Invention of Laudanum - Linnaeus and the Enlightenment - The First Synthetic Drugs - Opium and the Romantics - The Club des Haschischins - Freud and Cocaine - Addiction and Drug Control - Mescaline, LSD and Beyond - Drugs of the Future

The Drugs Trade 108

Drugs of the New World - The Psychoactive Revolution - Tobacco in China, Tea in Europe - The Opium Wars - The Anti-Opium campaign - Temperance and Prohibition - The 'War on Drugs' - Epilogue: The Decline of Tobacco

Notes and Further Reading	174
Acknowledgments	186
Picture Credits	187
Index	188



A Universal Impulse

Every society on earth is a high society. As the sun rises in the east, caffeine is infused and sipped across China in countless forms of dried, smoked and fermented tea. From the archipelagos of Indonesia and New Guinea through Thailand, Burma and India, a hundred million chewers of betel prepare their quids of areca nut, pepper leaf and caustic lime ash, press it between their teeth and expectorate the day's first mouthful of crimson saliva. Across the cities of Thailand, Korea and China, potent and illicit preparations such as *ya'aba*, home-cooked amphetamine pills swallowed or smoked, propel a young generation through the double working shifts of economic boomtime, or burn up the empty hours of unemployment, before igniting the clubs and bars of the urban nightscape.

As the sun tracks across towards the afternoon, the rooftop terraces of Yemen's medieval mud-brick cities fill with men gathering to converse and chew khat through the scorching heat of the day. Across the concrete jungles of the Middle East, millions without the means for a midday meal make do with a heap of sugar stirred into a small cup of strong black tea. As the working day in Europe draws to a close, the traffic through the bars of the city squares begins to pick up, and high-denomination euro notes are surreptitiously exchanged for wraps of cocaine and ecstasy. In the cities of West Africa, the highlife clubs are thick with cannabis smoke, while in the forests initiates of the Bwiti religion sweat their way through their three-day intoxication by the hallucinogenic root *iboga*, during which they see the visions that will guide them through the passage to adulthood.

When daylight reaches the western hemisphere, it illuminates the broadest spectrum of drug cultures on the planet. Across North America's cities, the sidewalks throng with office workers clutching lattes and espressos, while giant trucks thunder down interstate highways delivering tobacco and alcohol on a scale now rivalled by the industrial marijuana plantations concealed in giant polytunnels and warehouses among the forest tracts of California and Canada. Further south, the Huichol people of Mexico, despite the mesh fences and enclosures spreading across their ancient hunting grounds, still make their desert pilgrimage to harvest peyote cactus for their rituals, while street

Opposite: A young man smokes ganja (cannabis) in the slums of Dhaka in Bangladesh, where it has been used for centuries and was made illegal only in 1984. The World Health Organization estimates that cannabis is used by around 150 million people across the globe.

children in the barrios of Colombia and Brazil stupefy themselves with petrol-soaked cocaine residue and aerosol sprays. And in the Amazon, dozens of tribes, as they have since time immemorial, squat around fires powdering, toasting and brewing the seeds, roots and leaves of the world's most diverse mind-altering flora.

Finally the sun sets across the islands of the south Pacific, the most remote outposts of humanity. Here, almost all the drugs consumed by the rest of the world remain unknown: even alcohol and tobacco are costly imports, rare outside the urban centres. But from the middle of the afternoon, the men have been drifting in from their gardens and plantations to grate, chew and soak kava root for their evening brew. As the sun sets, they congregate in huts to drink it from coconut shells and share some whispered conversation, or squat alone on the beach to listen to its voice in the surf, as the sunset fades to darkness.



Drug cultures are endlessly varied, but drugs in general are more or less ubiquitous among our species. The celebrated list of 'human universals' compiled by the anthropologist Donald E. Brown includes 'mood- or consciousness-altering techniques and/or substances' as one of the essential components of human culture, along with music, conflict resolution, language and play. But there is little consensus regarding the origins of this universal impulse, which essential human traits it serves and how far back into our past its roots extend. Some have posited a primordial moment of discovery when proto-humans first encountered plants that expanded their minds to generate new forms of thought and language. Others have argued that such a moment may be encoded in our shared origin myths, perhaps in stories of a fruit that bestowed the knowledge of good and evil. Nevertheless, it seems that the discovery of intoxicants is a drama in which even the remote human past is a very recent episode. The plants that contain these substances evolved alongside our animal antecedents, and many developed such chemicals because of their physiological effects on creatures like ourselves. We were taking drugs long before we were human.

Drugs, and our response to them, are the product of an elaborate evolutionary dance between the plant and animal kingdoms that has been underway for at least 300 million years. Coniferous trees began producing tannins to deter fungal parasites, and bitter saponines to repel wood-boring insects. Flowering plants, when they emerged during the Cretaceous period, developed more complex nitrogen-based alkaloids in their fruit and leaves. These compounds, typically bitter to the taste, are toxic to some animals but produce pleasant effects in others. The



Khat chewers in Sana'a, the capital of Yemen. The cultivation, transport, trade and consumption of the fresh khat leaf is the mainstay of local economies across many parts of East Africa and the Arabian peninsula.

capsaicin in chilli peppers, for example, is both a deterrent and a stimulant, killing parasites but encouraging the release of endorphins in mammals (while birds, on which the chilli depends for its dispersal, lack the chemical receptor that causes it to function as an irritant). Plant families often generate a spectrum of related alkaloids with both mental and physical effects: the nightshades, for example, manufacture the poisons in raw potatoes, the bug-killing and brain-rewarding nicotine in tobacco, and the hallucinogenic delirians in daturas and belladonna.



Long before humans first appeared, this profuse natural pharmacopeia encouraged an equally wide variety of drug-seeking behaviours. Many animals root out and consume plant drugs for medical purposes – to poison intestinal parasites, for example – but there are also abundant examples of the deliberate pursuit of intoxication. Cats abandon themselves to the ecstasy of catnip, which has little effect on humans but causes felines to head-twitch, salivate, give love-bites and apparently experience sexual hallucinations: in the wild, the plant may perform the function of bringing females into heat. Siberian bears and reindeer seek



Above: Monkeys 'aping' the new habit of tobacco smoking was a popular theme of seventeenth-century prints, such as this engraving after the Flemish artist David Teniers the Younger. Apes and monkeys use a particularly wide range of intoxicants, and are easily taught to smoke tobacco in captivity.

out fly agaric mushrooms and appear to relish their mind-altering effects. Migrating birds make regular seasonal detours to gorge on fermented fruits. For many villages across the Indian subcontinent, a herd of drunken elephants on the rampage after feasting on rotten windfalls or raiding illegal stills is an all too familiar hazard. Our closest relatives, the primates, display many sophisticated drug-seeking behaviours. Baboons chew tobacco in the wild, and apes in captivity readily learn the habit of smoking it. Male mandrills in Gabon have even been observed to dig up and eat the hallucinogenic iboga root, then wait for an hour for its effects to take hold before engaging rivals in combat.

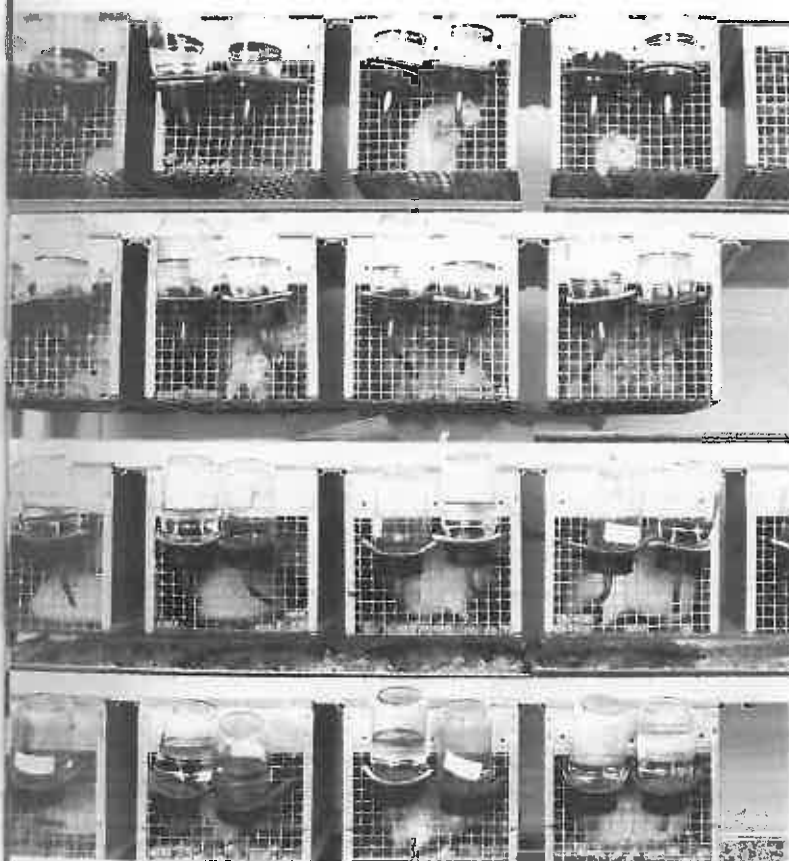
In many human cultures, the origin stories of plant-derived drugs involve tales of people observing and copying the habits of animals. In Ethiopia, for example, the discovery of coffee is attributed to goatherders who observed their flock becoming frisky and high-spirited after consuming coffee beans. Goats are very fond of coffee, and modern plantations must be robustly fenced against them; their taste for the effects of caffeine may have prompted the plant, which spreads its seeds via animal droppings, to produce it. Theirs is a long-standing symbiosis, though human participation in the cycle is relatively new. The practice of coffee drinking seems only to have developed around the tenth century AD—

recently enough, perhaps, for the legends of its discovery to have some historical validity. It seems plausible that the practice of roasting the seeds of one among many hard, bitter and inedible desert shrubs and then percolating boiling water through them might have emerged only in modern times, and with some peculiar prompting.

Plants, then, use their drugs to nudge and manipulate the animal kingdom, repelling some species and attracting others; but what benefits do animals derive from drugs? It is often assumed that they consume them instinctively for chemical rewards: the stimulation of neurochemicals such as dopamine and serotonin, and the pleasurable sensations they deliver to the brain. Indeed, the modern neurological understanding of drugs leans heavily on the responses of laboratory animals: the 'addictiveness' of substances such as cocaine and opiates is measured by, for example, how many times a caged rat will press a lever to receive a dose. But there is more to animal drug-taking than reflex response. Environment is also a factor: many animals, for example, are more inclined to take drugs in captivity. This tendency was explored in a startling series of experiments by the Canadian addiction psychologist Bruce Alexander.

Alexander's clinical work involved tests on laboratory rats. Initially the rats were kept individually in small cages with two drinking bottles,

Below: The Rat Park experiments conducted by Bruce Alexander in the late 1970s at Simon Fraser University in British Columbia, Canada. Some of the laboratory rats typically housed in cramped and solitary cages (left) were moved to a spacious, open-plan social environment (right), where their drug use diminished dramatically.



one containing plain water and the other morphine solution, which were weighed daily to generate behavioural data. But Alexander became curious about the effects of environment, and constructed alongside the cages a habitat that became known as Rat Park. Several rats, who are naturally gregarious, were housed together in a large vivarium enriched with wheels, balls and other playthings, on a deep bed of aromatic cedar shavings and with plenty of space for breeding and private interactions. Pleasant woodland vistas were even painted on the surrounding walls.

In Rat Park, he discovered, drug use diminished markedly: some rats reduced their morphine intake to one-twentieth that of their caged neighbours. Even if pre-addicted to morphine, they would suffer withdrawals rather than maintain their habit. When the morphine water was sweetened with sugar, most of the rats still chose plain water, though they would drink the sugared water if Alexander also added naloxone, which blocks morphine's effects. It seemed that the standard experiments were measuring not the addictiveness of opiates but the stresses inflicted on lab rats caged in solitary confinement, with catheters inserted into their jugular veins.

Such experiments do not disprove the claim that animals take drugs for their chemical rewards, but they do indicate that the impulse to take drugs is more than a simple behavioural reflex. In humans, of course, the variables become far more complicated. Sensory pleasure is an obvious component of most drug use, though the definitions of pleasure are as varied as human culture itself. But some drugs offer strictly functional benefits. The ability to alter consciousness in dramatic but controllable ways has many uses, and there is much evidence to suggest that humans have long used such drugs instrumentally: even, in some cases, elaborating their entire social systems around the heightened states of consciousness such substances produce.



Perhaps the earliest drug artefacts in the archaeological record are two chillum-style pipes fashioned from hollowed-out puma bones, excavated in 1973 from a cave high in the Andes of north-west Argentina and radiocarbon-dated to before 2000 BC. The pipes were found to contain the burnt residue of the seeds of the mountain shrub *Anadenanthera*, a rich source of dimethyltryptamine. DMT, as it is known, is among the most powerful naturally occurring hallucinogens. When smoked or snuffed in sufficient quantities, it produces a rapid reaction of extreme nausea and often convulsive vomiting, accompanied by a few minutes of exquisitely strange, beautiful or terrifying visions.

A carved stone head from the ancient temple site of Chavín de Huántar in the Peruvian Andes, with grimacing jaws and mucus flowing from its nostrils. The heads form a sequence representing the transformation from human to jaguar under the influence of DMT-containing snuff.



With the appearance of monumental architecture in South America, the use of such drugs is attested in more detail. The ceremonial centre of Chavín, constructed in the Peruvian Andes in the centuries around 1000 BC, is surrounded by towering stone walls studded with a series of grotesque stone heads frozen in various stages of transformation from human to jaguar. As the heads grin and grimace, eyes bulging and fangs sprouting, streams of mucus pour from their noses: a telltale sign of the snuffing of powdered *Anadenanthera* seeds, which is further attested by the distinctive snuff trays excavated from similar sites across Peru, Bolivia and Chile. The drug's effects were, it seems, understood as a process of shapeshifting between human and monstrous feline forms.

The notion that DMT-containing powders and potions transform their human subjects into animals – particularly predators, such as big cats or snakes – remains widespread throughout the many shamanic cultures of the Amazon region today. Animal transformation is not regarded as pleasurable: indeed, in both ancient and modern traditions it

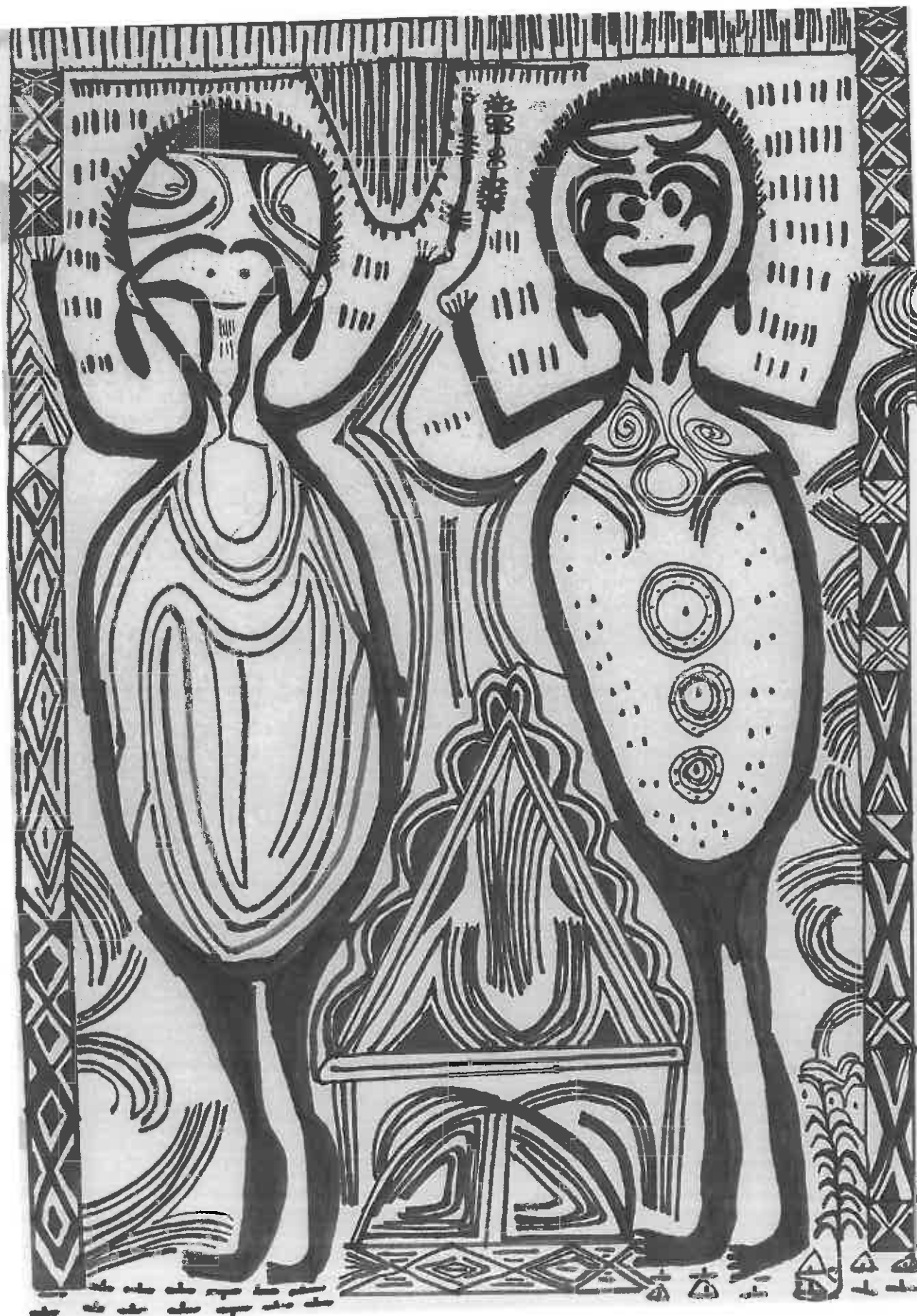
Opposite and below: British botanist Richard Spruce was the first Westerner to drink the DMT-containing brew ayahuasca during his Amazon expedition in 1852. He also brought back *Anadenanthera* seeds and pods, together with a snuff tray, pestle, bone container and snuffing tube used to prepare and administer the powdered seeds (opposite), now housed in the Economic Botany Collection at Kew Gardens, London. The Amazonian Yanomami people from the upper Rio Negro still use DMT-containing snuff prepared from *Virola* bark, which they blow up each other's sinuses with long bamboo tubes, as in this photo taken by Richard Evans Schultes in 1967 (below).

is represented as physically unpleasant and emotionally traumatic. Just as the stone heads on Chavín's walls appear in a transport of agony rather than ecstasy, the Amazon cultures who still use DMT-containing snuffs, or infusions such as ayahuasca, typically describe the ordeal as terrifying. The drug is taken not for sensory gratification, but for immersion in a collective mental and spiritual world in which the participants become something more than human.

Between 1966 and 1969, the Austrian-born anthropologist Gerardo Reichel-Dolmatoff made a series of field trips to study the use of hallucinogenic snuffs among the Tukano Indian groups in the Vaupés area of the Colombian Amazon. These groups have little in the way of social hierarchies, chiefs or councils of elders; conflicts are largely mediated by shamans, a category of adult males with specialist knowledge of plants, hunting or healing. The shamans' activities are almost always conducted under the influence of a snuff prepared from the DMT-rich sap sweated out of the bark of various trees of the *Virola* genus. Powdered and propelled into the sinuses through a hollow stone or bone tube, the sap produces a state of heightened awareness in which diseases are treated









Opposite and above: Some Tukano groups consume DMT in the form of ayahuasca, a bitter tea that contains the drug in combination with other mind-altering plants. These two figures (opposite) are forest spirits seen in ayahuasca visions: a husband and wife holding batons covered in sickness that they spread among humans. The decorative art that covers Tukano clothes, ornaments, pottery and houses (above) is almost entirely drawn from ayahuasca visions.

and weather and game patterns predicted. But when large doses of snuff are taken, it is universally recognized among the Tukano that the shamans will turn into jaguars.

When Reichel-Dolmatoff attempted to establish precisely what this transformation entailed, he received a bewildering variety of explanations. The 'jaguar complex', as he termed it, operated across many levels of meaning. On one level, it described the physical sensations produced by the drug: snuffing produces a painful burning sensation followed by convulsive nausea, and shamans in the grip of these symptoms are said to be jaguars writhing and 'turning their bellies up'. They were also consciously imitating jaguars: many shamans had personal collections of jaguar skin, claws and teeth. But they were also genuinely believed to be shifting form, taking on powers that make them capable of bloody acts of predation and revenge. It follows from this that a jaguar encountered in the wild may not truly be a jaguar, but rather a shaman in feline 'dress'. Shamans acting in this way are able to enter the dreams of others in jaguar form. As they wander in the forest, their jaguar 'dress' can also guide them to the trails of 'real' jaguars, which they might witness, as some zoologists have, chewing on hallucinogenic vines and 'turning their bellies up' as the effects take hold.

On the surface, the transformation of shaman into jaguar seemed to be accepted as real by all Reichel-Dolmatoff's subjects. Young men regaled him with bloodthirsty tales of rapes and murders that they had undertaken in feline form, often of friends or close kin; claw-marks and bloodstained whiskers were offered up as physical proof. But these terrifying tales tended to evaporate under scrutiny. The alleged victims were still alive and unharmed: the acts of violence seemed to have taken place in a parallel world. Indeed, Reichel-Dolmatoff's informants acknowledged that 'real' jaguars are not particularly ferocious or dangerous, and are far more likely to flee from humans than to attack them. The shaman's transformation into a jaguar was a symbolic theatre in which impulses of aggression and revenge could be acted out physically and tangibly, but without real-life consequences.

Yet the jaguar transformation was more than charade or a drug-induced fantasy. Under the influence of the snuff, shamans found themselves awakening into a state of hyper-consciousness in which they could see, hear, smell and understand aspects of reality normally hidden from view. The idea that they had transformed into jaguars made sense of these sensations: they were in possession of the uncanny night vision of the predator, its speed and agility, its preternaturally acute hearing. They were able to observe the world through new eyes, to receive unfamiliar impressions, and to expand the store of natural knowledge demanded by their role: the positions of the stars, the habits of other animals, the patterns of plant growth, the fluctuations of weather and climate, the hidden weave of nature itself. Used in this way, drugs can operate as a kind of sensory prosthetic: just as a diving suit allows humans temporary access to a normally hostile and alien world, Virola snuff allows the shaman to encompass a world populated by many different forms of consciousness and to glimpse a perspective beyond the limits of the human.



Opposite: The jazz scene in postwar New York, in which Howard Becker conducted his research, was an epicentre of the cannabis culture that became a global phenomenon in the 1960s. One of the earliest accounts was the 1946 memoir of the Jewish saxophonist Milton 'Mezz' Mezzrow, who explained: 'tea puts a musician in a real masterly sphere, and that's why so many jazzmen have used it'.

Drugs can bestow remarkable powers, but only to those who are primed to receive them. The hallucinatory derangement of Virola snuff will overwhelm anyone who ingests enough of it, but for most it will be recalled (if at all) as a fever dream of fragmentary impressions, dominated by sensations of burning sinuses and overwhelming nausea. It is an intensely personal ordeal, but can only be understood within a social context. Unlike animal intoxication, human drug use is part of a web of verbal and symbolic culture, and it is here that its shared meanings reside.

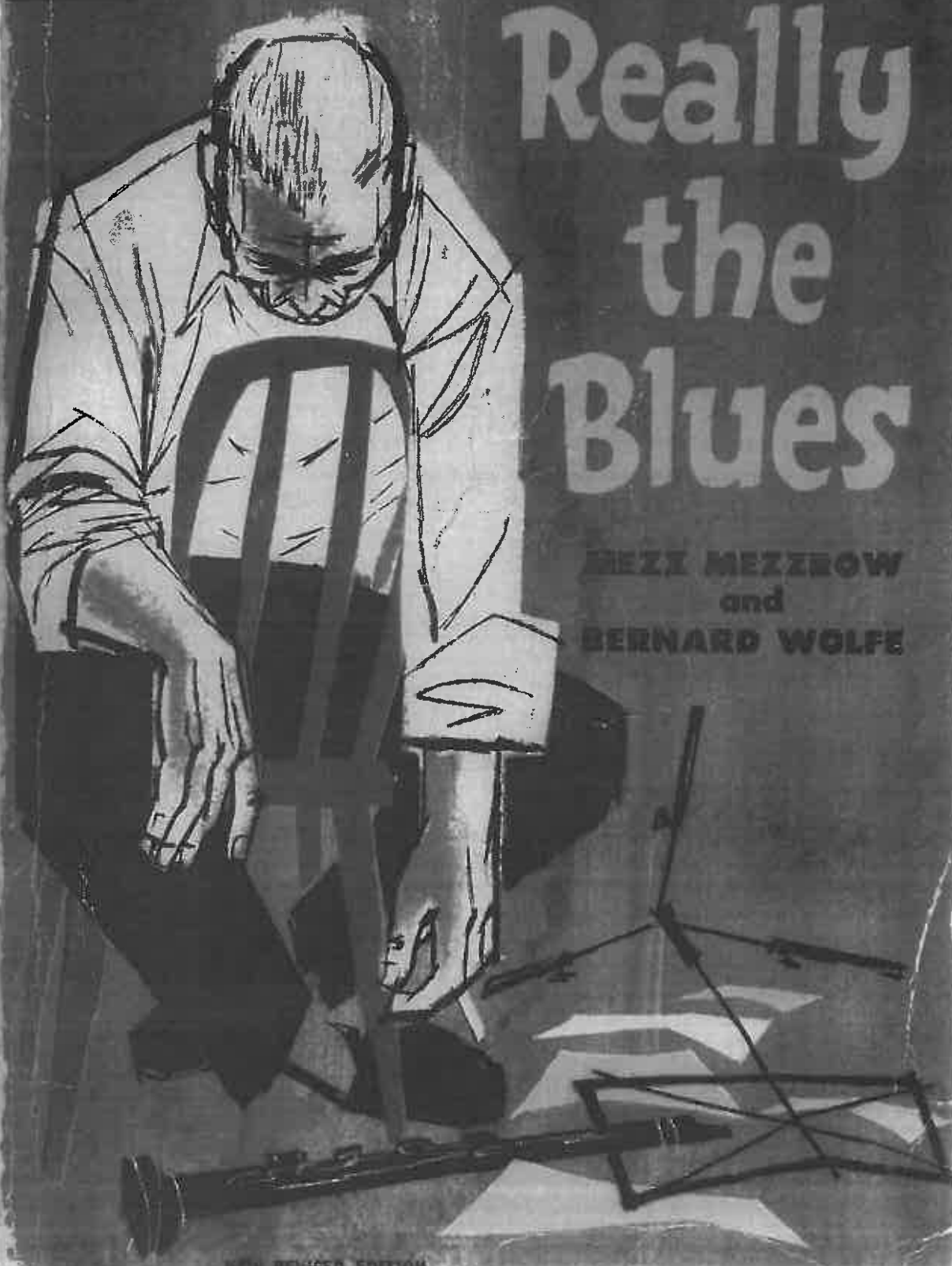
In 1953 Howard S. Becker, a young sociologist and jazz enthusiast, published a now-classic paper entitled 'Becoming a Marijuana User'. His musical interests had led him to study the lifestyles of New York's jazz

DELL
BOOK
D118

TRUE...SHOCKING 50c

Really the Blues

MEZZ MEZZROW
and
BERNARD WOLFE



NEW REVISED EDITION

subculture, and he had focused on the practice of smoking cannabis, a habit widespread within his study group but regarded as deviant in the cultural mainstream. He began an informal project of interviewing users to understand how this practice was learned and transmitted.

What Becker discovered was a three-stage model that has since been applied to drug cultures across the world. The first stage, 'Learning the Technique', involved the technical challenge of ingesting a sufficient dose of the drug – in this case, learning to inhale correctly, and to hold the smoke in the lungs for a sufficient length of time. But this was not enough to get high in and of itself: most first-time users felt no effects at all. A second stage, 'Learning to Perceive the Effects', was essential. This required the user to believe that there were indeed effects to be perceived, and to cultivate a gradual physical recognition of them: head-spinning, rubbery legs or hunger pangs. But even when perceived, it was not obvious to the user that these effects were desirable. The third stage, 'Learning to Enjoy the Effects', could only be grasped within a culture where the drug's effects were valued: light-headedness was a cue for giggling and verbal flights of fancy, hunger pangs led to enjoyable snacking binges, feelings of anxiety or paranoia were acknowledged and soothed with camaraderie and humour.

Becker's observations challenged the consensus view of 1950s American psychiatry that marijuana users represented a deviant and criminal minority whose aberrant appetites led them to drug use. It was, he argued, the opposite: they had joined a subculture within which drugs became pleasurable. 'Marihuana use', he concluded, 'is a function of the individual's conception of marihuana and of the uses to which it can be put'. People in straight society shunned marijuana not because they were virtuous, but because there was no reward to be gained from it: even if they felt the effects, they would lack the context in which to enjoy them.

The physical effects of most drugs are initially unpleasant, and would be perceived as toxic unless they were culturally valued, shared and sanctioned. The first glass of beer is unpleasantly sour; the first sip of red wine burns the mouth; the first lungful of tobacco produces coughing, low blood pressure and nausea. Modern drug cultures, by validating the exploration of unfamiliar tastes and mental states, have converted many substances from poison to exotic pleasure. 'Magic' mushrooms, for example, are now consumed with the expectation of a colourful and mind-expanding trip, but historical accounts of accidental ingestions show that, without such expectations, their effects were typically taken to be the painful and alarming onset of poisoning. The drug habits of one culture often disgust another, at least until the new drug is socialized and normalized: drugs may be universal, but they are also an acquired taste.

Throughout history, the spread of foreign drugs has been socially divisive, eagerly adopted by some and fiercely resisted by others.



But drugs are not always divisive. They can also reinforce cultural values, strengthening and formalizing them, often to the point where vital exchanges become inconceivable without them. The role of kava in many cultures across the South Pacific offers a striking example.

Kava is a narcotic drink produced by grinding and soaking the root tubers of *Piper methysticum*, a large plant of the pepper family. Since it must be drunk fresh, preparing kava is a process that consumes a significant proportion of every day. Roots must be rubbed clean with coconut husks, stripped, peeled and shredded—these days usually with an old cheese grater into a plastic bowl, but in the most traditional villages by chewing the root and spitting the macerated pulp into a banana leaf. Although this process

Below: In the Pacific nation of Fiji, kava is drunk to welcome guests in both private and public ceremonies. Here Queen Elizabeth II is offered kava in the traditional receptacle, a coconut shell, on her state visit in 1982.





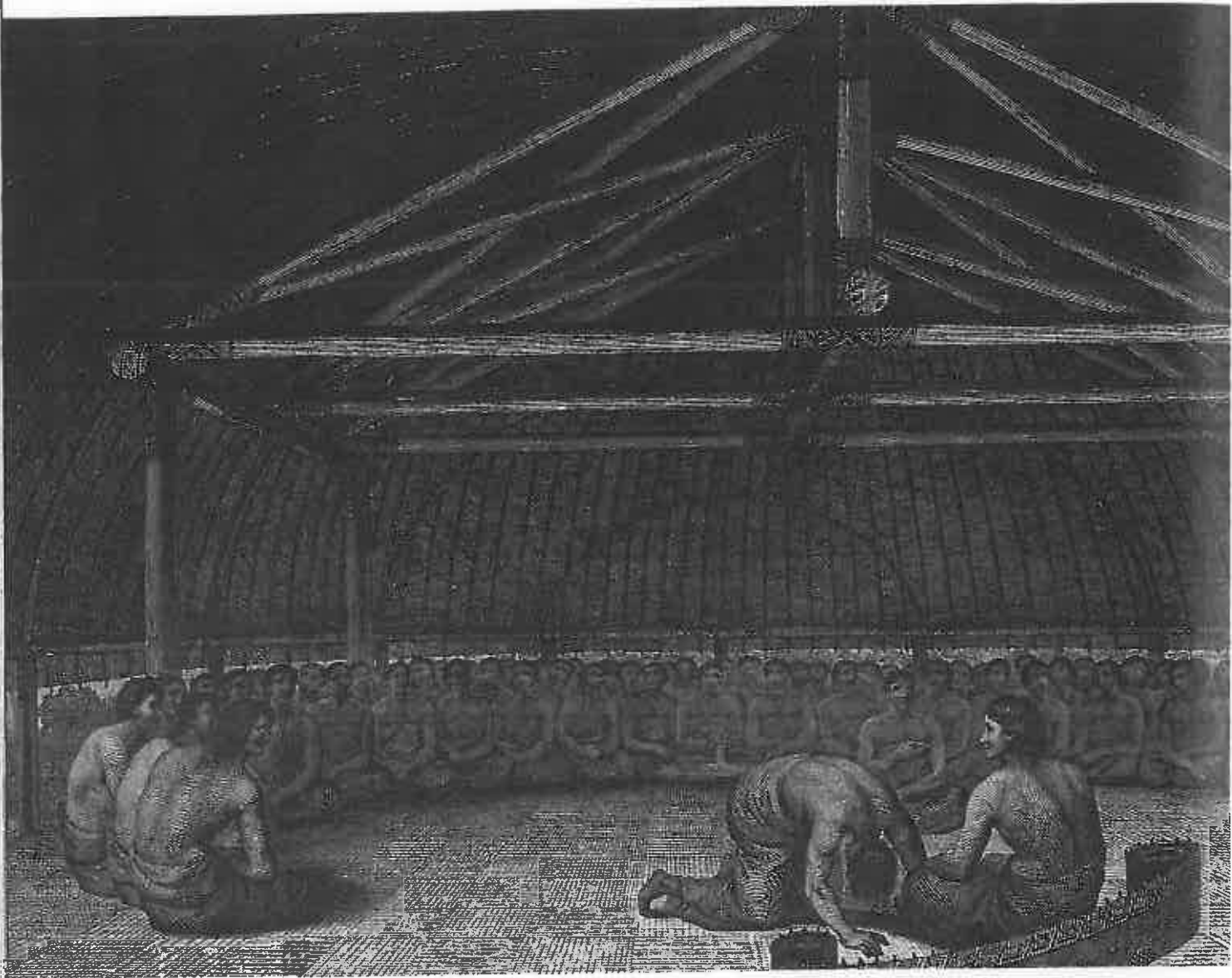
appears unhygienic, kava-drinkers rarely catch diseases from one another: in addition to its mind-altering qualities, the root is also antibacterial and antifungal. The syphilis that spread across the region with Western contact affected kava-drinkers markedly less than their neighbours.

Once prepared, the drink is poured into coconut shells, which are knocked back quickly and cleanly: although kava has an exalted cultural status, it is still not reckoned to taste very nice. It is a muddy pale-brown suspension with a peppery burn and a distinctive numbing effect on the lips and throat. Other effects soon follow: a fullness in the head, a rush of warm feelings and a clumsy, stumbling gait. Sounds become louder and light harsher: it is good manners to whisper among fellow-drinkers and to dim paraffin lamps. After a few hours of gentle trance, it promotes a sound night's sleep, making it a better complement to working routines than alcohol. In equally marked contrast to alcohol, which has had destructive effects on many Pacific cultures, kava encourages positive social behaviours such as generosity and sensitivity, cordial conversation and comfortable silence.

For these reasons kava is an ancient and essential element, both symbolic and practical, in social interaction. Kava-drinking, like the Native American peace pipe, is a communion through which friendly relations are established, contracts sealed and hostilities set aside. Kava roots are exchanged as gifts between neighbours, and more formally between families at weddings and funerals. Whether drunk or exchanged, the presence of kava signals a hiatus in niggling rivalries and social tensions and an opportunity for a fresh start in individual or group relations. It can even smooth over major inter-group conflicts and civil wars: once the 'big men' or elders of rival groups have formally made peace in a kava ceremony, all resentments are truly dead and buried. Its time-honoured role is reflected in modern political protocol, particularly in Tonga and Fiji, where foreign presidents, royalty and even popes are publicly welcomed with kava ceremonies. Generally, governments across the Pacific are keen to encourage its use, which stimulates the local economy and mitigates the negative social consequences of alcohol.

The origins of kava use are the subject of many myth-cycles in the South Pacific. Most prominent among them is the story that humans discovered the wild root by watching rats eating it and staggering clumsily back for more. Botanically, the origins of the kava plant are enigmatic: it is a sterile clone from a long-forgotten source, a cultivar surviving only through human agency. For the cultures that use it, kava therefore also serves as a sacred conduit to their ancestral inheritance. Alongside its public and social role, this private aspect of kava is highly valued: it is at dusk, regarded in Melanesia as a time of especially strong ancestral

Opposite: Fresh kava being prepared by an indigenous group in Arnhem Land, Northern Australia. During the 1980s, missionaries and tribal leaders from Melanesia began to introduce kava to Australian communities ravaged by alcoholism, but it has now been banned by the federal government.



presence, that kava ceremonies are held. It is drunk in graveyards to allow the living to listen to the voices of the departed: revelations received in this way are not taken as the utterance of the one who heard them, but as messages from a deeper source. In this sense, kava-drinking allows individuals to act as disembodied oracles for the community at large.

Kava, then, can be seen as a universal solvent: a drug that has insinuated itself into almost every aspect of life. Public gatherings of all kinds depend on its mediating influence; at the same time, it offers privileged access to the deepest recesses of the private self. The diversity of its roles overflows the borders, in other contexts rigorously defined, between sacred and secular. On some islands, its use is confined to priestly ceremonies; on others, the towns are full of late-night kava bars. There is much evidence, even during the short period of recorded history since



Above and above right: A kava ceremony hosted by the royal family of Tonga, from a sketch made in 1777 by John Webber, the artist on Captain James Cook's third expedition to the Pacific (above). In contrast to subsequent colonists and missionaries who banned the practice, Cook hosted kava ceremonies in his private cabin on the HMS Resolution, and in Hawaii was presented with a fine ceremonial bowl (above right).



Captain James Cook's first contacts with the region, that such patterns of use are remarkably fluid: old taboos have been superseded and religious traditions modified in response to new developments such as colonial regimes or global trade. In Fiji, for example, kava circles have become more formal since Western contact, while in Vanuatu the traditional village setting of the *nakamal* has been supplemented by more casual drop-in urban kava bars. Often the sanction to change the rules comes from revelations received during the kava trance itself: the drug even provides its own mechanism to renew its charter with the society it serves.

Yet kava, while unifying societies in so many ways, also exemplifies the role that drugs can play in dividing and stratifying them. The most obvious in this case, and perhaps most typical overall, is the way its use divides the genders. In most Pacific cultures, kava use is an exclusively

male preserve, and the marker of broader male domains in society. The *nakamal*, the meeting ground in the village where kava is prepared, is taboo to women. The long hours of kava preparation constitute a forum for exclusively male discussion and decision-making, as does participation in the kava trance. Similar gender distinctions are enforced in many traditional cultures across the globe, from ayahuasca-drinking in the Amazon to tobacco-smoking in Arabia. Though often rationalized with the view that intoxication is socially or biologically inappropriate for women, limiting drug-taking to men seems to play a more active role in reinforcing and formalizing a primary distinction between the sexes. It demarcates a female sphere of mundane domestic activity, centred around childcare, housekeeping and the preparation of food, by creating an alternative male sphere centred around ritual, ceremonial occasion and heightened consciousness.

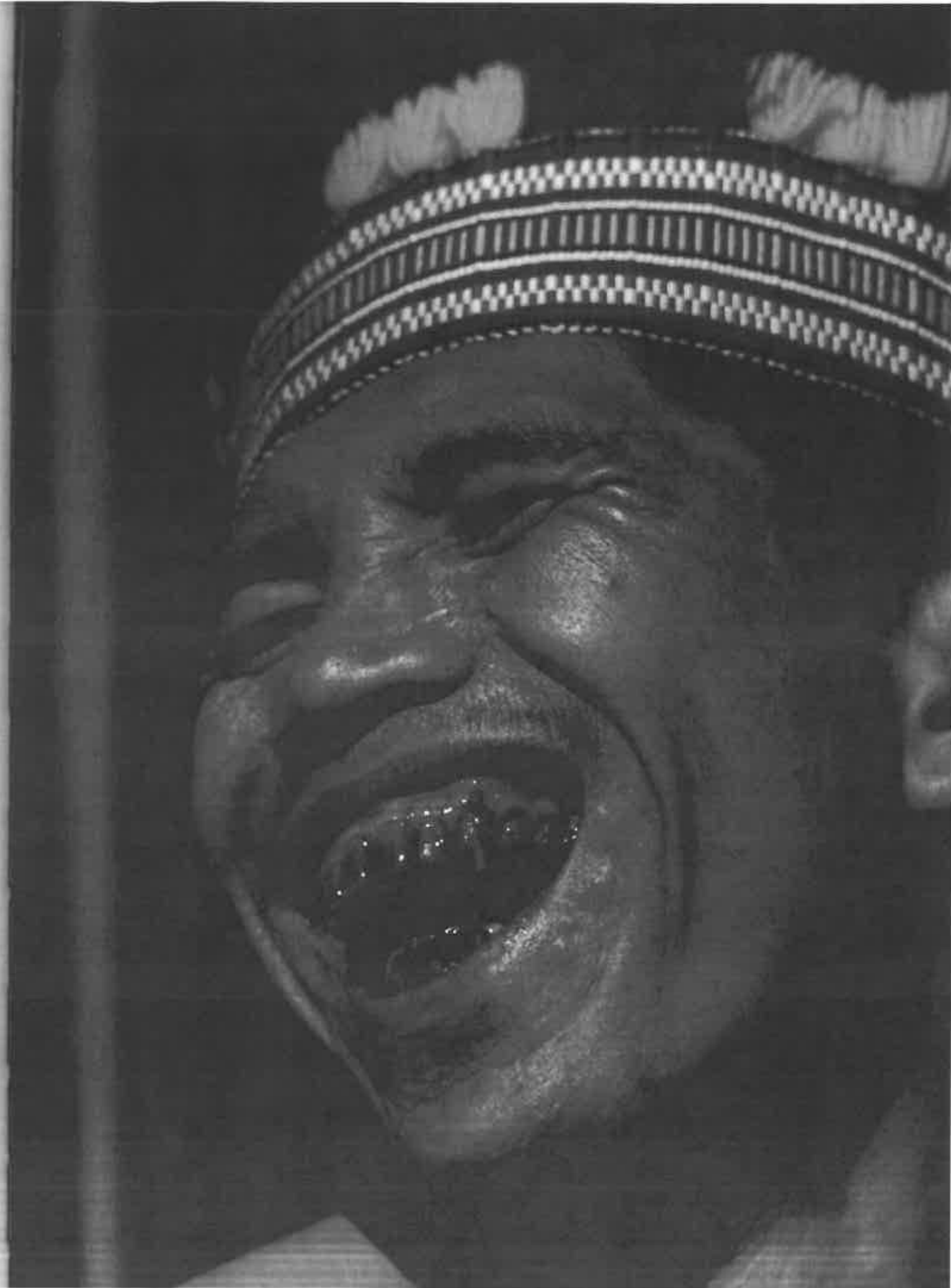
There is no evidence that this strict demarcation has its roots in human biology. Rather, traditional prohibitions against women using intoxicants simply illustrate another way in which drugs insinuate themselves into cultures: by becoming a means of signalling boundaries. When such cultural prohibitions are not strictly enforced, drug use by women tends to become normalized: in the modern kava bars of the urban Pacific, women drink as freely as men, and the pleasure drugs of Western subcultures, particularly cocaine and ecstasy, are equally popular across the gender divide.



Immediately to the west of the kava cultures of the Pacific extends a vast territory, stretching from New Guinea, north to China and west to Madagascar, where the habit of betel-chewing dates back far into prehistory. The 'quid' that is chewed may contain many ingredients, but three are essential: the nut of the areca palm, wrapped in the leaf of the betel pepper, which is spread with a paste of lime ash. The lime precipitates and releases alkaloids in the two plants that combine to produce a mild and agreeable combination of alertness, relaxation and euphoria, as well as aiding digestion and stimulating the production of red-stained saliva.

Although the betel habit is rich in sacred symbolism, with countless mythological stories woven around the origins of its ingredients, it is essentially a secular practice whose domain is one of leisure, hospitality and luxury. Women partake as frequently as men – more so, in fact, in societies such as Indonesia where men increasingly smoke clove cigarettes in its place. Like tobacco, it generates a low-level social economy where peasant women squat in markets, village squares and street corners to exchange small packages of nut, leaf and lime for the spare

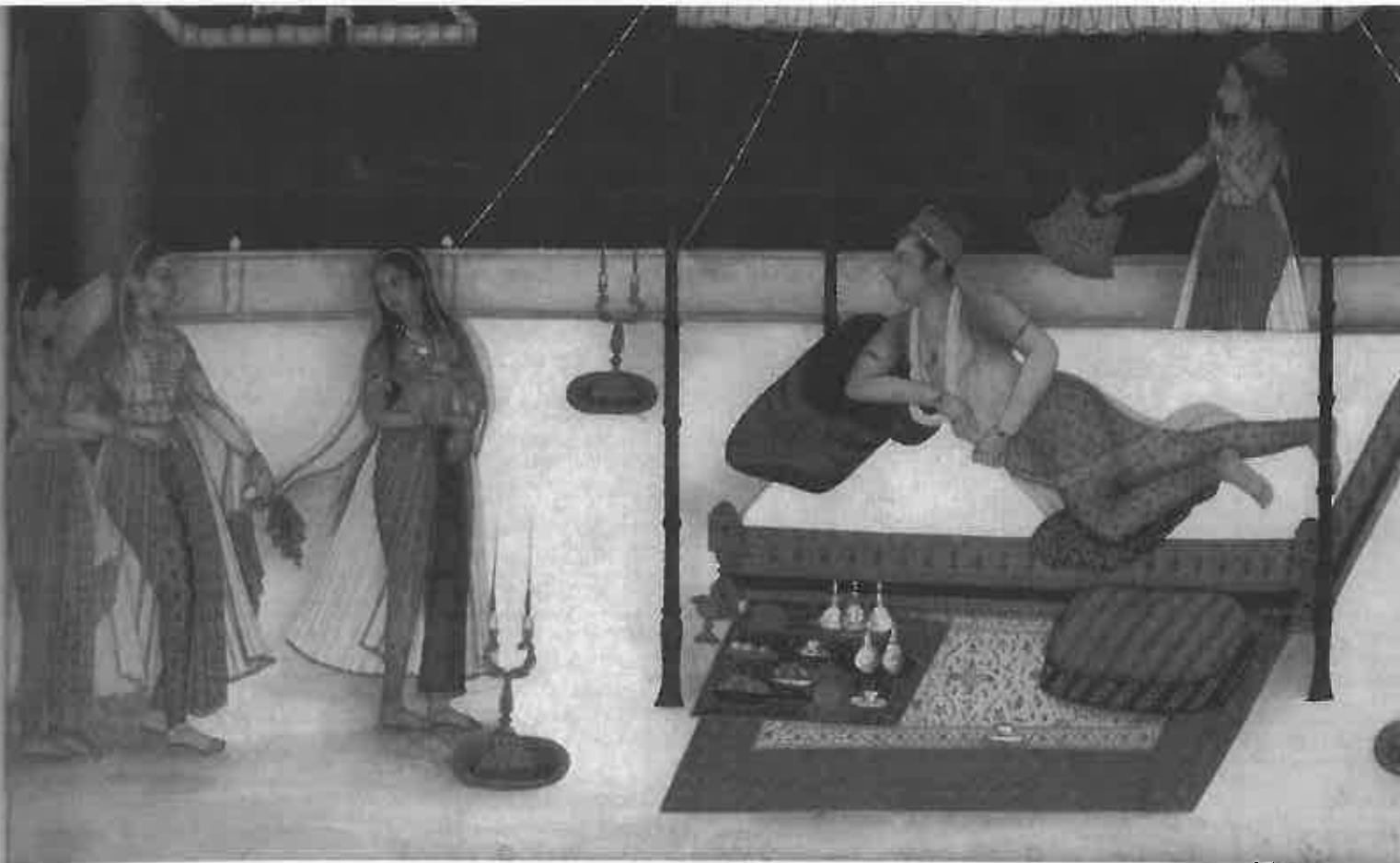
Opposite: A tribesman from Ifugao in the mountainous interior of Luzon, northern Philippines, chewing betel. Habitual chewing can cause chronic damage to teeth and gums but the red staining it produces is seen in many cultures as a mark of beauty.



Right: The betel quid has many variants but three essential components: the nut of the areca palm, spread with lime ash and folded in the leaf of the betel pepper. When chewed, the lime releases the alkaloids in the other two plants.

Below: Women conducting 'betelnut bisnis' in a market in the Solomon Islands beyond New Guinea, at the eastern extremity of betel culture.





Above: A seventeenth-century Mughal prince reclining among the traditional 'enjoyments of life', including an ornate betel set in the foreground.

coins of labourers and shopkeepers, for whom betel buys a few minutes of private relaxation or convivial gossip. Its recreational virtues are sanctioned by centuries of tradition: a sixth-century Indian text lists it as one of the eight enjoyments of life (along with incense, women, clothes, music, beds, food and flowers).

As with any such commodity, there are products and prices to suit all tastes. Some prefer their areca nuts young and soft, while others will pay more for the astringent tannins that develop when they are dried and cured. Sellers need to know their market: the betel that fetches the best price in the highlands will often be regarded as inferior on the coast. Beyond its essential ingredients, costly spices can be added – cloves, musk, camphor – for sweet breath. Those who wish to display generous hospitality will buy fresh betel, perhaps of a higher quality than their daily chew. Elegant betel habits are a sign of refinement: young women will be judged on how neatly they roll their leaf into a quid. The habit is one of private gratification, but its outward signs communicate clear messages of sophistication and character. As with coffee or wine, the rituals of preparation and consumption socialize a desire for intoxication that might otherwise appear unseemly or selfish.

The various components of the betel chew have, over the centuries, lent themselves to a profusion of utensils through which different gradations of wealth and taste are expressed and a decorative aesthetic is



Above and right: 'Betel nut beauties' are a familiar part of the urban landscape of Taiwan, where their brightly lit glass booths line the main traffic routes. They sell ready-rolled betel quids to motorists and truck drivers, for whose attention they compete with their skimpy and alluring outfits.





Above and right: Betel accessories are part of the ornamental tradition of most South Asian cultures. These Balinese betel cutters (above), used for slicing the areca nut, are modelled on familiar characters from the *wayang* shadow-puppet theatre. The lacquerware lid of a Burmese betel box (right) opens to reveal highly polished compartments that hold the ingredients for the quid.



explored and refined. The practice requires, at the bare minimum, a tray on which to lay out the ingredients; it is also desirable to have a cutter to slice the nut, a vase or pouch to contain the leaves, a pot to hold the lime and a spatula to spread it on the leaf. For most villagers these will be made of everyday materials such as wood or rattan, but for those aspiring to higher status they are the perfect pretext for a conspicuous display of wealth. The first European visitors to south-east Asia were staggered by the ornate betel sets used by the royalty of Khmer and Siam. Gold and silver boxes, cutters and bowls, enamelled, chased and filigreed, were accompanied by solid gold spittoons, and carried by a procession of 'betel slaves' constantly busy with lime, nut and leaf, pestles and mortars, lip salves and holders for quids awaiting consumption.

This type of royal display set the tone for courtiers, nobles and merchants, and established a diversity of regional styles and materials. Classic Burmese betel-ware consisted of round lacquered boxes, intricately worked with designs in red, black and gold, and opening to reveal a nest of smaller polished trays and implements. In the Malay peninsula, specialist metalworking trades turned to producing sets in pale brass alloys, filigreed with Arabic script; in Indonesia, cutters were worked into the sinuous shapes of *wayang* shadow-puppets. The economy of betel extends far beyond the drug itself. Even in its most costly forms, spiced and scented with musk and ambergris, it is only the springboard for a cult of material indulgence: formed around a shared and cherished intoxication, but elaborated into an endless variety of ways to express cultural identity.



From Amazonian tree-bark resins toasted on the embers of campfires to betel quids offered to kings on solid-gold salvers, drugs present themselves in almost every imaginable form. The intoxications they offer are equally diverse, from mild stimulation to life-threatening ordeal; and their social roles span a range from natural sacrament to luxury merchandise. But there is an alternative form of drug culture that has, over the last century, come to prominence across the modern world: one that defines itself not by its use of drugs, but by its prohibition of them.

In most cultures throughout history, only a small number of drugs were in common use. The remainder were not explicitly forbidden; there was no need, since they lacked the cultural framework to make them desirable. Official drug prohibitions are the exception rather than the rule, but they are not an exclusively modern phenomenon. The most familiar historical example, perhaps, is the prohibition of alcohol across much of the Islamic world.



Above: Alcohol intoxication was a conspicuous motif in the Roman culture of luxury. In this mural from the House of the Chaste Lovers in Pompeii, two prostitutes ply the victor of a drinking competition with more wine from a drinking-horn, while his defeated rival lies insensible beside him.

Like the drug prohibitions of the twentieth century, this proscription of alcohol was one manifestation among many of a dramatic social rupture. The culture that rose to power with Islam defined itself in opposition to the region's previous rulers, the city-dwelling merchants of the Mediterranean coast. The conquerors were nomadic traders who brought with them a desert culture that stressed the virtues of dignity and self-control, and expressed them through frugal and ascetic habits. They saw the urban merchants as a decadent and corrupt elite, whose vices were exemplified by the wine on which they squandered their wealth in boorish intoxication. With the ascendancy of Islam, the luxuries of the city were replaced by the austerity of the camel train, the villa by the desert tent, the stuffed divan by the simple cushion on the ground. The prohibition of alcohol evolved from individual acts of religious observance to edicts against public drunkenness, and finally to a universal taboo; in the process, it confirmed the new cultural hegemony.



Above and opposite: In most Islamic cultures alcohol is forbidden and its role in hospitality, sociability and relaxation is filled by a spectrum of milder intoxicants. In a nineteenth-century coffee house in Cairo (*above*), tobacco is smoked with water in hookah or shisha pipes; in present-day Amman, Jordan (*opposite*), a coffee or tea in a sidewalk café is accompanied by either shisha or cigarettes.

As with all drug prohibitions, however, it was technically not a prohibition but a substitution. The vacuum created by alcohol was filled, over time, with a broad spectrum of stimulants and narcotics. A small, strong cup of coffee or tea – astringent and parsimonious of resources – took the role of wine as a marker of hospitality. Other stimulants, including kola nut in the Sudan and khat across east Africa and western Arabia, became integral to social exchange and leisure. Coffee emerged to rival tea; tobacco became (and remains) ubiquitous; in many regions, cannabis remained (and remains) tolerated. Widespread abstention from alcohol had practical benefits: the negative effects of alcohol on the health of both the individual and wider society were certainly greater than those of the substances that replaced it. But its prohibition had a wider symbolic function: by uniting converts to the new religion, it acted as a social glue in a similar way to drugs themselves.

The prohibition of drugs in the twentieth century had its roots in a similar reaction against cultural decadence. A hundred years ago, many of today's illicit drugs were available in any high-street chemist. Cocaine was aggressively marketed in pills, lozenges and energy drinks, or supplied pure in solution with hypodermic needles. Cannabis was a common ingredient in tinctures and patent medicines. Bayer's new cough suppressant,

المهوسيس
عارف الباسطي واولاده





Above and right: By the end of the nineteenth century, even children's medication was laced with powerful drugs: the main active ingredient in Ayer's Cherry Pectoral (above) was morphine. Cocaine was available over the counter in dozens of patent preparations such as coca wines (right).

A marvellous restorative

HALL'S COCA WINE

Strongly recommended by the Medical Press and the highest Medical Authorities throughout the United Kingdom.

INVALUABLE
IN CASES OF
INFLUENZA,
SLEEPLESSNESS,
ANEMIA,
MENTAL FATIGUE,
&c.

 A large illustration of a tropical landscape with palm trees and a group of people. In the foreground, a large bottle of Hall's Coca Wine is visible. The scene appears to be a tropical island or a mountainous region.

Charles Kingsley in "Westward Ho," describing the adventures of St. Amys and party of Englishmen crossing the Cordillera, makes frequent reference to the "Calabashes of Coca" carried by them, and the keen desire of the Indians for "that miraculous herb which makes food unnecessary, and enables their panting lungs to endure that keen mountain air."

THE GREAT BRAIN AND NERVE TONIC.

AGREEABLE, SAFE, AND CERTAIN.

The Medical Profession have recommended "HALL'S COCA WINE."

See that the fac-simile signature of the Proprietors is across the label

Of all Chemists and Wine Merchants,
2/- & 3/6 per bottle, or post free.

STEPHEN SMITH & CO.,
BOW, LONDON.

marketed under the brand name Heroin, was prominent among the point-of-sale displays at chemists' counters. Yet the most problematic drug, as it had been for the early followers of Islam, was alcohol. Intoxication in its traditional forms had been a constant thread through Western life since antiquity; but modern chemistry and commerce had combined to offer unbridled access to alcohol and other drugs in ever more potent forms, in ways that many believed were incompatible with the civilized society of the future.

This conflict between civilization and desire was explored at the time by the German sociologist Max Weber, whose classic work *The Protestant Ethic and the Spirit of Capitalism* first appeared in essay form in 1904. The modern West, he argued, was driven by an ethic that valorized the creation of wealth but was uncomfortable with spending it. Money was to be invested sensibly or spent modestly, rather than squandered on impulse; the ability to defer gratification was essential to social functioning, and held destructive passions in check. It was a culture, therefore, intensely concerned with the policing and management of pleasure. Alcohol, and intoxication in general, was a clear and present danger: an offence against the sovereign spirit of reason and an invitation to disorder and self-destructiveness. Yet the Protestant ethic was also producing what Weber called a 'disenchantment of the world': a society in harness to the demands of mass production, creating lives leached of pleasure and mystery, deprived of the possibility of escape or transcendence. These social contradictions were projected onto dangerous objects of consumption, such as drugs and alcohol, creating taboos around their use.



The twentieth-century prohibition of drugs, like that of alcohol under Islam, was succeeded by a culture of substitution. New substances nudged drug use away from pleasure and towards medical need. Pharmaceuticals, from aspirin to barbiturates, took over the role of opium, while amphetamines plugged the gap left by cocaine. Alcohol, after the collapse of Prohibition in the USA, was tamed by licensing and regulation. But with the consumer boom and youth counterculture of the 1960s, the mass demand for chemical re-enchantment generated yet another social form: the drug subculture.

Like drug prohibitions, drug subcultures are not a modern invention; nor do they require a legal ban before they emerge. The buzzing social network that revolved around coffee houses in eighteenth-century London, for example, was regarded by both insiders and outsiders as a drug subculture. It originated with a small but influential group whose preference for an exotic stimulant provided the motive to hive themselves

Below Aspirin, launched by Bayer in 1899, offered a less potent and non-euphoric alternative to opiates as an everyday painkiller.







Preceding pages: In the eighteenth-century British coffee house, the new stimulant drink was associated with a distinctive subculture of smoking, pamphleteering, gossip and vigorous political debate.

off from conventional society and create a new and exclusive space where they could enjoy like-minded company. Formed in opposition to the mainstream tavern culture of the day, it proliferated through an 'in-crowd' of initiates and generated its own world of stimulant-fuelled literature, subversive humour and progressive political opinions.

Traditional societies are equally capable of generating drug subcultures, particularly in times of cultural dislocation. During the 1860s, for example, as the traditional Native American way of life was entering its tragic and terminal decline, a 'peyote cult' spread from its traditional territory in Mexico through the tribes of the northern plains; some, but not all, tribal members adopted and developed a ritual based around the vision-inducing cactus. The 'cult', a synthesis of indigenous practices with aspects of the Christian message, offered an alternative to the harsh



Opposite and below: An official of the Santo Daime church (opposite) brings sacramental Daime, or ayahuasca tea, to a ceremony in Brazil. During the powerful intoxication it produces, the participants pray, dance and sing hymns that were transmitted to the church's founder, Raimundo Irineu Serra, during his Daime trances (below right).

choice between persisting with a self-destructive warrior ethic and being absorbed into an oppressive foreign culture. It survived official persecution to become a force for stability and peace among the displaced tribes; it eventually became established as the Native American Church, and still thrives today.

The coexistence of modern and traditional cultures can also generate innovative subcultures of drug use such as the Santo Daime churches of modern Brazil, which combine Catholic forms of worship with the ritual consumption of the DMT-containing jungle brew ayahuasca. Santo Daime emerged in the 1930s from the experiences of a black rubber-tapper named Raimundo Irineu Serra who encountered ayahuasca while working among indigenous Amazon groups. His version of its rituals, based around hymns that he channelled during his visions, spread rapidly



Below: Ecstasy users hugging at a rave in Baltimore, Maryland, USA, in 2000. The sensitive and empathic effects of MDMA encouraged public behaviour that was quite different from the established norms of concerts and dance events where alcohol had typically been the dominant drug.

through the working neighbourhoods of cities such as Rio de Janeiro and São Paulo, where congregations now number in the tens of thousands. For the urban poor, whose parents or grandparents belonged to an indigenous jungle culture of which they themselves have no experience, Santo Daime enriches the Catholic faith with a distinctively Brazilian syncretism of African and Amerindian influences.



Drug subcultures, as in these cases, emerge as a response either to new drugs or to new social situations. Over the last half century, both of these factors have been continuously in play, and illicit drug use has proliferated across the globe. Although this subcultural explosion is unprecedented in its massive scale, global reach and aura of modernity,



it nevertheless echoes the long-established patterns through which other cultures have assimilated drugs into their ways of life.

During the early 1980s, a new 'designer drug' emerged from a research laboratory in California and became the subject of unofficial trials among experimentally minded members of the state's large psychotherapeutic community. Word rapidly spread that methyldioxymethamphetamine, or MDMA, was a substance of exceptional therapeutic promise, and possibly even transformative potential for society as a whole. Subjects experienced waves of euphoria that made them emotionally receptive, tactile and uninhibited; in this state, they proved remarkably open to analysis and acutely empathic towards the feelings of others.

Within months, MDMA – still, at this point, a legal compound – had begun to appear alongside cannabis and cocaine on the streets, at parties and particularly in the nightclubs and discos of Texas, Chicago and New York. Its original marketers had attempted to christen it 'empathy', but 'ecstasy' emerged as a more commercial street name. Its distinctive spectrum of effects – stimulant, euphoric, empathic – made it peculiarly conducive to dancing *en masse*, immersed in a collective experience of brimming energy, warmth and joy. As the drug spread, so did the demand for a new type of public space. Warehouse and basement clubs with state-of-the-art sound systems and lightshows, previously the domain of gay or black subcultures, sprang up in cities across the USA and Europe; musicians and DJs surfed the chemical wave with rushing, space-age sonics and extended, hypnotic mixes. Since ecstasy was best complemented with water rather than alcohol, alcohol-licensed venues became irrelevant, and youth culture, together with its high disposable income, began to migrate away from established nightspots in city centres and into derelict industrial spaces on the edge of town, or the open fields beyond, where they could dance until dawn, or even through the whole weekend.

The intensity of the shared ecstasy experience bound its users with a powerful, initiatic sense of group identity, and expressed itself in immediately distinctive visual, conceptual and musical forms. Although much of the iconography it generated was futuristic – digital, robotic beats and dayglo plastics, with the ecstasy pill hymned as the ticket to a space voyage or a pass-key to a higher evolutionary network – many inside the culture were equally attracted by the idea that they were returning to tribal or shamanic forms of intoxication, where ecstatic dancing generated a primal engagement with nature. Imagery drawn from the DMT-inspired cultures of the Amazon proliferated across posters and CD packaging, clothing and body art, and ethnically-inflected dance mixes spawned new

Opposite: Dayglo, pulsating stage lighting and glowsticks combine to hallucinatory effect at an ecstasy-fuelled dance party in Melbourne, Australia, in 2007.

trance and tribal subgenres. Some underground dance collectives took to the road, travelling across Europe in a search for traditional nomadic lifeways, or migrating to the non-stop party circuits of Ibiza, Goa or Thailand. To the cultural mainstream, the phenomenon appeared terrifying: a cult that was consuming their youth in a reckless and hedonistic 'dance of death'. To its initiates, it was closer to the universal solvent represented by kava in the Pacific: at once a badge of identity, a soul medicine and a secular sacrament.

But however transcendent the experience at the heart of the ecstasy culture, it was still unfolding within the embrace of a consumer society, and as a leisure activity for those who could afford it. From the beginning, ecstasy pills had been far more expensive than comparable recreational drugs such as cannabis, amphetamines or LSD; now the big clubs were becoming vast corporate ventures, with stadium-scale sound and light shows and ticket prices to match. Top DJs were commanding staggering fees and chartering private jets to ferry them between events; designer bags and dayglo clubwear were making membership of the new tribe an expensive business while diffusing its styles far beyond the consumers of the substance. As it swept through mainstream fashion, music and media, 'e culture' exposed the tensions between the consumer ethos and wider moral messaging: the news media treated the drug as a social and medical problem, even as representations of the experience it offered were shimmering and pulsing across billboards and shop windows, televisions and computer screens. Like betel, ecstasy had become the foundation for an exuberant material culture whose scale eclipsed the drug itself.

The cultural journey of MDMA could not have been predicted either by its advocates or its enemies, not least because it came to embody so many contradictory meanings at the same time. To its initiates, it was the trigger for a chemical carnival, a form of mass intoxication without precedent; less visibly, it also developed private and therapeutic uses closer to those envisaged by its original developers. In official public discourse, it was a social evil, the spectacle of a generation prepared to risk liver damage, mental illness and even death for a night of self-indulgence; but it was also the emblem of a futuristic hedonism that insinuated itself across the youth-dominated worlds of advertising, media and commerce. It was an instantly defining symbol of modernity; but it nevertheless retraced and reinvented forms of drug culture only distantly remembered. The patterns made by drugs in human cultures may be endlessly varied, but all are perhaps woven from the same fabric.

Notes and Further Reading

Chapter 1: A Universal Impulse

The Evolution of Drugs

Donald E. Brown's *Human Universals* (1981) has been widely referenced; his list of universals is discussed and reproduced in Steven Pinker's *The Blank Slate* (2003). There are some cultures (the most typically cited are Inuit groups) who have no intoxicating plants among their indigenous flora, but use techniques such as fasting and sleep deprivation to alter consciousness, and adopt foreign drugs such as alcohol and tobacco when they become available.

Gustav Schenk's *The Book of Poisons* (1956) remains an accessible introduction to the spectrum of plant poisons and intoxicants. Studies in the coevolution of plants and animals were pioneered by Paul Ehrlich and Peter Raven in their paper 'Butterflies and Plants: A study in coevolution', *Evolution* 18 (1964), pp. 586–608. The theory that plant drugs (specifically mushrooms) were the original spur to human brain development and language is advanced by Terence McKenna in *Food of the Gods* (1992).

Animal Intoxication

The development of psychoactive alkaloids is discussed in Ronald Siegel's *Intoxication: Life in pursuit of artificial paradise* (1989), a rich repository of information on drug experiments on animals. Additional zoological observations are reported in Giorgio Samorini's *Animals and Psychedelics* (2000).

The Rat Park experiments were published as B. K. Alexander, B. L. Beyerstein, P. F. Hadaway and R. B. Coombs, 'The effect of early and later colony housing on morphine ingestion in rats', *Pharmacology, Biochemistry and Behaviour* 15 (1981), pp. 571–76. The experiments are widely discussed, for example in Lauren Slater's *Opening Skinner's Box* (2004). Bruce Alexander expands the conclusions of Rat Park in *The Globalisation of Addiction* (2008).

Drugs and Shamanism

On the prehistory, history and ethnography of DMT-containing snuffs in South America, see Constantino Manuel Torres and David B. Repke, *Anadenanthera: Visionary plant of ancient South America* (2006).

European archaeology presents a very different picture: intoxicating plants such as dried poppy capsules are found at burial sites dating back to 4000 BC, but there are no unambiguous drug artefacts or utensils present until a much later date. The origins of Old World drug use are discussed by Richard Rudgley in *The Alchemy of Culture* (1993), *Lost Civilisations of the Stone Age* (1998) and elsewhere. The earliest plausible European drug artefacts are Middle Neolithic pottery rings usually identified as 'vase supports', which Andrew Sherratt proposed as braziers for opium-smoke inhalation in his paper 'Sacred and Profane Substances: The ritual use of narcotics in late Neolithic Europe', in *Sacred and Profane: Proceedings of a conference on archaeology, ritual and religion*, Oxford, 1989, Paul Garwood, ed., Oxford University Committee for Archaeology monograph 32 (1991), pp. 50–64.

Richard L. Burger's illustrated study *Chavín and the Origins of Andean Civilisation* (1992) presents the archaeological evidence for hallucinogens in Chavín and its surrounding cultures. I have added some speculations on their ritual uses in my article 'Enter the Jaguar: Psychedelic temple cults of ancient Peru', *Strange Attractor Journal* 2 (2005), pp. 17–34, also archived at <http://mikejay.net/articles/>.

Gerardo Reichel-Dolmatoff's research is recounted in *The Shaman and the Jaguar* (1975); he also published extensively on the ayahuasca art and cosmology of other Tukanoan groups in such books as *Shamanism and Art of the Eastern Tukanoan Indians* (1987) and *Beyond the Milky Way: Hallucinatory images of the Tukano Indians* (1978), both heavily illustrated.

The meaning of animal–human transformations in Amazon cultures is brilliantly discussed by Eduardo Viveiros de Castro in his article 'Cosmological Deixis and Amerindian Perspectivism', *Journal of the Royal Anthropological Institute* 4/3 (1998a), pp. 469–88, and his book *From the Enemy's Point of View: Humanity and divinity in an Amazonian society* (1992).

Drugs and Culture

Howard S. Becker's paper 'Becoming a Marihuana User' first appeared in the *American Journal of Sociology* 59 (November 1953), pp. 235–42. For more on the social history of drugs in 1950s America, see Jill Jonnes, *Hep-Cats, Narcs and Pipe Dreams* (1996).

The Culture of Kava

Vincent Lebot, Mark Merlin and Lamont Lindstrom's *Kava: The Pacific elixir* (1992) is an excellent single-volume account of the botany, history, ethnography and economics of kava. Changes in its cultural sanction and use are examined by Ron Brunton in *The Abandoned Narcotic: Kava and Cultural Instability in Melanesia* (1980). The first Western examination of its use was by the German pharmacologist Louis Lewin in his classic drug study

Phantastica: Die betäubenden und erregenden Genussmittel (1924), tr. as *Phantastica: Narcotic and stimulating drugs* (1931).

The Culture of Betel

The anthropology of consumption and luxury is explored in such influential works as Mary Douglas and Baron Isherwood's *The World of Goods: Towards an anthropology of consumption* (1979); Jack Goody's *Cooking, Cuisine and Class* (1982) and Pierre Bordieu's *Distinction: A social critique of the judgement of taste* (1984). Compared to food, however, the consumption of drugs has been relatively little studied from an anthropological perspective; a notable exception is the essay collection *Consuming Habits: Global and historical perspectives on how cultures define drugs*, Jordan Goodman, Paul Lovejoy and Andrew Sherratt, eds (1995; second edition 2007). It includes Stephen Hugh-Jones's paper 'Coca, Beers, Cigars and Yagé: Meals and anti-meals in an Amerindian community', pp. 46–64, which considers the roles of food and drugs in defining male and female social domains, and Eric Hirsch's 'Betel-nut "Bisnis" and Cosmology: A view from Papua New Guinea', pp. 86–97.

Dawn F. Rooney's *Betel Chewing Traditions in South-East Asia* (1993) is an attractive illustrated survey of the history and material culture surrounding betel; see also the film *Betelnut 'Bisnis': A story from Papua New Guinea* (2004), produced by SBS Independent in Australia in association with the National Film Institute of Papua New Guinea.

Drug Prohibitions

On alcohol in Roman antiquity, see *In Vino Veritas*, Oswyn Murray and Manuela Tecusan, eds, (1995); on alcohol and Islam, see Andrew Sherratt, 'Alcohol and its Alternatives', in *Consuming Habits*, pp. 11–45; and Mohammed Ali Albar, *The Problem of Alcohol and its Solution in Islam* (1986).

On the cultural dynamics underlying the prohibition of drugs in the modern West, see Axel Klein, *Drugs and the World* (2008). For a polemical extension of Max Weber's ideas into modern attitudes to drugs, see Thomas Szasz, *Ceremonial Chemistry: The ritual persecution of drugs, addicts and pushers* (1974).

Drug Subcultures

On the eighteenth-century London coffee house, see Markman Ellis, *The Coffee-House: A cultural history* (2004); on the wider picture, see Woodruff Smith's article 'From Coffeehouse to Parlour: The consumption of coffee, tea and sugar in north-western Europe in the seventeenth and eighteenth centuries', in *Consuming Habits*, pp. 142–157; and Wolfgang Schivelbusch's *Das Paradies, der Geschmack und die Vernunft: eine*

Geschichte der Genussmittel (1980) tr. David Jacobsen as *Tastes of Paradise* (1992). On the peyote cult, see Weston La Barre, *The Peyote Cult* (1959) and Omer C. Stewart, *Peyote Religion: A history* (1987).

For a sociological survey of the ayahuasca churches of modern Brazil, see Andrew Dawson, *New Era: New Religions: Religious transformations in contemporary Brazil* (2007); for a positive first-person account, Alex Polari de Alvergo, *Forest of Visions: Ayahuasca, Amazonian spirituality and the Santo Daime* (1999); on Brazil's other main ayahuasca church, the União do Vegetal, see Anthony Richard Henman, *Ayahuasca Use in a Religious Context* (1985), archived at www.erowid.org.

The Cultures of Ecstasy

On the emergence of ecstasy, see Matthew Collin, *Altered State* (1997); on the effect of ecstasy on mainstream consumer culture, Jim Carey's article 'Recreational Drug Wars: Alcohol versus Ecstasy', in *Ecstasy Reconsidered*, Nicolas Saunders, ed. (1997), pp. 20–27.

Chapter 2: From Apothecary to Laboratory

What Is A Drug?

On the origin of 'drug' as a pejorative term see John Parascandola, 'The Drug Habit: The association of the word 'drug' with abuse in American history' in *Drugs and Narcotics in History*, Roy Porter and Mikuláš Teich, eds (1995), pp. 156–67.

Drugs in Antiquity

On the role of drugs in classical antiquity, see Vivian Nutton, *Ancient Medicine* (2001); on Dioscorides, John Riddle, *Dioscorides on Pharmacy and Medicine* (1985). The *Materia medica* is published in various modern scholarly editions; one of the most accessible is Robert T. Gunther, ed., *The Greek Herbal of Dioscorides* (1934).

Renaissance Herbals

The early modern herbal is the subject of Agnes Arber's *Herbals: Their Origin and Evolution 1470–1670* (1912) and Frank J. Anderson's *An Illustrated History of the Herbals* (1977).

Witches and Flying Ointments

Narcotic Plants of the Old World (1979), edited by Hedwig Schleiffer, is a useful compendium of early texts on nightshades and 'flying ointments'. Due to nightshades' toxic and amnesiac effects, first-person accounts of