CHAPTER 2

Historical and Social Context of Psychoactive Substance Use Disorders

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Historical and social factors are key to the understanding of addictive disorders. These factors affect the rates of addictive disorders in the community, the types of substances abused, the characteristics of abusive users, the course of these disorders, and the efficacy of treatment. Knowledge of these background features helps in understanding the genesis of these disorders, their treatment outcome, and preventive approaches.

Psychoactive substances subserve several human functions that can enhance both individual and social existence. On the individual level, desirable ends include the following: relief of adverse mental and emotional states (e.g., anticipatory anxiety before battle and social phobia at a party), relief of physical symptoms (e.g., pain and diarrhea), stimulation to function despite fatigue or boredom, and "time-out" from day-to-day existence through altered states of consciousness. Socially, alcohol and drugs are used in numerous rituals and ceremonies, from alcohol in Jewish Passover rites and the Roman Catholic Mass, to peyote in the Native American Church and the serving of opium at certain Hindu marriages. To a certain extent, the history of human civilization parallels the development of psychoactive substances (Westermeyer, 1999).

Paradoxically, these substances that bless and benefit our existence can also torment and decivilize us. Individuals, societies, and cultures began learning this disturbing truth millennia ago. We continue to rediscover this harsh reality today and will do so in the future, as though each new generation must

learn afresh for itself. As our societies become more complex, so too do our psychoactive substances, our means of consuming them, and the problems associated with them. Preventive and treatment efforts, also age-old and wrought at great cost, are our forebears' gifts to us for dealing with psychoactive substance use gone astray (Anawalt & Berdan, 1992).

HISTORY AND ORIGINS

Prehistory

Methods for the study of psychoactive substance use disorders through time and space include the archaeological record, anthropological studies of preliterate societies, and the historical record. Archaeological data document the importance of alcohol commerce in late prehistorical and early historical times, both in the Mediterranean (where wine vessels have been discovered in numerous shipwrecks) and in China (where wine vessels have been found in burial sites). Poppy seed caches have been recorded in a prehistoric site in northern Turkey. Incised poppy capsules have been noted in the prehistoric headdresses of Cretan goddesses or priestesses, indicating an early awareness of opium harvest methods. Availability of carbohydrate in excess of dietary needs, fostered by neolithic farming technology and animal husbandry, permitted sporadic cases of alcohol abuse (Westermeyer, 1999).

Anthropological studies of preliterate societies have shown the almost universal use of psychoactive substances. Tribal and peasant societies of North and South America focused on the development of stimulant drugs (e.g., coca leaf, tobacco leaf, and coffee bean) and numerous hallucinogenic drugs (e.g., peyote). They used hallucinogens for ritual purposes and stimulant drugs for secular purposes, such as hard labor or long hunts. New World peoples discovered diverse modes of administration, such as chewing, nasal insufflation or "snuffing," pulmonary inhalation or "smoking," and rectal clysis (DuToit, 1977). African and Middle Eastern ethnic groups produced a smaller number of stimulants, such as qat, and hallucinogens, such as cannabis (Kennedy, Teague, & Fairbanks, 1980). Groups across Africa and the Eurasian land mass obtained alcohol from numerous sources, such as honey, grains, tubers, fruits, and mammalian milk. Certain drugs were also used across vast distances, such as opium across Asia and the stimulant betel nut from South Asia to Oceania. Old World peoples primarily consumed drugs by ingestion prior to Columbus's travel to the New World.

Early History

Historical records of alcohol, opium, and other psychoactive substances appear with the earliest Egyptian and Chinese writings. Opium was described as an

ingested medication in these first documents, especially for medicinal purposes. Mayan, Aztec, and Incan statues and glyphs indicated drug use for ritual reasons (Furst, 1972). Medieval accounts recorded traditional alcohol and drug use. Travelers of that era often viewed use patterns in other areas as unusual, aberrant, or problematic; examples include reports of Scandinavian "beserker" drinkers by the English and reports by Crusaders of Islamic military units or "assassins" intoxicated on cannabis. Along with animal sacrifice and the serving of meat, the provision of alcohol, betel, opium, tobacco, or other psychoactive substances came to have cultural, ritual, or religious symbolism, including hospitality toward guests (Smith, 1965). Affiliation with specific ethnic groups, social classes, sects, and castes was associated with consumption of specific psychoactive substances. For example, one group in India consumed alcohol but not cannabis, whereas an adjacent group consumed cannabis but not alcohol (Carstairs, 1954). Altered patterns of psychoactive use have signaled other, more fundamental cultural changes (Caetano, 1987). Religious identity could be tied to alcohol or drug consumption. For example, wine has been a traditional aspect of Jewish, Catholic, and certain other Christian rituals and ceremonies, whereas some Islamic, Hindu, Buddhist, and fundamentalist Christian sects prohibit alcohol drinking. In addition to distinguishing people from one another, substance use may serve to maintain cooperation and communication across ethnic groups and social classes, from Africa (Wolcott, 1974) to Bolivia (Heath, 1971).

Cultural and Social Change

In recent centuries, political, commercial, and technical advances have influenced the types, supply, cost, and availability of psychoactive substances, along with modes of administration (Westermeyer, 1987). International commerce, built on cheaper and more efficient transportation, and increasing income have fostered drug production and distribution. Increasing disposable income has resulted in greater recreational intoxication (Caetano, Suzman, Rosen, & Voorhees-Rosen, 1983). Development of parenteral injection for medical purposes was readily adapted to recreational drug self-administration in the mid-1800s, within several years of its invention. Purification and modification of plant compounds (e.g., cocaine from the coca leaf, morphine and heroin from opium, and hashish oil from the cannabis plant) produced substances that were both more potent and more easily smuggled and sold illicitly. Laboratory synthesis has produced drugs that closely mimic naturally occurring substances (e.g., the stimulant amphetamines, the sedative barbiturates and benzodiazepines, the opioid fentanyl, and the hallucinogen lysergic acid) that are more potent and often cheaper than purified plant compounds.

Historical and cultural factors may theoretically affect the pharmacokinetics and pharmacodynamics of psychoactive substance, just as the pharma-

cology of these substances may affect their historical and traditional use. A case in point is the flushing reaction observed among a greater-than-expected number of Asians and Native Americans (but neither universal in these peoples, nor limited to them). Absence of alcohol use among the northern Asian peoples who subsequently peopled much of East Asia and the Americas is a likely explanation, but the exact reason is unknown. The flushing reaction associated with alcohol (Johnson & Nagoshi, 1990) has been offered as a reason for two opposite phenomena:

1. The low rates of alcoholism among Asian peoples, who presumably find the reaction aversive and hence drink little—although rates are increasing across much of Asia (Ohmori, Koyama, et al., 1986).
2. The high rates of alcoholism among certain Native American groups, who presumably must "drink through" their flushing reaction to experience other alcohol effects.

Flushing may be more or less desirable, depending upon how the culture values this biological effect. Among many East and Southeast Asian peoples influenced by Buddhist precepts, flushing is viewed as the emergence of cupidity or rage, with implied loss of emotional control. Modal differences in alcohol metabolism have also been observed among ethnic groups, and these differences support arguments in favor of biological causation. However, the intraethnic differences in alcohol metabolism greatly exceed the interethnic differences (Fenna, Mix, Schaeffer, & Gilbert, 1971). Despite some minimal pharmacokinetic differences among people of different races, the observed differences appear to be more due to pharmacodynamics; that is, the influence of people vis-à-vis the drug (i.e., their traditions, taboos, expectations, and patterns of use) appears to exert greater influence than the drug vis-à-vis the people (e.g., rates of absorption and catabolism and flushing reactions). Pharmacodynamic factors related to culture and pharmacokinetic factors related to biological inheritance and environmental influences probably both play roles in the individual's experience with psychoactive substances.

As psychoactive substance use developed into substance abuse in many advanced civilizations, social and cultural means evolved to control usage. One method was law and law enforcement. Aztecs utilized this method in pre-Columbian times to limit the frequency and amount of drinking (Anawalt & Berdan, 1992). Later, in the post-Columbian period, England countered its "gin plague" with a tax on imported alcohol-containing beverages (Thurn, 1978), and its later "opium epidemic" with prescribing laws (Kramer, 1979). Another method has been religious stricture. Perhaps the first organized religion to prescribe abstinence from alcohol was Hinduism. Early Buddhist leaders counseled abstinence from alcohol as a means of quitting earthly bondage to achieve contentment in this life and eternal nirvana after death. Islam became the third

great religion to adopt abstinence from alcohol, reportedly when a town was sacked as a result of a drunken nighttime guard. The gin plague in England spawned several abstinence-oriented Christian sects, despite the earlier status of wine as a Christian sacramental substance (Johnson & Westermeyer, 2000). The Church of Jesus Christ of Latter-Day Saints (the group popularly known as the Mormons) forbids any use of psychoactive substances, including caffeine and nicotine.

In addition to religion as a preventive measure, religion has also served as a therapy for psychoactive substance abuse. Native Americans and Latin Americans, plagued with high rates of alcoholism, have joined fundamentalist Christian sects as a means of garnering social support while resisting peer pressures to drink (Mariz, 1991). Many Native Americans have joined the Native American Church, in which peyote is a sacramental substance but alcohol is proscribed (Albaugh & Anderson, 1974).

Patterns of Psychoactive Substance Use

Traditional patterns of psychoactive substance use in most societies were episodic, coming at times of personal celebrations (e.g., birth and marriage), rituals (e.g., arrivals, departures, and changes in status), and seasonal celebrations (e.g., harvest and New Year). Exceptions to this pattern were daily or at least occasional use of alcohol as a foodstuff and use of various stimulants (e.g., betel-areca, tea and coffee, and coca leaf) in association with long, hard labor (e.g., paddy rice or taro farming and silver mining). Daily beer or wine drinking was limited to Europe, especially the para-Mediterranean wine countries and central grain-beer countries. Such daily or "titer" use is not without its problems, even when socially sanctioned. Hepatic cirrhosis and other organ damage (e.g., to brain, bone marrow, neuromuscular system, and pancreas) may result from long-term, daily use of more than 2–4 ounces of alcohol, depending on body weight (Baldwin, 1977). Daily use of stimulants, especially if heavy or addictive, can lead to biomedical or psychosocial problems, such as oral cancers in the case of betel-areca chewing (Ahluwalia & Ponnampalam, 1968) or psychobehavioral changes in the case of coca leaf chewing (Negrete, 1978).

Socially sanctioned, episodic psychoactive substance use may involve heavy use, with marked intoxication or drunkenness (Bunzel, 1940). In a low-technology environment, this pattern may cause few problems, although psychotomimetic drugs such as cannabis can cause toxic psychosis (Chopra & Smith, 1974). In a high-technology environment, with modern methods of transportation and industrial machinery, intoxication even at mild traditional levels may be life threatening (Stull, 1972). Binge-type alcohol problems include delirium tremens, fights, sexually transmitted disease, and falls.

Among other consequence of technology and advanced civilization are widespread substance abuse epidemics, or long-lasting endemics. In the pre-

Columbian era, sporadic cases of acute and chronic substance abuse problems had been known for at least a millennium, and probably longer. However, relatively sudden, massive substance abuse increases appeared early in the post-Columbian era. One of these was the English gin epidemic or gin plague (Thurn, 1978), which began in the late 1600s and continued for several decades. Transatlantic intercontinental trade and the beginnings of the Industrial Revolution were the immediate causes. At about the same time, opium epidemics broke out in several Asian countries. The origins of these epidemics were somewhat different. The post-Columbian spread of tobacco smoking to Asia introduced the inhabitants to inhalation as a new mode of drug administration. This new route of administration applied to an old drug, opium, produced a combination more addictive than the old opium-eating tradition. Governmental pressures against tobacco smoking (which was viewed as wasteful and associated with seditious elements) probably accelerated the popularity of opium smoking. Subsequently, European colonialism and international trade contributed to the import of Indian opium to several East Asian countries. Opium epidemics also occurred somewhat later in Europe and North America (Kramer, 1979). Although East Asian countries have largely controlled their opium problems, opiate endemics continue in Southeast and South Asia, the Middle East, parts of Europe, and North America.

HISTORICAL MODELS OF SUBSTANCE USE

Although ceremonial alcohol use is widely appreciated, the ceremonial use of drugs is not so well known. Peyote buttons are a sacramental substance in the Native American Church (Bergman, 1971). Hallucinogen use for religious purposes still occurs among many South American ethnic groups (DuToit, 1977). Supernatural sanctions, both prescribing use within certain bounds and proscribing use outside these bounds, inveigh against abuse of these substances by devotees. Thus, ceremonial or religious use tends to be relatively safe. Examples of abuse do occur, however, such as the occasional Catholic priest who becomes alcoholic, beginning with abuse of sacramental wine.

Secular but social use of alcohol and drugs occurs in numerous quasi-ritual contexts. Drinking may occur at annual events, such as New Year or harvest ceremonies (e.g., Thanksgiving in the United States). Weddings, births, funerals, and other family rituals are occasions for alcohol or drug use in many cultures. Marking of friendships, business arrangements, or intergroup competitions can virtually require substance use in some groups. For example, the *dutsen* in German-speaking Central Europe is a brief ritual in which friends or associates agree to address each other by the informal *du* ("thou") rather than by the formal *Sie* ("you"). Participants, holding an alcoholic beverage in their right hands, link their right arms, toast each other, and drink with arms linked.

The use of betel-areca, pulque or cactus beer, coca leaf, and other intoxicants has accompanied group work tasks, such as harvests or community *corvée* obligations (e.g., maintaining roads, bridges, and irrigation ditches). Although substance use may be heavy at ceremonial events, even involving intoxication, the social control of the group over dosage and the brief duration of use augurs against chronic abuse (although problems related to acute abuse may occur). Problems can develop if the group's central rationale for existence rests on substance use (e.g., habitués of opium dens, taverns, and cocktail lounges). In these latter instances, group norms for alcohol or drug use may foster substance abuse rather than prevent it (Dumont, 1967).

Medicinal reasons for substance use have prevailed in one place or another with virtually all psychoactive substances, including alcohol, opium, cannabis, tobacco, the stimulants, and the hallucinogens (Hill, 1990). Insofar as substances are prescribed or administered solely by healers or physicians, abuse is rare or absent. For example, the prescribing of oral opium by Chinese physicians over many centuries had few or no adverse social consequences. On the other hand, self-prescribing for medicinal purposes carries risks. For example, certain Northern Europeans, Southeast Asians, and others use alcohol for insomnia, colds, pain, and other maladies—a practice that can and does lead to chronic alcohol abuse. Self-prescribing of opium by poppy farmers similarly antedates opium addiction in a majority of cases (Westermeyer, 1982). Thus, professional control over medicinal use has been relatively benign, whereas individual control over medicinal use of psychoactive compounds has often been problematic.

Dietary use of substances falls into two general categories: (1) the use of alcohol as a source of calories and (2) the use of cannabis and other herbal intoxicants to enhance taste. Fermentation of grains, tubers, and fruits into alcohol has been a convenient way of storing calories that would otherwise deteriorate. Unique tastes and eating experiences associated with beverage alcohol (e.g., various wines) have further fostered their use, especially at ritual, ceremonial, or social meals. Cannabis has also been used from the Middle East to the Malay Archipelago as a means of enhancing soups, teas, pastries, and other sweets. Opium and other substances have been served at South Asian ceremonies (e.g., weddings) as a postprandial "dessert."

Recreational use can presumably occur in either social or individual settings. Much substance use today occurs in recreational or "party" settings that have some psychosocial rationales (e.g., social "time-out" and meeting friends) but minimal or no ritual or ceremonial aspects. So-called recreational substance use in these social contexts may in fact be quasi-medicinal (i.e., to reduce symptoms associated with social phobia, low self-esteem, boredom, or chronic dysphoria). Even solitary psychoactive substance use can be recreational (i.e., to enhance an enjoyable event) or medicinal (i.e., to relieve loneliness, insomnia, or pain).

Other purposes exist but are not as widespread as those described earlier. In the 19th century, young European women took belladonna before social events in order to give themselves a ruddy, blushing complexion. A particular substance or pattern of use can represent a social or ethnic identity (Carstairs, 1954). Children may inhale household or industrial solvents as a means of mimicking adult intoxication (Kaufman, 1973). Intoxication may simply serve as a means for continuing social behaviors, such as fights or homicide, that existed previously without intoxication (Levy & Kunitz, 1969). Particular patterns of alcohol–drug production or use may represent rebellion by disenfranchised groups (Connell, 1961; Lurie, 1970).

HISTORY OF SUBSTANCE ABUSE TREATMENT

Historical and literary accounts have long documented individual attempts to draw back from the abyss of alcohol and drug abuse. At various times autobiographical, biographical, journalistic, and anecdotal, these descriptions list centuries-old recovery methods still employed today in lay and professional settings. Modalities include gradual decrease in dosage; symptomatic use of nonaddicting medications; isolation from the substance; relocation away from fellow users; religious conversion; group support; asylum in a supportive and nondemanding environment; and treatment with a variety of shamanistic, spiritual, dietary, herbal, and medicinal methods (Westermeyer, 1998).

Beginning with Galenic medicine, a key strategy has been to identify certain syndromes as having their etiology in alcohol and drug abuse. Once the etiology is determined, the specific treatment (i.e., cessation of substance abuse) can be prescribed. Examples of such substance-associated disorders include delirium tremens (i.e., alcohol and sedative withdrawal), withdrawal seizures, morphinism (i.e., opioid withdrawal), cannabis-induced acute psychosis, stimulant psychosis, and various fetal effects, such as fetal alcohol syndrome. Thus, description of pathophysiological and psychopathological processes, together with diagnostic labeling, has been a crucial historical step in the development of modern assessment and treatment for substance use disorders (Rodin, 1981).

Modern treatment approaches have their origins in methods developed by Benjamin Rush, a physician from the Revolutionary War era, who is often credited as the father of American psychiatry. Rush developed a categorization of drinkers and alcoholics. He further prescribed treatment that consisted of a period of "asylum" from responsibilities and from access to alcohol, to take place in a family-like setting, in a milieu of respect, consideration, and social support. As Rush's concepts were extrapolated to the growing American society, large state-supported institutions were developed—although some smaller,

private asylums or sanitoria for alcoholics have persisted up to the current time (Johnson & Westermeyer, 2000).

Medical treatments can interact constructively with cultural factors. For example, taking disulfiram can serve as an excuse for Native American alcoholics to resist peer pressures to drink (Savard, 1968). Ethnic similarity between patients and staff appears to be more critical to the treatment process than in other medical or psychiatric conditions (Shore & Von Fumetti, 1972). Strong ethnic affiliation may be associated with more optimal treatment outcomes, although ethnic affiliation may change as a result of treatment (Westermeyer & Lang, 1975).

On a federal level, treatment for drug abuse (largely opiate dependence) began with the Harrison Act of 1914, which outlawed nonmedical use of opiate drugs. For a time, heroin maintenance was prescribed and dispensed in several clinics around the country. Although research studies were not conducted, case reports from these clinics indicated that many patients were able to resume stable lives while receiving maintenance doses of heroin. These clinics were phased out, largely because of political opposition. Two long-term, prison-like hospitals for opiate addicts were established (one in Kentucky and the other in Texas). Research in these institutions contributed greatly to our understanding of opiate addiction (and alcoholism, which was also studied), but the demonstrated inefficacy of prison treatment led to their demise as treatment facilities. These legal and medical approaches, beginning in 1914, were effective in reducing opiate dependence in the societal mainstream. However, certain occupational, geographical, and ethnic groups continued to use drugs that were made illicit by the Harrison Act. These included seamen, musicians, certain minority groups, and inhabitants of coastal–border areas involved in smuggling (e.g., San Antonio, Texas; Louisiana seaports; San Francisco, California; and New York City).

Following World War II, medical and social leaders were more aware of widespread mental disabilities in the country because of the high rate of psychiatric disorders among inductees and veterans. This led to the establishment of the National Institute of Mental Health (NIMH), which had divisions of alcoholism and drug abuse. By the 1970s, it became apparent that substance use disorders were widely prevalent. Numerous indices of alcohol abuse and alcoholism had been increasing since World War II, including hepatic cirrhosis and violence-related mortality. Endemic abuse of cocaine and opiates exploded into an epidemic in the late 1960s, followed by the appearance of stimulant and hallucinogen abuse. It was evident that the NIMH was not adequately addressing either the alcohol epidemic or the drug epidemic. This led to the formation of the National Institute on Alcohol Abuse and Alcoholism (NIAAA) and the National Institute on Drug Abuse (NIDA), both of which have equal status with the NIMH under the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA). Located within the Department of Health and Human

Services, ADAMHA has fostered the development of substance abuse research, training, clinical services, and prevention. Governmental support for these efforts has come largely from elected officials who have personally experienced psychoactive substance use disorders, either in themselves or in their families. For example, most of the last several American presidents have had a spouse, parent, sibling, offspring, or personal experience with a substance abuse disorder.

SOCIAL AND SELF-HELP MOVEMENTS

Abstinence-oriented social movements first appeared among organized religions (Johnson & Westermeyer, 2000). Certain South Asian sects, arising from early Persian religions and Hinduism, abstained from alcohol over two millennia ago. Buddhist clergy were forbidden to drink alcoholic beverages, and pious Buddhist laity were urged to refrain from drinking, or at least to drink moderately. Early on, Moslems were urged not to drink; tradition has it that Mohammed himself established abstinence for his followers. Abstinence-oriented Christian sects evolved in England and then in Central Europe at about the time of the gin epidemic.

Religiomania has long served as a cure for dipsomania and narcotomania. Opium addicts in Asia have gone to Buddhist monasteries in the hope that worship, meditation, or clerical asceticism would cure them, which it sometimes did (Westermeyer, 1982). Many Latin Americans and Native Americans with high rates of alcoholism have abandoned Catholicism and Anglicanism in favor of abstinence-prescribing fundamentalist Christian sects and the Native American Church (Albaugh & Anderson, 1974; Hippler, 1973). Children raised in these sects are taught the importance of lifelong abstinence from alcohol and other drugs of abuse. Despite this childhood socialization, those leaving these sects as adults can develop substance use disorders. Thus, the effects of various religions in preventing substance abuse disorders appear to persist only as long as one is actively affiliated with the group.

Abstinent societies not tied to specific religions began to appear in the 18th and 19th centuries. Examples include the Anti-Opium Society in China and the Women's Christian Temperance Union in the United States. These groups engaged in political action, public education, social pressure against addiction or alcoholism, and support for abstinence. These led eventually to prohibition movements that sought legal strictures against the production, sale, and/or consumption of psychoactive substances outside religious or medical contexts. In Asia, these movements began against tobacco (which was viewed in the 1600s and 1700s as a slothful habit associated with political sedition) and then later changed to oppose primarily opium. In Northern Europe and the United States, prohibition laws first involved opiates and cannabis but later

expanded to include alcohol. As Moslem peoples emerged from colonial regimes, their nations passed anti-alcohol legislation that ranged from mild strictures for Moslems alone, to harsh measures against all inhabitants of the country.

Numerous self-help groups in the United States were founded during the Depression era. Many more were begun after World War II. These groups involved individuals who banded together to meet their common financial, social, or personal needs (Lieberman & Borman, 1976). Movements of the era differed in several important aspects from earlier abstinence-oriented groups as follows:

- Individuals could remain in their homes, families, and jobs rather than joining a separate sect or going off to an asylum or special group.
- Considerable structure was involved, with specific meetings and phased "step" recovery activities.
- The concept of a recovery process over time was introduced, as distinct from a sudden cure or conversion; this had biological, psychological, social, and spiritual dimensions.
- Organization was kept predominantly atomistic (i.e., autonomous small groups) rather than hierarchical.
- Membership required self-identity as an alcoholic or addict (i.e., supportive or concerned persons were excluded).

Like earlier movements, these self-help groups emphasized the importance of abstinence from psychoactive substance abuse (although tobacco and coffee are notably present at some Alcoholics Anonymous [AA] meetings today), reliance on a superior spiritual force (the "Higher Power"), and social affiliation or "fellowship" for mutual support. AA, perhaps the best known of these groups today, was first established in the United States. It has spread to many other parts of the world over the last 50 years and has served as a model for similar groups whose identity centers on other drugs and even other problems (i.e., Narcotics Anonymous, Cocaine Anonymous, Overeaters Anonymous, Gamblers Anonymous, and Emotions Anonymous [formerly Neurotics Anonymous]). Groups for those personally affected by alcoholism have also appeared, such as Alateen for the teenage offspring of alcoholic parents and Al-Anon for the spouses, parents, and other concerned associates of alcoholic persons. Over the last several years, the Adult Children of Alcoholics and Addicts (ACOAA) movement has also evolved to meet the needs of those distressed or maladaptive adults raised by alcoholic parents. Mothers Against Drunk Drivers (MADD) was originally formed to meet the support needs of parents whose children were killed by drunken auto drivers. MADD has since expanded its activities as a "watchdog" group that follows the records of legislators and judges in regard to alcohol-related legal offenses. The social and cultural com-

position of the self-help group appears to be an important factor in attracting clients and effecting therapeutic outcomes (Jilek-Aal, 1978).

FACTORS AFFECTING ALCOHOL–DRUG EPIDEMICS

Numerous factors contributed to the development of substance abuse "epidemics" or "plagues." One of the first of these, the gin epidemic (which involved other alcohol-containing beverages besides gin) in late 17th- and 18th-century England, was fostered by the following factors:

- English merchant ships returning empty from trips to its colonies loaded on gin, rum, and other alcohol-containing beverages as ballast before returning to England.
- Rum was derived from sugar cane grown with slave labor, and gin was from grains grown with indentured labor. With no import tax, calories of these alcohol-containing beverages were literally cheaper than calories of bread in London.
- The beginnings of the Industrial Revolution gave rise to repressive social conditions and a loss of traditional rural values, fostering widespread drunkenness with inexpensive beverage alcohol.
- Although traditions and social controls existed for the drinking of mead and ale, these traditions and controls did not extend to gin and rum drinking, with the result that daily excessive drinking appeared.

During this period, numerous sequelae of alcoholism were first recognized, including the description of the fetal alcohol syndrome (Rodin, 1981). The gin epidemic raged for several decades, perhaps as long as a century. It eventually receded under such pressures as an import tax on imported alcohol-containing beverages, anti-alcohol propaganda in the literature and art of the day, and evolution of abstinence-oriented Protestant sects for the working classes.

The opium epidemic in many countries of East and Southeast Asia began about the same time as the European alcohol epidemic. Several factors, some similar to the European situation but others different, contributed to the opium epidemic:

- Tobacco smoking was introduced to Asia from the New World; it became a popular pastime in smoking houses that were frequented by the artisans, artists, adventurists, and literati of the day.
- As European and New World concepts and artifacts flooded into Asia, tobacco-smoking houses were viewed as places of cultural change and even political sedition; they were gradually outlawed.

- Opium eating, primarily a medicinal activity that had never been a significant social problem, was combined with this new technology (i.e., drug consumption by volatilization and inhalation); recreational opium smoking subsequently became widespread.
- Political corruption, government inefficiency, and absence of statecraft skills to deal with widespread drug abuse, abetted by the political and economic imperialism of Western colonial powers, led to centuries of widespread opium addiction among various Asian nations. Some countries have reversed the problem in this century (e.g., Japan, Korea, China, and Manchuria); others have not (e.g., Thailand, Laos, Burma, Pakistan, Afghanistan, Iran, and India).

TRENDS IN PROBLEMS ACROSS TIME AND SPACE

The appearance of new drugs (or reappearance of old ones in new forms) exposed social groups to agents against which they had no sociocultural protection or "immunity"; that is, the community or nation had no tradition for problem-free, or at least controlled, use of the substance. Users themselves may not have perceived the actual risks associated with the new psychoactive substance. This situation also occurred when the group was familiar with the substance but in a different form. For example, traditions may exist for wine but not beer or distilled alcohol; pipe smoking may be subject to customs that do not extend to cigarette smoking.

Symbolic aspects of certain drugs or modes of drug administration may displace the issue from psychoactive substance use per se to associated issues of ethnic identity, cultural change, political upheaval, class struggle, or intergenerational conflict (Robbins, 1973). Examples include the following:

- Cannabis and hallucinogen use as antiauthority symbols in the late 1960s and 1970s.
- Alcohol abuse among indigenous peoples (Thompson, 1992).
- Illicit raising of poppy as a cash crop and opium smuggling by ethnic minorities in Asia (Westermeyer, 1982).

As drug use has spread in the last few centuries, drug production and commerce have become important economic resources in many areas. Early examples in the 1800s were the British trading companies in large areas of India, which depended for their wealth on opium sales to China. Numerous backward areas in the world today maintain their participation in national and world markets through their participation in illicit drug production and sales: Afghanistan, Burma, Laos, Mexico, Pakistan, and Thailand in opium and heroin; the Caribbean nations and Mexico in cannabis production and cocaine commerce; and several South and Central American countries in cocaine production and com-

merce. During the 1980s, several states in the United States counted cannabis as a major, albeit illicit, cash crop: North Carolina, Tennessee, Kentucky, Kansas, Nebraska, New Mexico, California, and Hawaii (Culhane, 1989).

Government instability, corruption, or inefficiency can cause or result from drug production, export, and/or smuggling today. Unstable countries in South Asia, the Middle East, Africa, and Latin America have become producers, transshippers, or importers of illicit drugs. Societal breakdown has led to substance abuse in some Moslem countries, contributing to a backlash of Islamic fundamentalism. Likewise, in the United States and Latin America, widespread alcoholism predates the shift to Christian fundamentalism.

Industrialization and technological advances have fostered a redefinition of substance abuse (Stull, 1972). An intoxicated or "hungover" (withdrawing) oxcart driver can effect limited damage, other than to cart, ox, and self. The alcohol- or drug-affected driver of a modern high-speed bus, the captain of a ferry boat, or the pilot of a jet transport can kill scores of people and destroy equipment and material worth millions of dollars. Handicraft artisans under the influence of drugs or alcohol can do little damage, whereas workers in a factory can harm themselves or others, as well as destroying expensive machinery and bringing production to a halt.

Since World War II, and especially since the 1960s, adolescent-onset substance abuse has escalated from rare sporadic cases to a high prevalence in many communities (Cameron, 1968). Several factors appear to have fostered it: widespread parental substance abuse, societal neglect of adolescents, poverty, rapid social changes, family breakdown, and political upheaval. Whatever the cause, the consequences are remarkably similar: undermining of normal adolescent psychosocial development, poor socialization of children to assume adult roles, lack of job skills, emotional immaturity, increased rates of adolescent psychiatric morbidity, and increased adolescent mortality from suicide, accidents, and homicide.

TRENDS IN TREATMENT AND PREVENTION

From the time of Benjamin Rush, two central treatment methods were established, based on the psychiatric treatment methods of the late 1700s: (1) "asylum" in a supportive environment away from drink and companion drinkers and (2) "moral treatment," consisting of a civil, respectful consideration for the recovering person (Johnson & Westermeyer, 2000). Both methods persist today and remain as two standard treatment strategies. They were not and are not inevitably successful. Consequently, other methods have been tried.

One of these methods was the substitution of one drug for another. For example, laudanum (combined alcohol and opiates) was once prescribed for alcoholism. Morphine, and later heroin, was recommended for opium addiction

during the mid-1800s. This approach is not extinct, as exemplified by the frequent recommendation in the 1970s that alcoholics substitute cannabis smoking for alcohol. Currently, methadone is used for chronic opiate addicts who have failed attempts at drug-free treatment. Despite aversive selection factors, methadone maintenance patients tend to do well as long as they comply with treatment.

Detoxification became prevalent in the mid-1900s. Public detoxification facilities, established first in Eastern Europe, spread throughout the world. For many patients, this resource offers an entree into recovery. For others, "revolving door" detoxification may actually produce lifelong institutionalization on the installment plan (Gallant et al., 1973). The problem of the treatment-resistant public inebriate exists today in all parts of the United States.

The so-called Minnesota Model of treatment developed from several sources: a state hospital program (at Wilmar) and a later private program (at Hazelden), supplemented by the first day program for alcoholism (at the Minneapolis Veterans Administration Hospital). The characteristics of this "model" have varied over time as treatment has evolved and changed, and definitions still differ from one person to the next. However, characteristics often ascribed to the model include the following:

1. A period of residential or inpatient care, ranging from a few weeks to several months.
2. A focus on the psychoactive substance use disorder, with little or no consideration of associated psychiatric conditions or individual psychosocial factors.
3. Heavy emphasis on AA self-help concepts, resources, and precepts, such as the "12 steps" of recovery.
4. Referral to AA or another self-help group on discharge from residential or inpatient care, with minimal or no ongoing professional treatment.
5. Minimal or no family therapy or counseling (although family orientation to AA principles and Al-Anon may take place).
6. Negative attitudes toward ongoing psychotherapies and pharmacotherapies for substance use disorder or associated psychiatric disorder.

At the time of its evolution in the 1950s and 1960s, this model served to bridge the formerly separate hospital programs and self-help groups—a laudable achievement. However, if it is applied rigidly in light of current knowledge, some patients (who might otherwise be helped) will fail in or drop out of treatment. Nowadays, many treatment programs employ aspects of the old "Minnesota Model," integrating them flexibly with newer methods in a more individualized and patient-centered manner.

The workplace has been a locus of prevention, early recognition, referral for treatment, and rehabilitation. Following World War II, Hudolin and

coworkers in Yugoslavia established factory- and farm–commune-based recovery groups, with ties to treatment facilities. Over the last two decades, alcoholism counselors have worked in similar "employee assistance programs" in the United States.

More sophisticated methods of pharmacotherapy have appeared recently, although these remain few in comparison with other areas of medicine. Safe detoxification is possible through increased basic and clinical appreciation of withdrawal syndromes. Disulfiram, naltrexone, buprenorphine, and methadone may be selectively prescribed as maintenance drugs in the early difficult months and years of recovery. Other medications are currently being investigated for use in special circumstances.

Recognition of comorbid conditions accompanying substance abuse has led to concurrent treatment for affective disorders, anxiety disorders, eating disorders, and pathological gambling. For certain chronic conditions (e.g., mild mental retardation, borderline intelligence, organic brain syndrome, or chronic schizophrenia), substance abuse treatment, rehabilitation, and self-help procedures need to be modified. Intensive outpatient programs, conducted during the day, evening, or weekend, assist certain patients to recover when other measures fail. These intensive outpatient programs are modeled after similar psychiatric programs. Much of the treatment time is spent in groups of various sizes, although individual and family sessions may occur as well. Staffing is typically multidisciplinary, with counselors, nurses, occupational and recreational therapists, psychologists, psychiatrists, and social workers. Monitoring of recovery in several contexts and by several sources (e.g., at work, by licensing agencies or unions, in the family, and with medical resources) appears to enhance outcome (Westermeyer, 1989).

Preventive techniques first applied to the gin epidemic are still useful today: control over hours and location of sales, taxes or duties to increase cost, changing of public attitudes via the mass media, education, and abstinence-oriented religion (Smart, 1982). The prolonged Asian opium epidemic demonstrated that laws alone are ineffective unless accompanied by socially integrated treatment; recovery programs; compulsory abstinence in identified cases; police pressure against drug production, commerce, and consumption; and follow-up monitoring. Experience with anti-alcohol prohibition laws in Europe and North America demonstrated the futility of outlawing substance use that was supported by many citizens. Adverse results from the Prohibition era in the United States included increased criminality associated with bootlegging alcohol, lack of quality control (e.g., methanol and lead contaminants), and development of unhealthy drinking patterns (e.g., surreptitious, rapid, without food, and in a deviant setting). Public interest groups such as MADD may aid in reducing certain alcohol- and drug-related problems. The United States has expended several 10's of billions of dollars since 1970 to reduce the supply of and demand for drugs. But mortality from hepatic cirrhosis, alcohol-related

accidents, and suicide continue at an unprecedented level, especially among young American males. Work still remaining includes our learning from history (our own as well as that of others) to honing that aspect of statecraft aimed at eliminating our endemic substance abuse.

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