



GUEST EDITORIAL

Cultural evolution of addiction

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According to the contemporary biomedical approach, addiction is defined as the compulsive use of substances or engagement in behaviors despite harmful consequences. It is characterized by a preoccupation with a substance or behavior, challenges in controlling or restricting usage, and the emergence of unpleasant feelings when access is interfered with or thwarted. Behaviors related to daily living, such as eating, shopping, engaging in sexual activities, and gambling, are increasingly being recognized and regarded as addictive tendencies, or “use disorders.”

With advances in science and technology, the diagnosis and management of psychiatric disorders are adapting and evolving. A paradigm shift in psychiatry and neuroscience is also attributable to our understanding of addiction. Instead of relying on contradictory theories and research, the answer to the question “What causes addiction?” seems to arise from a variety of sources, including genetics, social environment, developmental variables, and life events.

However, this paper aims to provide a perspective that will enrich our understanding of addiction by addressing the “use of psychoactive substances” in a broader sense within human cultural history, beyond the transformation of the scientific paradigm.

The History of Alcohol and Substance Use

Historically, psychoactive substances have been used since ancient times in religious ceremonies, by healers for medicinal purposes, and in socially acceptable ways within the community (1). Throughout history, psychoactive compounds have been utilized to address various societal demands in the areas where

they were typically cultivated. Native Australians utilized two types of nicotine 40,000 years ago. Similarly, native communities in North and South America consumed nicotine, while Khat was used in Ethiopia and North Africa. Ecuadorian natives consumed the Coca plant 5,000 years ago, and Timorese natives used the stimulant Betel Nut (Areca Catechu) 13,000 years ago. The ancient use of these compounds differed from that of modern times, incorporating methods such as buccal, oral, rectal, and inhalation (2).

In fact, delving further back in time, historical evidence suggests that early hominid species have used psychoactive chemicals 200 million years ago. However, due to the restricted availability of these substances, early hominids did not exhibit adaptive modifications in the cortico-mesolimbic system. Consequently, the concepts of “wanting” and “salience,” pivotal in contemporary discussions of addiction, were not applicable at that time (3).

Indeed, in ancient times, psychotropic compounds were likely not used to alter internal homeostasis but rather as sources of nutrition containing neurotransmitter precursors (e.g., tyrosine, tryptophan). The interaction between early hominids and psychotropic flora is thought to have conferred evolutionary benefits to both, leading over time to the production of more potent allelochemicals (coevolution) (4, 5).

Historical data on the emergence of alcohol in cultural history points to wine production in China dating back to 7000 B.C. (6). These Neolithic findings suggest that wine spread from the Caucasus to Anatolia and Mesopotamia, and from there to the Mediterranean basin. Fermented beverages, such as wine and beer,

were crafted based on the predominant fruits and cereals in each geographical area. For centuries, from the Neolithic period to nearly the Industrial Revolution, these fermented beverages were valued not solely for their pleasurable effects, as in modern societies, but also for their antibacterial, analgesic properties, and as sources of high-energy nutrients, making them economically valuable as well (7, 8).

The Greek wine god Dionysus, the Roman Bacchus, and Hindu deities like Varuni, all highlight the significant role that alcohol has played in society. The evolving customs and laws of monotheistic religions also reflect alcohol's presence in social life.

As briefly mentioned earlier, plants have developed psychoactive compounds as a defense strategy through natural selection to protect themselves from herbivores. Throughout human history, the emergence, widespread usage, and occasional prohibition of various psychotropic substances have paralleled the spiritual, political, and cultural evolution of individuals and societies.

Alcohol in the Early Modern Period

Before the seventeenth century, alcohol served as a nourishing and enjoyable beverage throughout Europe. In Central and Northern Europe, beer was a primary dietary staple, a status it maintained until the introduction of potatoes following the discovery of America. Brewing beer, like preparing bread and butchering animals, was one of the daily tasks assigned to women. Beer also played a crucial role in the diets of European troops. In pre-industrial communities, heavy drinking had both ceremonial and nutritional purposes, with participation in carousing and drinking competitions being commonplace (9).

With the "moderation" movement, which originated during the Reformation Period, society began to criticize drunkenness. Excessive behaviors such as binge drinking, noisy festivities, fights, alcohol contests, and public intoxication were deemed inappropriate. The Reformation influenced the restructuring of the individual's relationship with God and with alcohol. However, this ideological movement alone was insufficient to alter society's drinking habits significantly; a material base was required. The economic power stemming from geographical discoveries began to alter the feudal social structure. The rapid development of the printing press diminished the church's hegemony over society. Leading to a decline in its central significance. A more

developed society and economy, the need for a change in behavior, increased work discipline, and the introduction of coffee into Europe as an alternative beverage responded to this need for moderation (8, 10). And so, in the 17th century, coffee began to embody a variety of "ideological" characteristics in addition to its pharmacological effects on the individual. In contrast to the intoxication associated with alcohol, the mental alertness promoted by coffee gained a significant appreciation (8).

During the Industrial Revolution

Although alcohol did not disappear from daily life after being domesticated by the bourgeoisie in the 17th century, its consumption shifted to private settings (clubs, house parties, etc.). However, for the lower strata of society, the situation was different. For those in the 17th and 18th centuries who were excluded from the bourgeois coffee culture, alcohol symbolized solidarity. The misery of the working class, exacerbated by industrialization in the 19th century, turned drinking from a traditional ritual into a means of escaping sorrow. Distilled beverages (spirits), the physiological and social counterparts to coffee, became the proletariat's drink, whereas coffee was favored by the bourgeoisie. Prior to the Industrial Revolution, spirits were generally used for medicinal purposes, containing almost 10 times as much alcohol as regular beer. Unlike beer and wine, which are consumed slowly, spirits are consumed quickly, leading to rapid intoxication (8, 11, 12).

At the beginning of the 19th century, opium was a widely used tranquilizer and painkiller. Casual use of opium was prevalent among working people in the early half of the nineteenth century, while cannabis found popularity among avant-garde artists and writers of the time. The production of morphine in 1817 and heroin in 1874, outcomes of the German chemical revolution, had devastating impacts. Their effects on the drug market mirrored the influence of distilled spirits on the alcohol market. The proliferation of their toxic effects led to significant social problems. Morphine was extensively used in military hospitals during major 19th century conflicts, including the Crimean War, the American Civil War, and World War I (8). These pharmacological and social developments rendered drug addiction an issue that could not be overlooked, prompting the regulation of opium use through the British "Pharmacy and Poisons Act" of 1868 (13).

Another crucial aspect of opium in the 19th century involved the East India Company's importation of

various products from China, including tea, porcelain, silk, and other goods. Opium cultivated in India was exported to China in exchange for payment. This trade deeply affected Chinese society as opium addiction soared. The Opium Wars arose from this conflict, resulting in significant losses for China. Conversely, the first international agreements regulating the use of narcotic compounds were signed shortly before World War I (14).

Attitudes Towards Alcohol and Substances in the 20th Century

The excessive consumption of distilled alcoholic beverages, unrestricted by cultural traditions and notably problematic among poor working-class families during industrialization, fueled "temperance movements" in several European countries and the United States (15, 16). The prevalent "Degeneration Theory" promoted the idea that biological factors, toxic environmental influences, or moral vices could lead to a series of social, moral, and medical problems that would worsen with each generation, and eventually result in the family's extinction (17, 18). In the first three decades of the 20th century, proponents of degenerationism and the temperance movement undertook extensive political actions concerning alcohol addiction (19). The Prohibition Era in the USA, which lasted from 1919 to 1933, reflects this movement. Prohibition appeared to reduce alcohol use in society, however, the illegal production of alcohol led to an increase in medical conditions and criminal activities associated with the mafia (20). Notable criminals of this era include Al Capone and Lucky Luciano. The Prohibition era ended with the onset of the Great Depression, a profound worldwide economic crisis affecting several countries (21). Before being permitted by the Nazi regime, several medical experts had supported the forced sterilization of 'severe alcoholics' (16).

Since the early 1930s, the concept of alcoholism as an illness has become more widely accepted within society. The establishment of Alcoholics Anonymous during this period aligns with this changing perspective (15). The first drug clinic in Kentucky, the Narcotic Farm Lexington, was established in 1935 (22).

Until the 1960s, Western society, having endured an enormous economic crisis and two world wars, harbored a fear of contact with narcotic drugs (8). Drugs were perceived as chemicals that altered consciousness or, more severely, as substances leading to the disintegration of personality and

posing a threat to the cohesion and unity of bourgeois society. This perspective began to shift in the 1960s, transforming the fear of contact into a fascination with drugs. Alongside the liberalization of sexuality, concepts like "mind expansion" and "me experience" gained popularity among the youth. The counterculture of the 1960s was distinguished from prior anti-authoritarian movements by many features. The post-World War II baby boom created a large number of possibly dissatisfied young people. The post-war economic prosperity enabled many individuals from the counterculture generation to shift their focus away from meeting basic material needs, which had been a primary concern for their parents who lived through the Great Depression (23). Smoking and drinking alcohol were associated with notions of achievement, rivalry, and authority, while cannabis and psychedelic use symbolized a detachment from these concepts.

This expression, emblematic of the 1960s, is fading along with the last remnants of the youth movement of that period. However, the prevalence of alcohol and drug use is persistently rising, not merely a passing trend. In the era of ongoing medicalization that began in the mid-1930s, addiction is viewed as a "chronic, treatable brain disease." Yet, in many regions and sociocultural settings, it is considered a subject for moral assessment.

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