
CHAPTER I

Conceptualization of Addictive Behavior and the Need for Informed Practice

Why a book on theories of addictive behavior? For at least the last 200 years in U.S. history, substance misuse (primarily alcohol) has been viewed as an immoral or sinful activity and addiction as a somewhat mysterious, or at least nonspecific, condition frequently referred to as a disease. These views remain prominent today in the legal and correctional system, as well as in the treatment community. For many years, it also was believed that the sole or preferred qualification to work as an addictions counselor was to be a recovering addict. Knowledge of addiction thus was based mostly on one's personal recovery experiences, and invariably addiction was understood as a primary and involuntary disease and nothing else. Many still endorse this belief. Indeed, disease models remain the foundation of much of the addiction treatment provided in the United States today.

Disease models clearly have facilitated the adoption of more humane public policies, such as medical insurance provisions, and have helped a large number of persons who have sought treatment. However, as judged by the very large number who avoid or refuse treatment, drop out of treatment, and/or relapse, it reasonably can be asserted that these particular models are not a "good fit" for many (perhaps most) individuals. It is imperative that practitioners consider a wider range of prevention and treatment models, especially for populations and individual clients who cannot work within a disease model. Doing so would likely expand the reach of prevention and treatment services, identifying a greater number of

individuals who could benefit from such services but so far have purposefully stayed away for reasons such as monetary cost and/or insistence on abstinence.

There is not just one way to explain addiction. Results of scientific investigations; social, cultural, and political events throughout U.S. history; and firsthand accounts of people who have experienced and been affected by addiction support this contention. Addiction is an extremely complex condition arising from multiple pathways and manifesting itself in innumerable ways. It thus defies a simple and absolute definition. It may be convenient to narrowly define the problem as a “brain disease,” but this term is insufficient and possibly misleading. Addiction also is not just a bad habit that can be stopped through willpower. Furthermore, it is not only (or even) a character or spiritual defect, although many fiercely defend the use of these descriptors. Addiction is more than any one of these characterizations. In many ways, addiction remains a puzzle, a mystery, a conundrum. Those who insist on a singular, absolute, and all-encompassing explanation of addiction are either ill-informed or championing a specific (social, political) cause, or both. For students of addiction etiology, understanding its complexity requires reliance on multilevel analyses and the capacity to examine the problem through different lenses.

Credentialing requirements for drug and alcohol counselors, prevention specialists, and other professional practitioners now include education in a range of theories of addiction, including science-based theories that describe addiction as a learned and adaptive behavior. Unfortunately, training in theories of addictive behavior does not translate automatically—if at all—to theoretically informed practice. All too often, practitioners rigidly cling to a favorite theory, in many cases without fully understanding its concepts and implications. At the same time, other theories may be callously disregarded. As noted by Webb, Sniehotta, and Michie (2010), many practitioners use interventions not informed by, or linked to, a specific theory—or, when they are, the connection is not clear. There is a similar disconnect with respect to research and practice, discussed later in this chapter and throughout the remaining chapters. As professionals, we should possess the flexibility to work with different communities and clients, and tailor our approaches to their needs. This is the meaning of *individualized or customized care*.

As in previous editions of this book, the threefold purpose of this edition remains to expose students and practitioners to a range of theories of addictive behavior, to review longstanding and current scientific research that has tested these theories, and to help make theories of addictive behaviors and their research relevant for contemporary prevention and treatment services. Although idealistic, we hope that in a small way the book helps to bridge the gap that exists between theory and research on one side and

practice on the other. We also hope students and in-service professionals will find the review of theory and research to be provocative enough to cause them to reconsider their conceptions of addiction.

WHAT EXACTLY IS A THEORY?

The popular understanding of the term *theory* is that it is a belief or set of beliefs distinguished from and in opposition to practice, science, and certainty or fact. Many of us have heard someone retort, “Oh, that’s just a theory.” This offhand remark suggests several things: theory is a spontaneous idea, the result of informal brainstorming; a cerebral invention of one or a select few persons isolated from mainstream thinking; and something to be minimized and not trusted. It also implies that theory is mere speculation, lacking substantiation or verification. Although there is a tendency to equate theory with things that are impractical or devoid of common sense, all of us rely on theory to function in our relationships with family members, friends, professional colleagues, and others. In most cases, these theories are crude and not explicit; nonetheless, they exist, if only in our minds. Thus, to dismiss theory as useless is to fail to recognize its universal application, both in science and in everyday life.

In the behavioral sciences, the term *model* is often used in place of *theory*. According to West and Brown (2013), a model describes or represents something, such as an object, a set of events, or a narrow aspect of some behavior. Unlike a theory, however, a model is not well developed and does not necessarily explain anything. Models “fall short of being theories” because they often are isolated from other models and may remain somewhat ambiguous (Ryan & Deci, 2017, p. 6). Throughout this book, we use the terms *model* and *theory* interchangeably, and we distinguish between the two periodically.

The word *theory* is derived from Greek for viewing or serving as a spectator. Theory thus is an observation. It not only describes what has been observed; it speculates about the meaning of or explains that observation. In this sense, theories should offer new perspectives for understanding a certain body of knowledge, predict new possibilities, and, at the very least, provide a means for experimentation (Cottone, 1992). Although theory should not be thought of as “truth” or “fact,” Cottone (1992) argued that theory implies a scientific ideal or a rational construction representing some form of reality. Think of theory as an explicit, comprehensive, and comprehensible account or explanation of something that has happened or continues to happen. This something can be a singular event (e.g., a solar eclipse) or a series of events (e.g., businesses closing in a local community). It also can be human behavior that is exhibited rarely (e.g., an acute

psychotic episode) or repeatedly (e.g., smoking tobacco daily) by a few or a vast number of persons. These events, behaviors, and experiences are the observable phenomena that theory seeks to describe and explain. In so doing, an attempt is made to regulate these phenomena.

Theories are not predetermined by nature or data, or any other orderly process; they rest largely on a theorist's prior knowledge and creativity. Theory is understood further as a coherent and consistent body of knowledge (Prochaska & Norcross, 2018; Ryan & Deci, 2017) that, when applied to addiction, helps explain human behavior and change mechanisms. The function of theory is thus to organize and impose order and meaning on a collection of isolated observations, data, or facts (Ryan & Deci, 2017). In this respect, theories attempt to make sense of dissimilar findings and to explain relationships among variables of interest. In the study of addictive behavior, theory helps us understand its etiology and points to possible intervention strategies.

A theory is a tentative approximation of "the truth" (Prochaska & Norcross, 2018) and is provisional (i.e., it does not explain a phenomenon in absolute or final terms). It therefore is inappropriate to characterize it as "true" or "false" (Feist & Feist, 2009). Instead, it is best to describe a theory as "useful" or "not useful" (Hall, Lindzey, & Campbell, 1998), as well as relevant or irrelevant. A theory's utility and relevance can be assessed by its ability to (1) explain certain events in a cogent and cohesive manner and (2) generate ideas and concepts that enhance understanding. These two functions go hand in hand. A useful and relevant theory explains an observation and generates alternative explanations for new observations. This means that a useful and relevant theory is never permanent or impervious to change. Quite the contrary: It remains tentative and subject to revision; it is constantly in flux, depending on how it is tested. And by tested we mean its application over time to explain new developments, such as findings from scientific investigations.

The application of theory to science does not mean findings from research studies can "prove" or "disprove" a theory. Also, research findings, particularly from one or a handful of studies, do not "confirm" or "refute" a theory. This kind of thinking confuses the separate, though related, constructs of theory (i.e., abstraction) and empiricism (i.e., observation). Theory guides and explains observation, and observation guides theory development. Both are needed to enhance understanding of addictive behavior; they are complementary, and therefore one cannot dismiss the other. Although "the link between theory and data is extremely tenuous" (West & Brown, 2013, p. 28), it is important that persons devoted to understanding and changing addictive behavior (practitioners, family members, researchers, politicians, and community leaders) consult both sources of information: theories of addiction and empirical research. This book showcases both.

ATTRIBUTES AND FUNCTIONS OF A GOOD THEORY

Given the importance of a theory, it is worth considering what makes a good theory. What is it about a theory that makes it relevant and useful in practice? What criteria should a practitioner use to determine whether a particular theory is worth selecting to guide clinical decision making and plan interventions?

Theorists and researchers in the social and behavioral sciences (e.g., Ryan & Deci, 2017), including the addictions (e.g., West & Brown, 2013), have proposed that a good theory has at least eight attributes. Although enumerated in the following listing, they are not presented in any order of priority. Each describes the function of a good theory, that is, what a good theory should be able to do to be useful in practice. A good theory:

1. *Explains a related set of observations.* The explanatory function of a theory is crucial. More than simply describing a collection of observations (as a model does), a good theory explains the meaning or purpose of those observations by seeing beyond the visible to underlying connections. A good theory not only answers the question, “*What is happening?*” it goes further by attempting to answer the question, “*Why is this happening?*” A good theory thus is speculation about how and why a set of observations are related. It helps to make sense of observations by proposing connections that are not obvious, such as why a person who was surrounded by a strong support system and had been sober and in active recovery from drug use for 15 consecutive years would overdose and die from injecting heroin. Pursuing explanations for unconventional occurrences or complex phenomena is not a simple or convenient task. It can be arduous, and it requires patience and persistence. Doing so renders meaning and a sense of order to the set of observations.

2. *Is coherent and cohesive.* The connections that a theory comprises should logically “stick together.” For example, a theory of social skills development in humans should account for both verbal and nonverbal forms of expression, not just one; it also should explain how these two forms of communication are connected. This makes a good theory internally consistent. It also helps explain to clients in a group session, for example, what makes a certain behavior effective, such as the social skill of refusing an offer to use a drug (i.e., not only *what* is verbalized, but *how* the message is conveyed nonverbally). A coherent and cohesive theory is solid rather than shaky and tight rather than loose.

3. *Is comprehensible.* A good theory is readily understandable. This means that its propositions can be clearly described and easily communicated. Ideally, theory will lift a cloud of confusion and replace it with clarity. A good theory represents a common language for researchers and

practitioners (Ryan & Deci, 2017). It makes it possible for professionals to communicate with one another observations that are made across settings and populations, and to anticipate and even predict certain events (e.g., relapse). Questions about how the propositions of a theory coalesce or fit together no longer need to be raised.

4. *Is explicit.* Precision is a chief characteristic of a good theory. Important theoretical concepts must be capable of being defined operationally. That is, concepts must be measurable with a high degree of reliability. Autonomous behavior is one such concept in self-determination theory (Ryan & Deci, 2017). It can be measured on the Index of Autonomous Functioning (Weinstein, Przybylski, & Ryan, 2012; also see www.selfdeterminationtheory.org), which has demonstrated acceptable reliability. Theories that rely on vague, ill-defined, or difficult-to-measure concepts cannot be checked against clear referents in the real world (Stefflre & Burks, 1979). For example, the popular terms *codependency* and *chemical imbalance* purport to explain certain aspects of addiction. However, neither has been operationalized or subjected to rigorous scientific study. They remain poorly defined concepts. Indeed, the “chemical imbalance” hypothesis as an explanation for depression has been refuted (Schultz, 2015) and has even been called a hoax (Carey, 2016).

5. *Involves no more concepts or elements than are necessary.* A good theory explains phenomena in a relatively simple and straightforward manner. It is concise and to the point; it is parsimonious. This means a good theory encompasses only essential ingredients; extraneous material is discarded as unnecessary. Describing addiction as a “brain disease” or a “chronic relapsing disease” comparable to diseases such as diabetes or hypertension (see Heilig, 2015) is one example of a parsimonious theory. It is straightforward and can be conveyed easily to and understood by others (e.g., clients in group counseling). Its premise and explanatory function, however, remain in question (Lewis, 2015, 2017; Peele, 2016). A theory that can explain behavioral events in innumerable ways is suspect. A theory that “overexplains” something may be creative, but it may also be fiction; it may not accurately reflect reality.

6. *Is comprehensive.* Although a good theory does not attempt to explain everything, it can be applied to many individuals in many different situations. A theory is not useful if it is isolated to only one occurrence at one point in time. A good theory should be able to explain events that extend across a variety of time periods, geographic areas, sociopolitical and sociocultural contexts, and sociodemographics (e.g., gender, race/ethnicity, religion). This function also speaks to a theory’s relevance.

7. *Generates predictions that can be tested.* For a theory to remain relevant over time, it must be able to generate questions and offer predictions

that can be tested. Theories are always “under construction.” A good theory is one that is responsive to feedback from empirical studies. This means theories must adapt to new observations or discoveries, such as recent empirical findings that mindfulness meditation improves emotion regulation and decreases drug use (Tang, Tang, & Posner, 2016). A good theory has a history of generating research findings (i.e., data) that support or are consistent with its concepts and further its enhancement. Theories that have little or no empirical support are less useful than those that have considerable data driving further investigation of their propositions.

8. *Is not contradicted by empirical evidence.* West and Brown (2013) maintain that for a theory to develop, mature, and endure, it must not be “overruled” by a competing theory; it must be able to stand alone. This attribute and function of a theory is necessary so as to eliminate nonuseful, opportunistic, and ephemeral theories. Subject to ongoing testing, a good theory must be able to explain “big observations” so as to exert its utility over time and across populations. Theories that persist despite overwhelming evidence to the contrary (i.e., existence of strong counter-explanations) may continue to serve as an important historical foundation for the study of addictive behavior, but they should be challenged and in most cases should not serve as conceptual frameworks for contemporary practice.

THEORY AS A ROAD MAP

Some time ago, Stefflre and Burks (1979) aptly summarized the attributes and functions of a good theory by likening it to a road map. Just as maps necessarily change to reflect alterations of the terrain, so too must theories change to account for new discoveries. In this way, a good theory not only explains what is known; it is revised based on new data and ideas. A good theory thus is sturdy *and* fluid, solid *and* malleable. It remains relevant by harnessing its dialectical functions of explanation and proposition. In a sense, a good theory is perpetually reinventing itself. And as it does, it serves to point practitioners and researchers in a direction that is clear and helpful. As Stefflre and Burks stated, “A theory is always a map that is in the process of being filled in with greater detail. We do not so much ask whether it is true, but whether it is helpful” (p. 9).

CONCEPTIONS OF ADDICTION IN U.S. HISTORY

Notable events in U.S. history have shaped today’s conceptions of substance use and addiction. A review of these conceptions provides insight

into how we have come to understand addiction in three distinct ways: as (1) immoral conduct, (2) disease, or (3) maladaptive behavior. In this section, you are encouraged to critically evaluate the historical conceptions of addiction by applying the eight attributes and functions of a good theory presented earlier. For example, for each perspective of addictive behavior mentioned in U.S. history, how clear, comprehensible, and parsimonious is it? Has the concept been contradicted by subsequent empirical evidence?

The Incongruent Views of Addiction

For most of American history, habitual drunkenness and drug use have been viewed as both sinful conduct and disease. In recent decades, they also have been considered maladaptive behavior or debilitating behavior that is “overlearned.” Today, some insist that addiction evolves from all three sources: It is a *disease* in which people *learn* to act in *immoral* ways.

This incongruent view of addiction has a long history. Only in recent years, however, has this history been studied in a systematic way (Nathan, Conrad, & Skinstad, 2016; White, 2014). Addiction to alcohol has been the primary concern over time. However, the use of drugs other than alcohol (e.g., opiates, cocaine, marijuana) also has a lengthy history in the United States. Nevertheless, historical analysis of alcohol problems has garnered more attention in recent years, owing in part to the emergence of interest in the era of National Prohibition and the lessons it may provide in today’s debate about the size and scope of the federal government. This historical review therefore emphasizes conceptions of alcoholism more so than other drug addictions.

Colonial Period and Reformation

In the United States, the conception of addiction to alcohol has been evolving since the colonial period (roughly 1607–1776). During that time, alcohol consumption in the populace was high (by today’s standards), and inebriety was quite common (Burns, 2004). There was little concern about excessive drinking and drunkenness, and those who engaged in these behaviors were regarded simply as “distractions” from more important events (Weinberg, 2005). Even after the Revolutionary War and into the 19th century, Americans—having only recently gained their freedom from British rule—generally had a high tolerance for social deviance, and thus they were mostly indifferent to the problems caused by heavy drinking. Alcohol was used as a beverage, as medicine, as barter, and as a social lubricant. The town tavern was at the center of social and political life. Workers often drank throughout the day, and some employers actually supplied them with free liquor. Okrent (2010) reported that by 1830 each

adult, on average, was consuming the equivalent of 1.7 bottles of 80 proof liquor per week, or roughly seven gallons of pure ethanol per year!

During the 17th century and for most of the 18th century, alcohol was not seen as an addictive substance, and habitual drunkenness was not viewed as a disease or a medical condition (Edwards, 2010). Moreover, frequent, heavy drinking was not understood to be a compulsion involving a so-called loss of control, nor was it considered a progressive, deteriorative disorder. Although most Americans considered excessive drinking to be of little importance, some prominent figures did warn about and chastise drunkenness. In these instances, it often was defined as a vice, as immoral behavior. In sermons, Puritan ministers warned that drunkards faced eternal suffering in hell, and although Cotton Mather referred to alcohol as the “good creature of God,” he also described drunkenness as “this engine of the Devil” (Mather, 1708). In the 1760s, John Adams proposed restrictions on taverns, Benjamin Franklin described these establishments as “pests to society,” and President George Washington labeled as traitors the “Whiskey Boys,” who rebelled against the 1791 congressional tax on whiskey and other liquors (Gately, 2008; Rorabaugh, 1976).

With the dawn of the Enlightenment period and the Age of Reason in the United States (roughly the mid- to late 18th century), habitual drunkenness became a focus of concern and systematic inquiry. This was also true during the Georgian period in Britain, when England was ruled by four successive King Georges (1714–1830). The introduction of cheap distilled spirits to the working class and poor in England in the early 1700s led to an increase in public intoxication and diseases, a time in British history known as the “gin craze” (Warner, 2003). Although it was deemed immoral, the habit of drunkenness also came to be viewed as a type of disease state. It would be erroneous, however, to equate the very early understanding of *disease* with how it is often understood today—as a distinct pathology (Edwards, 2010). According to Porter (1985), *disease* in 18th-century Britain was understood as *dis-ease*—a state of discomfort or an imbalance in the human constitution (and relating primarily to bodily fluids) attributable to a lack of wholesome diet and proper exercise. In the late 1700s and early 1800s, the disease state of habitual drunkenness referred to the behavior itself, to the act of drinking in excess, and this behavior was only a concern because of the medical complications it caused, such as gout, jaundice, and depression. Thus, habitual drunkenness 200 years ago was not considered a medical condition or a disease in its own right. It was a disease by association only—that is, by the dysfunctions, disabilities, or diseases that it caused.

The first American to write extensively about habitual drunkenness as a type of disease state was Dr. Benjamin Rush, considered the father of American psychiatry (Brodsky, 2004). He was a Philadelphia physician, a signer of the Declaration of Independence, a Christian reformer, and

surgeon general of the Continental Army who, in 1784, authored a pamphlet titled *An Inquiry into the Effects of Ardent Spirits on the Human Mind and Body*. In this work, Rush challenged the conventional view that habitual drunkenness was an innocuous activity. He did not condemn alcohol use per se, but rather its excessive consumption and drunkenness. Rush also confined his commentary to the excessive use of distilled spirits or hard liquor (specifically “grog” or rum, and “toddy”), not fermented alcohol (i.e., beer and wine), which he viewed as “generally innocent” and even having a “friendly influence upon life and health” when consumed in moderation (1790/1814/1943, p. 325). Rush acknowledged that “drunkenness resembles certain hereditary, family and contagious diseases” (p. 327), but he also inferred that the condition is actively acquired (i.e., becomes customary practice) and is not beyond the individual’s control. For example, he described a gradual process of “contracting a love for distilled liquors by accustoming the stomach to their stimulus” (p. 333). He also categorized the death that results from habitual drunkenness as suicide, implying that intoxicated “self-murderers” (p. 329) were able to exert some measure of control over their circumstances. Furthermore, he believed that the “condemnation” received “at the day of judgment” (p. 329) would be far greater for those who died from habitual drunkenness than those who died from using opium (a substance he deemed to be “less injurious to the body and mind” than distilled alcohol).

Levine (1978, p. 152) contended that Benjamin Rush contributed to a new understanding of habitual drunkenness that included the contemporary understanding of alcoholism as a “loss of control” over drinking behavior and that its only “cure” was complete abstinence. A close review of Rush’s writings, however, does not reveal a clear articulation of the involuntary nature of habitual drunkenness, and abstinence from all hard liquor is only one of 12 “remedies” that he identified to prevent further drunkenness. These remedies can be categorized as “religious, metaphysical, and medical” (p. 338) and included obeying Christian doctrine, feeling guilt and shame, eating vegetables, temporarily substituting beer or wine when abstaining from hard liquor (to assuage craving and withdrawal), and engaging in alternative behaviors on the days and times when one would customarily drink.

White (2014) agrees that Benjamin Rush is not to be credited with formulating “a fully developed disease concept of alcoholism” (p. 3), a concept that did not emerge in the United States until the 1870s. White argues, however, that “Rush’s writings stand as the first articulation of a disease concept of alcoholism by an American physician” (p. 3). Levine (1978) stated that Rush is to be credited specifically with alerting Americans to the dangers of unrestrained drinking, or to what Rush referred to as the “evils produced by ardent spirits” (p. 329). Rush emphasized that alcohol misuse contributed to an array of social problems: disease, poverty,

crime, insanity, and broken homes. In this regard, habitual drunkenness was a public health issue necessitating a comprehensive and multifaceted approach extending beyond the purview of medicine.

At about the same time as Benjamin Rush, Thomas Trotter, a recently retired British physician to the Royal Navy, proposed that “the habit of drunkenness” was a “disease of the mind,” similar to delirium and mania. His 1804 *An Essay, Medical, Philosophical and Chemical, on Drunkenness and its Effects on the Human Body* was “a pioneering text and the first book-length treatise on what is today referred to as ‘alcoholism’ to appear in any language” (Vale & Edwards, 2011, p. 156). It earned him recognition as “the first scientific investigator of drunkenness” (Harrison, 1971, p. 92). Although Trotter may not have been the first British physician to refer to excessive alcohol consumption as a “disease” (according to Porter’s [1985] historical review), his treatise appeared at a time when psychiatry was a nascent profession. He may be credited, therefore, with prioritizing medical and specifically psychiatric interventions for habitual drunkenness, more so than moral reform. According to Edwards (2010), Trotter challenged the medical community to assume ownership for the issue of habitual drunkenness, whereas Benjamin Rush appealed to Christian clergy to champion its fight. Over the course of history, however—in the United States and in Britain—both the medical and religious communities have been instrumental in defining alcohol misuse and its remedies, and this included their involvement in temperance societies.

The writings of Benjamin Rush and Thomas Trotter (and those before them; see Porter, 1985) contributed to the process of redefining “habitual drunkenness” from an exclusively immoral condition to one also influenced by physiological and mental dysfunctions and reflecting a medical disorder. This paradigm shift, however, took place over almost 150 years, and it was not until the late 1800s that excessive drinking was specifically referred to as a treatable disease. According to Tracy (2005, 2007), the shift in understanding habitual drunkenness is evident in four distinct terms that each held prominence in the American medical community at different times from 1870 to 1920: intemperance, dyspsomania, inebriety, and alcoholism. *Intemperance* was the earliest of these terms that referred to problematic alcohol use as primarily an immoral condition. This was followed for a short period by the term *dyspsomania*, a heritable medical condition similar to insanity that primarily affected the middle and upper classes. *Inebriety* then became the preferred descriptor, and it referred to an involuntary yet habituated condition, reflecting both medical and moral characteristics. The latest of these terms was *alcoholism*, which by its very name attributed the medical condition for the first time to the substance, alcohol, rather than to the behavior of the drinker. Although practitioners today may regard some or all of these terms as crass, Tracy (2007) proposed that all four terms “actually reflected a sophisticated understanding

of alcoholism's etiology—one that acknowledged heredity, environmental circumstance, and individual temperament” (p. 88).

It is important to note that the different views of substance use throughout U.S. and British history are the direct result of changes in economic, political, religious, scientific, and other social conditions. Addictive behavior—then and now—cannot be studied and understood apart from these factors; it is not an isolated phenomenon. Substance use was therefore not the sole focus of reform efforts during the 18th, 19th, and into the 20th centuries in America and Britain. Economic development, governmental structure and political party formation, religious freedom, the institution of formal education, and public health and safety were all the essential ingredients of nation building. Although Rush addressed the issue of habitual drunkenness, his work also focused on education, abolition, the humane treatment of criminals and the insane, and an extensive array of physical illnesses. As a Christian reformer, physician, and politician, Rush produced work and writings that were instrumental to the Temperance movement in the United States, the largest campaign of the 19th century for moral and social reform.

Temperance Movement and Prohibition Period

The first Temperance Society was formed in 1808. Three years later a number of independent groups united, and in 1826 the American Society for the Promotion of Temperance (later renamed the American Temperance Society) was founded. Consistent with the views of Dr. Rush, the initial objective of the society was to promote moderation, not prohibition. To accomplish this objective, the society organized itself into local units that sent lecturers out into the field, distributed information, and served as a clearinghouse for movement information.

By the mid-1830s, over 500,000 Americans had joined the Temperance movement *and* made a pledge to abstain from all alcoholic beverages (Levine, 1978). In the 5 years after the 1840 founding of the non-Christian temperance fraternity, the Washingtonians, approximately 600,000 had pledged to refrain from any alcoholic beverages, including wine and cider (Tracy, 2005). The emphasis on moderation gave way to the necessity of abstinence for all citizens. Thus, the *temperance* movement became a *prohibitionist* movement, and increasingly habitual drunkenness or intemperance was seen as immoral conduct. Famous American huckster P. T. Barnum, who later founded the Barnum and Bailey Circus, was one of the most popular and outspoken campaigners for prohibition at this time. He drew crowds to his American Museum in New York City, which included “moral plays in a moral manner,” with one act featuring an extreme case of alcohol-induced delirium and seizures (delirium tremens, or DTs) intended to scare the public into abstaining from all alcohol (Okrent, 2010). After the Civil

War (1861–1865), this view was also applied to opium and morphine, as well as to cocaine, which were all subsequently viewed as inherently addicting poisons.

Those in the Temperance Society worked hard to proselytize others, and to an extent they were successful. Employers stopped supplying alcohol to their employees on the job. Politicians were more restrained in their relations with alcohol producers and distributors. In many areas, local legislation was passed to regulate taverns—an outcome of lobbying by the society. Goode (1993) reported that between 1830 and 1840, annual alcohol use dropped from 7.1 gallons per person (age 15 and older) to 3.1 gallons. Support for temperance waned, however, during and after the Civil War (Tracy, 2005): The United States Brewers' Association was established 1 year after the war began, and the amount of alcohol consumed increased by 300% from 1850 to 1870.

It was not until the late 1800s that the Temperance movement experienced resurgence, most notably under the leadership of women, many of whom had experienced the debilitating effects (e.g., loss of family income and home; domestic violence) of the excessive drinking of their husbands and other male family members. The Women's Christian Temperance Union (WCTU) was founded in Cleveland, Ohio, in 1874 on the platform of "protection of the home" against the "ravages of alcohol." Although their efforts may have been to help reform the "habitual drunkard" through the Christian gospel and "moral suasion," members of the WCTU launched a strident "do everything possible" national campaign that included shutting down drinking establishments, supporting newly developed "cures" for inebriety, advocating against the use of alcohol in medical interventions, and changing workforce policies and practices.

For Frances Willard, the second and most famous president of the WCTU, habitual drunkenness was both a moral and a medical condition—the former, however, remained more important for her and her followers. The priorities or values of the WCTU are evident in the ordering of the words that comprise its name: It was first and foremost a women's organization "born of Christ's Gospel and cradled at His altars," whose purpose was "to help forward the coming of Christ" by prohibiting the traffic of "intoxicating drinks" (despite its use of the word *temperance*) and mobilizing "the total abstinence agenda" (excerpts from Frances Willard's speeches, cited in Gordon, 1898, pp. 131, 133, 139). The WCTU regarded "the drunkard as one who commits a crime against society" and therefore favored legal intervention and custody so as to imprint upon "the drunkard . . . the displeasure of the community in which he moves about as a perpetual danger" (see Gordon, 1898, p. 175). Given the WCTU's vehemently moralistic approach to habitual drunkenness, it is no wonder that Tracy (2007) declared it as "one of the most visible and powerful critics of the disease concept" (p. 88).

John B. Gough (1881), another prominent temperance lecturer, said that he considered “drunkenness as sin, but I consider it also disease. It is a physical as well as moral evil” (p. 443). These mixed medical–moral conceptualizations of inebriety were actually consistent with those expressed by physicians at the time. In her review of the history of alcoholism in America during the late 1800s and early 1900s, Tracy (2005) reported that upon the recommendation of Dr. B. N. Comings, a Civil War surgeon, the American Medical Association (AMA) adopted a resolution in June 1876 that inebriety was both a vice and a disease, even though one member contended that the moral failing was actually the disease. It is evident that the muddled conceptions of alcoholism that exist today have a long history.

In 1870, the American Association for the Cure of Inebriates (AACI) was founded in the United States. AACI members identified themselves more as scientists than as temperance leaders. Their main goal was to “reveal that [inebriates] were victims of a curable condition, worthy of public sympathy and medical care rather than punishment” (Tracy, 2005, p. 3). Four of their eight principles were:

1. Intemperance is a disease.
2. It is curable in the same sense that other diseases are.
3. Its primary cause is a constitutional susceptibility to the alcoholic impression.
4. This constitutional tendency may be either inherited or acquired.

These principles may have inspired Dr. Leslie E. Keeley, a surgeon for the Union Army during the Civil War, to boastfully proclaim in 1879 that “drunkenness is a disease and I can cure it.” He proceeded to market a tonic to treat inebriety and also to open up over 100 institutions for its treatment, settings wherein male residents could experience camaraderie (similar to that experienced in taverns, minus the alcohol) to restore their dignity. Although Keeley was regarded as a charlatan by many in the medical community, he is credited with convincing the public that inebriety was a treatable condition. The opening of various state inebriate asylums in Massachusetts, Connecticut, Minnesota, and Iowa in the mid- to late 1800s also served to medicalize intemperance and spawn a new medical specialty.

It also was at this time that problems associated with the use of narcotics (e.g., morphine and other opiates) were more noticeable. Musto (1999) cited a committee report of the American Pharmaceutical Association that from 1898 to 1902 importation of cocaine and opiates (opium and morphine) had risen 40% to almost 600%, respectively, even though the American population had increased by only 10% in that time period. The invention of the hypodermic needle led to an increase in morphine addiction in

the late 1800s. It was generally believed that physicians were the primary cause of their patients' drug addiction in their efforts to treat such maladies as cholera and dysentery, as well as obstetrical and gynecological problems. This form of physician-assisted addiction is known as *iatrogenic addiction*. Iatrogenic addiction has received renewed scrutiny in the midst of the current opioid epidemic in the United States. As Beauchamp, Winstanley, Ryan, and Lyons (2014) noted, "Physicians undoubtedly, and in most cases unknowingly, contributed significantly to recent increases in opioid-related morbidity and mortality" (p. 2023).

The dangers of morphine and other opiates were balanced by their effective treatment of physical ailments, most notably in reducing pain and calming nervous conditions. The iatrogenic explanation for drug addiction, however, applied only to the wealthy and upper middle class, those who had access to and could afford medical services and whose "innocent" or "accidental" addiction could therefore be excused because of negligent physicians or "dope doctors." A "social contagion" explanation for drug addiction applied to the poor and the working class because of their involvement in prostitution, gambling, and other deviant and illegal behaviors. To address the concerns of drug addiction, Campbell (2010) reports that state and local government bodies and private philanthropic foundations funded research initiatives and established treatment facilities in the late 1800s, including the New York City Narcotic Clinic.

Despite these attempts to define and treat addiction as a medical condition in the 1800s and early 1900s, the moral campaign—or "moral contagion" (Clark, 2017, p. 5)—gained the upper hand. Physicians were not united in their belief that drug addiction (including its withdrawal syndrome) was an organic disease (Musto, 1999), and many believed that addicts who frequented their medical offices were troublesome and could not be trusted. The Harrison Narcotic Act, passed by Congress in 1914 and implemented in 1915, gave authority to the Internal Revenue Service to tax—and therefore to regulate—opiates, derivatives of the coca plant, and other drugs. Specifically, it forbade the purchase of narcotics by unlicensed persons and prevented the refilling of prescriptions containing narcotics (Kolb, 1928).

The Harrison Narcotic Act may have provided further momentum to the cause of alcohol prohibitionists, even though at the time alcohol and drugs, such as narcotics, were not viewed by many as equal vices. As Clark (2017, p. 6) writes: "The two groups—pathetic drunkards and dangerous dope fiends—supposedly had little in common." The increased consumption of alcohol at the turn of the century may have been reason enough for alcohol reformers to forge ahead. According to Okrent (2010), consumption of alcoholic beverages "exploded" in the late 1800s: it increased from 36 million gallons in 1850 to 855 million gallons in 1890. And from 1900 to 1913, per capita consumption of both beer and liquor increased by

one-third (Blocker, 2006). Although the United States Brewers' Association in 1866 attributed domestic troubles, poverty, crime, and disease to the use of hard liquor, it referred to its own product—beer—as “liquid bread.”

Temperance and prohibition leaders had reason to be concerned. The Anti-Saloon League (ASL), established in 1893 in Oberlin, Ohio, assumed the reins of the Temperance and Prohibition movements by maintaining an anti-alcohol focus. The ASL appealed to clergy (including popular evangelist and former professional baseball player Billy Sunday), engaged in inventive political maneuvering, and published and distributed mass propaganda (with messages conveying its moral authority). References to people and localities as either “wet” or “dry” signaled the transition from a goal of moderate and nonproblematic alcohol use to one of zero tolerance. This dichotomous thinking also promoted further divides—between poor and rich, black and white, native and immigrant. Although the inebriety of European immigrants (e.g., Irish) had been a concern for some time, World War I heightened specifically anti-German sentiment in the United States. This sentiment extended to those whose names were *Pabst*, *Anheuser*, and *Busch*, even though their brewery businesses were already well established. An ASL argument was that breweries were using grain that should be targeted for more wholesome purposes, such as food for U.S. soldiers. Interestingly, the ASL's efforts did not appear to blame men for the alcohol problem in as pronounced a manner as other reform groups did. Perhaps it was because the prohibitionist and the suffrage movements joined forces at this time to achieve their respective goals in 1920: National Prohibition became law (the Eighteenth Amendment to the U.S. Constitution) and women gained the right to vote (the Nineteenth Amendment to the U.S. Constitution).

The federal ban on all production, transportation, and sale of “intoxicating liquors” had a profound effect on how addiction was—and still is—understood and treated. Even though prohibitionists located the culprit of alcohol addiction in its “poisonous” beverage, the person who “allowed” himself or herself to become victim to excessive alcohol consumption (whether it was beer, wine, or distilled alcohol) still was viewed by the majority of the populace as morally depraved and deserving punishment. This was particularly true during a time when alcohol was not supposed to be readily available, a time that Blocker (2006) notes essentially “wiped out” a collective and successful industry (breweries and distilleries in particular; wineries less so). Granted, the habitual drunkard could still find alcohol. What he or she could not find was help when needed because most of the inebriate asylums had closed and mutual aid societies had dissolved. Clark (2017, pp. 4–5) cites a 1922 study that reported that approximately 80% of pre-Prohibition treatment facilities had by that time disappeared, closed, or begun treating other conditions. Only 27 inebriety treatment providers remained. Therefore, the moral victory achieved during Prohibition

essentially “extinguished America’s collective memory of the early movement to medicalize alcoholism” (Tracy, 2005, p. 275).

This included the memory of physicians. In 1917, the AMA adopted a resolution stating that medicinal alcohol lacked any scientific value. Only 5 years later (and only 2 years into Prohibition), the AMA essentially reversed itself by declaring that any restriction on the medicinal use of alcohol represented an interference with medical practice. Okrent (2010) reports that during Prohibition, physicians increasingly prescribed alcohol for various ailments, including asthma, cancer, diabetes, and even old age. Add to that the increased acquisition of sacramental wine (its production was exempted in the Eighteenth Amendment) by rabbis and priests during Prohibition. Prohibition thus served to showcase more than ever before Americans’ conflicted attitudes toward alcohol and addiction.

Post-Prohibition and the Medicalization of Addiction

Blocker (2006) contends that the Great Depression of the 1930s was largely responsible for repeal of the Eighteenth Amendment in 1933. Widespread economic hardship—due in small part to the loss of tax revenue on beer and liquor manufacturing and sale—replaced alcohol as the explanation for human travails. Furthermore, Prohibition had been unsuccessful in eliminating alcohol consumption, and it was only moderately successful in reducing drinking: According to Okrent (2010, p. 148), the best estimates of authoritative scholars are that use decreased by 30% in the first decade of Prohibition. Blocker argues, however, that Prohibition did succeed in keeping drinking rates below pre-Prohibition levels until the 1970s. Even during World War II, when the federal government did not enforce stringent restrictions on the alcohol industry, drinking rates remained relatively low. Kolb (1928) claimed that drug addiction “decreased rapidly” during Prohibition. It could be said, therefore, that Prohibition was “partly successful as a public health innovation” (p. 241). But credit for decreased alcohol consumption also must be extended to the economic strain of the Great Depression, state (rather than local or federal) liquor control policies, ongoing labor reform, the founding of the Research Council on Problems of Alcohol in 1937 (financed by the alcohol beverage industry), and the founding in 1935 of what now is considered the largest and most successful self-help group in the world: Alcoholics Anonymous (AA). That a physician (Dr. Bob Smith) and an unemployed stock broker (Bill Wilson) would join forces, after a chance meeting in Akron, Ohio, to establish a fellowship based on Christian principles that would embrace and become synonymous with the disease concept of addiction symbolizes, quite profoundly, the enigmatic tapestry of addiction.

Although prohibitionists and members of AA were united in their efforts to prevent the destructive effects of alcohol, this was their only

similarity. Prohibitionists believed that anyone could become an alcoholic, whereas AA members identified themselves as compulsive drinkers who had a unique constitution that prevented them from drinking “normally.” Their problems stemmed from a yet undefined condition within themselves rather than from the pharmacological properties of ethanol. This condition was a type of “allergy” that induced excessive drinking. Dr. William Silkworth, a New York physician, proposed the “allergy” theory adopted by AA. In the AA’s view, this distinctive condition set alcoholics apart from other drinkers. Furthermore, AA was established primarily to rehabilitate “drunkards” by welcoming them into a morally supportive fellowship of other—and recovering—drunkards, not by humiliating them or subjecting them to punitive measures. Such a welcoming community that offered a message of hope through personal testimonials was just the balm many habitual drunkards needed at the time, particularly those still scarred by their treatment as immoral outcasts during the self-righteous Prohibition movement. Publication in 1939 of AA’s “Big Book” that outlined its founders’ views on alcoholism brought further attention to AA. But the *Saturday Evening Post* cover story of AA in March 1941 is widely considered the primary reason AA membership quadrupled from 2,000 to 8,000 that year (Weinberg, 2005).

Scientific interest in chronic inebriety also increased after Prohibition, supported financially by the liquor industry (which was interested in diverting causation of alcoholism away from alcoholic beverages to the drinker) and by notable industrialists (e.g., John D. Rockefeller, Jr. and Andrew Carnegie) who favored alcohol taxation for their own financial gain. The Research Council on Problems of Alcohol was established in 1937, and the Yale Center of Alcohol Studies soon followed in 1941. Although these early, private research institutes did not support AA’s adoption of the allergy theory of alcoholism, and AA was “quite cavalier about the relevance of science to their own work” (Weinberg, 2005, p. 58), these separate movements needed each other to promote their own interests. As Weinberg noted, the scientific community benefited from the popularity of AA because more research dollars were solicited from private foundations to study a condition that afflicted the middle class (not just “skid row bums”) and was potentially curable (i.e., worth the investment). In turn, AA benefited from the scientific community’s legitimization of alcoholism as a disease, albeit a heretofore nonspecific and elusive medical disorder that included certain characteristics within the drinker, chiefly “loss of control.”

Due to the effects of the 1915 Harrison Narcotic Act and America’s involvement in World War II and then the Vietnam War, drug addiction remained a focus of scientific inquiry. Prisons had become overcrowded with convicted narcotic users in the 1920s, and two penitentiaries or “narcotic farms” were established in the 1930s to relieve this burden: one in

Lexington, Kentucky; the other in Fort Worth, Texas. Placed under the federal jurisdiction of the Public Health Service, these facilities laid the groundwork for medicalizing drug addiction (Musto, 1999). Dr. Lawrence Kolb was the first medical director of the Lexington, Kentucky, facility and later worked for what would become the National Institutes of Health in Washington, DC. He proposed that drug addiction resulted primarily from preexisting psychopathology (e.g., “abnormal nervous makeup,” neurosis, psychopathy; Kolb, 1928), whether or not addicts began their use “accidentally” to satisfy pleasure (classified as “pure dissipators”) or to treat a medical condition, for which narcotics or amphetamines were prescribed. Although Kolb was criticized for what Weinberg (2005) described as “the veiled moralism of his own theories” (p. 67), he advocated for a medical approach to the treatment of drug addiction rather than punishment. This approach was challenged from 1935 to 1960 when anticommunist sentiment and fear of any efforts to undermine nationalistic fervor or patriotism contributed to an escalation in criminalization for drug use and drug-related behaviors. Ironically, it was during this same time that pharmaceutical companies were in their heyday developing and marketing a wide range of amphetamines for mental health conditions, such as depression (see Rasmussen, 2008). It was in 1953 that Narcotics Anonymous was founded in Southern California.

The civil rights movement in the United States and the counterculture of the 1960s represented a slight shift in tide toward drug addiction and also showcased a greater variety of addictive substances, namely, hallucinogens and marijuana, and in the 1980s, cocaine. This generated expanded considerations about the nature and causes of addiction. Although federally funded research on drug and alcohol dependence had been under the purview of the National Institute of Mental Health since its inception in 1948, it was only with the founding in the early 1970s of federal agencies devoted specifically to substance use issues that addiction research, treatment, and prevention gained prominence. Harold Hughes, a self-described recovering alcoholic and a member of AA, was elected in Iowa to the U.S. Senate in 1968 and was instrumental in passing through Congress the act that established the National Institute on Alcohol Abuse and Alcoholism (NIAAA) in 1970. According to Weinberg (2005), this legislation effectively “institutionalized the disease concept of alcoholism” (p. 62). The National Institute on Drug Abuse was established in 1973 and, in partial contrast to NIAAA, promoted the concept of drug addiction as a form of deviant behavior (Campbell, 2010). This sociological emphasis allowed researchers and policymakers to consider environmental factors (e.g., poverty, urban decline) more so than biological factors when explaining addiction. There is logic to a predominant focus on biological mechanisms (including genetic predisposition) to explain addiction when only one substance—alcohol—is considered. When a wide variety of substances classified under the nebulous

heading “drugs” is the focus, however, explanations for addiction beyond “disease” are necessarily entertained.

The difficulty is that addiction as “disease” is not and never was confined to a biological or medical condition. Psychoanalytic or psychodynamic explanations of addiction in the 1940s and well into the 1960s included references to character malformation and deficits, such as having an infantile or immature and narcissistic ego incapable of accurate self-assessment. Clark (2017) describes the common psychiatric view of addiction at that time as “the expression of an underlying, individual psychological disturbance caused by insufficient psychosexual development” (p. 63). Alcoholics and addicts thus were viewed as infants who needed a type of “rebirth” that was overseen by persons in authority (e.g., professionals, recovering addicts) who provided so-called loving, yet firm, guidance. They also were branded as “liars” who were “in denial” about their addiction, and so treatment approaches necessarily included confrontation to “break through” their strong defense mechanisms. (Chapter 5 provides further discussion of a psychoanalytic understanding of addiction.)

These characterizations persisted into the counterculture of the 1960s and 1970s, a time of great societal change in the United States. It also was during this time that prominent psychotherapies (e.g., Gestalt therapy, reality therapy, rational-emotive behavior therapy) endorsed direct and confrontational approaches (e.g., disputing “irrational thinking”) to promote client catharsis. It was believed that recovery from addiction could occur only by first uncovering “deeply rooted” and repressed beliefs and feelings and then encouraging clients to vent in dramatic fashion. Psychotherapists and other helping professionals were not alone in adopting this approach; so did laypersons or paraprofessionals working in treatment programs.

One such treatment program was Synanon, founded in the late 1950s in Ocean Park, California, by Charles “Chuck” Dederich, a recovering alcoholic and former oil salesman. Dederich had benefited from AA but thought its nonjudgmental practice of sharing testimonials “was too gentle to affect heroin addicts hardened by criminal careers, underworld associations, and socially unacceptable substance choice” (Clark, 2017, p. 11). Like AA, Synanon was group-based and peer-led. Unlike AA, Synanon was a residential treatment program that operated according to strict rules and prioritized intense aggressive and confrontational tactics, including ridicule. Sessions focused on challenging residents to come face to face with their moral failings, substituting their ineffective defenses with new, healthy habits. Few viable treatment alternatives were available at that time, and science-based evidence was in its infancy. Unfortunately, despite the growth of evidence-based practices today, remnants of Synanon philosophy and practices persist in many U.S. addiction treatment facilities. Although confrontational practices now are more subtle compared to the

outright confrontational methods of 60 or 70 years ago, nonetheless various forms of coercion remain.

Current Views of Addiction

Throughout U.S. history, addiction to alcohol or other drugs has consistently been viewed as a “hybrid medical–moral affliction” (see Tracy, 2005, p. 26). This remains true today. Despite 65 years of the American Psychiatric Association’s recognition of substance-related conditions as mental disorders and the American Society of Addiction Medicine’s definition of addiction as “a primary, chronic disease” (www.asam.org), advances in neurobiology and biochemistry, and findings from sophisticated behavioral and social science research (e.g., behavioral economics) that implicate conditioning and environmental factors (e.g., poverty) in the initiation and maintenance of addiction, the person who has become addicted to a substance is still often regarded as blameworthy and consequently is treated as a criminal in modern society.

Federal policies and practices have promoted this form of public exorciation of alcoholics and drug addicts. For example, the 1986 Anti-Drug Abuse Act signed into law by President Reagan drastically cut funding for treatment and research, while dramatically increasing funding for law enforcement to “fight drugs” and implement a “zero tolerance” policy. This moralistic and punitive view of addiction still guides alcohol and drug control policies today. For instance, drug courts “sentence” offenders to “treatment”: Driving while intoxicated offenders are required to participate in treatment and/or attend AA meetings, employers make workers’ continued employment contingent on seeking treatment, and some medical centers may not accept for liver transplantation individuals diagnosed with alcoholic liver disease. Such practices tend to impede progress toward developing widely shared social norms about acceptable and unacceptable substance use, and they spur acrimonious debates about public drug control policy. Peele’s (1996) description of the “disease law enforcement model” is reminiscent of practices more than a century old, and it still applies today: “When public figures in the United States discuss drug policy, they generally veer between these two models, as if the debate is over whether we should imprison or treat drug addicts. The contemporary U.S. system has already taken this synthesis of the law enforcement approach to drug abuse and the disease approach almost as far as it can go” (p. 204).

Americans remain conflicted about alcohol and other drug use (e.g., marijuana) and perhaps increasingly about specific behaviors that can become addictive (e.g., gambling, video gaming). This ambivalence is likely due to the futility—or more precisely, the impossibility—of isolating a singular and direct cause of addiction. With respect to substance addictions, Kalant (2009) offers the following observation: “Addiction is not produced

by a drug, but by self-administration of a drug; the difference is of fundamental importance” (p. 781). He proposes a comprehensive, complex, and integrative approach to understanding substance addiction rather than the frequently used approach known as *biological reductionism*. Kalant contends that addiction can only be explained by considering multilevel factors from the molecular to the societal. This view is shared by Lewis (2015, 2017), who proposed a *developmental learning model* of addiction that highlights the brain’s neuroplasticity as part of the process of learning—the learning of addiction and the learning of recovery. His model is discussed briefly in a later section of this chapter.

The American conception of addiction, particularly alcoholism, has for too long been defined by incongruous assumptions involving disease and morality. Neither perspective has supplanted the other, probably due, at least in part, to various interest groups seeing benefit in maintaining the incongruent medical–moral addiction model. For example, municipal court and common pleas court judges who oversee drug court programs routinely “sentence” “offenders” to drug treatment for a certain length of time (e.g., 1 year), and sentencing may include mandated attendance at mutual aid societies, such as AA. A more sophisticated debate about the nature of addiction, one free of moral overtones and disease labels, may be too controversial and uncomfortable. We believe it is necessary nonetheless. In 2017, the peer-reviewed scholarly journal *Neuroethics* devoted one entire issue to the controversial topic of whether addiction is a brain disease. The 17 original articles in that issue present a sophisticated debate.

In practice settings, however, there does not seem to be much interest in entertaining the more complex perspective that addiction represents maladaptive behavior—behavior arising from interactions between characteristics of the individual and their environmental conditions. Such an analysis would include examining poverty, inadequate education, lack of employment, racism and other forms of oppression, and access to services. The prospects for this type of comprehensive analysis gaining traction are not bright, except perhaps in academic and scientific circles. Attempts to define addiction continue to stumble when challenged by the entanglements of personal responsibility and blameworthiness, reward seeking and brain circuitry, and disease and suffering. They intersect and are entwined by myriad contemporary social conditions, including (1) the politics of special interest groups, such as Mothers Against Drunk Driving; (2) relentless attempts to medicalize human behavior whereby pharmaceutical companies and medical professionals benefit; (3) growing opposition to regulating economic markets and concerns about restrictions on personal liberties, such as the continued efforts to legalize cannabis use in the United States; and (4) persistent poverty coupled with growing income inequality and increasing health disparities. Much disagreement and confusion about the nature of addiction remain.

THEN AND NOW: THREE BROAD PERSPECTIVES ON THE NATURE OF ADDICTION

The preceding historical review of conceptions of substance use and addiction in U.S. history highlights three broad perspectives on the nature of addiction that remain “alive and well” today. These perspectives regard addiction as (1) immoral conduct, (2) disease, or (3) maladaptive behavior. All three of these perspectives, to varying degrees, were evident from the early Temperance days and into Prohibition, and they continue to be prominent today in public attitudes and professional circles.

Addiction as Immoral Conduct

The first set of beliefs maintains that addiction represents a refusal to abide by some ethical or moral code of conduct. Excessive drinking and drug use are considered freely chosen behaviors that are at best irresponsible and at worst evil. By classifying addictive behavior as sinful, one does not necessarily ascribe the same level of “evilness” to it as one would to rape, larceny, or murder. Nevertheless, in this view it remains a transgression, a wrong.

Note that this broad perspective assumes that alcohol and drug misuse (and other non-substance-related behaviors, e.g., gambling) are freely chosen. In other words, with respect to this sphere of human conduct, people have autonomy and are free agents: They have decision-making capacity and are able to control or regulate their behavior. Those who struggle with alcohol or drug use or gambling, for example, are not considered “out of control”; rather, they *choose* to use substances or to engage in activities in such a way that they create suffering for others (e.g., family members) and for themselves. Thus, they can be blamed justifiably for their addiction.

Because addiction results from a freely chosen and morally wrong course of action, the logical way to “treat” the problem is to punish the person, who is often referred to pejoratively as an alcoholic, addict, or offender. From this perspective, legal sanctions such as jail sentences, fines, and other punitive actions are seen as most appropriate. The addict is not thought to be deserving of care or help. Rather, addicts must face the natural (or societal) consequences of their actions. More often than not, this means punishment to rectify past misdeeds and to prevent further substance use or addictive behavior. Relapse is considered evidence of lingering evil in the addict; therefore, punishment is again needed to correct “slipping” or backsliding.

In the United States today, this perspective on alcohol and other drug use is typically advocated by politically conservative groups, law enforcement organizations, and some zealous religious factions. During political campaigns, candidates frequently appeal to this sentiment by proposing tougher legal penalties for possession and distribution of illicit drugs and

for drunken driving. As is apparent in the historical review presented at the beginning of this chapter, U.S. history is marked by repeated (and failed) government efforts to eliminate addiction with such legal sanctions. The crackdown on Chinese opium smokers in the 1800s and the enactment of National Prohibition in 1920 are two noteworthy examples.

The addiction-as-sin perspective has several advantages as well as disadvantages. One advantage is that it is straightforward and clear; it is parsimonious (refer to the fifth attribute and function of a good theory mentioned earlier in this chapter). There is little ambiguity or murkiness associated with this stance. Furthermore, it is absolute; there is no need for theorizing or philosophizing about the nature of addiction. It is simply misbehavior, and as such it needs to be confronted and punished. Scientific investigation of the problem is believed to be unnecessary because that which must be done to correct it (i.e., implementing sanctions) is already well understood. From this perspective, society's inability to adequately address the problems of addiction reflects widespread moral decay. Proponents of the addiction-as-sin perspective typically call for a return to "traditional" or "family" values as the way to ameliorate the problem. This was the case in the campaign of the WCTU in the late 1800s and early 1900s, a campaign that continues today (see www.wctu.org).

The perspective that addiction is immoral, a sin, has at least three disadvantages. First, science suggests that addiction is anything but a simple phenomenon. Addictive behaviors have multiple origins, stemming from pharmacological, biological, economic, psychological, and social factors. The apparent complexity of addiction is underscored by the variety of diverse theories seeking to explain it (many of which are described in subsequent chapters of this book). Moreover, as science has begun to shed light on various aspects of addictive behaviors, it is clear that much still remains to be learned. The genetic vulnerability hypothesis (see Chapter 2), expectancy theories (see Chapter 7), and the purported stabilizing effects of alcohol use on family structure (see Chapter 8) are all cases in point.

Another disadvantage of the perspective that addiction is immoral conduct is that it is not at all clear that addiction is freely chosen. The disease models (see Chapter 2) maintain that exactly the opposite is the case. That is, excessive drinking or drug use represents being "out of control" or having impaired self-control (see Tang, Posner, Rothbart, & Volkow, 2015). In either case, the individual does not freely choose addictive behavior. Repeatedly engaging in compulsive behavior is not voluntary. A further point of departure is offered by the social and behavioral sciences, where, at least from several theoretical perspectives, a high rate of drug self-administration is understood to be under the control of social or environmental contingencies. These contingencies are usually external to the person struggling with substance use and are not under their personal

control. Thus, both the disease models and the social and behavioral sciences challenge the notion that addiction is willful misconduct.

A third disadvantage of the addiction-as-sin position is that, as history suggests, punishment is an ineffective means of reducing the prevalence of addictive problems in the population. Aside from the issue of inhumane sanctions (which is a real possibility if a political majority adopts the moral view of addiction), a reasonably strong case can be made, based on historical precedents, that striking back at those who struggle with addiction via governmental authority simply does not work over an extended period of time. Law enforcement crackdowns often have the unintended effects of strengthening organized crime networks, creating underground markets, bolstering disrespect for the law, clogging court dockets, and overloading local jails and prisons (at substantial cost to taxpayers).

Addiction as Disease

The second broad perspective on addiction contends that excessive consumption of alcohol or drugs is the result of an underlying disease process (Detar, 2011). The disease process is thought to cause excessive drinking or drug use; the high rate and volume of use are merely the manifest symptoms of an existing illness. The exact nature of the illness is not fully understood at this point, but many proponents of disease models believe that it has genetic origins. For these reasons, it is hypothesized that individuals cannot drink or drug themselves into alcoholism or drug addiction. If the disease (possibly arising from a genetic vulnerability) is not present, then substance use disorders cannot develop, no matter how much of the substance is ingested.

The addiction-as-disease conception maintains that persons struggling with their substance use are victims of an illness. The afflicted individual is not evil or irresponsible; the person is ill or sick. And the illness or sickness is endogenous, which explains the reference to addiction as a *dispositional* disease (Miller, Forcehimes, & Zweben, 2011). Thus, substance use and behavioral addictions are not freely chosen. Excessive drinking, drugging, and gambling, for example, change the brain's neurochemistry, resulting in compromised decision-making capability and increased reliance on extrinsic sources for motivation and reward. The ability to self-regulate (e.g., delay gratification, not act on impulse) is jeopardized. A common feature of the disease conception is loss of control. This mechanism involves cravings that rob addicts of personal control. The power to resist temptation has disappeared (see West & Brown, 2013, p. 96).

Because alcoholics and addicts are seen as suffering from an illness, the logical conclusion is that they deserve compassionate care. And because the condition is considered a disease, medical treatment is appropriate.

Competent treatment, then, especially on an inpatient basis, is physician-supervised. Traditionally, treatment based on the disease models emphasized the management of medical complications (e.g., liver disease, stomach ulcer, anemia), as well as patient education about the disease concept and recovery.

Five groups of persons or organizations strongly advocate for the disease models of addiction: the (1) medical profession, (2) treatment industry, (3) pharmaceutical industry, (4) alcohol industry, and (5) recovery movement. For quite some time, critics have indicated that physicians have a vested interest in convincing society that addiction is a disease. As long as it is considered such, they can admit patients to treatment programs, bill insurance companies, and collect fees. This also is true for nonmedical treatment providers, such as counselors and social workers. Unless addiction is endorsed as a disease, many argue, professional treatment will wane. The pharmaceutical industry also strongly advocates for the disease models of addiction. If addiction is a disease similar to hypertension and diabetes, it is logical to assume that pharmacological interventions would be recommended to treat its symptoms (e.g., cravings) and stabilize the condition. The pharmaceutical industry has taken full advantage of this logic, with support from the medical profession. Although extremely unsettling, it is unfortunately not surprising that the increase in overdose deaths in the United States between 1999 and 2010 directly corresponded to the dramatic increases in the sale of opioid pharmaceuticals in those same years (Beauchamp et al., 2014). To add salt to the wound, these same pharmaceutical producers now manufacture medications to counter the negative side effects of their opioid medications, such as opiate-induced constipation. This seems a cruel cycle.

Another group that endorses addiction, specifically alcoholism, as disease is the alcohol industry (i.e., the brewers, distillers, and winemakers). As long as it is a disease suffered by only 10% of all drinkers, then government entities will not take serious steps to restrict the manufacture, distribution, sale, and consumption of alcoholic beverages. Note that the alcohol industry wants the public to believe that the problem lies in the alcoholic (i.e., consumer), and not in their alcohol products.

The final group that strongly supports addiction as disease is the recovery movement, composed of individuals and families in recovery, including members of AA and other 12-step mutual aid societies. From this group's perspective, calling addiction a disease makes it more respectable than labeling it a moral problem or a mental disorder. It also can serve to reduce possible guilt or shame about past misdeeds, thereby allowing recovering individuals to focus on the work they need to do to establish and maintain a healthy life.

The disease models have several advantages. Most importantly, addiction is taken out of the moral realm, and its victims are helped rather than

scorned and punished. In addition, society is more willing to allocate resources to help those who have a disease than to individuals who are merely wicked. It also is clear that the disease models have helped hundreds of thousands of alcoholics and addicts return to healthy living. Thus, its utility in assisting at least a large subset of addicts is beyond question.

The disease models have a number of disadvantages as well, only a few of which are discussed here. (Chapter 2 includes a more extensive discussion of them.) Briefly, several of the key concepts have not held up under scientific scrutiny. For example, the loss of control hypothesis, the supposedly progressive course of alcoholism, and the belief that a return to controlled drinking is impossible are all propositions that have been seriously challenged by scientific investigations. Within the scientific community, it is acknowledged that these assumptions are not well supported by empirical evidence. And many have argued that the disease models of addiction do not refer to a condition that is strictly biomedical in etiology and treatment (Lewis, 2015, 2017; Tracy, 2007). Unfortunately, substantial segments of the prevention, treatment, and recovery communities do *not* appear to use research as a guide for practice.

Addiction as Maladaptive Behavior

The third broad perspective on addiction is that it is a form of maladaptive behavior. This means that addictive behavior is shaped by the same laws that shape all human behavior. Essentially, addiction is learned. And this learning takes place not only at a cognitive level; it also occurs neurologically or neurochemically. Lewis (2015, 2017) maintains that engaging in rewarding behaviors (whether addictive or nonaddictive) results in the formation of new synapses (known as synaptogenesis) as well as the depletion of synapses (known as pruning). This change in brain circuitry is a form of learning, and, in the instance of addictive behaviors, this learning is maladaptive in that it is not healthy or beneficial. Lewis (2017) describes addiction as “the repeated pursuit of highly attractive goals and the brain changes that condense this cycle of thought and behavior into a well-learned habit” (p. 12).

Addiction as a “well-learned habit” is neither sinful (as the moral model purports) nor out of control (as the disease models purport). Instead, from a maladaptive perspective, addiction is seen as an inability to adjust to healthy living conditions, a maladjustment that consequentially presents significant environmental, family, and social stressors. Furthermore, as in the disease models, individuals with an addiction are considered victims, though not victims of a disease. From the maladaptive perspective, the “victimhood” of addiction results from the destructive living and learning conditions in which persons find themselves, such as early childhood trauma and impoverished and crime-ridden neighborhoods. Addictive behavior

as maladaptive behavior is, for the most part, not freely chosen, although some social and behavioral science theories (e.g., social-cognitive theory) do assert that addicts retain some degree of control over their problem behaviors and that addiction is a failure of self-regulation in a challenging environment.

It is important to understand the value placed on objectivity in the social and behavioral sciences. When addiction is described as a *maladaptive behavior*, this is very different from describing the condition as *misbehavior* (a moral perspective). Social and behavioral scientists retain a neutral stance and avoid passing judgment on the “rightness” or “wrongness” of addiction. *Maladaptive* is used to convey a behavior pattern or habit that is thought to have harmful or destructive consequences for persons struggling with an addiction, their families, and society. It does not imply that addicts are bad, sinful, or irresponsible persons.

In the social and behavioral sciences, both preventive efforts and treatment interventions are based on learning principles, and both attempt to help individuals modify their lifestyle by enhancing behavioral skills, such as improving healthy decision making and delaying gratification. Change mechanisms also target the social conditions in which they live, and formats for doing so can be group- and family-based, as well as individual. Multilevel interventions combine individual-level change strategies with those that seek to change conditions in neighborhoods, business practices, workplaces, and communities. Policy interventions also are key components of multilevel interventions. Professionals in the social and behavioral sciences (including public health) are most heavily involved in these approaches to prevent and treat addiction.

Interventions attempting to influence the social environment and the behavior of individuals are labor-intensive and evaluation-focused. Thus, professional practice ideally should be theoretically informed, data-driven, and subject to frequent modification. Although these characteristics are consistent with today’s emphases on efficiency and accountability, many prevention and treatment programs are slow to adopt this kind of empirical approach (Miller, 2009). Today, facilitating the adoption of evidence-informed practice is variously described as *research translation*, *technology transfer*, and *diffusion of innovation*. Each phrase has somewhat different meanings, but they all refer to processes by which new products and services are moved from research settings to practice settings and consumer markets.

EVIDENCE IN SUPPORT OF PREVENTION AND TREATMENT

A major problem in U.S. drug control policy today is the lack of awareness, among both the general public and political leaders, that comprehensive

and competently administered prevention programming and addiction treatment are effective in addressing problematic substance use; that is, prevention and treatment do “work.” This is true for universal school-based prevention programs that focus on a combination of social competence and social influence and not on knowledge about drugs. These types of school-based programs have been found to reduce any drug use, including marijuana (Faggiano, Minozzi, Versino, & Buscemi, 2014). Furthermore, Swensen (2015) calculated that for each 10% increase in the number of treatment facilities in the United States, mortality is lowered by 2%. Despite these and other findings that prevention and treatment services reduce substance misuse and its consequences (including death), federal funding to control illegal drug use remains invested in law enforcement and interdiction first, followed by treatment and prevention (U.S. Office of National Drug Control Policy, 2016).

Why advocate for drug abuse prevention? Since 1989, a number of well-controlled preventive interventions have identified effective approaches to deterring tobacco, alcohol, and illegal drug use among youth. Among these seminal studies are those that found support for school-based interventions (Botvin, Baker, Dusenbury, Botvin, & Diaz, 1995; Ellickson, Bell, & McGuigan, 1993) and community-based approaches with parent and school components (Pentz et al., 1989; Perry et al., 1996). Some of the lessons learned from these early trials that remain true today are that positive program outcomes decay over time and, as a result, ongoing “booster sessions” are essential to maintain gains. Of course, such additional services require resources, commitment, and collaboration among communities, schools, and parents. Another finding of the studies from this era that remains important today is that perceived peer norms mediate between program activities and outcomes. Prevention programming appears to be effective to the extent that it can instill conservative norms about substance use. Stated in another way, if youth are influenced to perceive that substance use is uncommon (not prevalent) and is socially unacceptable among their peers, they are less likely to initiate or continue substance use.

Existing research also provides a strong rationale for greater public support of substance abuse treatment programs (Cao, Marsh, Shin, & Andrews, 2011; Carroll et al., 2011). In 1999, the National Institute on Drug Abuse established the National Drug Abuse Treatment Clinical Trials Network (CTN) to bring together clinical practitioners and researchers to identify ways to increase the relevance of research in practice and to foster the adoption and dissemination of evidence-based treatment practices (see www.nida.nih.gov/ctn). By 2017, CTN had completed 50 trials testing pharmacological, behavioral, and integrated treatment strategies involving more than 24,500 clients. In one study, Ball and colleagues (2007) tested a brief motivational enhancement therapy (MET) treatment against a brief

counseling as usual (CAU) control condition in a multisite randomized clinical trial. A total of 461 outpatient clients were treated in five outpatient programs by 31 treatment practitioners. The study found no retention differences between the two brief intervention conditions. The results indicated that both three-session treatment conditions produced decreases in substance use during the 4-week treatment phase. However, MET produced sustained reductions over the subsequent 12-week period compared to the CAU condition, which was associated with significant increases in substance use during this follow-up period. Further examination of the findings revealed that MET produced more sustained substance use reductions among primary alcohol users than among primary drug users. Overall, the results showed that brief MET is an effective strategy for helping clients with substance abuse problems. Further studies of MET are discussed in Chapter 11.

In another CTN study, Petry and colleagues (2005) examined the efficacy of an abstinence-based contingency management intervention in eight community-based outpatient treatment programs. The 415 clients were cocaine or methamphetamine users who were randomly assigned to a usual care control condition or a usual care plus abstinence-based incentives treatment condition for a 3-month period. Those assigned to the treatment condition were provided with opportunities to win prizes for submitting drug-free urine samples. The lottery was set up such that those who achieved continuous abstinence increased their chances of winning prizes. Compared to clients in the control condition, those in the treatment condition (1) stayed in treatment significantly longer, (2) were more likely to submit stimulant-free and alcohol-free samples, and (3) were more likely to achieve 4 to 12 weeks of continuous abstinence (Petry et al., 2005). The study documents the viability and efficacy of using motivational incentives in community-based treatment settings. Free resources describing this intervention, including a video depicting its implementation in practice settings, are available at www.betterxoutcomes.org.

For some time, treatment for substance-related addictions has been found to be cost-effective. The Rand Corporation (1994), for example, found that for every dollar spent on treatment, \$7 was saved on crime-related costs and lost workplace productivity. A subsequent Rand study found that treatment was more cost-effective than either conventional law enforcement or mandatory minimum drug sentences in reducing both cocaine consumption and related violence (Caulkins, Rydell, Schwabe, & Chiesa, 1997). More recently, standard outpatient therapy supplemented by computer-assisted training in cognitive-behavioral therapy was found to be cost-effective in the outpatient treatment of substance dependence (Olmstead, Ostrow, & Carroll, 2010). Another study found that a one-session motivational intervention designed to assist alcohol-involved youth

treated in a hospital emergency department, costing \$170–\$173, was found to save \$8,795 per quality-adjusted life year in societal costs (Neighbors, Barnett, Rohsenow, Colby, & Monti, 2010).

The outcomes of the major prevention and treatment studies described here represent a small number of the evidence-based practices that have been validated by researchers. Although much remains to be learned, particularly about how to efficiently transfer research findings to community practice settings on a broad scale, it is clear that the approach and methods used in behavioral and social interventions make an important difference. Thus, a major challenge facing the addictions field is implementing evidence-based practices into in-service and formal training programs needed to prepare highly competent practitioners for the future. Chapter 12 addresses this challenge in more detail.

CHAPTER SUMMARY

Advances in scientific research and technology, recent and further changes to health care policy, and economic instability at the state and federal levels necessitating funding restrictions, have all helped to shape contemporary views of addiction and the design of interventions. Although the relationship between empiricism or science and theory is tenuous, as West and Brown (2013) suggest, it is clear that this relationship is symbiotic. This means that social, economic, and political conditions influence perspectives of addiction and, in turn, views or theories of addiction influence these trends and events. A prominent example in U.S. history is National Prohibition. Fueled by a Christian crusade of moral reform, the Temperance movement quickly turned into a political force that changed the U.S. Constitution and had a powerful effect on conceptions of alcoholism and the resources used to address the problem.

Because addiction is a complex condition, there are multiple explanations for its etiology, prevention, and treatment. Three broad perspectives, traced through the past 200 years of U.S. history, can help professionals frame and further develop their understanding of addiction. These perspectives see addiction as (1) immoral conduct, (2) disease, or (3) maladaptive behavior. In the subsequent chapters of this book, we discuss various theories of addiction associated with each of these three broad perspectives. In so doing, we present pertinent research to alert practitioners to the possible shortcomings and strengths of these theories, and we provide recommendations for prevention and treatment. We hope the theories presented herein serve as a useful guide for implementing effective intervention strategies in the prevention and treatment of addiction and, more broadly, addictive behaviors.

REVIEW QUESTIONS

1. How does theory contribute to (a) new knowledge, (b) science, and (c) practice?
2. What is the purpose of theory?
3. What are the attributes and functions of a good theory?
4. What have been the incongruent views of addiction in American history? To what extent has the conception of addiction changed over time? What views of addiction today are parallel to those earlier in American history?
5. What are the characteristics of the three perspectives on addiction that make them distinctive and logically exclusive of one another? What are the advantages and disadvantages of each view?
6. How are the interests of different groups of persons or organizations aligned with the different views of addiction?
7. Which broad view of addiction has received less attention in scientific and treatment circles and among the general public than the other two broad views? What explains this?

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