Peter Ferentzy · Nigel E. Turner

The History of Problem Gambling

Temperance, Substance Abuse, Medicine, and Metaphors

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Preface

This book documents the history of ideas about problem gambling (PG) and its link to addictions. We use a combination of literature review as well as conceptual and linguistic analysis to explore the ways in which ideas about PG have changed over time. Religious and medical influences are discussed, along with the ways in which ideas about PG were constantly influenced by ideas surrounding substance abuse. The history of mental illness, notably as it pertains to themes such as loss of control over behavior, is also addressed. We also consider how advances in the mathematics of probability and more recently advances in gambling technology contributed to the emergence of an awareness of problem gambling as a distinct entity. We end with a discussion of the current situation, and future prospects, with an eye on which ideas about PG and addictions seem most promising and which ones should perhaps be left behind.

Our book really is the first of its kind. While there is no shortage of manuscripts on the history of gambling, and even if many of these refer here and there to the addicted or pathological gamblers from days gone by, ours is the first effort to give the evolution of ideas pertaining to gambling addiction its own proper history. The evolution of ideas related to mental illness is now well documented, with substance abuse also a serious (though still emerging) field of historical inquiry. Yet PG had no documented history, so we decided to rectify the matter.

Some readers might be struck by the many twists and turns taken in this book. Chapters 4 and 5, for example, devote more attention to drugs and alcohol than to gambling. This was unavoidable. Any contemporary PG scholar can tell you that the discipline borrows many—maybe most—of its ideas from the sciences of substance abuse. What we today call "alcoholism" was once called inebriety or dipsomania, and it was the first "addiction" to receive serious attention in the West. Later, use of opiates and other drugs came to set the standard by which addictions were measured. Many of our current ideas about PG are still beholden to these early forays in chronic drunkenness and, later, heroin addiction—here, the purportedly irresponsible and psychopathic "junkie" became the model for other out-of-control behaviors.

Through the nineteenth century, there was an accompanying trend: sciences involving volitional deficiency perhaps best exemplified by Esquirol's notion of

monomania. In order to understand how we came to the notion of "pathological gambling" in its current form, all of these determinants must be given their due and, somehow, streamlined into a coherent vision. Social, religious, political, technological, racial, class-based, and otherwise influenced, the history of PG's conceptualization is laden with science, pseudo-science, and a vast array of determinants—any one of which could be the sole topic for a decent book.

Further to this, there has long been some debate about the literal veracity of psycho-behavioral disease constructs, with many suggesting that such afflictions are merely metaphorical diseases rather than real ones. We are the first authors to address this matter with a solid foundation in the role of metaphor in all forms of conceptualization, including scientific discovery. When discussing the ways in which ideas and concepts travel from one domain (e.g., biology) to another (e.g., mental illness), we do not shy away from issues pertaining to literal veracity. We tackle them head on, explaining the many twists and turns these ideas have taken.

Yet we have chosen to do more than write a history and have addressed the current understanding of PG with both the eyes of the historian and those of two PG scholars well versed in current issues and controversies. Here, one example will suffice. Since the early twentieth century, the governing wisdom has been that addicts of all stripes need to hit bottom—meaning that they must suffer degradation prior to any readiness to change. Knowledgeable critics are aware that this is questionable, that readiness to change is nowhere near that simple, and that in fact the afflicted are more likely to change in response to positive developments—ranging from social support to assorted (e.g., career) opportunities—than to humiliation and suffering (which are more likely to exasperate the condition). So we challenge the governing ideology as many experts do. The difference is that we also provide a historical backdrop. While addiction historians have discussed how the "addict" was reconstructed in the early twentieth century into the worst of all possible derelicts, we are the first to link that development closely to the parallel emergence of the "hit bottom" theory. In short, only when addicts of all stripes were perceived this way could the idea that they require extremes of degradation become dominant. So we trace the ideology of hitting bottom from its inception right up to current ideas about etiology and treatment, both for PG and substance abuse disorders.

We have done our best to do justice to our topic, though it really is vast. This book could have been a thousand pages long. Sympathy for our readership, however, prompted us to opt for a bit of concision.

Authorship of this book is alphabetical and the authors contributed equally to the book. Ferentzy took the lead investigating the histories of nosology, addictions, and mental illness concepts. Turner took the lead in terms of the history of gambling and gambling technology, the psychology of gambling, and the linguistics of metaphors. Both contributed to discussion of the current state of gambling research and the integration of these various topics.

We would also like to thank Wayne Skinner for providing helpful advice during the initial stages of this investigation. In addition, we would like to thank the Ontario Problem Gambling Research Center for awarding a grant to Turner to help pay for the costs of conducting the research on which this book is based. In addition,

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Contents

Abbreviations

AA	Alcoholics Anonymous
APA	American Psychiatric Association
ADHD	Attention deficit hyperactivity disorder
BCE	Before Common Era (before year 1)
CE	Common Era (year 1 to present)
DSM	Diagnostic and Statistical Manual
DSM-III-R	Diagnostic and Statistical Manual, Version 3, revised
DSM-IV-TR	Diagnostic and Statistical Manual, Version 4, text revision
GA	Gamblers Anonymous
ICD	Impulse control disorders
NA	Narcotics Anonymous
PG	Problem and pathological gambling
OCD	Obsessive–compulsive disorder
PH	Public Health
RNG	Random number generator
SUD	Substance use disorder

Chapter 1
Introduction

Abstract In this chapter, we describe the basic outline and purpose of the book. A brief synopsis of each chapter is offered, along with an introduction to some of the most pertinent themes raised throughout. These include the role of substance abuse in the development of ideas about problem gambling, debates between advocates of public health and mainstream disease conceptions, and the role of metaphor in the creation of addiction-related ideas.

Keywords Substance abuse • Problem gambling • Book overview

In recent years, problem gambling has become recognized as a major public health issue. This recognition has come about in part as a result of a massive change in social attitudes towards gambling. Although gambling has existed for thousands of years, over the past 30 years it has been subject to an unprecedented level of commercial exploitation. This development has helped to generate an unprecedented awareness of problem gambling.

Over the past 200 years, society has gradually come to accept the idea that addictions are a type of disease. The disease notion can be traced back to sermons and medical documents from the late eighteenth and early nineteenth centuries. This perspective was a great step forward as it alleviated some of the guilt, reduced stigma, and encouraged the afflicted to seek help. More recently, though, the disease (or medical) conception has been challenged by many experts. While there are several disease models, they are often treated as a unified entity and a few criticisms stand out: (1) it is overly rooted in clinical perspectives; (2) it focuses unduly on the hardest cases; (3) it inhibits harm reduction and moderation therapy approaches; (4) it does not fit well with sociological inquiries; (5) it paints pathology in black and white terms, without allowing for degrees; and (6) it still has too much in common with the moral model it supplanted. A major challenge, which arguably encompasses the ones just listed, involves viewing addictions along a "continuum" of harm as opposed to a strict focus on pure pathology. This last criticism relates to

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issues ranging from the appropriateness of harm reduction and prevention initiatives to debates over whether abstinence is the only solution.

In this book we trace the evolution of these ideas as they relate to problem gambling. We wish to provide a systematic rendition of the medical conception and the many emerging alternative perspectives, with an eye on how the situation is likely to evolve. Behavioral learning theory, systems theory, and discussions involving "public health" and sociology have all presented challenges to a dominant "medical" conceptualization of gambling problems arguably beholden to a disease conception that Gamblers Anonymous (GA) and many in the treatment field adapted from Alcoholics Anonymous (AA). Despite the existence of many medical models, the "disease" or "medical" model is often taken as synonymous with the one put forward by GA. Confusing the issue is that many of these models—for example, the DSM description of pathological gambling as a "disorder of impulse control"—share traits with the GA model. Yet the public health model, rooted in epidemiology and clearly a "disease" model of sorts, is often presented as a challenge to the more popular GA-disease conception. Thus, we have an ironic situation of a "disease" model that was not initially rooted in medical science in competition with an alternative public health model that is clearly rooted in medical science.

Frankly, this is a book that had to be written. Unlike mental illness and substance abuse, problem gambling does not have a well-documented history of its own. Our efforts are also timely: currently psychiatrists, psychologists, and medical researchers are struggling to revise the Diagnostic and Statistical Manual that is used to diagnose (and to define) mental health problems. It is our hope that we can influence this process through clarification of the nature—and origins—of these models.

In this book, we examine the history of the medical view of problem gambling, unravel the many conceptions of disease currently in use, and provide some historical background for a better grasp of how the current situation has taken shape. By necessity, we also examine the literature on the idea of substance abuse as a mental disorder, its history, and how this has interacted with the very notion of disease itself. Special attention is given to whether addictions are literally diseases or only metaphorically so. We also identify future possibilities by determining where certain terms, concepts, beliefs, and practices are potentially compatible or even complementary and where others are—for either practical or logical reasons—mutually exclusive.

Many in the mental health field are unhappy with the current status of problem gambling and would like to see it conceptualized differently. In the effort to properly assess, and then to realistically alter, our views of where (and how) problem gambling should fit into the overall picture of public health, it will be helpful to know a bit about the ways in which current discussions are beholden to a range of scientific developments—and beholden as well to religion, politics, and even human vanity.

Chapter 2 is a brief history of gambling and changes in gambling technology over time. The role of metaphor in the construction of scientific discourse is also discussed. Chapter 3 defines pathological gambling, examines evidence for the existence of the disorder, and examines where it should be placed in terms of nosology.

Chapter 4 examines early views of addiction, including gambling addiction, from the seventeenth century to the late nineteenth century. Chapter 5 examines the perplexing period of time from the late nineteenth to the mid-twentieth centuries where society attempted to control addictions through prohibition. This period was characterized by a remarkably negative view towards addictions and addicts themselves, emphasized punishment rather than treatment, and defined addictions that in many ways still reverberate. Chapter 6 examines the events in the mid- to late twentieth century, essentially a trend to a more humane treatment of addiction involving the growth of Alcoholics Anonymous and the 12-Step movement along with scientific inroads such as learning theory, descriptive studies of gamblers, and the inclusion of pathological gambling in the DSM-III. Chapter 7 examines the later twentieth and early twenty-first centuries during which society adopted a more benign view of addictions that focuses more on medical treatment than punishment. Chapter 7 also focuses on the shift from the chronic disease model that locates the disorder in the individual to a public health model that locates the disorder in society. In the concluding discussion (Chap. 8), we examine the metaphoric underpinnings of these models, argue for a more balanced perspective, and revisit many themes discussed throughout the book.

Chapter 2
The History of Gambling and Its Intersection with Technology, Religion, Medical Science, and Metaphors

Abstract In this chapter, we offer a brief history of gambling and then discuss the intersection of pathological gambling with technology, religion, and science. While technological innovations, assisted by the development of probability theory helped to make gambling a more profitable industry, other historical currents were at work. Substance use and abuse, the temperance movement, and moral panics in general—all of these had key roles to play in the evolution of pathological gambling as an idea. Chronic drunkenness was our first widely recognized (and medicalized) addiction, followed by addictions to opiates and other substances—all of which set the stage for the recognition of behavioral addictions such as pathological gambling. We end with a discussion of metaphor, shedding light on questions concerning the literal veracity of psychobehavioral disease constructs. We argue that metaphor is endemic to all human conceptualization and that this on its own need not invalidate disease conceptions of behavior such as pathological gambling.

Keywords History • Technology • Luck • Medical science • Temperance • Metaphors

2.1 Gambling, Luck, and Rituals

Evidence for gambling and luck-oriented rituals has been found dating back to as early as 4000 BC (David, 1962; Schwartz, 2006; Reith, 1999). Although numerous papers and books have been written on the history of gambling (Asbury, 1938; Binde, 2007; Dixon, 1991; Schwartz, 2006), little scholarly attention has been paid to the history of the disease conception of problem gambling. This book examines the history of the notion that problem gambling is a disease and examines what it means to call it a disease. A place to start is simply an account of the changes in conceptualization by reference to the history of gambling itself.

For centuries, governments have variously tried to benefit from the proceeds of gambling or to prohibit the activity altogether (Rose, 1991; Skolnick, 2003). In the

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Western world, during the first half of the twentieth century, governments tried mainly to limit the availability of gambling (often to degrees approaching outright prohibition). This often resulted in legal and political battles between some citizens who wished to gamble and governments that insisted on trying to protect people from themselves. Similar battles have been fought over drugs, alcohol, prostitution, and pornography. The modern gambling scene has been characterized by a number of dramatic changes over the past 100 years. First, since the 1970s, there has been a remarkable liberalization of gambling laws so that, in the West, people now have much more freedom to bet. Second, this change has been accompanied by a rapid shift among governments from a prohibition model of governance to an exploitation model (Skolnick, 2003). Third, there has been a rapid commercialization of the gambling product that has shifted gambling from private bets between individuals to bets against large casinos, corporations, or governments. Fourth, the games themselves have shifted from games that often involved some element of skill to games that employ random chance using random number generators. And fifth, since the 1980s, casino gambling has shifted from card and dice games to electronic gambling machines (Ernkvist, 2009). Coincident with these changes, problem gambling was first recognized as a mental disorder in the mid-twentieth century (Bergler, 1943, 1957; Freud, 1961), and, in 1980, was incorporated into the Diagnostic and Statistical Manual (American Psychiatric Association, 1980) used by psychiatrists to place labels on their patients.

2.2 The History of Gambling

Gambling has been around in some form or other for thousands of years. Gambling games have been found in the pyramids. The casting of lots, an early form of dice, is mentioned in the bible. Most human cultures around the world have engaged in some form of gambling (Schwartz, 2006). Taking risks is an intrinsic part of our existence. Gambling can be defined as risking something of value (usually money) for the possibility of gain with an uncertain outcome. Risk taking has always been an essential part of survival. Among a troop of monkeys, a male who does not take risks will never become the dominant male and never have an opportunity to pass on his genes to the next generation. Human endeavors such as exploration, work, trade, and (of course) war involve taking calculated risks in order to secure a gain. However, gambling is a peculiar type of risk. Typically it only involves the risk of wealth, rather than any physical risk. Also, in modern commercial gambling, the expected long-term payoff is nearly always negative.

The history of the disease model of problem gambling has been colored by many important currents, and here two are discussed: changes in the technology of gambling itself and the conflicted relationship between gambling and religion. The appendix includes a list of some of the important historical events and developments.

2.3 Probability Theory

When considering the notion that excessive gambling is an addiction or a disease, it is important to be aware of the technological changes that have occurred over the past few hundred years. Arrows, spears, sticks, stones, or other weapons were among the earliest devices used for gambling. Later, dice were created from sheep hucklebones, which are roughly a cubic rectangle in shape with four long sides and two small rounded ends (David, 1962; Schwartz, 2006). The dice would only land on one of the four longer sides (not the ends). In addition, of those four long sides, two were larger than the other two. This meant that the dice would more likely land on the larger sides than the smaller sides. The earliest six-sided dice have been dated to 3000 BC (Schwartz, 2006). Board games such as senet were developed in ancient Egypt. The Romans bet on chariot races and held lotteries for prizes (Schwartz, 2006). According to David (1962), by the "time of the emergence of Rome and the Romans as the dominating power in Europe, gaming was the common recreation among all classes and types of people, so much so that it was found necessary to promulgate laws forbidding it, except at the Saturnalia" (p. 7). Cards were first used in China as early as the twelfth century and had spread to Europe by the fourteenth (Hargrave, 1966).

One complication for a study of the history of gambling is that many gambling devices were not solely used for gambling. The use of arrows or other weapons as gambling devices cannot be determined from the archaeological records. Similarly, hucklebones or astragali were also used for religious divination, and it is difficult to determine if a particular artifact was used for gambling or divination. However, in archaeological sites, hucklebones are far too common to have only been used for religious purposes (Schwartz, 2006). Similarly, it is often unclear whether board games such as senet were only played for amusement or as a means of gambling. To complicate matters, there were no strong lines drawn between sports, games, and gambling until the twentieth century. Early sport contests such as pedestrianism were run as a form of gambling. In fact, gambling was often the only means by which these athletes could earn money from their performances (Schwartz, 2006, p. 338). Asbury (1938) treats the terms sportsman and gambler as interchangeable.

Though gambling was a well-established recreational hobby well before the Roman Empire, back then the understanding of random chance was quite different from our modern view. According to David (1962),

> The beginning of the Christian era finds us then with dice, with astragali, with throwing-sticks, with board games, and with games of chance which use neither boards nor men. The idea of counting and enumeration is firmly established but not the concept of number as we know it now. The paraphernalia of chance events has been organized for man's pleasure and entertainment. Randomization, the blind goddess, fate, fortune, call it what you will, is an accepted part of life. But for an understanding of man's mental attitude towards these chance events, and his conception of chance in general, it is necessary to turn attention to a different stream of thought-divination (p. 12).

According to David (1962), ancient peoples had an entirely different understanding of random chance that was tied more to religion than to mathematics. We will return to the issue of divination in Sect. 2.5.

In addition, for most of human history, the calculation of probability was well beyond the ability of even the brightest minds. People simply lacked the mathematical operations that would make such calculations possible. The Roman system of Is, Vs, and Xs did not facilitate the simple arithmetic operations needed to compute probability. The famous Roman philosopher, lawyer, and statesmen, Cicero, had some understanding of the concept of luck as random chance (David, 1962), but never developed it mathematically. In addition, according to Mlodinow (2008), the Romans did understand the idea of a half-truth. In Roman law, it was believed that two half-truths equaled a certainty. Mlodinow points out that in reality two half chances (assuming the chances were indeed 50%) would equal a three quarters chance $(1-0.5*0.5=0.75)$.

The Greeks are famous for mathematical accomplishments such as the Pythagorean theorem, but that was not worked out with numbers. The Pythagorean theorem was discovered using geometry and literally used squares (see Bronowski, 1973, pp. 158–159). Something as simple as, which is more likely, the chance of rolling a 9 or a 10 with 3 dice would be a difficult problem until an easy-to-use system of mathematics was available. The fact that people did not appreciate the "stability of statistical ratios" (see David, 1962, p. 22) may be in part due to the absence of well-formed and balanced dice. However, some well-formed (true) dice have been found. David (1962) goes on to suggest that it was more the absence of a belief in the importance of empirical observation that hindered progress towards an understanding of random chance.

The earliest known advances in solving this puzzle were made in India (Bag, 1966; David, 1962) and China (Mlodinow, 2008). In Europe, the breakthrough came with the adoption of Indian-Arabic numerals during the Renaissance (Mlodinow, 2008). Several advances were made due to practical questions related to gambling (Mlodinow, 2008). It was in the sixteenth century that Cardano (1501–1576) started to make real headway towards an understanding of random chance (Mlodinow, 2008; Schwartz, 2006). Cardano was himself "addicted" (David, 1962, p. 56) to gambling on chess and dice. David (1962) credits him with drawing an abstraction about dice from observation and with checking his theoretical computations against practical experience, in short, a scientific approach to the puzzle. Further developments were provided by Galileo (1564–1642) who was asked by his patron to work out the chances of rolling a 9 or a 10 with 3 dice. The ideas of Cardano, Galileo, and others were then synthesized into a more general account by Pascal (1623–1662) in the seventeenth century. Pascal's exploration of the topic began when he was asked to solve a problem related to scoring a game that had not been completed. To solve the puzzle, Pascal corresponded with his colleague Fermat (Mlodinow, 2008; Schwartz, 2006). During this exchange, Pascal developed a triangle based on very simple math (addition) that could be used to work out the opportunities (permutations) for something to occur (see Fig. 2.1). Working out the opportunities for an event is a key to determining the chance that it could happen

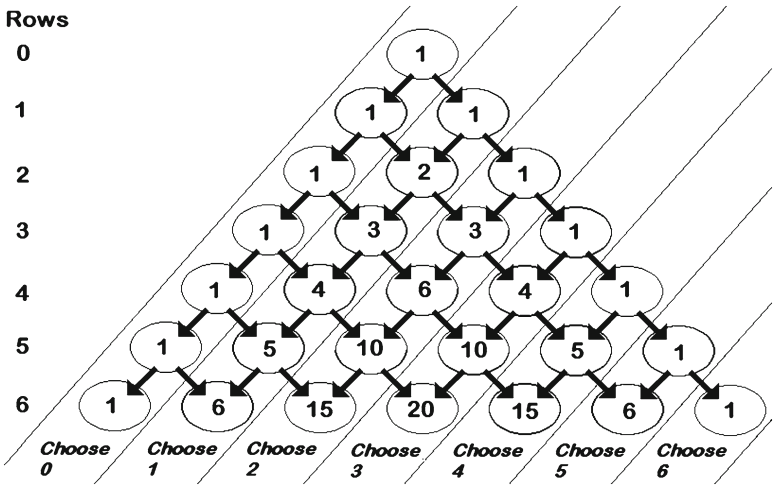

Fig. 2.1 The first six lines of Pascal's triangle illustrating how it is used to determine opportunities

(Mlodinow, 2008). Though today this triangle is called Pascal's triangle, Pascal and Fermat did not invent the idea (Bag, 1966; David, 1962; Mlodinow, 2008). In fact the basic idea had been discovered and forgotten and then rediscovered several times in history until it was finally understood (David, 1962). Pascal used it to develop a more complete understanding of probability. In addition, Pascal also discovered a number of useful properties of this triangular arrangement (David, 1962).

The first six lines of Pascal's triangle are shown in Fig. 2.1. We used arrows and diagonal lines to make the pattern easier to understand. The arrows indicate which numbers from one line are used to compute the numbers on the next line. Rows one to six indicate the size of the number pool or how many numbers one has to choose from. For example, for lotto 6/49, the pool is made up of 49 numbers. The diagonal columns indicate how many numbers are chosen from the pool where the order does not matter and without repeating a number (exactly like choosing 6 numbers for a lotto 6/49 ticket). Moving from left to right, the first diagonal column represents choosing 0 from the pool, the second diagonal column represents choosing 1 from the pool, the third represents choosing 2, and so on. For example, if you have a pool of 6 numbers, there is only one way of choosing no numbers from it, 6 ways of choosing 1 number, 15 ways of choosing 3 numbers, 20 ways of choosing 4 numbers, 15 ways of choosing 5 numbers, and only 1 way of choosing 6 numbers. Suppose there was a lottery with a pool of 6 numbers in total (1, 2, 3, 4, 5, 6) in which each ticket consisted of 3 numbers (lotto 3–6). Reading along the 6th row, go to the diagonal column labeled "choose 3," and the number is 20. This means there would be a total of 20 possible tickets, and the chances of winning would be 1 in 20. For lotto 6/49 (see Turner & Ferentzy, 2010), a player selects 6 numbers from a pool of 49 numbers. If the table extended down to 49 rows (see Fig. 2.2), the opportunities listed in the "choose 6" numbers column would be 13,983,816.

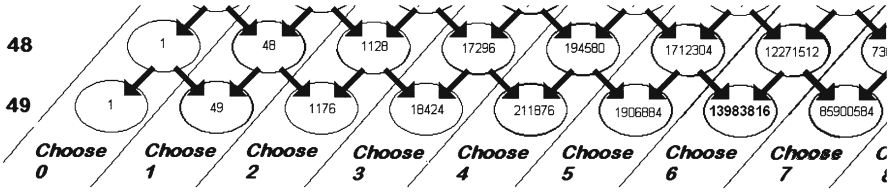

Fig. 2.2 Extending the triangle down to the 49th line to illustrate its utility for a lotto 6/49

These examples are given here to illustrate how important this triangle was to the discovery of probability theory. The problem is that the triangle was still quite tedious to compute and hard to use for complex problems. Today most gambling math can be easily computed using factorials. For example, the factorial of a number (e.g., 4!) is the product of all positive integers less than or equal to 4 (e.g., 4! = 4*3*2*1) = 24. A lottery, for example, in which the player selects 6 numbers out of 49 numbers where the order in which they are drawn does not matter can be worked out as follows ((49!)/((49 – 6)!))/(6!) = 13,983,816 or 1 in 14 million. This is considerably a faster method than working out Pascal's triangle to the 49th row. These ideas were further developed by Huygens (1629–1695), Newton (1643–1727), Leibnitz (1646–1716), Bernoulli (1654–1705), de Montmort (1678–1719), de Moivre (1667–1754), Bayes (1702–1761), Laplace (1749–1827), Kramp (1760–1826), and numerous others (see Arnold, 1978; David, 1962; Higgins, 2008; Mlodinow, 2008; Schwartz, 2006) so that by the mid-eighteenth century, the mathematics of probability was well established.

Until the sixteenth century, gambling was largely a matter of private bets between individuals. In addition, gambling games were typically zero-sum games in that the total wealth of the two individuals was not altered during the game but simply redistributed from one person to the other. In the sixteenth century, a more complete understanding of probability was developed (Mlodinow, 2008; Schwartz, 2006). Around the same time, the casino, or ridotti, came into existence as a place where Italian merchants could go to relax and entertain themselves. These ridotti offered banked gambling games in which the casino had a subtle house edge. Probability mathematics made it possible for a casino to compute the chances of a game with enough precision so that the casino could offer a game to its customers that ensured a profit for the casino but paid back to the customers enough so that they felt the game was fair. According to Schwartz (2006), the development of "mercantile gambling provided a way to legitimately make a living from gambling by running houses where gambling was permitted" (p. 93). In addition, the games became simpler and faster (Schwartz, 2006). The very complex game of *hazard*, for example, was simplified into the game of *craps* (Asbury, 1938). Banked games led to an unprecedented wave of gambling mania in Europe. From 1650 to 1800, "gambling occupied a place in European society far more prominent than before or since" (Schwartz, 2006, p. 91). This model of casinos is still with us today. In fact most of the table

games found in casinos today (e.g., baccarat, craps, blackjack,[1] roulette) date from the seventeenth and eighteenth centuries (Arnold, 1978; Asbury, 1938; Schwartz, 2006). The concurrent growth of casino gambling and probability mathematics is not coincidental, but the extent to which probability theory leads to the growth of gambling or that the growth of gambling leads to the discovery of probability theory is difficult to determine. The two may well have evolved in a reciprocal manner.

2.4 Gambling Devices and Technology

The development of different gambling devices had also been tied to advances in the understanding of random chance. Ancient dice made from hucklebones were typically not perfect cubes. This meant that the dice were in fact weighted, with dice landing on some sides more often than others. Cards were first introduced in the twelfth century. Cards were a convenient way to gamble but a relatively inefficient randomizer (Turner & Powell, 2007). The poor quality of randomization of cards makes card counting (Thorpe, 1966) and shuffle tracking (Patterson, 1990) possible, as well as several types of cheating such as stacking the deck (Asbury, 1938; Jillette & Lynn, 2005). Most modern table card and dice games were developed between 1600 and 1800 and are at least in part a result of the discovery of probability theory. Roulette may date back to the Roman age (Asbury, 1938), but a clear lineage for the game can be traced to the eighteenth century when a more sophisticated grasp of probability allowed for the development of a game that held the house edge to an incredibly small 2.6%. There are legends that the roulette wheel was invented by Blaise Pascal (Mlodinow, 2008, p. 86). Roulette was a huge advance in randomization, but even that game does produce some deviation from random chance if the wheel is not balanced correctly (Barnhart, 1992; Bass, 2001).

The American Mississippi and the Old West were hotbeds of gambling (see Asbury, 1938) and led to the creation of numerous types of gambling card games, which collectively are now called poker. These games were particularly popular during the 1880s (Schwartz, 2006).

The current dominance of gambling by machine games began in 1891 with the invention of an automatic poker machine designed to take advantage of the popularity of poker (Schwartz, 2006). The winners won from 1 to 4 cigars. In 1898, Charles Fey invented the first slot machine that paid out coins to the winner. The machines were banned in California in 1909 but survived as vending machines that dispensed gum and used symbols of fruits to represent the flavors of the gum that the player could win (Schwartz, 2006). Other machines paid off in trade rather than in cash or in cash with a payoff to the local police. These machines were "virally" popular. For example, by 1931 organized crime boss Frank Costello reportedly controlled

[1]The name "blackjack" is a relatively new addition (see Arnold, 1978, p. 146), but the game is virtually the same as the game of 21 played in France, 200 to 300 years ago.

over 25,000 machines in New York City that took in more than 25 million dollars a year (Schwartz, 2006, pp. 331–332).

In the mid-1960s, mechanical slot games began to give way to electromechanical machines, which in turn were replaced by fully digital gambling machines by the mid-1980s (Ernkvist, 2009). Mechanical slots used gears and flywheels to create unpredictable outcomes; digital slot machines use a computerized random number generator (RNG) to determine the outcome. Mechanical randomization is never perfect and is dependent on initial conditions (Bass, 2001; Mlodinow, 2008). For example, if a person knows the location of the ball relative to the wheel when the ball is thrown, they can theoretically predict the outcome of the spin with enough accuracy to make a profit from roulette (see Bass, 2001). Dice made with holes to indicate the numbers have a bias in favor of larger numbers such as 6 because the side with the 6 is slightly lighter than its opposite side with only 1 hole. Casino dice avoid this problem by having the holes filled in with plastic. Nonetheless, unless dice are perfectly balanced, they may have some bias. Casinos tend to throw away dice after only a few uses because as they get worn, they start to show a slight bias.

Using a computer to generate random numbers would address most of the problems with mechanical randomizers. However, the pseudo RNG used in EGMs is not random—just very complex. The random number generator in fact runs in a fixed sequence based on Lehmer's congruential iteration that produces a very erratic sequence of numbers but always in the exact same order (Ernkvist, 2009; Kilby, Fox, & Lucas, 2004; Turner & Horbay, 2004). The sequence may run for four billion numbers before being repeated. However, if the machines relied just on the long and erratic sequence to protect their profit margin, the casinos and the suppliers of these machines would soon go broke. Although it might cost several million dollars, it would be possible for a player to track the machine, to uncover the code, and then to predict the next outcome with absolute certainty. If the player knew the RNG that was in use, it would only take a small segment of spins to crack the machine's code. To solve this problem, the RNG runs continuously so that the outcome the player get depends on the value of the RNG at the exact millisecond that the spin button is pressed. Note that this is a bit of a simplification because the EGM first has to receive the signal that the spin button has been pressed and then run the algorithm to obtain the current value of the RNG. The lag between the button press and reading the value from the RNG adds some additional uncertainty to the games' outcome. As a result of the combination of an erratic sequence of numbers and the uncertainty of the button press, the continuously running RNG makes electronic gambling machines perhaps closer to true random chance than any other form of gambling (see Ernkvist, 2009; Harrigan, 2007; Turner & Horbay, 2003). Up until the mid-1970s, gambling machines accounted for just over 30% of casino revenue in Nevada (Ernkvist, 2009). A number of innovations such as a continuously running RNG, virtual reels, multiline games, video gambling games, customer loyalty programs, bill acceptors, wide area progressive jackpots, and bonus features have emerged in the past 35 years and have established electronic gambling as the most profitable form of gambling today (Ernkvist, 2009). By the first decade of the twenty-first century, gambling machines dominated the floor in most North

American casinos and accounted for nearly 70% of casino revenue (Ernkvist, 2009; Canadian Partnership for Responsible Gambling, 2009).

This rapid change in technology has been paralleled by rapid changes in the academic acceptance of problem gambling as a concept worthy of scientific study. Very few studies on problem gambling were published prior to 1980. Today the field is a popular research topic and there are now four academic journals devoted to this one topic that jointly print over 100 articles per year on problem gambling. In addition, numerous studies are published in journals devoted to addiction, psychiatry, public health, and psychology.

This rapid change in technology has also been paralleled by rapid changes in the demographics of problem gamblers. During the 1980s when gambling was first officially recognized as a psychiatric disorder, most gamblers were men who played on table games or bet at the races (e.g., Custer & Milt, 1985). In more recent years, the majority of problem gamblers have had a problem with electronic gambling machines (Counter & Davey, 2006; Dorion & Nicki, 2001; Urbanoski & Rush, 2006). Furthermore, up until the 1990s, a very large portion of problem gamblers were male (Custer & Milt, 1985; Volberg, 2003). Electronic gambling has shifted the population of problem gamblers. Although males are still in the majority, there are now a substantial number of women who experience problems with gambling (Jackson, Thomas, Holt, & Thomason, 2005; Phillips, 2009; Volberg, 2003). Heater and Patton (2006) reported that half of the problem gamblers who contact the helpline in Manitoba were female (Heater & Patton, 2006). Urbanoski and Rush (2006) report that in Ontario by 2002, although females made up only 34% of the caseload in treatment for problem gambling, they accounted for 53% of slot machine players in treatment.

2.5 The Turbulent Relationship Between Religion and Gambling

The history of gambling is also tied to the history of religion. According to the ancient Egyptians, gambling was a gift from the god Thoth. Ancient peoples believed that by using some sort of random procedure such as casting lots, they could determine the will of God or predict the future. In addition to astragali, priests in the ancient world were remarkably good at finding random events from which to divine the future including reading the entrails of slaughtered beasts, coconut shells, broken eggs, feces and urine, rose petals, cracks in bones, tea leaves, the lines on a palm, astrological charts, and, more recently, tarot cards (Schwartz, 2006). Even today in India many prospective couples have their fortunes read in order to determine if the omens are in their favor.

In general, religions have had an ambivalent relationship with gambling. Polytheistic and animalistic religions typically accept gambling and often merge gambling with religious rites (Binde, 2007). In nearly all "religions is some sort of mechanism whereby the deity may be consulted and if willing make his (or her)

wishes known to the suppliant" (David, 1962, p. 13). Divination often involved the creation and reading of random events such as the patterns in the entrails of animals, egg shells, tea leaves, or astragali (David, 1962; Mlodinow, 2008; Schwartz, 2006). David argues that casting lots was a practical solution when dealing with a number of unknown gods:

> To appease one was to offend the other, and the constant recourse to lot-casting, tali, and so on to probe the divine intent was a solution of a difficulty for which one has every sympathy (p. 19).

On the other hand, religions that claim a strict monopoly in matters concerning the divine and supernatural tend to have a critical attitude towards gambling. For Christianity, a negative attitude towards gambling was in part because dicing or lot-casting was seen as part of the Roman pagan religion that they were trying to replace (David, 1962). Islamic teachings tend to condemn gambling (Schwartz, 2006) and have taken what is probably the most consistent antigambling stance among modern religions. In spite of this condemnation, the conservative Islamic government of Iran uses a lottery to raise money (Mohseni, 2002). Binde (2007) notes that although gambling occurs frequently in Hindu mythology and is practiced by many people in India, religious authorities harshly condemn it, and most forms of gambling are today illegal in India.

Many religions have discouraged gambling or have tried to control it by limiting it to particular times of the year (e.g., festivals). For example, in the Roman republic, officials tried to curb the enthusiasm for gambling through restrictive laws, but during the year-end holiday of Saturnalia, those laws could be flouted with impunity. According to David (1962), the prohibitions against gambling other than during Saturnalia were repeatedly "renewed and ignored" (p. 7). Several emperors including Claudius and Augustus were well known for their gambling (David, 1962).

According to Schwartz (2006), in the Jewish tradition habitual dice players were not permitted to be magistrates or witnesses in courts. Nonetheless, during Hanukah, a dreidel (a four-sided top) is used to celebrate the Maccabean revolt against Antiochus (Schwartz, 2006). According to Jewish tradition, Antiochus tried to stamp out the Jewish religion. People who were studying the Torah would play with a dreidel and claim to be gambling if caught.

Christians have also had a similar ambivalence towards gambling. Unlike the pagan Romans who consulted the god using random chance, for Christians such as St. Augustine,

> Nothing happened by chance, everything being minutely controlled by the will of God. If events appear to occur at random, that is because of the ignorance of man and not in the nature of the events. Man's true endeavor was to discover and submit himself to the Divine Will, and not, presumably, to cloud this search by looking at patterns of behaviour in aggregates of events. (David, 1962, p. 26).

This indicates that Christianity was a marked departure from the pagan Romans in terms of their view of random chance. Christianity has warned against gambling, but its prohibition was almost always riddled with loopholes or just ignored (Schwartz, 2006, p. 33). The Roman Catholic Church does not view games of chance as sinful in themselves but only when played to excess so that they lead to

deprivation. The Puritans who settled in America were more stringently monotheist than their Catholic and Anglican counterparts. For them, God's will was completely beyond human comprehension. Yet this entailed a paradox: God's will, Divine Providence, is the attribute to which Puritans paid the most attention. Financial success, for example, was seen as divine providence, the reward for hard work and faith. Games of chance were thought sinful because they trivialized providence (Miller, 1939, pp. 10–11, 30; see also Winship, 1996).

Though other determinants were involved, protestant attitudes towards sin and redemption contributed to the emergence of Christian perfectionism and, in its wake, the antialcohol temperance movement (Schmidt, 1995; Warner, 2009). The temperance movement is of particular importance to the history of the relationship between religion and addiction, as well as the emergence of many disease conceptions of addiction that are still current—the basics of the dominant chronic disease conception of addiction were adopted (and promoted) by temperance in the nineteenth century when medicine was still on the fence (Cassedy, 1976; Levine, 1978). Perfectionism, of course, also took on a range of secular variants consistent with Enlightenment visions of human virtue (Rorabaugh, 1979). Still, the temperance movement was religiously oriented and dedicated initially to promoting moderation in beverages such as wine and beer and abstinence only from hard liquor. Later, complete abstinence in the use of all intoxicating liquor was advocated (Berk, 1974; Blocker, 1989; Encyclopedia Britannica, 2011; Tyrrell, 1979). Partly a reaction to the excessive use of distilled spirits (Warner, 2002), the earliest prominent temperance organizations were arguably founded at Saratoga, New York, in 1808 and in both Massachusetts and Connecticut in 1813 (Berk, 1974; Blocker, 1989; Encyclopedia Britannica, 2011; Fraser, 1985; Keller, 1942; Schmidt, 1995; Tyrell, 1979). But the phenomenon was widespread and marked by groupings with varying degrees of formal organization (and clout). As Krout (1925) points out, an indicator of the movement's broad appeal was that in the early going, temperance organizations would be formed in different regions at roughly the same time yet without cooperation or even awareness of each other's existence.

Promoted by churches and often affiliated with woman's suffrage, abolition, and the so-called progressivist movement in general, the temperance movement spread rapidly across the USA and Canada (Blocker, 1989; Dorchester, 1884; Jaffe, 1981; Krout, 1925; Tyrell, 1979). According to one estimate, by 1833, there were 6,000 local societies in the USA alone (Encyclopedia Britannica, 2011). People who joined the movement normally took the Temperance Pledge to refrain from drinking, though as already mentioned, the substance of the pledge would change over time (Blocker, 1989; Dorchester, 1884; Tyrell, 1979). Temperance and abstinence became the objects of education and legislation in many regions. In addition, as will be reported in Chap. 4, the movement expanded its objectives to include other problematic behaviors including opiate use and gambling. The movement combined moral and political action and had an international scope. Temperance movements in the nineteenth century pushed initially for a greater understanding of the addicted person and an encouragement for them to take the Temperance Pledge, though their attitude did harden with drive for prohibition in the late nineteenth century (Levine, 1978).

One part of the overall movement of particular note for the current book was the Washingtonians who presaged many aspects of the mutual aid groups that exist today such as Alcoholics Anonymous (Blumberg & Pittman, 1991). Washingtonians promoted the idea of relying on each other and sharing their alcoholic experiences to keep each other sober. Though total abstinence from alcohol was their goal, it is worth noting that while most Washingtonians believed in God, such beliefs were not officially part of their doctrine—many Washingtonians were openly either atheist or agnostic. This short-lived organization fell apart perhaps due to a loss of focus as they expanded too broadly beyond their original goal. Infighting over religion and politics hastened to their demise—most notably disagreements over the need for faith and whether alcoholic beverages should be prohibited through legislation (which most members considered unduly punitive) (Krout, 1925; Pegram, 1998; Blumberg & Pittman, 1991). Our fifth chapter discusses both the Washingtonians and the larger temperance movement, with the former peeking in the 1840s and the later in the early twentieth century.

One overriding truism about the relationship between addiction and morality has been the occurrence of exaggeration and fear. Morally centered discussions of topics such as electronic gambling machines, comic books, rock and roll, crime rates, drug use, video games, immigration, prostitution, and Internet pornography have been marked by similar exaggerations and sometimes develop into moral panics (Cohen, 2002). A moral panic can be defined as an intensity of feeling of fear expressed in a population about an issue that some people believe threatens their social order (Jones & Jones, 1999). According to Cohen (1972), a moral panic occurs when a condition, episode, or group of people are defined as a threat to societal values and interests. A moral panic often involves concern or awareness that the target of the panic is likely to have a negative impact on society (Ben-Yehuda & Goode, 1994). The concern may be justified to some extent as is the case with excessive substance use or perhaps adolescents mimicking video games and, for example, engaging in street racing as a result. But a key feature of moral panic is exaggeration, excessive fear, and hence the overreaction in action advocated or taken. The targeted issue must generate some consensus among those concerned in order to organize the panic or action (against the target group or behavior). Those who spread the moral panics have been labeled *moral entrepreneurs* (Cohen, 1972); this role might be played by religious leaders, concerned parents, the media, or politicians hoping to capitalize on the stated fear in order to win votes. In addition, there must be hostility between mainstream society and the target group or behavior setting up a clear division between polite society (us) and the target group or behavior (them; Ben-Yehuda & Goode, 1994). The fear and the action taken or advocated by those who fear are disproportionate to the threat posed by the feared group or behavior (Cohen, 1972). In addition, moral panics are often volatile and may disappear as quickly as they appear (Jones & Jones, 1999). However, moral panics involving addictive behaviors have reoccurred frequently. As will be seen in this book, the history of rhetoric about addiction is often the history of various moral panics over some form of intoxicating substance or behavior (in this case gambling).

2.6 Gambling, Problem Gambling, and Professional Gambling

Gambling may be an intrinsic aspect of the human condition. It is unlikely that humans would dominate the planet today if not for our willingness to take risks for the possibility of gain. The thrill that many people get from taking risks may be an important part of our ancestry. Gambling games are a culturally limited form of risk taking that typically does not involve any real threat to ones' life or health. As a pastime, gambling is not universal—but according to Schwartz (2006), it is easier to list the cultures which do not engage in gambling than to list those that do.

The possibility of problem gambling also appears to be a common weakness in human nature. An examination of historical literature suggests that problem gambling was known, but no systematic examination of the issue occurred until the nineteenth century. As mentioned, in Jewish law, habitual dice players were not permitted to serve as magistrates (Schwartz, 2006). However, it is unclear if this was directed at players who were habitual because of compulsion or at professional players who took advantage of the weaknesses of others. Given that the astragali of the time were most often unbalanced, both professional and problem gamblers may well have existed.

In the Hindu book The Mahabharata, Yudhishthira gambles away his entire kingdom, his freedom, and finally his wife's freedom (Schwartz, 2006), suggesting Yudhishthira had a rather severe gambling problem. Another Hindu poem describes gambling as "open theft" (Schwartz, 2006, p. 15)—more in line with the professional gambler than the problem gambler.

Gambling problems have been the target of church sermons (Bernhard, 2008) and fiction (Dostoyevski, 1996/1866; Flavin, 2003). Gambling has consistently been a popular topic for myths, books, songs, poems, operas, and, more recently, films (Dement, 1999; Turner, Fritz, & Zangeneh, 2007). An examination of these works of art suggests that people have long been aware of the potential for problems with gambling. For example, *Carmina Burana* by Carl Orff (1994) is based on medieval songs dating from approximately 1230 that portray "the wheel of fortune" (fate) and the uncertainties of life. The idea of the wheel as described in *O Fortune* is itself an early version of the gamblers fallacy. A wheel turns in a rather nonrandom manner. According to these songs, if a person has been dragged down into the mud and water at the bottom of the wheel, there is a strong possibility that their fortune could improve. Conversely, someone at the top of their success is due for a fall. Another song, *The Tavern*, describes excessive gambling where some people lose even their clothing. Similarly in the fourteenth-century *Canterbury Tales*, Geoffrey Chaucer (1993) included the Pardoner's Tale that describes how excessive drinking, gambling, and swearing are certain paths to death. The Rake's Progress, a series of paintings by William Hogarth, depicts the decline and fall of Tom Rakewell, the spendthrift son and heir of a rich merchant, who comes to London; wastes all his money on luxurious living, prostitution, and gambling; and as a consequence is imprisoned in the Fleet Prison and ultimately Bedlam (Wikipedia, 2010). Tchaikovsky's *Queen of Spades* (1993) was first performed in 1890 and was based

on an 1833 short story by Alexander Pushkin. The opera depicts a man obsessed with finding a system to beat the game of faro. These works of art suggest that people were aware of problem gambling, but the treatment of the topic tended to be moralistic rather than scientific.

Significantly, the theme of compulsion was often applied inconsistently, or not at all. While there has long been some awareness of what we might call "addiction," notably with respect to alcohol, for centuries, such awareness was not systematic (Ferentzy, 2001; Levine, 1978; Warner, 1994). An interesting feature (from our point of view) of much of the older gambling literature is that it rarely separates the problem gambler from the professional gambler. For example, in an examination of sermons from the eighteenth and nineteenth centuries, Bernhard (2008) found instances where gamblers were described as cheats and criminals, but it is unclear if this refers to problem gamblers cheating in desperation or professional gamblers using gambling to defraud other players. Similarly, some of the "gamblers" in Asbury's (1938) book were clearly problem gamblers (e.g., John "bet a million" Gates), some were clearly professional casino managers (e.g., Richard Canfield), but others were a confused mix of the two (e.g., Canada Bill). The confused blend of professional and problem gambling may have been a reality in the gambling scene prior to the twentieth century. A remarkable number of the people Asbury describes making a living from gambling such as casino owners ended up losing whatever they had earned through gambling. The clearer separation between the problem and the professional gambler that we have today may be in part a result of the refinements in probability theory and the commercialization of gambling in the twentieth century. A clear understanding of probability makes it much easier to make a consistent profit from the games one is running.

A more focused approach to compulsion began to take hold in the eighteenth and nineteenth centuries. Prototypical versions of a disease conception of substance addiction can be found in sermons dating back to the eighteenth and seventeenth centuries (Levine, 1978; Warner, 1994). Hard drinking was thought, for example, to get worse over time. In current terminology, drunkenness was derided as "progressive." Yet this involved a conception of sin in general, applying to behaviors such as swearing and adultery (Ferentzy, 2001). So the current situation, wherein PG and substance abuse are understood with similar concepts, is not entirely novel. Bernhard (2008) was able to find examples of all ten of the DSM-IV symptoms for pathological gambling in sermons from the eighteenth and nineteenth centuries. There are some explicit references to gambling as a disease from the nineteenth century (Flavin, 2003; Asbury, 1938) and a hymn from 1905 compares gambling to leprosy (Flavin, 2003, pp. 222–223). This hymn is of particular note because it depicts gambling as contagious.

Current disease conceptions of addiction stem largely from the political and medical attention given to alcohol in the nineteenth and early twentieth centuries. Chronic drunkenness—whether labeled dipsomania or inebriety—was the prototypical "addiction," followed by other substance addictions, and then a host of compulsive behaviors (Levine, 1978; Reinarman, 2005). For example, when Levenstein (1878a/1981, 1878b) discussed morphine withdrawal in the late nineteenth century,

he compared it to alcoholic delirium tremens rather than to withdrawal from opium—which was already well known and obviously more similar. More recently, a similar addiction model has come to target a range of behaviors (Carnes, 1983; Griffiths, 1996; Miller, 1980; Orford, 1985), with pathological gambling often portrayed as an addiction (Brown, 1991; Griffiths, 2005; Jacobs, 1986). Hence, it should not be surprising that efforts to tackle problem gambling often adopt ideas and practices from the substance abuse field. Arguably the label "disease," when applied to addictions, has varied from metaphoric use to strictly literal. Peele (1989, 2003), for example, has questioned the literal veracity of labeling addictions as diseases. Szasz (1973, 1974) has explicitly invoked the notion of metaphor to disparage the disease status of both mental illness and addiction. This raises questions pertaining to what exactly it might mean to ask whether addictions are literally or metaphorically diseases.

2.7 The Meaning of Metaphor

While debates over the literal veracity of behavioral disease conceptions abound (Barham, 1984; Fingarette, 1988; Flavin & Morse, 1991; Meyer, 1994; Peele, 1989, 2000, 2003; Schaler, 1998, 2000; Szasz, 1973, 1974), we are not aware of any attempt to address this topic with a sound grasp of the distinction between the metaphoric and the literal. It is our intention to lay such a foundation before proceeding further.

Human language permits a considerable degree of flexibility in as much as the message conveyed can often differ from the exact literal meaning of the words. For the purpose of this discussion, we will use a standard dictionary definition of literal meaning. According to the Merriam-Webster Dictionary (Woolf, 1974), literal meaning can be defined as "adhering to fact or to the ordinary or usual meaning (as of a word)" (pg. 410). According to one linguistic tradition, the standard pragmatic model (Searle, 1979), the meaning of a sentence that is intended literally is the same as the expressed meaning of the words in the sentence (Searle, 1979). For example, consider the following:

1. The cat is on the mat.

The word "cat" refers to a small furry animal, and "mat" refers to a small floor covering. The words "is on" indicate the location of the animal relative to the floor covering. Conversely, in a figurative sentence, the expressed meaning differs from the exact meaning:

2. My job is a jail.

The word "jail" does not refer to a prison but uses characteristics of the concept signified by "jail" to express a sense of confinement. According to Searle's (1979) standard pragmatic model, literal sentences take the form of S is P, where S is the subject and P is the predicate. In literal sentences, the literal meaning (P) is also the

intended meaning or referent (R). However, in a metaphoric sentence, the literal meaning (P) is not the intended meaning (R). For example, "Sam is a pig" could be used to describe a pig named Sam, but similar phrases involving a name and the predicate "pig" are more often used to indicate that the person identified as the subject of the sentence, named "Sam" (S), is filthy or gluttonous (R). The pragmatic interpretation based on familiarity, context, and word usage would favor a nonliteral reading of the sentence. Often the literal meaning would not make sense in the context, or would be an inappropriate use of the word. For example, a jail is a type of location, whereas a job is not a location. Similarly, pigs are not usually given human names. The conflict between the context and the word usage is a signal that alerts the reader to the fact that the sentence is not intended literally (Ortony, Schallert, Reynolds, & Antos, 1978; Turner & Katz, 2003). In addition, when a word is used metaphorically, it is sometimes used as a different part of speech than when it is used literally (Deignan, 2005; e.g., "dog" is a literal noun, whereas "dogged" is a metaphoric verb).

A metaphor sometimes assumes the structure of "S is a P" but may also take many different forms (e.g., "Sam the pig"; "That pig, Sam"). In addition, there are actually a variety of different figures of speech, each of which is characterized by using a word, phrase, or sentence to convey a nonliteral meaning. These include simile, analogy, metonym, personification, idiom, synecdoche, and proverb (Turner, 1995). Many of these figures of speech use metaphors or are types of metaphors (Lakoff, 1987; Lakoff & Johnson, 1980; Turner, 1995; Turner & Katz, 2003). A simile, for example, is a metaphor in which the nonliteral intention of the sentence is made explicit by including the word "as" or "like." This hedge weakens the strength of the statement but makes the metaphor easy to understand. For example, "Sam acts like a pig" implies that Sam is not actually a pig and also provides some indication of the particular "piglike" features that are intended. Metaphors are stronger statements about the subject of the sentence than similes; Sam is not merely *like a pig*; Sam *is a pig*. This strength comes with the risk that the meaning may not be as clear. An analogy is typically an explicit comparison, more like a simile, that is more structurally complex and involves the mapping of multiple features from predicate to subject. An idiom (see Gibbs, 1980, 1986) is a figure of speech that is so well known that it is understood directly without the reference to the underlying metaphor (e.g., "kicked the bucket" = died). Other related forms of figurative language include personification, proverbs, metonym, and synecdoche.

It has been argued that the standard pragmatic model implies a two- or three-stage analysis of metaphor interpretation wherein the first interpretation is literal, the literal meaning is later rejected, and finally the metaphoric meaning is extracted (Ortony et al., 1978; Turner & Katz, 2003). It has been argued that if metaphors were understood in two or three stages, then it should take longer to understand a sentence used figuratively than one used literally (Ortony et al., 1978). Turner and Katz (2003) found that this was the case with unfamiliar proverbs, but not with familiar proverbs. The standard pragmatic model appears to break down when one deals with very familiar metaphors or idioms. Studies by Ortony et al. (1978) and

Glucksberg (2003) have shown that people can understand metaphors as quickly as literal language. In addition, Gibbs (1980, 1986) and others have shown that idioms are understood more quickly when used in their conventional figurative sense than in their literal sense. The issue of literal versus figurative meaning is often obscured in the use of common metaphors or idioms. The use of "pig" to describe persons is so common that on hearing the sentence, "Sam is a Pig," many readers would assume that Sam was filthy or gluttonous rather than a farm animal.

Many consider metaphor a device of the poetic imagination, part of extraordinary rather than ordinary language. However, Lakoff and Johnson (1980) have shown that metaphors are pervasive in everyday life—not just in poetry but in ordinary language, thought, and action (Lakoff & Johnson, 1980). They have argued that the human conceptual system is fundamentally metaphorical. Consider the following:

- I am feeling up.
- That boosted my spirits.
- You are in high spirits.
- I am feeling down.
- I fell into a depression.

Each of these uses a directional metaphor (in italics) to describe moods that can be summarized as *Happy is up; Sad is down*. The last example includes the word depressed and is particularly relevant to the current discussion. The mental disease "depression" is named in a manner consistent with this directional metaphor.

Lakoff and Johnson (1980) catalogued several such families of metaphors, showing how they underlie a large number of ideas. Lakoff (1987) expanded this study into a more general account of how we categorize and make sense of the world. Far from being rare, poetic devices and metaphors are fundamental to conceptualization (Lakoff & Johnson, 1980). Nonmetaphorical thought is for Lakoff only possible when we talk about purely physical reality. As a result, conceptual metaphors typically are about physical position (up vs. down) or containment (in vs. out). The greater the level of abstraction of an idea, the more layers of metaphor are required to express it. People normally do not notice these metaphors, as they are very familiar and integral to ordinary language. Lakoff (1987) has argued not only that our conceptual system is fundamentally based on metaphors but also that the mind is, essentially, *embodied*: almost all of human cognition, including abstract reasoning, depends on and makes use of such concrete and "low-level" referents rooted in the sensorimotor system and the emotions (see also Lakoff & Johnson, 1999). A key aspect of this argument is that people are not normally aware of the metaphoric basis of much of their language, categorization, and reasoning. *If Lakoff and Johnson are right, then it is understandable that so-called mental and behavioral diseases borrow terms originally applied to biological ailments—this would just be another example of thought proceeding from the physical toward the more abstract.*

Lakoff and Johnson's (1980) theory has been criticized by some psychologists who argue that the metaphoric root is not automatically accessed when reading an

instance of a conceptual figure of speech (Keysar & Bly, 1995; Keysar, Shen, Glucksberg, & Horton, 2000). However, the importance of Lakoff and Johnson's (1980) work is not their specific theory but the incredibly rich fabric of metaphors in conventional language that they have revealed. More recent linguistic analysis (Deignan, 2005; Steen, 2007) confirms the importance of metaphor in language. Deignan (2005), for example, includes a number of words that are used figuratively more often than they are used literally and observes that some verbs are only used as metaphors (e.g., dogged).

Metaphors are used for a number of reasons. For example, metaphors can be used to make a text more interesting or more colorful. Metaphors can provide a means of communicating complex ideas (e.g., "the atom is like a planetary system"), communicating one's feelings about a topic (e.g., "it is as hot as hell"), or obscuring the intended meaning as is often done in many creative poems. An important aspect of the motivation behind metaphors is that it is easier to understand and remember things that are grounded in physical experience (Paivio, 1986). Metaphors and analogies are often used to help people understand and organize information about unfamiliar and abstract ideas (Lakoff & Johnson, 1980; Turner, 1995; Turner & Katz, 2003). Metaphor actually belongs to a family of mental shortcuts which also includes mental models (Johnson-Laird, 1983, 1989), mental imagery (Paivio, 1986), heuristics (Kahneman & Tversky, 1982), and analogy (Gentner, 1983). All of these are employed to concretize, organize, and simplify the world. These shortcuts can be useful, but reliance on them can lead to errors in reasoning (Johnson-Laird, 1983, 1989; Kahneman & Tversky, 1982). The most important mental trap for metaphors is that the choice of a metaphoric vehicle downplays features inconsistent with the metaphor (Lakoff, 1987).

Although scientific reasoning attempts to define ideas using empirical methods, scientific models are derived in a manner quite similar to other mental models: a simplification and concretization of abstract ideas. For example, both Newton's particle theory of light and Maxwell's wave theory of light (see Coren & Ward, 1989, p. 58) use designations borrowed from common experience to explain some properties of electromagnetic radiation. During the nineteenth century, these two models were in competition with each other for dominance. These metaphors are still current, however, not only because of the clarity they provide but also because they facilitate predictions regarding the properties of light.

Though useful, metaphor can become a hindrance if we accept it too strongly. Metaphors reveal some aspects of a subject domain but hide others. For example, calling Sam a pig reveals perhaps that the person in question eats too much, is greedy, or is filthy. However, Sam could be a respected teacher, a loyal friend, or a skilled mathematician. Part of the reason that both Newton's particle theory of light and Maxwell's wave theory of light (see Coren & Ward, 1989, p. 58) are still in use today is that the features hidden by the particle theory are revealed by the wave theory, and vice versa. It is therefore important to examine both aspects of a metaphoric categorization: what it reveals and what it hides.

2.8 Metaphoric Categorization and the Disease Model

What a metaphor reveals and what it hides depends on the prototype used. Consider, for example, the following statements: (1) a duck is a bird, (2) a penguin is a bird, and (3) a plane is a bird. The third example is clearly metaphor. According to both Lakoff (1987) and Glucksberg (2003), categorization is defined not by comparison with an abstract concept but by reference to a prototype or exemplar. For the category "bird," the prototype might be a type of song bird called a robin. In essence, identifying a member of a category is a comparison of that member to the prototype: (1) a duck is a robin, (2) a penguin is a robin, and (3) a plane is a robin. Here it is clear that all three are dependent on the nature of the prototype. The plane is still understood through metaphor, but even the example of the duck could be viewed as metaphoric.

The issue of whether addictions are literally or metaphorically diseases can hinge on the many definitions and the selected prototypes for the category "disease." As mentioned, categories (both literal and figurative) reveal some things and hide others. To draw a link between a duck and a robin emphasizes some features such as eggs, feathers, and nests but hides the differences in habitats (trees vs. ponds), sounds (chirps vs. quacks), and size (small vs. medium). If the receiver of a message were only familiar with song birds such as robins, after hearing the sentence "a duck is a bird," he or she might mistakenly assume that the duck is a song bird. This issue is a particularly troublesome when people use a familiar metaphor that they may not realize is a metaphor. When metaphors become too familiar, people cease to see them as metaphors and instead understand them directly as if they were literal sentences (Gibbs, 1980; Turner & Katz, 2003). The addiction as a chronic disease metaphor has in fact become so familiar that it is now itself used as a metaphor for numerous other behavior disorders. As mentioned, metaphors help us to understand and organize information about the unfamiliar. We use familiar and literal categories to make sense of unfamiliar and abstract ideas (Turner, 1995; Turner & Katz, 1997, 2003). While a metaphor can enhance understanding, it can become a hindrance if we fail to apply some critical acumen to the issue. This can be especially troublesome when attempts are made to merge popular conceptions with scientific categories, and disease conceptions of addiction have evolved in conjunction with a practical and experience-based method of recovery known as the Twelve-Step program offered originally by Alcoholics Anonymous (AA) and later by Gamblers Anonymous (GA).

It is our contention that the question—"Is pathological gambling literally or only metaphorically a disease?"—raises a moot point because both literal and figurative meanings are founded on categorization by prototypes. Calling it a metaphoric categorization in no way diminishes its significance. So medical science that addresses addictions, including pathological gambling, can be properly scientific despite its reliance on metaphors. However, it is important to examine the nature of the prototypes (literal or figurative) that underlie the disease models in order to examine what the prototypes reveal and what they hide. This in turn may give us a

different perspective on some of the controversies haunting our field. It could be argued that alcoholism and problem gambling are only metaphorically diseases. But as Lakoff and Johnson (1980) have argued persuasively, all abstractions—including those aimed at physical diseases and mental disorders (e.g., depression)—are founded on metaphors. While it can be argued that much of scientific discourse is based on definitions, not prototypes, even in such cases, the starting point would have to be a certain conception of disease. Those who argue for or against the "disease model" will have a particular prototypical disease or set of diseases in mind. If the issue were exclusively about definition, arguments could just as easily be about what type of disease it was rather than whether it is a disease at all. No matter how we categorize problem gambling (disease, disorder, public health problem, etc.), the reality is that people who suffer from the disorder do indeed suffer and that helping professionals can often alleviate their distress. The more important questions for this book involve the following: when a science links categories such as addictions and diseases, what aspects of the predicate of the sentence (e.g., disease) are being attributed to the subject of the sentence (e.g., addiction)? What, in essence, does it reveal about the affliction and what does it hide? We will return to this question in the final chapter.

In this book, we explore the history of ideas about problem gambling and where problem gambling fits into a larger conception of health. We focus on two aspects of this history: (1) the nature and origins of the terms and concepts currently applied to problem gambling and (2) the history of how these terms and concepts have changed, remained constant, or, more often, changed in ways subtle enough to require learned clarification.

References

American Psychiatric Association [APA]. (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.). Washington, DC: Author.

Arnold, P. (1978). *The encyclopedia of gambling: The game, the odds, the techniques, the people and places, the myths and history*. Glasgow: Collins.

Asbury, H. (1938). *Sucker's progress: An informal history of gambling in America from the Colonies to Canfield*. New York: Thunder Mouth Press.

Bag, A. K. (1966). Binomial theorem in ancient India. *Indian Journal of History of Science*, *1*, 68–74. Retrieved 16-juin-11, from http://www.new1.dli.ernet.in/data1/upload/insa/INSA_1/20005aef_68.pdf.

Barham, P. (1984). *Schizophrenia and human value*. New York: Basil Blackwell.

Barnhart, R. T. (1992). *Beating the wheel: Winning strategies at roulette*. New York: Carol Publishing Group.

Bass, T. (2001). *The eudaemonic pie*. Lincoln, NE: Authors Guild (backprint edition).

Ben-Yehuda, N., & Goode, E. (1994). *Moral panics: The social construction of deviance*. Oxford: Blackwell.

Bergler, E. (1943). The gambler: A misunderstood neurotic. *Journal of Criminal Psychopathology*, *4*, 379–393. Reported in Selected Papers of Edmund Bergler, M.D. 1933–1961. New York: Grune and Stratton, 1969.

Bergler, E. (1957). *The psychology of gambling*. New York: Hill and Wang.

Berk, S. E. (1974). *Calvinism versus democracy: Timothy Dwight and the origins of American evangelical orthodoxy*. Hamden: Archon Books.
Bernhard, B. (2008). *Social responsibility matters: Historical and anthropological perspectives on culpability and gambling*. A paper presented at the Alberta Gaming Research Institute's 7th Annual conference, Banff, AB.
Binde, P. (2007). Gambling and religion: Histories of concord and conflict. *Journal of Gambling Issues*, *(20)*, June. http://www.camh.net/egambling/issue20/03binde.htm.
Blocker, J. (1989). *American temperance movements: Cycles of reform*. Boston: Twain Publishers.
Blumberg, L. U., & Pittman, W. L. (1991). *Beware the first drink! The Washington temperance movement and alcoholics anonymous*. Seattle: Glen Abbey.
Bronowski, J. (1973). *The Ascent of Man*. London: British Broadcasting Corporation.
Brown, I. (1991). Gaming, gambling and other addictive play. In J. Kerr & M. Apter (Eds.), *Adult play: A reversal theory approach* (pp. 101–118). Amsterdam: Swets & Zeitlinger.
Canadian Partnership for Responsible Gambling. (2009). *Canadian gambling digest 2007–2008*. Downloaded December 30, 2010, from http://www.cprg.ca/digest.cfm.
Carnes, P. (1983). *Out of the shadows: Understanding sexual addiction*. New York: CompCare.
Cassedy, J. (1976). An early American hangover: The medical profession and temperance 1800–1860. *Bulletin of the History of Medicine, 50*, 405–413.
Chaucer, G. (1993) *The Canterbury Tales*. A complete translation into modern english. Translated into English by R.L. Ecker & E.J. Crook. Hodge & Braddock Publishers. Downloaded October 28, 2008, from http://www.ronaldecker.com/ct.htm.
Cohen, S. (1972). *Folk devils and moral panics*. London: MacGibbon and Kee.
Cohen, S. (2002). *Folk devils and moral panics* (3rd ed.). London: Routledge.
Coren, S., & Ward, L. M. (1989). *Sensation and perception* (3rd ed.). San Diego: Harcourt Brace Jovanovich, Publishers.
Counter, A., & Davey, B. (2006). *What is the Ontario Problem Gambling Helpline (OPGH)?* Paper presented at the 2006 conference of the Responsible Gambling Council (Ontario), Toronto. Retrieved July 16, 2008, from http://www.rgco.org/articles/anne_counter_brad_davey_discovery_2006.pdf.
Custer, R., & Milt, H. (1985). *When luck runs out*. New York: Facts on File.
David, F. N. (1962). *Games, gods, and gambling: A history of probability and statistical ideas*. New York: Hafner.
Deignan, A. (2005). *Metaphors and corpus linguistics*. Amsterdam: John Benjamins Publishing Company.
Dement, J. W. (1999). *Going for broke: The depiction of compulsive gambling in film*. Lanham, MD: The Scarecrow Press.
Dixon, D. (1991). *From prohibition to regulation: Bookmaking, anti-gambling and the law*. London: Clarendon.
Dorchester, D. (1884). *The liquor problem in all ages*. New York: Phillips & Hunt.
Dorion, J. P., & Nicki, R. M. (2001). Epidemiology of problem gambling in Prince Edward Island: A Canadian microcosm. *Canadian Journal of Psychiatry, 46*, 413–417.
Dostoyevski, F. (1996). *The gambler* (C. Garnett, Trans.). New York: Dover Publications. (Originally published 1866).
Encyclopedia Britannica. (2011). *Temperance movement*. Accessed on line June 7, 2011, from http://www.britannica.com/EBchecked/topic/586530/temperance-movement.
Ernkvist, M. (2009). *Creating player appeal*. Göteborg, Sweden: University of Gothenburg.
Ferentzy, P. (2001). From sin to disease: Differences and similarities between past and current conceptions of chronic drunkenness. *Contemporary Drug Problems, 28*, 363–390.
Fingarette, H. (1988). *Heavy drinking: The myth of alcoholism as a disease*. Berkeley: University of California Press.
Flavin, M. (2003). *Gambling in the nineteenth-century English novel: A Leprosy is o'er the Land*. Brighton: Sussex Academic Press.
Flavin, D., & Morse, R. (1991). What is alcoholism? Current definitions and diagnostic criteria and their implications for treatment. *Alcohol Health and Research World, 15*, 266–272.

Fraser, J. W. (1985). *Pedagogue for God's kingdom: Lyman Beecher and the second great awakening*. London: University Press of America.
Freud, S. (1961). Dostoevsky and parricide (1928). In J. Strachey (Ed. & Trans.), *Standard edition of the complete psychological works of Sigmund Freud* (Vol. XXI, pp. 175–196).
Gentner, D. (1983). Structure-mapping: A theoretical framework for analogy. *Cognitive Science, 7*, 155–170.
Gibbs, R. W. (1980). Spilling the beans on understanding and memory for idioms in conversation. *Memory and Cognition, 8*, 149–156.
Gibbs, R. W. (1986). Skating on thin ice: Literal meaning and understanding idioms in conversation. *Discourse Processes, 9*, 17–30.
Glucksberg, S. (2003). The psycholinguistics of metaphor. *Trends in cognitive sciences, 7*(2), 92–96.
Griffiths, M. (1996). Behavioural addiction: An issue for everybody? *Employee counselling today: The Journal of Workplace Learning, 8*, 19–25.
Griffiths, M. (2005). A 'components' model of addiction within a biopsychosocial framework. *Journal of Substance Use, 10*, 191–197.
Hargrave, C. P. (1966). *A history of playing cards and a bibliography of cards and gaming*. New York: Dover.
Harrigan, K. A. (2007). Slot machine structural characteristics: Distorted player views of payback percentages. *Journal of Gambling Issues, 20*, 215–234.
Heater, J., & Patton, D. (2006). Gender differences in problem gambling behaviour from help-line callers. *Journal of Gambling Issues*, *16*.
Higgins, P. (2008). *Number story: From counting to cryptography*. New York: Copernicus.
Jackson, A. C., Thomas, S. A., Holt, T. A., & Thomason, N. (2005). Change and continuity in a help-seeking problem gambling population: A five-year record. *Journal of Gambling Issues*, *13*. Retrieved January 24, 2006, from http://www.camh.net/egambling/issue13/jgi_13_jackson.html.
Jacobs, D. (1986). A general theory of addiction: A new theoretical model". *Journal of Gambling Behavior, 2*, 15–31.
Jaffe, A. (1981). *Addiction reform in the Progressive Age: Scientific and social responses to drug dependence in the United States*. New York: Arno Press.
Jillette, P., & Lynn, M. D. (2005). *How to cheat your friends at poker: The wisdom of Dickie Richard*. New York: St. Martin's Press.
Johnson-Laird, P. N. (1983). *Mental models: Towards a cognitive science of language, inference, and consciousness*. Cambridge, MA: Harvard University Press.
Johnson-Laird, P. N. (1989). Mental models. In M. I. Posner (Ed.), *Foundations of cognitive science* (pp. 469–499). Cambridge, MA: A Bradford Book.
Jones, M., & Jones, E. (1999). *Mass media*. London: Macmillan Press.
Kahneman, D., & Tversky, A. (1982). Judgement under uncertainty: Heuristics and biases. In D. Kahneman, P. Slovic, & A. Tversky (Eds.), *Judgement under uncertainty* (pp. 3–22). Cambridge: Cambridge University Press.
Keller, C. R. (1942). *The second great awakening in Connecticut*. New Haven: Yale University Press.
Keysar, B., & Bly, B. (1995). Intuitions of the transparency of idioms: Can one keep a secret by spilling the beans? *Journal of Memory and Language, 34*, 89–109.
Keysar, B., Shen, Y., Glucksberg, S., & Horton, W. (2000). Conventional language: How metaphorical is it? *Journal of Memory and Language, 43*, 576–593.
Kilby, J., Fox, J., & Lucas, A. F. (2004). *Casino operations management* (2nd ed.). New York: Wiley.
Krout, J. A. (1925). *The origins of prohibition*. New York: Knopf.
Lakoff, G. (1987). *Women, fire and dangerous things: What categories reveal about the mind*. Chicago: The University Press.
Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. Chicago: University of Chicago Press.

Lakoff, G., & Johnson, M. (1999). *Philosophy in the flesh: The embodied mind and its challenge to Western thought*. New York: Basic Books.
Levenstein, E. (1878a). *Morbid craving for morphia*. New York: Arno Press (1981).
Levenstein, E. (1878b). Delirium tremens: A symptom of morbid craving for morphia. *Quarterly Journal of Inebriety, 2*, 217–220.
Levine, H. (1978). The discovery of addiction: Changing conceptions of habitual drunkenness in America. *Journal of Studies on Alcohol, 39*, 143–174.
Meyer, R. E. (1994). Toward a comprehensive theory of alcoholism. In T. F. Babor, V. Hesselbrook, R. E. Meyer, & W. Shoemaker (Eds.), *Types of alcoholics: Evidence from clinical, experimental, and genetic research* (pp. 238–250). New York: New York Academy of Sciences.
Miller, P. (1939). *The New England mind: The seventeenth century*. Boston: Beacon.
Miller, W. (1980). *The addictive behaviors*. Oxford: Pergamon Press.
Mlodinow, L. (2008). *The Drunkard's walk: How randomness rules our lives*. New York: Vintage Books.
Mohseni, R. (Producer & Director). (2002). *Iranian lottery* [Documentary Film]. Iran: AzersamFilms. http://www.raminmohseni.com/iranian_lottery.htm.
Orff, C. (1994). *Carmina Burana* [Opera]. Directed by Leonard Slatkin. United States: BMG Music.
Orford, J. (1985). *Excessive appetites: A psychological view of the addictions*. Chichester: Wiley.
Ortony, A., Schallert, D., Reynolds, R., & Antos, S. (1978). Interpreting metaphors and idioms: Some effects of context on comprehension. *Journal of Verbal Learning and Verbal Behavior, 17*, 465–477.
Paivio, A. (1986). *Mental representations: A dual coding approach*. New York: Oxford University Press.
Patterson, J. (1990). *Blackjack: A winner's handbook*. New York: Perigee Books.
Peele, S. (1989). *Diseasing of America: Addiction treatment out of control*. Lexington, MA: Lexington Books.
Peele, S. (2000). A prototypical case of alcoholism treatment and coercion: G. Douglas Talbott. In S. Peele, C. Buffe, & A. Brodsky (Eds.), *Resisting 12-step coercion: How to fight forced participation in AA, NA, or 12-Step treatment* (pp. 143–153). Tucson, AZ: See Sharp Press.
Peele, S. (2003). Is gambling an addiction like drug and alcohol addiction? Developing realistic and useful conceptions of compulsive gambling. In G. Reith (Ed.), *Gambling: Who wins? Who loses?* (pp. 208–220). Amherst, NY: Prometheus Books.
Pegram, T. R. (1998). *Battling Demon Rum: The struggle for a Dry America, 1800–1933*. Chicago: Ivan R. Dee.
Phillips, B., (2009). *A focus on problem gambling: Results of the 2006/07 New Zealand Health Survey*. Wellington, New Zealand: Ministry of Health. Available at http://www.moh.govt.nz.
Reinarman, C. (2005). Addiction as accomplishment: The discursive construction of disease. *Addiction Research and Theory, 13*, 307–320.
Reith, G. (1999). *The age of chance: Gambling and western culture*. New York: Routledge.
Rorabaugh, J. (1979). *The alcoholic republic: An American tradition, 1790–1840*. New York: Oxford University Press.
Rose, I. N. (1991). The rise and fall of the third wave: Gambling will be outlawed in forty years. In W. Eadington & J. Cornelius (Eds.), *Gambling and public policy* (pp. 65–86). Reno, University of Nevada: Institute for the Study of Gambling & Commercial Gaming.
Schaler, J. (1998). Drugs and free will. In J. A. Schaler (Ed.), *Drugs: Should we legalize, decriminalize or deregulate?* (pp. 235–248). New York: Prometheus.
Schaler, J. (2000). *Addiction is a choice*. Chicago: Open Court.
Schmidt, L. A. (1995). A battle not man's but God's: Origins of the American temperance crusade in the struggle for religious authority. *Journal of Studies on Alcohol, 56*, 110–121.
Schwartz, D. (2006). *Roll the bones*. New York: Gotham Books.
Searle, J. (1979). Metaphor. In A. Ortony (Ed.), *Metaphor and thought* (pp. 92–123). Cambridge: Cambridge University Press.

Skolnick, J. H. (2003). Regulating vice: America's struggle with wicked pleasure. In G. Reith (Ed.), *Gambling: Who wins? Who loses?* (pp. 311–321). Amherst, NY: Prometheus Books.
Steen, G. J. (2007). *Finding metaphor in grammar and usage*. Amsterdam: John Benjamins Publishing Company.
Szasz, T. (1973). Mental illness as a metaphor. *Nature, 242*, 305–307.
Szasz, T. (1974). *Ceremonial chemistry: The ritual persecution of drugs, addicts, and pushers*. Garden City: Anchor.
Tchaikovsky, P. I. (1993). *Pique Dame: The Queen of Spades*. Conducted by V. Gergiev. Russia: Philips.
Thorpe, E. O. (1966). *Beat the dealer: A winning strategy for the game of twenty-one* (2nd ed.). New York: Vintage Books.
Turner, N. E. (1995). *The role of literal meaning in proverb comprehension*. Doctoral dissertation, the University of Western Ontario, London in partial completion of a Ph.D. in Cognitive Psychology.
Turner, N. E., & Ferentzy, P. (2010). The natural life history of a lottery: The importance of large wins in the establishment and survival of a lottery. *International Gambling Studies, 10*(1), 19–30.
Turner, N. E., Fritz, B., & Zangeneh, M. (2007). Images of gambling in film. *Journal of Gambling Issues., 20*, 117–144.
Turner, N. E., & Horbay, R. (2003). Doubling revisited: The mathematical and psychological effect of betting strategy. *Gambling Research, 15*, 16–34.
Turner, N. E., & Horbay, R. (2004). How do slot machines and other electronic gambling machines actually work? *Journal of Gambling Issues*, (*11*), 10–50. http://www.camh.net/egambling/issue11/index.html.
Turner, N. E., & Katz, A. N. (1997). Evidence for the activation of literal and of convention meaning during the comprehension of proverbs. *Pragmatics and Cognition, 5*, 199–233.
Turner, N. E., & Katz, A. N. (2003). The availability of conventional and of literal meaning during the comprehension of proverbs. In W. Mieder (Ed.), *Cognition, comprehension and communication* (pp. 531–554). Baltmannsweiler, Germany: Schneider Verlag Hohengehren GmbH.
Turner, N. E., & Powell, J. (2007). Probability, random events, and the mathematics of gambling. In R. Murray (Ed.), *Helping the problem gambler*. Toronto, ON: Centre for Addiction and Mental Health. Retrieved May 17, 2007, from http://www.problemgambling.ca/.
Tyrrell, I. (1979). *Sobering up: From temperance to prohibition in Antebellum America, 1800–1860*. Greenwood Press: Westport.
Urbanoski, K., & Rush, B. R. (2006). Characteristics of people seeking treatment for problem gambling in Ontario: Trends from 1998–2002. *Journal of Gambling Issues, 16*. Available at http://www.camh.net/egambling/issue16/index.html.
Volberg, R. (2003). Has there been a "feminization" of gambling and problem gambling in the United States? *Electronic Journal of Gambling Issues*, *8*. doi:10.4309/jgi.2003.8.7.
Warner, J. (1994). Resolv'd to drink no more: Addiction as a preindustrial construct. *Journal of Studies on Alcohol, 55*, 685–691.
Warner, J. (2002). *Craze: Gin and debauchery in the age of reason*. New York: Random House.
Warner, J. (2009). Temperance, alcohol, and the American evangelical: A reassessment. *Addiction, 104*, 1075–1084.
Wikipedia. (2010). *A rake's progress*. http://en.wikipedia.org/wiki/Rakes_progress.
Winship, M. P. (1996). *Seers of God: Puritan providentialism in the restoration and early enlightenment*. Baltimore: John Hopkins University Press.
Woolf, H. B. (Ed.). (1974). *The Merriam-Webster Dictionary*. New York: Pocket Books.

Chapter 3
Pathological Gambling as an Idea: What Does It Mean?

Abstract This chapter was written to clarify the basics of problem or pathological gambling (PG) as an idea and also to establish its existence. Controversies over the reality of mental disorders are especially poignant when behavioral addictions are at issue. We discuss evidence for PG based upon harm, prevalence, and its relationship to other psychiatric disorders. Assorted definitions of problem and pathological gambling, along with issues pertaining to subtypes and etiology, are discussed with the intention of identifying controversies as well as providing as much clarity as possible. Comparisons to substance addiction, obsessive–compulsive disorder, and impulse control disorder are made, both to help identify PG's place in psychiatric nosology and also to highlight conceptual difficulties that would haunt us regardless of which designations we favor. Above all, we argue that PG is a reality even if it cannot be defined and explained to everyone's satisfaction.

Keywords Nomenclature • Definition • Substance addiction, Obsessive–compulsive disorder • Impulse control disorder • Harm

3.1 Pathological Gambling: An Idea Based on Real Harm

This chapter was written to clarify the basics of problem or pathological gambling (PG) as an idea and also to establish its existence. While some may consider the latter unnecessary, the reality of psycho-behavioral ailments has long been controversial (Al-Issa, 1982; Triandis & Draguns, 1980; Szasz, 1973); addictions more so (Fingarette, 1988; Schaler, 2000) and behavioral addictions such as compulsive or pathological gambling are still mythical to many critics both lay and professional (Griffiths, 2008a; Reinarman, 2005). Is pathological gambling a myth, an addiction, a disorder of impulse control, a lifestyle choice, or something else? We will now turn to this question.

The identification of harm is a good place to start. This, after all, is the foundation for any behavioral disorder's existence: humanity—lay and professional—will

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Table 3.1 The prevalence of DSM-IV-TR symptoms of pathological gambling

DSM-IV criteria (paraphrased)	DSM-IV = 3 or 4 $N=30$ (%)	DSM-IV = 5 or more $N=85$ (%)
1. Preoccupied with gambling	50	87
2. Needs to gamble with increasing amounts of money for same level of excitement	30	64
3. Made efforts to control gambling that have been unsuccessful	47	79
4. Restless or irritable when attempting to cut down or stop gambling	30	74
5. Gamble as a way to escape from your problems or relieve guilt, anxiety, or depression	63	92
6. After losing money gambling, returns another day to get even; chasing losses	67	82
7. Lies to family members, or therapist, or others in order to conceal the extent of gambling	27	66
8. Committed illegal acts such as forgery, fraud, or theft to finance gambling.	3	36
9. Jeopardized or lost a significant relationship, job, educational, or career opportunity due to gambling	3	42
10. Relies on others to provide money when in a desperate financial situation due to gambling	20	64

notice bad effects, seek a cause or many causes, and then presume to give answers and to provide labels. While our inquiry will soon touch upon some fairly complicated themes, the first step really is that simple.

3.1.1 DSM-IV-TR Symptoms

The clinical definition of pathological gambling is determined using the Diagnostic and Statistical Manual, Fourth Edition, Test Revision (DSM-IV-TR) symptom checklist (American Psychiatric Association [APA], 2000). To examine the prevalence of different harmful consequences of gambling, we have summarized the frequency of DSM-IV-TR symptoms from two of our published studies (Turner, Littman-Sharp, & Zangeneh, 2006; Turner, Jain, Spence, & Zangeneh, 2008). The combined sample includes 131 nonproblem gamblers, 30 subclinical problem gamblers, and 85 pathological gamblers. The Cronbach's alpha for the DSM-IV-TR questions for the entire sample was 0.86 indicating that the checklist is reliable. All items had strong positive item total correlations of between 0.48 and 0.66.

Table 3.1 lists the prevalence of DSM-IV-TR symptoms among subclinical problem gamblers who endorse 3 or 4 on the DSM-IV-TR and pathological gamblers who score 5 or more on the DSM-IV-TR. Nearly all of the pathological gamblers (92%) report gambling to escape from anxiety, depression, or guilt. On the other

hand, only 36% of pathological gamblers report committing crimes to fund their gambling or pay gambling debts.

Other symptoms focus on specific aspects of the disorder such as chasing (82%); lying to family or other people (66%); jeopardizing relationships, jobs, or career opportunities to gamble (42%); and relying on others to provide money when in a desperate financial situation (64%). It is also important to note that 79% of the pathological and 47% of the subclinical problem gamblers report unsuccessfully trying to control their gambling. These figures alone suggest that many problem gamblers at least believe they suffer from a real disorder. In addition, 74% of pathological gamblers and 30% of subclinical problem gamblers report being restless or irritable when attempting to cut down on gambling, suggesting that they have experienced withdrawal symptoms. Slightly less than half of the pathological gamblers (42%) report jeopardizing an important relationship, job, or educational opportunity. Very few subclinical problem gamblers report either committing a crime (3%) or jeopardizing a relationship or career opportunity (3%) due to gambling.

The last four items focus on specific harmful consequences of gambling (lying, committing crime, jeopardizing relationships or career, and relying on others for financial help). These items on average were less frequently endorsed than the first six items and were less likely to be endorsed by subclinical problem gamblers. Nonetheless, nearly half (47%) of the subclinical problem gamblers and 92% of the pathological gamblers endorsed at least one of these items. In addition, on average, the pathological gamblers endorsed 3.1 (SD = 1.1) of these four items and the subclinical problem gamblers endorsed 0.5 items (SD. 0.6).

In these studies, the participants were also asked to estimate their lifetime losses due to gambling. Because the data was positively skewed, we used geometric mean to estimate the average. Note that the geometric mean is equivalent to the center of the distribution after it has been logarithmically transformed. The geometric mean for lifetime losses due to gambling was $28,271 for the pathological gamblers and $13,481 for the subclinical problem gamblers.

3.1.2 A Rose by Another Other Name: Sorting Out Nomenclature

One of the more confusing aspects of the problem gambling field is the variety of names used for the phenomena. Names used to describe problem gamblers have included compulsive gamblers (Lesieur & Custer, 1984), pathological gamblers (APA, 1987, 1994, 2000), disordered gamblers, problem gamblers, level 3 gamblers (Shaffer, Hall, & Vander Bilt, 1999), probable pathological gamblers (Lesieur & Blume, 1987), and severe problem gamblers (Ferris & Wynne, 2001). Some terms have been tied to specific theoretical ideas (e.g., compulsive gamblers), others have been tied to specific measures used to assess the disorder (e.g., severe problem gamblers, probable pathological gamblers), and others have been tied to specific research

studies (e.g., level III). The lack of consistent nomenclature is a frustration to anyone trying to advance the field.

The current medical literature uses the theory neutral term pathological gamblers (APA, 1987, 1994, 2000). The problem with this term is that it presupposes a categorical difference between people with the disorder and those who do not have the disorder, rather than a continuum, and it is tied very specifically to the extreme end of the continuum. In addition, there is some evidence that this criterion is too conservative and may underestimate the number of people who suffer from the disorder (Cox, Enns, & Michaud, 2004; Turner, Preston, Saunders, McAvoy, & Jain, 2009). When we are only discussing the extreme cases of individuals who meet the medical criteria of five symptoms on the DSM-IV, we will use the term pathological gambler. When we are referring only to people who fall just short of this threshold (e.g., a score of 3 or 4 on the DSM-IV), we will use the term subclinical problem gamblers. However, in general, we will use the term problem gambler or simply PG to describe anyone who has suffered from a gambling disorder regardless of whether or not they meet the medical criterion for a diagnosis. If other terms are used, we will give translations to ensure consistent nomenclature.

3.1.3 Prevalence

The most comprehensive study of prevalence rates in Canada and the United States was a meta-analysis conducted by Shaffer et al. (1999) which found that 1.14% ± 0.24% of the adult population had a level III gambling disorder (pathological) in the past year and that an additional 2.80% ± 0.85% of the population had a level II disorder (subclinical) in the past year. More recent studies have yielded similar estimates (e.g., Ferris & Wynne, 2001; Room et al., 1999; Shaffer, LaBrie, LaPlante, Nelson, & Stanton, 2004; Wiebe, Single, & Falkowski-Ham, 2001; Wiebe, Mun, & Kauffman, 2006; Wiebe & Volberg, 2007). Such findings identify pathological gambling as more common than anorexia (0.7%; Hudson, Hiripi, Pope, & Kessler, 2007) and at around the same population frequency as schizophrenia (Regier et al., 1993) or past year harm from illicit drugs excluding cannabis (0.9%; Adlaf, Begin, & Sawka, 2005). While less common than major depression (6.7%; Kessler, Chiu, Demler, & Walters, 2005) or hazardous drinking (13.1% of the entire sample, Adlaf et al., 2005), pathological gambling is clearly common enough to warrant the kind of concern that has long been directed at other psychobehavioral issues.

Evidence also suggests that many seek help for PG. For example, Ontario's problem gambling helpline receives more than 1,000 calls per month (Counter & Davey, 2006), and its problem gambling treatment centers deal with yearly caseloads numbering in the thousands (Urbanoski & Rush, 2006).

3.1.4 Crime

In an extensive discussion of social impact, Grinols (2004) offers some impressive numbers pertaining to associations between PG and crime, with PGs "abusing" dollars this way at almost fifty times the per capita rate for adults. Turner et al. (2009) found the prevalence of severe problem gambling (pathological) in the Ontario correctional population to be just under 9.6%. In their review of studies examining gambling behavior within forensic populations, Williams, Royston, and Hagen (2005) found the prevalence rate for problem gambling ranging from 17% to 60%, with an average of about 33%. Note that in their work "problem gambling" refers to the combination of pathological and subclinical problems. Perhaps even more telling is a finding by Brown (1987): like heroin addicts, PGs typically are not serious criminals at first and are more likely to become criminals as a response to financial challenges associated with the psycho-behavioral ailment. For example, in a well-known case, a banker in Toronto, Brian Molony, embezzled ten million from his employer in a futile attempt to pay off his gambling debts (see Ross, 2002). Although the size of Molony's embezzlement was very large, his behavior was not atypical. Turner et al. (2009) reported that 65% of the severe problem gamblers (pathological) in the correctional system that they interviewed claimed that their criminal activity was directly related to their gambling problem. One individual best described the relationship as follows: "gambling lead to debt, debt lead to crime, and around it goes." If many who were not criminals become criminals as a result of a propensity for gambling, two conclusions must follow:

1. For some, the behavior has a pull to it that only the most cavalier would dismiss as a mere "lifestyle choice." It seems that persons who once had decent lives will continue in the activity that took this away from them, landed them in jail, and continues to impair their ability to function normally and to live happily.
2. If, like other psycho-behavioral afflictions, PG often leads to criminality, we have good reason to consider it in the same light as other risk factors for criminal behavior.

The factors may be psycho, socio, or bio, but either way will warrant scrutiny from professionals of all stripes. This must include medical professionals even if we do not wish to grant these individuals complete sway. So the real debate will not be over whether to medicalize PG. Rather, legitimate debates can ensue over what portion of our overall efforts should receive a medical designation.

3.1.5 Organized Crime

Related to this issue is the fact that problem gambling is often associated with organized crime. As discussed in the Chap. 2, societies have long sought to prevent problems associated with gambling, either through control measures or outright

prohibition. Nonetheless, during the early part of the twentieth century when legal gambling was mostly unavailable, those who wanted to gamble often turned to organized crime for their gambling fix (Ferentzy & Turner, 2009). Evidence suggests that despite many newer legal gambling options, organized crime still reaps significant profits from gambling (Ferentzy & Turner, 2009). And PGs do account for an important segment of organized crime's clientele, either directly through gambling or by borrowing from loan sharks (Ferentzy & Turner, 2009).

3.1.6 Substance Abuse, Mental Illness, and Dysfunction

The list of psychiatric conditions and social problems that are associated with pathological gambling is quite long. For example, the National Opinion Research Center (1999) survey found that 20% of pathological gamblers reported suffering from depression and 20% reported suffering from alcohol or drug dependence. Ibanez et al. (2001) reported correlations of $r = 0.40$ between the number of SOGS symptoms and the number of comorbid diagnoses. Turner et al. (2009) reported finding that a factor aggregating emotional vulnerability variables (e.g., depression, anxiety) accounted for 28.9% of the variance of problem gambling severity. In a longitudinal study, Breyer et al. (2009) reported that approximately 24% of ADHD youth who continued to gamble (persisters) met the criterion for probable pathological gambling, compared to 7% of those who stopped gambling (desisters) and controls. A variety of studies have shown that PG is strongly associated with substance abuse (Liu, Maciejewski, & Potenza, 2009; National Opinion Research Center, 1999; Spunt, 2002; Spunt, Dupont, Lesieur, Liberty, & Hunt, 1998), homelessness (Castellani et al., 1996; Shaffer, Freed, & Healea, 2002; Shepherd, 1996), family dysfunction (Hardoon, Gupta, & Derevensky, 2004; Vachon, Vitaro, Wanner, & Tremblay, 2004), mental illness (Crockford & el-Guebaly, 1998; Ibanez et al., 2001; Johansson, Grant, Kim, Odlaug, & Gotestam, 2009; Turner et al., 2006, 2009), and attention deficit hyperactivity disorder (Breyer et al., 2009; Turner et al., 2009).

In a review of the literature, Johansson et al. (2009) summarized the risk factors for problem gambling. They found that nine factors had strong support: being young, being male, erroneous perceptions, illusion of control, sensory characteristics, schedules of reinforcement, obsessive–compulsive disorder, drug abuse, and delinquency/illegal acts. These findings, however, are only correlational and provide no definitive evidence about cause and effect.

Still, there are really two ways to understand the many associations listed in this subsection: PG is either a cause or an effect. Realistically, one should make room for both interpretations. If PG is a cause of undesirable behaviors and states of mind, then it requires exploration for this reason. Or, if PG is an effect, then it must be examined as the product of underlying conditions. As discussed below, some individuals suffer from comorbid conditions as a result of gambling (e.g., depressed or homeless due to gambling losses), whereas for other individuals, the comorbid condition leads to a gambling disorder (see Blaszczynski & Nower, 2002). Nonetheless,

even if gambling is a secondary consequence of some other disorder (e.g., depression), the huge negative impact of problem gambling on the individual means the disorder has to be dealt with at some level.

3.1.7 Summary

Research findings related to problem gambling suggest that this disorder is a real issue that needs to be dealt with as a public health issue. The rest of this chapter is a brief discussion of current scientific efforts and also an effort to place PG in a larger schema of psycho-behavioral disorders.

3.2 Substance Addiction as a Model for PG

It is no secret that PG studies are more indebted to the science of substance abuse than to any other discipline (see, e.g., Custer, 1975; Dickson, Derevensky & Gupta, 2002; Jacobs, 1986; Rosenthal, 1992; Taber, McCormick, Russo, Adkins, & Ramirez, 1987). While the most common descriptor for any substance use disorder (SUD) is the well-known *addiction* concept, the term itself is currently out of vogue in some scientific circles due in part to its exclusion from DSM which has long opted for *dependence* instead of *addiction* (APA, 1987, 1994). Yet the term, addiction, was spurned by DSM because of its purported capacity for stigmatizing the afflicted, not due to scientific shortcomings, and will in all likelihood supplant "dependence" in the next edition of DSM (O'Brien, 2006). Despite a comprehensive list of symptoms offered in DSM (APA, 1987, 1994), the term "dependence" still tends to invoke associations with the purely physical dimension of addiction—withdrawal and tolerance—often leading to a confusion between, say, dependence on methadone or any pain killer, on the one hand, and clinical SUD on the other. The latter, whether we call it addiction or dependence, requires more than those two physical markers and also involves considerations such as craving, loss of control, preoccupation with a substance, and serious harm to one's life. Cutting to the chase, any such disorder will involve reference to a loss or impairment of control over one's behavior—regardless of whether this loss of control is real or imagined (Room, 2003). In short, addiction concepts target a perplexing and arguably mysterious reality: drinkers and drug users continue to engage in the using behaviors despite negative, and at times devastating, consequences (Room, 2003, p. 225).

That PG's designation as a disorder of impulse control is in many ways consistent with, and largely based upon, an addiction model is well understood in the field (Ferentzy & Skinner, 2003; Lesieur, 1988; Lesieur & Custer, 1984; Petry, 2006; Potenza, 2006). Even symptoms many would consider specific to SUD such as tolerance and withdrawal (see Table 3.1) translate with little adjustment to PG: (1) many PGs need to gamble with greater amounts to achieve the same sensation

(tolerance) and (2) many PGs have been known to experience identifiable withdrawal symptoms upon cessation of their gambling behavior (APA, 1994, p. 618; see also Rosenthal & Lesieur, 1992). One notable difference is the propensity for chasing losses often associated with PG, a symptom for which SUD has no parallel (while chasing an original high can accompany either condition that is not the same as chasing lost money).

As with substance use disorders, PG studies have been marked by debates over the viability of hard pathological constructs through which PGs are seen as a distinct group, separate from the rest of the population. Should the behavior in question be viewed this way or should we instead understand it as falling along a continuum of severity or harm (Abbott & Volberg, 2006; Derevensky, Gupta, Dickson, & Deguire, 2001; Dickson, Derevensky, & Gupta, 2004; Ferris, Wynne, & Single, 1999; Korn, Gibbins & Azmier, 2003; New Zealand Ministry of Health, 2004; Strong & Kahler, 2007). One corollary would be that PG need not be qualitatively different from normal gambling—a potential challenge to the viability of pathological gambling as a "condition," disease entity, or any other such designation one might adopt. This critique has been launched at the DSM designation as well (Abbott & Volberg, 2006; Strong, Breen, Lesieur, & LeJuez, 2003), can be taken as a challenge to pathological constructs as such and not just to the addiction model, and can (perhaps ironically) shed light on precisely why hard pathological constructs are probably unavoidable. Dickson et al. (2004), for example, argue for a continuum of harm conception and an emphasis on subclinical PGs for a host of practical reasons, yet do acknowledge that a number of hard PG cases would not be amenable to the interventions proposed for the general population and that a pure abstinence model may be the only viable approach in these cases. With that granted, the issue has more to do with shifts in intervention emphasis and questioning the number of such hard cases than with a denial of hard pathological cases altogether. Similarly, Blaszczynski and Nower (2002) suggest that many etiological pathways can apply to PG—some perhaps entailing subclinical forms of PG—yet leave open the idea that many models (including an addiction model) can fit different cases.

The reader should also be aware that the gambling industry prefers a hard construct, a disease model that is entirely rooted in the individual. In that way, they would be able to argue that "gambling is not the cause of compulsive gambling" (Bulwer, 2003, p. 30). With respect to policy, such a conception can entail a need for pure abstinence among a small minority yet no regulations at all upon the general public. However, as will be argued in this book, calling gambling a disease need not imply that the disorder is entirely in the person. An illness that results from exposure to a toxin or a virus can also be called a disease.

Like the mainstream chronic disease or medical conception, the public health model is an important consideration in this study. Right here, a few comments will suffice. Typically invoking a continuum of harm conception of PG and, just as typically, associated with a range of harm reduction initiatives (e.g., controlled gambling measures) at odds with a mainstream disease concept perspective, the public health model offers a greater emphasis on sociological and other (e.g., economic) determinants and can, with caution, be viewed as the most viable current challenge

to the standard medical or disease conception (Marotta & Hynes, 2003; Messerlian, Derevensky, & Gupta, 2004; Raeburn, 2004; Shaffer, 2003; Shaffer, & Korn, 2002; Shaffer, LaBrie, & LaPlante, 2004; Taylor, Taske, Swann, & Waller, 2007). An emphasis on sociological and assorted determinants *external* to the individual is clearly at odds with any approach that treats a maladaptive behavior as primarily a clinical issue involving a disease that is, somehow, internal to the subject and hence largely impervious to outside influences.

Yet the public health model (PH) is not the only one to offer this kind of a challenge, and the PG field is currently rife with a range of perspectives on the nature and etiology of the disorder, as well as the best solutions. Psychoanalysis and social learning have long tended to share an emphasis on the causal determinants of PG, with at least the potential implication that PG need not be a primary disorder and that, perhaps, controlled gambling may be possible for someone who has tackled certain underlying or causal precedents (Bergler, 1943, 1957; Hardoon & Derevensky, 2001; Lesieur & Rosenthal, 1991; Rosenthal, 1992). There is also the biopsychosocial model which offers assorted, case-specific options for PG etiology. Later in this chapter, more will be said about PG etiology and its implications. For now, it is enough to note that many models do indeed offer assorted challenges to the notion of disease primacy and thereby raise questions pertaining to the purportedly chronic nature of the disorder—offering alternatives to, or at least limitations upon, PG's status as a disease entity, a primary disorder, or a maladaptive condition that is somehow fixed inside a subject's body or soul.

3.3 PG and the Addiction Model

Given that no substance ingestion is involved, PG has been treated as something akin to a *pure addiction* (Custer, 1975; Jacobs, 1986; Rosenthal, 1992). That is, because of the absence of a potentially harmful substance or any brain damage that might occur from the drug, the changes seen in a person are the result of the addiction and not a side effect of the substance itself. The phrase "pure addiction," however, can mean different things to different researchers. From a behaviorist or cognitive point of view (e.g., Marlatt, 1985; Skinner, 1953), the reinforcing contingencies of gambling (e.g., wins) are much easier to understand than those of drugs. Perhaps for this reason, PG has been able to provide a decent model for an overall susceptibility to addictions and compulsions (Jacobs, 1986). Yet with ever more discussion of a range of behavioral addictions that have recently been catalogued, PG is not as special in this regard as it once may have been (Brown, 1991, 1997; Carnes, 1983; Carnes, Murray, & Charpentier, 2005; Gentile, 2009; Glasser, 1976; Griffiths, 1995, 2008b; Griffiths & Barnes, 2008; Hodge, 1991; Jacobs, 1986; Miller, 1980; Orford, 1985; Reinarman, 2005). In fact, the research community has lagged behind lay conceptions on this score. The 1980s witnessed a virtual explosion of popular discourse surrounding non-substance addictions (Peele, 1989), with science moving (as it should) in more measured steps. One can reasonably ponder

whether and to what extent scientific discussions surrounding these matters are beholden to trendy and arguably fictitious ideas about addiction to issues ranging from sex and gambling to crime and videogames (Larkin, Wood & Griffiths, 2006; Reinarman, 2005). With respect to PG, Rosecrance (1985) has discussed the original impetus for its medicalization. This involved higher numbers of middle-class PGs in the wake of legalization along with advocacy from nonscientific circles (e.g., GA members were pivotal)—not the stuff of which science is supposed to made.

Still, that scientific discussions have come to reflect popular concerns can be interpreted another way: perhaps this is simply a reflection of reality. Few, after all, would be impressed by a list of psycho-behavioral diseases that failed to resonate with the public. Questions arise, however, regarding cultural bias in the construction of psychiatric categories (Larkin et al., 2006; see also Al-Issa, 1982; Reinarman, 2005; Triandis & Draguns, 1980). Closer to home, the cultural specificity inherent to the symptoms associated with alcoholism has been noted in cross-cultural studies. Even something seemingly straightforward like "loss of control over one's drinking" presumes a setting wherein individual self-control is expected in place of peer or familial control (Schmidt & Room, 1999). The same could surely be said of PG. The classic medical model and its tenets have long been critiqued as culturally specific, with experiential accounts (e.g., from 12-Step circles) challenged in the following way: loss of control, disease progression, and chronicity may often be caused by the suggestions of therapists and of popular culture in general (Peele, 1989; Reinarman, 2005). So, are we dealing with independent disease symptoms or simply self-fulfilling prophecies beholden to the internalization of a set of beliefs?

Properly understood, however, such questions lead to the contextualization of addiction concepts and to qualifications rather than to outright negation. Let us begin with alcoholism. When Levine (1978) published his landmark paper on the historical and cultural specificity of the modern addiction concept, he made the following observation:

> In terms of external behavior, there is little to distinguish the contemporary idea of alcoholism or inebriety from the traditional colonial view of the drunkard …. The main differences lie not so much in the external form as in the assumptions made about the inner experiences and condition of the drunkard. Beginning in the 19th century, terms like 'overwhelming' and 'irresistible' were used to describe the drunkard's desire for liquor. In the colonial period, however, these words were almost never used. Instead, the most commonly used words were love and affection, terms seldom used in the 19th and 20th centuries. (Levine, 1978, p. 148)

There is some transcultural constancy to substance use disorders, even if different contexts entail different interpretations of the related behaviors (and of their causes and implications). From here, one may ask whether this can apply to seemingly compulsive behaviors that do not involve substance ingestion. The short answer would be that substance use is irrelevant: if we believe that persons can, somehow, be out of control, then this fact would certainly not be contingent upon the consumption of drugs. The phenomenon of craving, as well, is not drug specific as one can just as easily crave intangibles such as love, sex, attention, respect, and, for that matter, gambling. Peele, for example, does not deny that gambling can be

addictive. He questions the idea that any addiction is a "disease" (Peele, 1989, 2003). Given the similarities between SUD and many behavioral addictions, it would be much more sensible to attack addiction as an idea, than to acknowledge its applicability to SUD but not to other behaviors. In this vein, neuroscience has been providing some decent evidence for a link between all addictions regardless of whether substances are ingested (Childress et al., 2008; Krystal, Webb, Cooney, Kranzler, & Charney, 1994; Satya & Pushpa; 2004; Szalavitz, 2002; Zack, 2006). That cravings for food, sex, drugs, and other stimulations seem to target the same pathways in the brain is probably unsurprising, yet it does suggest a commonality—one that this section was written to explore.

Identifying properly clinical cases of substance addiction must involve questions pertaining to where the line should be drawn between serious SUD and arguably normal behaviors that are still somewhat problematic. This question resurfaces in another form when trying to determine which behaviors are at least potentially addictive: where to draw the line? As Griffiths (2005) has pointed out, few consider gardening an addictive behavior, and the main reason is that gardening does not seem to do much harm to those who engage in it tenaciously. As we discuss assorted definitional and clinical issues, the reader should keep in mind that harm, or the potential for harm, is probably the determining factor.

DSM-IV offers seven criteria for SUD and ten for PG (APA, 1994). For an SUD diagnosis, three criteria must be met in a 12-month time frame, and five are needed for PG. The ambiguity associated with addiction concepts in general is perhaps highlighted by how, at least in principle, two individuals can be diagnosed with the same disorder despite sharing no common symptoms. Further, it is highly questionable whether meeting the necessary criteria, or even displaying more symptoms than needed, is enough on its own to establish the need for life-long abstinence. The latter is clearly an empirical issue that would be determined case by case. We simply have no theoretical schema or scientific constructs to guarantee foresight in such matters. Decent predictions, however, are not out of the question. So the measures we use have some validity. A flexible approach to conceptualization is definitely required, as a rigid application of any preconceptions would be unrealistic.

It is helpful, and prudent, to view addictions as extensions of normal human behaviors and aspirations—natural functions gone awry (Brown, 1997; Griffiths, 2005). Drugs, alcohol, and gambling all provide a person with an opportunity for pleasure, so a pleasure principle is likely involved in the addiction. Addictions are often ego-syntonic. In fact, it is often difficult to convince a person that they really need to quit gambling, smoking, drinking, or taking drugs. Consequently, addiction therapy often involves motivational interviewing (see Miller & Rollnick, 1991) in which a therapist helps the client move from a pre-contemplation or contemplation attitude (Pochaska, DiClemente, & Norcross, 1992) to a commitment to change (action). Obsessive–compulsive disorder (OCD), in contrast, is ego-dystonic and often does not involve a pleasure principle, only the avoidance of anxiety (APA, 1994, pg. 422). It is arguable that in the later stages of desperation, many cases of addiction begin to resemble OCD as individuals shift away from pleasure seeking to pain avoidance. That aside, addictions are generally goal directed and pleasure

seeking in nature (Brown, 1997, p. 49). Shortly more will be said about these matters. For now, let us note that not all conditions involving volitional deficiency would qualify as addictions. Tourette syndrome is one example, as it can involve involuntary ticks or even verbal diatribes, yet is free of many other markers such as preoccupation with a behavior and disease progression. Interestingly, Tourette syndrome is distinguishable in many of its features (e.g., effects on cognitive functioning) from both PG and alcoholism (Goudriaan, Oosterlaan, de Beurs, & van den Brink, 2005).

Finally, for those uncomfortable with the idea that one can be out of control when gambling or taking drugs, Brown's (1991) alternative explanation may be more palatable. It is by no means controversial that the self can be divided, with tendencies and countertendencies vying for dominance. Brown (1991) speaks of an "internal dispute" inherent to all addictions (p. 108). Regardless of how we explain it, with addictions the quest for happiness is, somehow, mismanaged (Brown, 1991, p. 113).

3.4 Pathological Gambling Explained: Assorted Models, Causal, and Descriptive

In the last section, we identified addiction as a pleasure-seeking behavior. Numerous theories have been proposed to explain gambling behavior. One of the most influential is behaviorism (Skinner, 1953; Marlatt, 1985) which views gambling as an instance of reinforced learning. The behaviorist perspective is particularly clear in terms of machine gambling (Haruvy, Erev, & Sonsino, 2001; Haw, 2008). Accounts from problem gamblers suggest that the pleasure often comes not just from the winning but from the excitement of the possibility of a win (e.g., Barthelme & Barthelme, 1999). As such, both wins and losses appear to positively reinforce the behavior.

All addictions have rewarding aspects, but there is a dual nature to these rewards. Drugs, alcohol, and gambling all provide a person with an opportunity for pleasure or positive reinforcement, but in addition they also provide an opportunity to emotionally escape distress or avoid pain. This is perhaps most clear in the case of opiates which are medically used to treat pain (Ksir, Hart, & Ray, 2006, p. 325). Opiates (e.g., heroin) are used by drug addicts to deal with both physical discomfort and psychological pain (see Ksir et al., 2006; Annis, Turner, & Sklar, 1997). Research has shown that both pleasure and the escape from pain are important components of addiction and that the relative balance of pleasure and escape varies between individuals (Marlatt, 1985; Sklar, Annis, & Turner, 1997; Stewart & Zack, 2008; Turner, Annis, & Sklar, 1997).

According to Blaszczynski and Nower (2002), some problem gamblers develop a problem because their gambling is positively reinforced, whereas others develop a problem because of emotional vulnerability (e.g., depression, anxiety) and hence use gambling to escape from reality. Some researchers have even suggested that

escape from emotional pain is the most important aspect of an addiction (e.g., Jacobs, 1986; Gupta & Derevensky, 1998). According to this view, maladaptive behaviors such as excessive gambling and drug use are reactions to something unpleasant, a means to assuage emotional pain and discomfort. Nonetheless a pleasure principle may be involved in both providing pleasure and escape from pain.

In the last section, addictions were discussed as essentially extensions of normal behaviors and desires. Historically, this conception (Brown, 1997; Griffiths, 2005) can be taken as a rebuttal to conceptions that emphasize addiction as, basically, a reaction to the negative. While this qualifier was surely needed, it should be taken as just that: a qualifier designed to render more complete a long-standing understanding of addiction as largely reactive (Duncan, 1974a; Fenichel, 1945; Jacobs, 1986; Khantzian, 1985; Khantzian, Mack, & Schatzberg, 1974; Rado, 1957). The latter, which tends to emphasize negative reinforcement, still leaves open questions about whether negative states preceded an addiction (risk factors) or whether an addictive behavior is a response to bad feelings and situations that have been caused by the engagement with a drug, gambling, or something else (Blume, Schmaling, & Marlatt, 2000). It is at least arguable, however, that such questions are best left to the area of prevention; existentially, for an addict, the reality may have become independent of original causes, leaving us with what may still be designated a *primary* addictive disorder (Flavin & Morse, 1991). More important might be the fact that this conception, while certainly valid, is in many cases incomplete: addicts will also engage in their behavior of choice in response to positive events, perhaps as a form of celebration (Berridge & Robinson, 2006; Turner, Annis, & Sklar, 1997).

Despite these qualifiers, addiction requires explanation as a maladaptive behavior and as such with an emphasis on negative determinants (which may even include a propensity to mismanage some positive approaches to simple pleasure seeking). The biopsychosocial model is probably the most comprehensive. This conception has a long and venerable tradition in the substance abuse field (Ewing, 1980; Marlatt, Baer, Donovan, & Kivlahan, 1988) and has more recently been applied to PG. Blaszczynski and Nower (2002) point out that whereas the PG field can now boast of many decent etiological discussions involving determinants, both psychosocial and biological, the assorted perspectives have not been properly integrated or properly validated empirically. Above all, PG is typically presumed to be a unified disorder rather than a complex matrix with assorted causal pathways. Instead of assuming that there must be a single, primary path leading to PG, Blaszczynski and Nower (2002) suggest three possible etiologies: (1) behavioral conditioning, with PG as primarily learned thorough positive reinforcement and situational experiences; (2) emotional vulnerability, involving mainly psychological and/or social precedents and a desire to escape from psychic pain (negative reinforcement); and (3) impulsivity and antisocial dispositions, involving assorted combinations of the first two but biogenetic considerations as well. The hardest PG cases come from the third category, and most cases of PG for which a strong disease model applies would likely come from this etiological subset and some from the second. It is less likely that a case of full-blown gambling disease would be rooted exclusively in the first

(though, of course, low-level PG might lead to emotional imbalances which, in turn, could exasperate the condition).

Explanations of PG consistent with an addiction model (Jacobs, 1986; Lesieur & Custer, 1984) may be open to criticism. But discussions of addiction and PG as determined by issues mainly falling into the first or second categories offered by Blaszczynski and Nower (2002; e.g., Fingarette, 1988; Peele, 1989, 2003), no matter how convincing, need not be taken as disproving the third category's existence. The literature on issues that qualify our understanding of addiction—psychologically, socially, politically, historically—is vast (Barnes, Welte, Hoffman, & Dintcheff, 1999; Collins, 1996; Courtwright, 1982; Hardoon & Derevensky, 2001; Lash, Petersen, O'Connor, & Lehmann, 2001; Levine, 1978; Musto, 1973; Peele, 1989; Reinarman, 2005; Room, 2003; Rosecrance, 1985; Schmidt & Room, 1999; Shaffer, LaPlante, LaBrie, Kidman, Donato, & Stanton, 2004; Shaffer & Korn, 2002; Welte, Barnes, Wieczorek, Tidwell, & Parker, 2004). Though illuminating, all of this serves mainly to contextualize the reality of addiction and also to show that absolutist thinking is a bad idea. The reality of addiction, and for that matter of PG, is not undermined by any of it.

3.5 The Reality of PG: Identifying the Disorder

However imperfect, estimates of PG prevalence amount to one good empirical indicator of this problem's significance. For clinical PG among adults, estimates normally range from 1% to 2%. If we take pathological gambling and at-risk (or moderate) PG as a unit, a recent Canadian study offered province-specific numbers ranging from 1.6% for Prince Edward Island to 6.1% for Manitoba (Canadian Partnership for Responsible Gambling, 2009). These figures apply to PG within the past year and should not be confused with estimates of lifetime prevalence which would obviously be higher. Wiebe and Volberg (2007) estimate the global rate of past year PG at about 1%.

It is fair to ask how reliable such figures can be. Cultural specificity has already been raised as an issue, casting doubt on whether PG can be measured globally (or even within a single nation with a multicultural demography). With respect to substance abuse criteria, a good example is raised by Room (2006): Inuit respondents interpret terms such as "feel" and "anxiety" differently from most Westerners, and this kind of semantic disparity might throw many respondent samples into question. PG measurement must also confront such semantic and conceptual difficulties. Gradations of severity have also been raised as a problem, with the suggestion that this is hard to assess without examinations that are more stringent than those offered by the formal surveys currently available (Gambino, 2006). Beyond this, possible subtypes within the broader category of problem gambling itself (Blaszczynski & Nower, 2002) raise another set of queries altogether: just what, exactly, are we measuring?

None of this need be as discouraging as might appear at first glance. A practical focus on harm (Griffiths, 2005) is one way to render such questions, no matter how important and fascinating, partly academic and certainly no impediment to the generation of many answers that can serve the needs of caregivers, academics, and other interested parties. One may even counter that the problem with a focus on harm is that harm only occurs after the disorder has become severe (pathological) and that this precludes the development of prevention initiatives. Either way, the mere fact that we must quibble over the nature of PG—its prevalence, its parameters, how best to deal with it—is, like it or not, proof of its existence.

A bit of context might help right here. Currently, we are witness to a scientific climate still beholden to the conceptualization of SUD that dominated the middle twentieth century. Duncan (1974b) was one of many prominent critics at odds with a single-minded focus on heroin addiction which in turn led to a single-minded focus on the physical aspects of dependence. For some time, the very existence of cocaine addiction remained controversial due to a seeming absence of certain symptoms (see, e.g., Inciardi, 1986). To this day, the ramifications of that mid-twentieth-century mindset can inhibit the acknowledgement of purely behavioral addictions.

The identification of behavioral addictions can present difficulties. Though identifying primary drugs of choice among polydrug users can be challenging, with behavioral addictions, other questions arise. When someone gambles almost exclusively online, for example, it could be fair to ask whether the individual is addicted to gambling or to the Internet (Widyanto & Griffiths, 2006). Though possibly less troublesome with SUD, similar difficulties are not out of the question. Concurrent SUD and sexual compulsivity has been identified as common, and clients presenting for one are considered high risk for the other (Schneider, Sealy, Montgomery, & Irons, 2005). Questions regarding which (if any) activity represents *the primary disorder* are perhaps more puzzling with behavioral addiction, but certainly not specific to it.

We end this chapter with a brief consideration of alternatives to an addiction model. OCD and impulse control disorder (ICD) are obvious possibilities. With OCD, we have already mentioned an important difference: OCD need not involve a pleasure principle. OCD is often ego-dystonic (APA, 1994, pg. 422). That is, the patient does not want to continue to carry out the obsessive act or to have the obsessive thoughts. As stated above, this is in marked contrast to problem gamblers who (like many substance addicts) often do not want to stop gambling. Nonetheless there are numerous overlapping elements that connect OCD and addictions, and they share many of the same vulnerabilities (e.g., anxiety). Whether a case in question would best be served by an OCD label might have more to do with a practitioner's (or client's) preference than anything else. The odds are good that no designation will do absolute justice to a case that has been properly examined: individuals are likely to exhibit symptoms that do not fit perfectly with any schema that one might wish to impose. Here, we will simply point out that many difficulties associated with an addiction model are not unique to that model. Is OCD a unified condition, or is it best understood as falling into assorted typologies? Or, should a person's specific obsessions and compulsions be treated separately or along a continuum

within a larger OCD framework? Researchers struggling with such questions are, to this day, confronted by realities that are just as uncooperative as those haunting proponents of addiction models (see, e.g., Stein & Lochner, 2008). Regardless of how one opts to categorize, the overlaps between symptoms associated with addiction, on the one hand, and OCD and ICD, on the other, are undeniable. In addition, the behavioral learning model for OCD and addictions overlaps considerably with intermittent negative reinforcement (relief from anxiety) playing a key role in the behavioral disorders. We have already discussed how the ICD model as applied to PG in DSM is very consistent with an addiction model (APA, 1994; Ferentzy & Skinner, 2003; Lesieur, 1988; Lesieur & Custer, 1984; Petry, 2006; Potenza, 2006). In a consideration of ICD and its application to PG, Potenza (2006) notes that ICD's place within the larger framework of psychiatric disorders is still perplexing, debatable, and nowhere close to settled. If nothing else, it is worth noting that beyond overlapping symptoms, risk factors for ICD and SUD are very similar (Potenza, 2006, p. 144). The same can be said of PG.

Undeniably, there are drawbacks to applying an addiction model to PG, not the least of which is the confusion over the very meaning of "addiction." In addition, an addiction model may not apply to every case of problem gambling. Nonetheless it is highly questionable whether the many available alternatives to this model would dispel much confusion. In fact, given the popular acceptance of the term "addiction," a simpler approach would be to realign the definition of addiction to match the nature of certain disorders, rather than to introduce new terms in assorted cases. One thing this book will make clear: words are but empty vessels on which we hang concepts. The label we use for a concept is much less important than understanding the concept itself. Above all, the difficulties involved with determining which model is best for problem gambling do not disprove the existence of the condition but, to the contrary, add evidence to the reality of the condition even if we are yet to define and explain it to everyone's satisfaction.

References

Abbott, M., & Volberg, R. (2006). The measurement of adult problem and pathological gambling. *International Gambling Studies, 6*, 175–200.

Adlaf, E. M., Begin, P., & Sawka, E. (Eds.). (2005). *Canadian Addiction Survey (CAS): A national survey of Canadians' use of alcohol and other drugs: Prevalence of use and related harms: Detailed report*. Ottawa: Canadian Centre on Substance Abuse.

Al-Issa, I. (Ed.). (1982). *Culture and psychopathology*. Baltimore: University Park Press.

American Psychiatric Association [APA]. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed., Rev. ed.). Washington: Author.

American Psychiatric Association [APA]. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington: Author.

American Psychiatric Association. [APA]. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision (DSM-IV-TR)). Washington, DC: Author.

Annis, H. M., Turner, N. E., & Sklar, S. M. (1997). *Inventory of Drug Taking Situations (IDTS) users guide*. Toronto, ON: Addiction Research Foundation.

Barnes, G., Welte, J., Hoffman, J., & Dintcheff, B. (1999). Gambling and alcohol use among youth: Influences of demographic, socialization, and individual factors. *Addictive Behaviors, 24*, 749–767.

Barthelme, F., & Barthelme, S. (1999). *Double down: Reflections on gambling and loss*. New York, NY: Houghton Mifflin.

Bergler, E. (1943). The gambler: A misunderstood neurotic. *Journal of Criminal Psychopathology, 4*, 379–393. Reported in Selected Papers of Edmund Bergler, M.D. 1933–1961. New York: Grune and Stratton, 1969.

Bergler, E. (1957). *The psychology of gambling*. New York: Hill and Wang.

Berridge, K., & Robinson, T. (2006). Automatic processes in addiction: A commentary. In R. Wiers & A. Stacy (Eds.), *Handbook of implicit cognition and addiction* (pp. 477–481). Thousand Oaks, CA: Sage Press.

Blaszczynski, A., & Nower, N. (2002). A pathways model of problem and pathological gambling. *Addiction, 97*, 487–499.

Blume, A., Schmaling, K., & Marlatt, G. (2000). Revisiting the self-medication hypothesis from a behavioral perspective. *Cognitive and Behavioral Practice, 7*, 379–384.

Breyer, J. L., Botzet, A. M., Winters, K. C., Stinchfield, R. D., August, G., & Realmuto, G. (2009). Young adult gambling behaviors and their relationship with the persistence of ADHD. *Journal of Gambling Studies, 25*(2), 227–238. doi:10.1007/s10899-009-9126-z.

Brown, I. (1987). Pathological gambling and associated patterns of crime: Comparisons with alcohol and other drug addictions. *Journal of Gambling Behavior, 3*, 96–114.

Brown, I. (1991). Gaming, gambling and other addictive play. In J. Kerr & M. Apter (Eds.), *Adult play: A reversal theory approach* (pp. 101–118). Amsterdam: Swets & Zeitlinger.

Brown, I. (1997). A theoretical model of the behavioural addictions – Applied to offending. In J. E. Hodge, M. McMurran, & C. R. Hollin (Eds.), *Addicted to crime?* (pp. 13–65). Chichester: Wiley.

Bulwer, M. (2003). *Treating gambling addition: A psychological study in the South African context*. Master's thesis presented to the University of South Africa. Retrieved June 15, 2011, from http://uir.unisa.ac.za/xmlui/bitstream/handle/10500/1479/dissertation.pdf?sequence=1.

Canadian Partnership for Responsible Gambling. (2009). *Canadian Gambling Digest 2007–2008*. Downloaded December 30, 2010, from http://www.cprg.ca/digest.cfm.

Carnes, P. (1983). *Out of the shadows: Understanding sexual addiction*. New York: CompCare.

Carnes, P., Murray, R., & Charpentier, L. (2005). Bargains with chaos: Sex addicts and addiction interaction disorder. *Sexual Addiction & Compulsivity, 12*, 79–120.

Castellani, B., Wootton, E., Rugle, L., Wedgeworth, R., Prabucki, K., & Olson, R. (1996). Homelessness, negative affect, and coping among veterans with gambling problems who misused substances. *Psychiatric Services, 47*, 298–299.

Childress, A., Ehrman, R., Wang, Z., Li, Y., Sciortino, N., Hakun, J., et al. (2008). Prelude to passion: Limbic activation by "unseen" drug and sexual cues. *PLoS One, 3*(1), e1506.

Collins, A. (1996). The pathological gambler and the government of gambling. *History of the Human Sciences, 9*, 69–100.

Counter, A., & Davey, B. (2006). *What is the Ontario Problem Gambling Helpline (OPGH)?* Paper presented at the 2006 conference of the Responsible Gambling Council (Ontario), Toronto. Retrieved July 16, 2008, from http://www.rgco.org/articles/anne_counter_brad_davey_discovery_2006.pdf.

Courtwright, D. (1982). *Dark paradise: Opiate addiction in America before 1940*. Cambridge: Cambridge University Press.

Cox, B. J., Enns, M. W., & Michaud, V. (2004). Comparisons between the South Oaks Gambling Screen and a DSM-IV–Based interview in a community survey of problem gambling. *Canadian Journal of Psychiatry, 49*(4), 258–264.

Crockford, D., & el-Guebaly, N. (1998). Psychiatric comorbidity in pathological gambling: A critical review. *Canadian Journal of Psychiatry, 43*, 43–50.

Custer, R. (1975). *Characteristics of compulsive gamblers*. Paper presented at the 2nd Annual Conference on Gambling, Lake Tahoe, Nevada.

Derevensky, J., Gupta, R., Dickson, L., & Deguire, A. (2001). *Prevention efforts toward minimizing gambling problems*. Report prepared for the National Council for Problem Gambling, Center for Mental Health Services (CMHS) and the Substance Abuse and Mental Health Services Administration (SAMHSA), Washington, DC.

Dickson, L., Derevensky, J., & Gupta, R. (2002). The prevention of gambling problems in youth: A conceptual framework. *Journal of Gambling Studies, 18*, 97–159.

Dickson, L., Derevensky, J., & Gupta, R. (2004). Harm reduction for the prevention of youth gambling problems: Lessons learned from adolescent high-risk behavior prevention programs. *Journal of Adolescent Research, 19*, 233–263.

Duncan, D. (1974a). Drug abuse as a coping mechanism. *The American Journal of Psychiatry, 131*, 724.

Duncan, D. (1974b). The acquisition, treatment and maintenance of polydrug dependence: A public health model. *Journal of Psychedelic Drugs, 7*, 209–213.

Ewing, J. (1980). Biopsychosocial approaches to drinking and alcoholism. In W. Fann, I. Karacan, A. Pokomy, & R. Williams (Eds.), *Phenomenology and treatment of alcoholism* (pp. 1–19). New York: Spectrum.

Fenichel, O. (1945). *The psychoanalytic theory of neurosis*. New York: W. W. Norton.

Ferentzy, P., & Skinner W. (2003, October). Gamblers anonymous: A critical review of the literature. *Electronic Journal of Gambling Issues*, *9*. doi: 10.4309/jgi.2003.9.9.

Ferentzy, P., & Turner, N. (2009, June). Gambling and organized crime—A review of the literature. *Journal of Gambling Issues*, *23*. http://www.camh.net/egambling/issue23/07a-turner.html.

Ferris, J., & Wynne, H. (2001). *The Canadian problem gambling index: Final report*. Canadian Centre on Substance Abuse. Retrieved September 30, 2008, from http://www.gamblingresearch.org (search for Ferris).

Ferris, J., Wynne, H., & Single, E. (1999). *Measuring problem gambling in Canada. Final Report – Phase 1. Inter-Provincial Task Force on Problem Gambling*. Submitted for the Canadian Centre on Substance Abuse.

Fingarette, H. (1988). *Heavy drinking: The myth of alcoholism as a disease*. Berkeley: University of California Press.

Flavin, D., & Morse, R. (1991). What is alcoholism? Current definitions and diagnostic criteria and their implications for treatment. *Alcohol Health and Research World, 15*, 266–272.

Gambino, B. (2006). A comment on the utility of prevalence estimates of pathological gambling. *Journal of Gambling Studies, 22*, 321–328.

Gentile, D. (2009). Pathological video game use among youth 8 to 18: A national study. *Psychological Science, 20*, 594–602.

Glasser, W. (1976). *Positive addictions*. New York: Harper & Row.

Goudriaan, A., Oosterlaan, J., de Beurs, C., & van den Brink, W. (2005). Decision making in pathological gambling: A comparison between pathological gamblers, alcohol dependents, persons with Tourette syndrome, and normal controls. *Cognitive Brain Research, 23*, 137–151.

Griffiths, M. (1995). Technological addictions. *Clinical Psychology Forum, 76*, 14–19.

Griffiths, M. (2005). A 'components' model of addiction within a biopsychosocial framework. *Journal of Substance Use, 10*, 191–197.

Griffiths, M. (2008a). Videogame addiction: Fact or fiction? In T. Willoughby & E. Wood (Eds.), *Children's learning in a digital world* (pp. 85–103). Oxford: Blackwell.

Griffiths, M. (2008b). Diagnosis and management of video game addiction. *New Directions in Addiction Treatment and Prevention, 12*, 27–41.

Griffiths, M., & Barnes, A. (2008). Internet gambling: An online empirical study among student gamblers. *International Journal of Mental Health and Addiction, 6*, 194–204.

Grinols, E. (2004). *Gambling in America: Costs and benefits*. Cambridge: Cambridge University Press.

Gupta, R., & Derevensky, J. L. (1998). An empirical examination of Jacobs' general theory of addictions: Do adolescent gamblers fit the theory? *Journal of Gambling Studies, 14*, 17–50.

Hardoon, K., & Derevensky, J. (2001). Social influences involved in children's gambling behavior. *Journal of Gambling Studies, 17*, 191–215.
Hardoon, K., Gupta, R., & Derevensky, J. (2004). Psychosocial variables associated with adolescent gambling. *Psychology of Addictive Behaviors, 18*, 170–179.
Haruvy, E., Erev, L., & Sonsino, D. (2001). The medium prizes paradox: Evidence from a simulated casino. *The Journal of Risk and Uncertainty, 22*(3), 251–261.
Haw, J. (2008). The relationship between reinforcement and gaming machine choice. *Journal of Gambling Studies, 24*(1), 55–61.
Hodge, J. (1991). Addiction to crime. In M. McMurran & C. McDougall (Eds.), *Proceedings of the first DCLP annual conference – Issues in criminological and legal psychology*, *17*(2). Leicester: The British Psychological Society.
Hudson, J. I., Hiripi, E., Pope, H. G., & Kessler, R. C. (2007). The prevalence and correlates of eating disorders in the National Comorbidity Survey Replication. *Biological Psychiatry, 61*, 348–358.
Ibanez, A., Blanco, C., Donahue, E., Lesieur, H., de Castro, I., Fernandez-Piqueras, J., et al. (2001). Psychiatric comorbidity in pathological gamblers seeking treatment. *The American Journal of Psychiatry, 158*, 1733–1735.
Inciardi, J. (1986). *The war on drugs: Heroin, cocaine, and public policy*. Palo Alto, CA: Mayfield.
Jacobs, D. (1986). A general theory of addiction: A new theoretical model. *Journal of Gambling Behavior, 2*, 15–31.
Johansson, A., Grant, J. E., Kim, S. W., Odlaug, B. L., & Gotestam, K. G. (2009). Risk factors for problematic gambling: A critical literature review. *Journal of Gambling Studies, 25*(1), 67–92. doi:10.1007/s10899-008-9088-6.
Kessler, R., Chiu, W., Demler, O., & Walters, E. (2005). Prevalence, severity, and comorbidity of twelve-month DSM-IV disorders in the National Comorbidity Survey Replication (NCS-R). *Archives of General Psychiatry, 62*(6), 617–627.
Khantzian, E. (1985). The self-medication hypothesis of addictive disorders: Focus on heroin and cocaine dependence. *The American Journal of Psychiatry, 142*, 1259–1264.
Khantzian, E. J., Mack, J. E., & Schatzberg, A. F. (1974). Heroin us as an attempt to cope: Clinical observation. *The American Journal of Psychiatry, 131*, 160–164.
Korn, D., Gibbins, R., & Azmier, J. (2003). Framing a public policy towards a public health paradigm for gambling. *Journal of Gambling Studies, 19*, 235–256.
Krystal, J., Webb, E., Cooney, N., Kranzler, H., & Charney, D. (1994). Specificity of ethanollike effects elicited by seretonergic and noradrenergic mechanisms. *Archives of General Psychiatry, 51*, 898–911.
Ksir, C., Hart, C. L., & Ray, O. (2006). *Drugs, society and human behavior*. Boston: McGraw Hill.
Larkin, M., Wood, R., & Griffiths, M. (2006). Towards addiction as relationship. *Addiction Research and Theory, 14*, 207–215.
Lash, S., Petersen, G., O'Connor, E., & Lehmann, P. (2001). Social reinforcement of substance abuse aftercare group therapy attendance. *Journal of Substance Abuse Treatment, 20*, 3–8.
Lesieur, H. R. (1988). Altering the DSM-III criteria for pathological gambling. *Journal of Gambling Behavior, 4*, 38–47.
Lesieur, H. R., & Blume, S. B. (1987). The South Oaks Gambling Screen (SOGS): A new instrument for the identification of pathological gamblers. *The American Journal of Psychiatry, 144*(9), 1184–1188.
Lesieur, H., & Custer, R. (1984). Pathological gambling: Roots, phases, and treatment. *The Annals of the Academy of Political and Social Science, 474*, 46–156.
Lesieur, H., & Rosenthal, R. (1991). Pathological gambling: A review of the literature. *Journal of Gambling Studies, 7*, 5–39.
Levine, H. (1978). The discovery of addiction: Changing conceptions of habitual drunkenness in America. *Journal of Studies on Alcohol, 39*, 143–174.
Liu, T., Maciejewski, P., & Potenza, M. (2009). The relationship between recreational gambling and substance abuse/dependence: Data from a nationally representative sample. *Drug and Alcohol Dependence, 100*, 164–168.

Marlatt, G. A. (1985). Situation determinants of relapse and skill-training interventions. In G. A. Marlatt & J. R. Gordon (Eds.), *Relapse prevention: Maintenance strategies in the treatment of addictive behaviours* (pp. 71–126). New York: Guilford Press.

Marlatt, G., Baer, J., Donovan, D., & Kivlahan, D. (1988). Addictive behaviors: Etiology and treatment. *Annual Review of Psychology, 39*, 223–252. doi:10.1146/annurev.ps.39.020188.001255.

Marotta, J., & Hynes, J. (2003). *Problem gambling prevention resource guide for prevention professionals*. Salem, OR: Oregon Department of Human Services. Available at http://www.gamblingaddiction.org/Prevent/PreventGuide.pdf.

Messerlian, C., Derevensky, J., & Gupta, R. (2004). A public health perspective for youth gambling. *International Gambling Studies, 4*, 147–160.

Miller, W. (1980). *The addictive behaviors*. Oxford: Pergamon Press.

Miller, W., & Rollnick, S. (1991). *Motivational interviewing: Preparing people to change addictive behavior*. New York: Guilford Press.

Musto, D. (1973). *The American disease: Origins of narcotic control*. New Haven: Yale University Press.

National Opinion Research Center. (1999). *Gambling impact and behavior study. Report to the National Gambling Impact Study Commission*. http://www.norc.uchicago.edu.

New Zealand Ministry of Health. (2004). *Preventing and minimising gambling harm: Strategic plan 2004–2010, needs assessment, proposed three-year funding plan, proposed problem gambling levy rates.* New Zealand: Author. http://www.moh.govt.nz/moh.nsf/0/CA598932BB52A37DCC256E610016B0AE/$File/ProblemGamblingConsultation.pdf.

O'Brien, C. (2006). What's in a word? Addiction versus dependence in DSM-V. Editorial. *American Journal of Psychiatry, 163*, 764–765.

Orford, J. (1985). *Excessive appetites: A psychological view of the addictions*. Chichester: Wiley.

Peele, S. (1989). *Diseasing of America: Addiction treatment out of control*. Lexington, MA: Lexington Books.

Peele, S. (2003). Is gambling an addiction like drug and alcohol addiction? Developing realistic and useful conceptions of compulsive gambling. In G. Reith (Ed.), *Gambling: Who wins? Who loses?* (pp. 208–220). Amherst, NY: Prometheus Books.

Petry, N. (2006). Should the scope of addictive behaviors be broadened to include pathological gambling? *Addiction, 101*(Suppl. 1), 152–160.

Pochaska, J., DiClemente, C., & Norcross, J. (1992). In search of how people change: Applications to the addictive behaviours. *American Psychologist, 47*, 1102–1114.

Potenza, M. (2006). Should addictive disorders include non-substance related conditions? *Addiction, 101*(Suppl. 1), 142–151.

Rado, S. (1957). Narcotic bondage: A general theory of the dependence on narcotic drugs. *The American Journal of Psychiatry, 114*, 165–170.

Raeburn, J. (2004). An international charter for gambling: The Auckland Conference and beyond. *Journal of Gambling Issues*, *12*. Available at http://www.camh.net/egambling/issue12/jgi_12_raeburn.html

Reinarman, C. (2005). Addiction as accomplishment: The discursive construction of disease. *Addiction Research and Theory, 13*, 307–320.

Regier, D., Narrow, W., Rae, D., Manderscheid, R., Locke, B., & Goodwin, F. (1993). The de facto mental and addictive disorders service system. Epidemiologic catchment area prospective 1-year prevalence rates of disorders and services. *Archives of General Psychiatry, 50*(2), 85–94.

Room, R. (2003). The cultural framing of addiction. *Janus Head, 6*, 221–234.

Room, R. (2006). Taking account of cultural and societal influences on substance use diagnoses and criteria. *Addiction, 101*(Suppl. 1), 31–39.

Room, R., Turner, N. E., & Ialomiteanu, A. (1999). Community effects of the opening of the Niagara Casino: A first report. *Addiction* (Abingdon, England), *94*, 1449–1466. doi:10.1046/j.1360-0443.1999.941014492.x.

Rosecrance, J. (1985). Compulsive gambling and the medicalization of deviance. *Social Problems, 32*, 275–284.

Rosenthal, R. (1992). Pathological gambling. *Psychiatric Annals, 22*, 72–78.
Rosenthal, R., & Lesieur, H. (1992). Self-reported withdrawal symptoms and pathological gambling. *The American Journal on Addictions, 1*, 150–154.
Ross, G. (2002). *Stung: The incredible obsession of Brian Molony*. Toronto: McClelland & Stewart.
Satya, P., & Pushpa, S. (2004). Overlapping and interactive pathway regulating appetite and craving. *Journal of Addictive Diseases, 23*, 5–21.
Schaler, J. (2000). *Addiction is a choice*. Chicago: Open Court.
Schmidt, L., & Room, R. (1999). Cross-cultural applicability in international classifications and research on alcohol dependence. *Journal of Studies on Alcohol, 60*, 448–462.
Schneider, J., Sealy, J., Montgomery, J., & Irons, R. (2005). Ritualization and reinforcement: Keys to understanding mixed addictions involving sex and drugs. *Sexual Addiction and Compulsivity, 12*, 121–148.
Shaffer, H. (2003). *A public health perspective on gambling: The four principles*. AGA Responsible Gaming Lecture Series, #2, 1-27. Available at http://www.americangaming.org/assets/files/LectureSHAFFERfnl.pdf
Shaffer, H., Freed, C., & Healea, D. (2002). Gambling disorders among homeless persons with substance use disorders seeking treatment at a community center. *Psychiatric Services, 53*, 1112–1117.
Shaffer, H., Hall, M., & Vander Bilt, J. (1999). Estimating the prevalence of disordered gambling behavior in the United States and Canada: A research synthesis. *American Journal of Public Health, 89*, 1369–1376. doi:10.2105/AJPH.89.9.1369.
Shaffer, H., & Korn, D. (2002). Gambling and related mental disorders: A public health analysis. *Annual Review of Public Health, 23*, 171–212.
Shaffer, H., LaBrie, R., & LaPlante, D. (2004). Laying the foundation for quantifying regional exposure to social phenomena: Considering the case of legalized gambling as a public health toxin. *Psychology of Addictive Behaviors, 18*, 40–48.
Shaffer, H., LaBrie, R., LaPlante, D., Nelson, S., & Stanton, M. (2004). The road less travelled: Moving from distribution to determinants in the study of gambling epidemiology. *Canadian Journal of Psychiatry, 49*, 504–516.
Shaffer, H., LaPlante, D., LaBrie, R., Kidman, R., Donato, A., & Stanton, M. (2004). Toward a syndrome model of addiction: Multiple expressions, common etiology. *Harvard Review of Psychiatry, 12*, 367–374.
Shepherd, R. (1996). Clinical obstacles in administering the South Oaks Gambling Screen in a methadone and alcohol clinic. *Journal of Gambling Studies, 12*, 21–32.
Skinner, B. F. (1953). *Science and human behavior*. New York: Free Press.
Sklar, S. M., Annis, H. M., & Turner, N. E. (1997). Development of the drug-taking confidence questionnaire: A measure of coping self-efficacy. *Addictive Behaviors, 22*, 655–670.
Spunt, B. (2002). Pathological gambling and substance misuse. *Substance Use & Misuse, 37*, 1299–1304.
Spunt, B., Dupont, I., Lesieur, H., Liberty, H., & Hunt, D. (1998). Pathological gambling and substance misuse: A review of the literature. *Substance Use & Misuse, 33*, 2535–2560.
Stein, D., & Lochner, C. (2008). The empirical basis of the obsessive-compulsive spectrum. In J. Abramowitz, D. McKay, & S. Taylor (Eds.), *Clinical handbook of obsessive-compulsive disorders and related problems* (pp. 177–187). Baltimore: John Hopkins.
Stewart, S. H., & Zack, M. (2008). Development and psychometric evaluation of a three-dimensional gambling motives questionnaire. *Addiction, 101*, 1110–1117.
Strong, D., Breen, R., Lesieur, H., & LeJuez, C. (2003). Using the Rasch model to evaluate the South Oaks gambling screen for use with nonpathological gamblers. *Addictive Behaviors, 28*, 1465–1472.
Strong, D., & Kahler, C. (2007). Evaluating the continuum of gambling problems using the DSM-IV. *Addiction, 102*, 713–721.
Szalavitz, M. (2002). Love is the drug. *New Scientist, 176*(2370), 38–40.

Szasz, T. (1973). Mental illness as a metaphor. *Nature, 242*, 305–307.
Taber, J., McCormick, R., Russo, A., Adkins, B., & Ramirez, L. (1987). Follow-up of pathological gamblers after treatment. *The American Journal of Psychiatry, 144*, 757–761.
Taylor, L., Taske, N., Swann, C., & Waller, S. (2007). *Public health interventions to promote positive mental health and prevent mental health disorders among adults. Evidence briefing*. London: NICE.
Triandis, H., & Draguns, J. (Eds.). (1980). *Handbook of cross-cultural psychology, Vol. 6. Psychopathology*. Newton, MA: Allyn & Bacon.
Turner, N. E., Annis, H. M., & Sklar, S. M. (1997). Measurement of antecedents of drug use and drinking: Psychometric properties of the Inventory of Drug Taking Situations (IDTS). *Behavior Research and Therapy, 35*, 465–483.
Turner, N. E., Jain, U., Spence, W., & Zangeneh, M. (2008). Pathways to pathological gambling: Component analysis of variables related to pathological gambling. *International Gambling Studies, 8*(3), 281–298.
Turner, N., Littman-Sharp, N., & Zangeneh, M. (2006). The experience of gambling and its role in problem gambling. *International Gambling Studies, 6*, 237–266.
Turner, N. E., Preston, D. L., Saunders, C., McAvoy, S., & Jain, U. (2009). The relationship of problem gambling to criminal behaviour in a sample of Canadian male federal offenders. *Journal of Gambling Studies, 25*, 153–169.
Urbanoski, K., & Rush, B. R. (2006). Characteristics of people seeking treatment for problem gambling in Ontario: Trends from 1998–2002. *Journal of Gambling Issues, 16*. Available http://www.camh.net/egambling/issue16/index.html.
Vachon, J., Vitaro, F., Wanner, B., & Tremblay, R. (2004). Adolescent gambling: Relationships with parent gambling and parenting practices. *Psychology of Addictive Behaviors, 18*, 398–401.
Welte, J., Barnes, G., Wieczorek, W., Tidwell, M., & Parker, J. (2004). Risk factors for pathological gambling. *Addictive Behaviors, 29*, 323–335.
Widyanto, L., & Griffiths, M. (2006). Internet addiction: A critical review. *International Journal of Mental Health and Addiction, 4*, 31–51.
Wiebe, J., Mun, P., & Kauffman, N. (2006). *Gambling and problem gambling in Ontario 2005*. Guelph, ON: Ontario Problem Gambling Research Centre.
Wiebe, J., Single, E., & Falkowski-Ham, A. (2001). *Measuring gambling and problem gambling in Ontario*. Ontario: Canadian Centre on Substance Abuse Responsible Gambling Council.
Wiebe, J., & Volberg, R. (2007). *Problem gambling prevalence research: A critical overview*. A Report to the Canadian Gaming Association.
Williams, R., Royston, J., & Hagen, B. (2005). Gambling and problem gambling within forensic populations: A review of the literature. *Criminal Justice and Criminal Behaviour, 32*(6), 665–689.
Zack, M. (2006, April). What can affective neuroscience teach us about gambling. *Journal of Gambling Issues, 16*. doi: 10.4309/jgi.2006.16.20.

Chapter 4
Pathological Gambling up to the Early Twentieth Century: Sins, Disease Metaphors, and Early Efforts at Medicalization

Abstract In this chapter, we examine early conceptions of pathological gambling from the ancient world up until the early twentieth century, with a special emphasis on the early nineteenth century. In particular, we examine how the concept of addiction as a disease, with roots in the notion of sin, emerged during this time period. Popular as well as scientific accounts of problem gambling are discussed, along with nineteenth-century precursors for ailments such as obsessive-compulsive disorder, impulse control disorder, and addiction. Conceptual difficulties that still haunt us to this day are shown to have roots in early psychiatry. Esquirol's conception of monomania, for example, was used as a catchall for assorted problems involving volition—and was subject to critiques that resemble current objections to the application of "addiction" to assorted behaviors. Finally, we discuss the early sciences pertaining to chronic drunkenness, the latter being our first well-studied addiction which in turn set the stage for our understanding of other substance addictions and, soon after, behavioral addictions such as pathological gambling.

Keywords Sins • Disease metaphors • Medicalization • Drunkenness • Monomania

4.1 Changing Perceptions

Flavin (2003) provides an account of gambling in nineteenth-century English novels. His findings are comparable to those of McCormick (1969) who published a study of the role played by drunkards in nineteenth-century English novels. McCormick documents the rise of Jellinek's (1960) "gamma" alcoholics—those who, upon taking a drink, will likely continue until thoroughly drunk. Solitary, desperate, and compulsive, these characters represented the new perception of the drinker—and such novels were important to temperance ideology.

Flavin's (2003) account brings several themes into focus. Not only is gambling portrayed as leading to inevitable ruin, speculators are often the target (p. 45). A gambler might be a "slave" to the habit (p. 53), and the urges are often irresistible

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(p. 101). Loyal women can save a few (male) gamblers here and there (p. 57), though in a struggle with temptation asking God for deliverance is perhaps the best strategy (p. 104). For our purposes, however, Flavin's most important observations involve class politics and medicalization. He notes that middle- and working-class gamblers received less respect than gambling aristocrats and even points to how ideas about declining morals and degeneracy of character led to suggestions that the practice of gaming was now more destructive and out of control than it once may have been (pp. 176–177). Though not focused on medical ideas, Flavin does point to terms and concepts that made up the climate in which medicalization would emerge. An idiomatic reference to pathological gambling (PG) as a "disease" (p. 128), inner conflicts, comparisons to alcoholism, PG referred to as a "mania" (p. 138)—all of this serves to highlight how uncontrolled, destructive gambling was a growing concern (see Flavin, 2003, p. 219). This growing concern in the nineteenth century could in part be motivated by changes in technology. As discussed in the second chapter, by this point the mathematics of probability was well understood, making possible games that were more enticing with their ability to provide players with the illusion of a fair game.

Lears (2003) provides an American history, with many similar observations. Here one can find accounts of how many professional gamblers ended up losing. In one case, for example, a professional 3-card monte dealer played at faro despite awareness that the game was "crooked" (p. 120). When asked, he said that it was the only game available, and he just had to play (see Asbury, 1938). A typical story would involve the purchase of a lottery ticket leading someone to become a drunkard (p. 132). Lears (2003) observes that most critics of gambling perceived it as linked to other sins (today we might identify these links with designations such as "comorbidity" or "syndrome"). Of note is how this author identifies links to drinking, masturbation, and an overall compromising of "self-mastery" (pp. 171–172, 245–246). These three themes would, of course, figure prominently in the earlier efforts at medicalization (with masturbation important to psychoanalytical accounts). Analogies with slavery (p. 134), and analogies or metaphors where sin and disease converge ("contagion of sinful influences") (p. 170), are rampant.

Lears offers up an account of language that was common to nineteenth-century antigambling discourse: "The wild excitement that fires his brain will unman him" (p. 170), or how a gambler who succumbs to his passions becomes a "beast of prey" (p. 178). The first statement promotes a conception of manhood as self-control; the second invokes morality and citizenship. Lears in fact identifies an emerging conception of freedom, involving self-control rather than libertarian license (p. 89). In his history of drinking and temperance in America, Rorabaugh (1979) makes a similar observation: "Here for the first time we see liberty viewed in a new light, not as a man's freedom to drink unlimited quantities of alcohol but as a man's freedom to be his own master, with the attendant responsibility to exercise self-control, moderation, and reason" (p. 37).

Bernhard (2002, 2007) studied popular discourse with an eye on its rapport with later efforts at medicalization. The progression of gambling as sin, that it may start innocently only to become insurmountable, compares almost perfectly to that of

later ideas about disease progression. Bernhard (2002) identifies the treatment of gambling as *passion*, akin to possession, and something that breaks down moral character. The following two quotations are from Bernhard (2002):

> Gambling is a disease, in my opinion, and from my twenty-two years' experience, I must say that when it is inoculated into the system of the child, the gambling germ grows and grows until when that child reaches the age of twenty-five, he loses his sense of right and justice and expands his sense of greed (Stough, 1912: 99–100).
>
> Its poison is insidious. Once in the system, like malaria, it chills and fevers and unfits for life and shatters the constitution… It feeds the passion for nervous excitement by bringing together the greatest number of demoralizing stimulants. These are intensified as the stakes increase, and the habit grows until a desperate mania, or a horrible insanity, robs character of purpose, piety, and purity, and brings the end of a blasted life (Breeden, 1899: 456).

Regardless of how much one would make of metaphors involving themes such as contagion and inoculation, Bernhard (2002, 2007), Flavin (2003), and Lears (2003) present evidence regarding PG's history. They all highlight the ways in which sin and disease conceptions converged and arguably still converge to this day: notions such as loss of control, chronicity, and disease progression were certainly not the creation of contemporary scientific minds. Perhaps the points made by Collins (1996) regarding PG and Levine (1978) regarding alcoholism should be revisited: shifts in thinking, in this case from moralizing to medicalizing, need not involve the invention of new phenomena. Shifts in emphasis—for example, far more space in texts devoted to issues related to compulsion (Ferentzy, 2001)—are enough to generate shifts in how a topic is perceived.

Another trait that antigambling tracts often shared with tirades against drunkenness is that the vice in question was often portrayed as the worst of all, and the hardest to forswear. Ferentzy (2001) found that a preacher dealing with more than one sin might, in the same tract, make these very claims about drunkenness as well as fornication. So when Greene (1848) says that few PGs (whom he simply calls "gamblers") recover (p. 13), the statement might have more credibility than his claim that gambling is harder to leave than other vices (pp. 13–14).

As Collins (1996) points out, through the nineteenth century, problematic gambling was primarily treated as a social problem rather than a pathology. Still, the foundation for medicalization was being set, and as Collins also mentions, the nineteenth century had already generated a mindset wherein any loss of control could, in principle, be pathologized (typically with drunkenness as a prototype) (p. 79).

The changing perceptions can be seen through contrast with earlier texts. The fifth edition of Cotton's (1725) *The Compleat Gamester* highlights some longstanding ambiguity in our rapport with gambling. As the title would suggest, it is a book of instruction, and games of chance are defended in it as harmless recreation. Yet the author does warn the reader not to let a "covetous desire" to win someone else's money result in losing one's own money, earning a bad reputation, and then being labeled a "gamester." Cotton also warns his readers that others will call them gamesters if they gamble unscrupulously. The author's intention, he states, is not to create "gamesters" out of his readers but to show them how to avoid being cheated by them.

Yet these "gamesters" must concern us, as their fate would later be said to be ruin brought on by compulsion. In earlier times, the gamesters were professional gamblers who would roam from town to town in search of hapless victims (Asbury, 1938). Thackeray's novel, The Luck of Barry Lyndon (1984), originally published in 1844 describes the exploits of one of these gamesters (see Flavin, 2003 for additional comments). Some may also have had a problem, but unlike today's pathological gambler, they often made a living from gambling. Unlikely to be pathological, today they are often the psychopathic subclinical problem gamblers often found at poker tables (see Jillette & Lynn, 2005 for a modern example)—and Cotton was trying to help people avoid becoming the suckers for these gamesters. In the late nineteenth and early twentieth centuries, more and more authors were claiming that ruination must be the fate of all, or at least most, gamblers. This shift in perception likely stems in part from a real shift brought on by the increasing commercialization of gambling. By the 1890s, a casino was run as a business. Canfield, for example (see Asbury, 1938), was a manager of very profitable casinos in New York City during the 1890s. He did not gamble and simply managed casinos. This places him in contrast to earlier itinerant professional gamblers who moved from town to town—often by force—looking for new suckers to cheat. The commercialization of gambling had led to a clearer separation of the professional owner and the players (all of whom were now viewed as doomed to losing). Nevill (1909) exemplifies an emerging attitude: "Nothing, indeed, is more striking than the almost universal ruin which has overtaken the vast majority of gamblers …" (p. 433). The hymn "A leprosy over the land" (see Flavin, 2003) also comes from this time (1905). In this hymn, gambling is depicted as a disease that is virulent, highly contagious, and incurable. A small exposure is all it takes to initiate the process.

Nevill's (1909) early twentieth-century tract also offers a take on pathology that, through most of the nineteenth century, was controversial: *insanity with insight*. More will be said about medical perceptions later in this chapter. Here, we simply note that the popular and the medical were in many ways moving in tandem: "In sober fact, the gambling mania is one for which no remedy exists—it is possessed by those who are well aware of its dangers" (p. 433). This tract, like many others, speaks of an "irreclaimable gamester" (p. 27) and someone's inability to "resist" (p. 28). Perhaps two points make this text worthy of note: first, a big win is identified as the original trigger for one case of PG (p. 31); second, the author considers regulation a solution, while the medical slant is not given serious attention, and those who wish to reform specific gamblers are dismissed as naive (pp. 434–435). We can note similar attitudes within the temperance movement, many members of which considered the reformation of drunkards a pipe dream, and hence promoted restrictive legislation in the hopes that the coming generations could be spared while existing drunkards would just die off (Tyrrell, 1979; on gambling see Greene, 1848, p. 13).

Like many, Rowntree (1905) compares gambling to drinking and notes how the former can spread "like a cancer" (p. ix). This author even identifies women as "especially addicted" (p. 73), suggesting that they are more reckless and excitable under the stress of losing. Churchill (1894) insists that the stock market is much the

same as any gaming table and, unlike many antigambling activists, makes an important distinction between casual gamblers and those who are trapped by the vice. The former are arguably more guilty because they entice those who are weak (p. 10). This author brings religious themes into the entire tract: gamblers do not go to church and, in making their gambling a religion, practice idolatry (pp. 24–25). Yet the account also brushes up against the medical when it is noted that a serious gambler is completely taken over and cannot enjoy normal social interaction (pp. 31–32). The distinction between "real" gamblers and others is made—clearly a reference to what we could call "real" PGs. Was the real gambler a victim? Comstock (1883) seemed to think so when he referred to the "unconquerable habit" that made someone's life unbearable (p. 64) and when he employed the passive voice in the following way: "I speak on behalf of young men who are made thieves of" (p. 69).

Yet even the eighteenth-century play, Red and Black (Anonymous, 1796), speaks of a "contagion" that is "rapidly pervading every class" (p. 10) and identifies the losing, chasing, and eventual ruin today associated with PG (pp. 12–13; see also Lesieur & Custer, 1984). Lears (2003) identifies this text as an early exposition of the link between gambling and pathology, and many ideas are indeed brought out: inflated ambition (pp. 12–13); raging, discordant passion, and self-torment (p. 13); and, most importantly perhaps, an awareness that gamblers may in other spheres be reasonable—a behavior-specific conception of PG. While not identical to the notion of *insanity* with insight that would remain controversial even in the next century, the text does bring forward some of the mystery associated with this line of thinking: "Unaccountable yet strong delusion!" This one comment might put this text in the modern camp: behavioral disorders (and especially addictions) would, with the advent of modernity, become mysterious in ways that sin never was (Ferentzy, 2001; Room, 2003).

4.2 Tales and Warnings in the Nineteenth Century

Weems (1812) provides an account that, arguably, represents older and newer thinking in matters pertaining to PG. In the older tradition, the author discusses the typical gambler's lack of wisdom—gambling is, essentially, a stupid practice. Indeed, gamblers are mad (p. 37). The association of insanity with plain old stupidity represents a pre-nineteenth-century viewpoint (Foucault, 1973; Porter, 1987). Yet the text offers a hint of what later will be called "insanity with insight":

> Like someone who had swallowed a slow poison, I felt myself disordered. And though I could not explain the symptoms, I found that my purity, peace, and joy were all gone. The fatal thirst increased upon me. At length, nothing would do but I must go to that hell upon earth—a gaming table (Weems, 1812, p. 39).

Here, there is an essential mystery to the addictive process—one that we are exploring to this day.

Greene (1848) was a reformed gambler who offered a first-person account of his gambling and subsequent reformation. Of note is that he was encouraged by the success of the temperance movement and that similar tales told by reformed inebriates inspired him to tell his story. Like many concerned with gambling, the author also complained about the relatively little attention gambling received. Ambiguities associated with disease conceptions can be found in the book. On the one hand, the author speaks of "that unfortunate class of men that are addicted to that vice" (p. 83) and of how persons of good character could descend into gambling. Yet a gambler may still be a "thorough-bred scoundrel" (p. 105). Of note, as well, is how the author is aware that one's character will not deteriorate at once. Understanding disease progression, he later makes a plea for righteousness clearly in keeping with the times: the "virtuous liberty" he now enjoys is far better than the "bondage" he left behind. Despite his own reformation, Greene holds out little hope for most PGs—perhaps one in a hundred get out, and religion is the best answer (p. 87).

Another account by a reformed Mississippi gambler (Devol, 1887) takes a different tack. Here, reasons given for not gambling have little to do with addiction: "When two persons bet, one must lose; and there is no law in this country to compel a man to bet his money or jewelry on anything. So my advice is, don't you do it" (p. 23). This account is more of an adventure story, and addiction scholars will find little of interest beyond discussions of how great and brilliant men have been "seduced by the allurements of gambling" (p. 297). Despite his reformation, Devol insists that gamblers are not as bad as they are made out to be. Non-gamblers, apparently, account for ten times as many "rascally" souls (p. 298).

Another text, purportedly by an American physician (Anonymous, 1838), is titled The Victims of Gaming. This tract is unambiguously sympathetic to those we now call PGs. A PG who had already disappointed many, "poor Stephen" at one point had the added misfortune of having access to some of his aunt's money (p. 111). The point, though, is that Stephen was at heart a very decent young man. But initiating someone to gambling is like allowing a tiger to taste human flesh: in either case we have a beast that cannot be trusted (p. 165). Disease progression is well understood by the author, who talks about PG starting small and growing insidiously. Yet the "feverish excitement becomes so great, that everything else is forgotten, parents, friends, business, and reputation" (p. 21). It is hard to tell whether or not the following statement is meant literally: gaming is "a disease more fatal than the plague, the small-pox, or the cholera" (p. 21). Chasing losses is discussed, as are broken promises made to oneself never to play again: "How few comparatively are aware of their own weakness?" (p. 61). Family and friends might also overlook "the worm which in secret was gnawing away at the very foundation of his character" (p. 62). And the other great vice, drunkenness, might soon follow (p. 71).

Another text with "victims" in the title, this one by an Englishman (Steinmetz, 1870), begins with a wonderful myth: an unholy pairing between the Goddess of Fortune and the God of War brings gambling, who in turn gives birth to twins: dueling and suicide. These are their mother's (gambling's) "darlings," and she nurses them with great affection (pp. 1–2). The vice may start slowly but can take down men of genius. Yet there is hope: the reformation of Montaigne and Descartes

"proves that this mania is not absolutely incurable" (p. 283). Though not a text with an eye on what we might call "addiction," the author seems to understand: "His fatal passion for play… plunged him into comparative distress" (p. 304), "His love of play was desperate" (p. 316), and, on a note more political and symbolic, the "Negro" on the shore of Africa will stake both his children and his liberty (pp. 7–8).

Mason Long (1878) is another who told of his decline and reformation. Learning to gamble and to drink as a soldier in the American Civil War, Long soon experienced gambling as a "mania" (p. 38). He was not alone. For many soldiers, the "fascination" with betting was so strong that they would risk their lives by playing on the frontlines, seemingly indifferent to enemy fire. Indeed, one might play even in a burning house, for when gambling takes hold you are in "its power" (p. 128). Long was also "addicted" to the ongoing use of spirits (p. 47). A very typical account of how any engagement can trigger PG is offered when the author addresses what later scientific texts would refer to as latency: "The taste I had got of playing seemed to have aroused all my passion for this vice, which had lain dormant for a few months" (p. 57). This author actually signed the Temperance Pledge and gave up drinking before ceasing to gamble. An early nineteenth-century development, the "pledge," took many forms. It actually became more strict over time with the "short" pledge targeting only distilled spirits and the "long" or "teetotal" pledge (emerging in the late 1820s) targeting all intoxicating drinks (Dorchester, 1884; Tyrrell, 1979). Long eventually found, however, that he could get no more pleasure from the gaming table. Temperance meetings (at which he often spoke) would now give him (perhaps) what gambling had tried to give (Long, 1878, p. 170). The vice that had once presented an "irresistible fascination" (p. 170) for him no longer did. Long insists that other gamblers and drinkers, like all "poor" and pitiable "outcasts" (pp. 168–169), can be reclaimed.

This text differs from others in one respect. The author distinguishes between real gamblers (like himself)—those who have real nerve, lose graciously, are generous after winning, and can be trusted with money because one's word is one's bond—and lying, pathetic scoundrels. The "true sport" (p. 135) will play even if the house is on fire because he has the nerve, the composure to do so. Another may do the same out of weakness. Is the true sport a PG? This is hard to answer. Long considered himself to have been in some form of bondage, so his (arguably self-serving) account suggests different typologies within a broader PG framework. Long also tells how, sadly, at the gaming tables the "true sports" are outnumbered a hundred to one by liars and thieves. And it was getting worse: in Long's time, apparently, the real gamblers were in decline, rapidly being replaced by an ascendant, degenerate breed (p. 135). Whether this passage reflects a sociopolitical shift consistent with issues already raised in this section, or whether it is simply the chatter of an older soul critical of newer generations, we cannot answer right here. If nothing else, Long's position is consistent with that of many nineteenth-century critics: no matter how horrible gambling may once have been, it is now increasingly practiced by persons—be they poor, female, black, or something else—who really should not be gambling.

We end this section by pointing to Rush (1804) who discusses many sins and crimes. Of note is how even the section on gambling is introduced by a discussion of drunkenness, "an artificial and voluntary madness" (p. 110) and clearly the prototypical vice-disease of the times. This author hits it on the head, by pointing to one consistency between older conceptions of sin and many conceptions of disease that would come after his text was published: "all vice is in its nature progressive" (p. 120). This theme still echoes in the twenty-first-century view of addictions as progressive disorders.

4.3 Early Medicalization of PG: An Overview

Lears (2003) has discussed the ways in which different sins intersected with medical ideas as they pertain to our topic. A conception of mental health as a sober, controlled maturity would also be amenable to connections such as the following: gambling, like masturbation, involved fantasy. In the first half of the twentieth century, "the psychoanalytic critique maintained the perspective of evangelical rationality, joining the gambler and the masturbator as slaves to an overmastering passion. Psychoanalysis became a secular justification for the ethos of self-control" (Lears, 2003, p. 246; see Simmel, 1920; Bergler, 1943, 1957). This was in many ways a continuation of a nineteenth-century conception of freedom involving self-control that was emerging in larger society, often with a focus on behaviors such as drinking and gambling (Lears, 2003; Rorabaugh, 1979). This social reality had everything to do with the kinds of pathologies the emerging psy-sciences would identify (Conrad & Schneider, 1992; Foucault, 1978, 1979; Ferentzy, 2001; Levine, 1978).

Collins (1996) has traced the nineteenth-century evolution of ideas that would eventually lead to what we call PG. An important observation he makes is that, typically, problem gambling was considered either a cause or a symptom of madness rather than a pathology in its own right (Maudsley, 1868; Moseley, 1838; Pinel, 1806)—a tradition that in many ways continues today with the view that gambling is a result of depression or impulsivity. Collins points out that problematic gambling was not a major concern for nineteenth-century psychiatry, and the first proper example of PG's direct medicalization (meaning as a disorder in itself) that he could find was in Clouston (1883) "who referred to a group of disorders collectively known as 'states of defective inhibition' of which the 'commoner and more typical varieties' were: general psychokinesia; epileptiform impulse; animal and organic impulse; homicidal impulse; suicidal impulse; destructive moral insanity; dipsomania; kleptomania and pyromania" (Collins, 1996, p. 81). For our purpose, it is important that dipsomania (alcoholism) made this list and that one of the first mad doctors (as medical persons dealing with insanity were often called during the nineteenth century) to medicalize PG was also an inebriety theorist who wrote a book on what today could be called "substance addiction" with the term "craving" in the title

(Clouston, 1890). We are indebted to Collins (1996) for identifying the following passage, though we have opted to offer a longer quotation:

> We cannot regard the drink-craving alone. We must be prepared to deal with the opium eater, insane smoker, chloral taker, gambler, and even many insane speculators. The state of brain in all these is the same in its essential nature. It would be inconsistent to provide against and try to cure the one without including the others (Clouston, 1887, p. 343).

The passage, especially its order of delivery, brings out two key issues: first, disordered drinking was setting the standard; second, substance addictions were already functioning as prototypes for what today might be called behavioral addictions—disordered (problem) gambling, in this case, was one of them. As well, the problem pertaining to targeting all of a client's potential addictions at once has been raised. We can note that, to this day, it is very hard to address (or even identify) all of a person's compulsions at once.

We can offer a far earlier example of PG identified as a disease in itself (Caldwell, 1834). This text, however, may be treated as a hybrid, both popular and medical. It is a moralistic address to university students by an M.D. very knowledgeable of issues related to insanity. The discussion is not a proper psychiatric document; yet is still reliant upon medical knowledge. Of special interest is that the address was made a half century prior to Clouston's (1883) publication. To repeat, this text can be viewed as a hybrid, medico-popular treatise and has special value for our efforts to understand how the two spheres interacted (and overlapped).

> Gambling is closely allied to theft, pocket-picking, and robbery, in its origin, as it is in its end. The parentage of the four vices is the same. They spring from the same need… It is acknowledged by every one, who pretends to an acquaintance with mental philosophy, that the brain is the organ of the mind, through which it manifests all its faculties. Those faculties are divided into animal, intellectual, and moral…" (Caldwell, 1834, pp. 16–17).

Some of this condemnation might have been related to the professional gambling cheats who at the time committed fraud regularly in order to make a living through gambling (see Asbury 1938; Maskelyne, 1894 for examples). Nonetheless, in this passage Caldwell is attacking gambling itself, and overall the text is about people who cannot control themselves. Caldwell felt strongly about the evils of gambling, but his view of gambling certainly did not reflect the position of mainstream psychiatry at the time. Still, he was well versed in this new science and as such may have been the very first medical authority to identify PG as a disease in itself and in a way that cannot be dismissed as moralistic metaphor or analogy:

> it has already been shown, that the gambling propensity is of cerebral origin; and, that by being long fostered, and habitually cultivated, it increases in strength, and becomes constitutional, cannot be doubted. It even assumes, in many instances, a form of positive and permanent monomania" (p. 23).

Monomania (Esquirol, 1817) is probably the closest designation the nineteenth century had for a catchall that in various ways encompassed what we today would label obsessive–compulsive disorders (OCD), impulse control disorders (ICD), and substance use disorder (SUD). The above quotation is the earliest we could find that addresses PG in ways that truly begin to resemble our current efforts.

4.4 Precedents for Three Kindred Designations: Impulse Control Disorder, Obsessive–Compulsive Disorder, and Addiction

Rosenthal (2005) has observed that diagnosing PG can be much easier than classifying it. He then states that ICD is in fact a wastebasket category, that all addictions are in fact disorders of impulse control, and that these conceptual muddles and overlaps are rooted in the early nineteenth century, dating back to Esquirol's 1810 description of the monomanias. The defining characteristic of these disorders was the idée fixe, a single pathological preoccupation in an otherwise sound mind. What was revolutionary in Esquirol's new classification was this notion of partial insanity; that a person could otherwise be normal or appear normal when you talked to them, and unless you asked them the right question or somehow brought out this preoccupation of theirs—some driven kind of activity or delusional identity—they would appear normal. Esquirol also described the "irresistible impulse": these people were driven to set fires, or hurt people, or steal, drink, or gamble (Rosenthal, 2005, no page reference).

Tavares (2008) agrees that "Esquirol was probably the first author to provide a nosological framework for ICDs. He coined the term Monomania to describe patients carrying focal disorders of the mind, which was otherwise intact" (p. S1). Tavares claims that monomania was abandoned because it was "too broad as it simultaneously encompassed both psychotic and non-psychotic syndromes" (p. S1). Today, as well, we struggle with similar difficulties. Are concepts such as ICD, PG, and addiction too broad as well? Are these notions better served by reference to a continuum of harm rather than assumptions about our ability to provide hard pathological designations (Abbott & Volberg, 2006; Derevensky, Gupta, Dickson, & Deguire, 2001; Dickson, Derevensky, & Gupta, 2004; Korn, Gibbins, & Azmier, 2003; New Zealand Ministry of Health, 2004; Peele, 1989, 2003)?

Berrios (1989) offers a similar genealogy of OCD, suggesting that Esquirol "opened a new clinical space for OCD when he classified the disease of Mlle. F as a form of volitional monomania" (p. 284). In the previous chapter, we discussed how OCD, given its lack of association with pleasure, might not be the best fit for afflictions such as PG and SUD. As Berrios points out: "OCD, agoraphobia, panic disorder, and other anxiety disorders were traveling companions up to the end of the nineteenth century" (p. 92). Then as now, OCD seemed a better fit for such disorders than for those we now call addictions. Yet, then as now, potential overlaps also affected conceptualization.

Berrios also mentions that Prichard's (1822, 1835) notion of "moral insanity" was in this tradition. Saß and Felthous (2007) have discussed how the term "moral" had many meanings—emotional and affective—and that we are not dealing here with a strictly moralistic designation. They mention Rush's (1812) treatment of diseases involving moral faculties and also how this helped to lay a foundation for notions of psychopathic (irresponsible, aggressive, amoral) personalities (Saß & Felthous, 2007). The latter was, as we will see in the next chapter, an important

construct in the generation of a new understanding of drug addicts, and by implication of addictions as such (Courtwright, 1982). Despite many categories, and subdivisions within each category, in a discussion of the history of impulsivity, Fernandez and Bravo (2003) note how mental health came to be associated with "the free exercise of the will" (p. 221). The next section is a brief account of that development.

4.5 Esquirol and Monomania: The Science of Losing Control

As mentioned, for most of the nineteenth century, problematic gambling was treated as a predisposing cause of other disorders, or as a symptom. One could say that PG was like an extension of other disorders: almost within the medical focus, but not quite. Next to inebriety, monomania was the most important precursor to current ideas about addiction in general (and PG in particular). Not only was monomania Esquirol's most significant scientific accomplishment, by the middle of the nineteenth century, it had become a popular term in lay discourse (Boime, 1991; Goldstein, 1998). For example, in the 1851 novel Moby Dick, Herman Melville (1851/2009) used the term monomania in describing Captain Ahab's obsession with getting revenge on the great white whale. Ahab is obsessed with this particular whale, but his great intellect, leadership, and navigational skill are otherwise intact. Obviously, this notion resonated with the times. While monomania's function as a catchall led to its eventual scientific demise in middle and later nineteenth century, the term continued to resonate with the public for some time after that. According to Goldstein (1998), monomania's demise was due partly to political factors ranging from the status of the first French psychiatrists (among whom Esquirol was the dominant figure) to the frustration of judges with a seemingly easy excuse for criminal conduct. Still the fact that partial insanity was often hard to isolate and that delusions would spill over into other areas, thereby undermining assumptions of the insanity being only partial, was troublesome to many in the field (Boime, 1991; Goldstein, 1998). Indeed, key questions involved whether monomania was a pathology in itself or, despite Esquirol's objections, just a symptom of other mental disturbances (Berrios, 1989; Boime, 1991; Saß & Felthous, 2007). This problem is still an issue today. Is PG a symptom of depression or cause of it? However, even if PG is only a complication of depression (or anxiety), the depressed person with PG is worse off (especially from a financial point of view) than the depressed person without PG. Because of the more serious financial consequences of PG, it has to be looked at as an additional challenge to the therapist, rather than just a symptom.

Esquirol (1817) invoked the term "monomania" to describe what in Britain was often called "moral insanity." While not purely insane, monomaniacs were thought to lose perspective or control in single, identifiable areas. Esquirol identified three types of monomania: intellectual, emotional, and volitional—the latter condition, for example, involving "lesions of the will" which nonetheless could leave the intellectual faculties unscathed (p. 320). Chronic drunkenness fell into this

classification, and Esquirol's views on this matter were more developed than anything he had to say about gambling:

> I have to prove, that if the abuse of alcoholic liquors is an effect of the degradation of the mind, of vices of education, and of bad examples, there is sometimes also a disordered condition of the system, which leads certain individuals to the abuse of fermented drinks. There are cases, in which drunkenness is the effect of the accidental disturbances of the physical and moral sensibility; which no longer leaves to man, liberty of action…. Some physical or moral cause has provoked this change… [After bouts of abstinence] Relapses are frequent; are provoked by the same causes, and announced by the same phenomena. (p. 352)

The notion of "lesion" is central here, a key metaphorical transposition. In the seventeenth century, anatomists conducting autopsies had found lesions in certain organs, suggesting that diseases could be local phenomenon rather than dispersed throughout the body. Germs had also been discovered and identified as a possible cause of illness (Rosenberg, 1979). Ideas about medicine and diseases in general were in flux from the seventeenth to the mid-nineteenth century. Thomas Sydenham was a key seventeenth-century figure who insisted that diseases were in fact entities unto themselves, going against the grain by denying that a disease was always specific to each patient and that treatment must be tailored according to each instance (Sydenham, 1974; see also Cunningham, 1989). Perhaps the greatest name in nosology was Francois Sauvages, who in the eighteenth century identified about 2,400 disease entities. Yet even Sauvages denied that etiology was a viable foundation for disease classification, and these developments did not have much immediate effect on medical practice. Even when specific diseases were acknowledged, they could be viewed as functions of fluid, nervous, or vascular systems. There was a strong resistance to localization of any kind (Shryock, 1960). This idea of localization (along with it disease specificity and the very science of nosology) was, at the time, on the cutting edge of medical theory. The transposition of a physical "lesion" to matters such as the intelligence or the will offered, if nothing else, a veneer of progressive scientific authority. Despite questionable explanatory value, the above quotation represents Esquirol at his best, creatively mixing the physical with the spiritual and the biological with the metaphysical.

Esquirol (1817) believed that all types of monomania were etiologically similar. There were many types, including erotic monomania, incendiary monomania (pyromania), and homicidal monomania. For example, "Erotomania… is a chronic cerebral affection, and is characterized by an excessive sexual passion… There is a lesion of the imagination only" (p. 335). This differs from nymphomania, which is a physical disorder. Again, monomania is a partial madness, involving "a partial lesion of the intelligence, affections or will" (p. 320—emphasis added). One thing this author had in common with observers of addictions today is a lingering sense of disbelief:

> Partial delirium is a phenomenon so remarkable, that the more we observe it, the more we are astonished, that a man who feels and reasons and acts like the rest of the world, should feel, reason and act no more like other men, upon a single point… In this the understanding is overthrown. In the other, it is sound (p. 321).

This, Esquirol (1817) explains, is much different from simple "mania" wherein one's whole being is perverted. Yet monomania seemed to have symptoms not obviously connected with the essential description. Monomaniacs are marked by pride and vanity (p. 326). Monomaniacs often struggle with delusions of grandeur and "wish to command the world" (p. 322). A student (or member) of Alcoholics Anonymous might notice how similar all this is to the how members of that fellowship described themselves in the 1930s, over a hundred years later (Alcoholics Anonymous World Services, Inc., 1976). In any case, monomania involved obsession or preoccupation, and while the following was aimed at drinking rather than gambling, it is important that the condition involves "a disordered appetite; a real longing…the desire for drink is instinctive, imperious, irresistible" (p. 355).

We have chosen to discuss monomania with an eye on alcoholism because this offers the best prototype for PG. Recall that Clouston (1883), perhaps the first to properly medicalize PG, did so in reference to substance abuse. The next section deals with early scientific treatments of drunkenness. Developments pertaining to other drugs are addressed only in the following chapter, which takes us just past the mid-twentieth century.

4.6 The Science of Drunkenness

Some PG specialists may question the attention devoted here to drunkenness. This is, after all, a PG study. Yet drunkenness was the first, prototypical addiction, temperance was the largest enduring mass movement in North American history, and it was in the nineteenth century that precedents for the current action really began. The Washingtonians (see Chap. 2), for example, presaged AA (Blocker, 1989; Tyrrell, 1979), which in turn set the stage in the twentieth century for mutual aid for addictions—including Gamblers Anonymous. Though short-lived—founded in 1840, peaking maybe in 1843 and all but gone by the end of that decade—the Washingtonians once boasted 600,000 members and were, for a while, at the forefront of a revival of faith in the ability of drunkards to reform. In the next chapter, we will discuss the context in which ideas pertaining to drunkenness would help to define how drug addicts were understood and, from there, how all of this affected our current conceptions of PG.

Benjamin Rush (1790) is considered the first to properly medicalize chronic drunkenness (Levine, 1978), though Thomas Trotter (1813/1981) was not too far behind. Either way, and especially in North America, Rush was more influential. As White (1998) points out, Rush "broke from the traditional view that excessive drinking was either a reflection of moral depravity or a cause or symptom of mental illness" (White, 1998, p. 2; Rush, 1790). Rush (1809) supposedly did not believe in individual disease entities, a view consistent with his eighteenth-century education. Yet Rush's conception of chronic drunkenness was still compatible with the notion of primary disease, or "self-contained" disease (Ferentzy, 2002; Levine, 1978; White, 1998).

In the first half of the nineteenth century, more physicians than psychiatrists were allied with temperance. Yet few physicians regarded chronic drunkenness as a disease in itself the way that Rush did, or at the very least they were not as adamant (Cassedy, 1976). Instead, they would focus on the obvious fact that heavy drinking could lead to disease, often the mental diseases drinking could cause (Cassedy, 1976, p. 408). There was, in fact, little "science" pertaining to chronic drunkenness in the first half of the nineteenth century. As Keller (1966) has pointed out, contributions were mostly made by physicians.

The term "Delirium Tremens" was put forward by Thomas Sutton in 1813, and the term "dipsomania" first appeared in a book on drunkenness by the German Bruhl-Cramer (it was coined in the Preface by Christopher Wilhelm Hufeland) (Bruhl-Cramer,1819; Bynum, 1968; Marconi, 1959; Romano, 1941; White, 2004, p. 35). The designation "chronic alcoholism" appeared only in the mid-nineteenth century and was advanced to describe the organic effects of long-term heavy drinking rather than compulsion itself (Anonymous, 1878; Wright, 1882, 1886; Bynum, 1968, pp. 161–162; Marconi, 1959, pp. 222–224; Valverde, 1998, p. 47). Only later did alcoholism come to invoke addictive behavior (for a critique of the term "alcoholism" in place of inebriety, see Anonymous, 1886). Marconi (1959) has discussed the origins and development of the concept "dipsomania" which eventually came to refer to sporadic rather than continuous bouts of drunkenness, though it was occasionally used to include other types of drunkenness (Valverde, 1998, p. 48; see also Babor, 1999). Perhaps because of its limited nature, the term dipsomania never caught on to any significant degree and would later be supplanted by "inebriety," a broader concept encompassing not only all forms of alcohol abuse but other substance addictions as well.

Aside from Rush's ideas, science had little effect on the North American scene in the first half of the nineteenth century. With respect to alcohol's evils, physicians tended to accept the information provided by temperance societies (Cassedy, 1976). As such, according to Sournia (1990) they worked with an ambiguous notion: "The ambiguity of their position resembled that of Rush: they considered the heavy drinker to be, on the one hand, sick and, on the other, guilty of committing a moral sin" (p. 31). Whether this position amounted to an inconsistency or to an enlightened broadening of the conception of disease is another matter. Rush (1812) himself was one of the first to understand a dilemma that troubles us to this day: "where the line should be drawn that divides free agency from necessity, and vice from disease, I am unable to determine" (p. 360; see Ferentzy, 2001). Temperance was essentially dealing with a moral disease—as such innately mysterious—and Sournia (1990) mentions that for Bruhl-Cramer the only cure for dipsomania was "willpower" (p. 26). As William Bynum (1968) has pointed out, Rush's treatment of alcoholism was more advanced than that of the psychiatrists of his time, in many ways resembling Esquirol's notion of impulsive monomania. Bruhl-Cramer himself understood that he was dealing with a difficult, perhaps inaccessible, notion:

> Dipsomania consists of an increased impulse, or an involuntary desire for the use of ardent spirits. Since we cannot make such an impulse into an actual concept, but rather at best only into a symbolic representation, we must take into consideration other analogous specific impulses (Quoted in Bynum, 1968, p. 170).

Note how this author is practically invoking the need for metaphorical guidance. As we have seen, Esquirol applied the notion of physical "lesions" to the mind. Yet even Esquirol had presumed that depressive states precede such drink "monomania," and as Marconi pointed out in the mid-twentieth century, "an irresistible spontaneous thirst for alcohol … emerged [only] in more recent years as an independent syndrome" (Marconi, 1959, p. 226; see Esquirol, 1817, pp. 352–356.). It was more in the works of Rush (1774, 1790, 1812), and in the propaganda of much of the temperance movement, that precursors to this twentieth-century conception could be found. In the middle twentieth century, the idea was that we in fact had no idea why alcoholics do what they do (Jellinek, 1960; Marconi, 1959). This conception was bolstered by AA's own view: alcoholics who claim to know why they drink are deceiving themselves, or perhaps making excuses (Alcoholics Anonymous World Services, Inc., 1976).

In the nineteenth century, it would be up to the theorists of inebriety to attempt, by reference to the best psychiatric knowledge of the time, to render this impulse less vague. After the American Civil War, physicians were not as keen on temperance as their predecessors had been, though some opted for more scientific inquiry in place of the polemics of temperance (Cassedy, 1976, p. 413). Psychiatry, which had largely ignored chronic drunkenness in the first half of the nineteenth century, would come to play a stronger role.

Yet this development requires some context. Throughout the eighteenth century and much of the nineteenth century, debates over free will and determinism—Calvinism versus "Arminianism"—achieved religious and political significance that might baffle a twentieth-first-century reader (Edwards, 1966; Schmidt, 1995). Yet, as Valverde has pointed out, it was only when such theological discussions had become less important to the public, and when "moral philosophy" had gone out of fashion, that neurology and physiology attempted, briefly, to take up the question of the will (Valverde, 1998. p. 3).

The notion of "drink monomania," while eventually unsuccessful, represents in one key respect perhaps the clearest example of nineteenth-century science attempting to forge an alcoholism concept that resembles the one that came to dominate twentieth-century North America: the crux of the matter was willpower, or the lack of it (Valverde, 1998, pp. 45–47). Science itself would turn away from the "will"—the twentieth-century alcoholism concept being somewhat of an anomaly insofar as it focused on willpower—and insist that diseases be either mental or physical. Yet, briefly, authors such as Theodule Ribot would have some legitimacy when they identified the will as separate category. As Ribot explains,

> The irresistible and yet conscious impulses to steal, to commit arson, to destroy oneself by alcoholic excesses, enter into the same category…
>
> All those fatal tendencies classed under the names of dipsomania, kleptomania, pyromania… are to-day no longer considered as distinct morbid forms… It is sufficient to note that all these creatures of impulse have the same characteristics: they are conscious, incoordinated [sic], incapable of struggle (Ribot, 1915, pp. 61–62)

Valverde has discussed how the essential question of the will's freedom runs through—with the same paradoxes reappearing each time—Rush's conception,

monomania, inebriety, alcoholism, and, finally, addiction and dependence (Valverde, 1998, pp. 4–9, 13–27). Britain's most prominent inebriety specialist, Norman Kerr, pointed out that, regardless of etiology, "the characteristic symptom… is an overpowering impulse to indulge in intoxication at all risks" (Kerr, 1894, p. 13). Inebriety is not "the act of intoxication, but a strong impetuous overmastering impulse to, or crave for, intoxication" (Kerr, 1894, p. 184). One major difference between this nineteenth-century conception and the one that came to dominate North America in the twentieth century involves the reliance on a subject's experience: the idea that loss of control cannot simply be observed by a second party and must hence be reported by the subject represents a honing of the experiential dimension which does not seem to appear among the inebriety experts. Partly due to the influence of 12-Step movements, and perhaps also to developments such as psychoanalysis, twentieth-century addiction science assumed a more communicative—and above all cooperative—rapport with the afflicted: self-reports became integral to the identification of addictions.

As a concept, inebriety was largely confined to the scientific community, and whatever momentum it did gain waned with the First World War and the adoption of prohibition (Jaffe, 1981). Receiving insufficient support from medicine, psychiatry, and the public, the inebriety movement, headed by figures such as Thomas Crothers, can be said to have failed in its mission to medicalize drunkenness and other addictions and to create a system of asylums designated to curing inebriates (Conrad & Schneider, 1992, p. 85).

By the later nineteenth century, two psychological theories guided inebriety science: degeneracy as expounded by Benedict Augustin Morel (1857) and neurasthenia as expounded by George Miller Beard (1881). Degeneracy was essentially a condition in which the nervous system operated at an inferior level and purportedly could be caused by many factors including heredity, social environment, as well as the abuse of alcohol. Higher functions were compromised, and behavior could become primal and instinctive. It is at least possible that this view represents an early recognition of the effect of fetal exposure to alcohol in the womb (Streissguth, 1997) which has and has been shown to be a risk factor for substance abuse and numerous other disorders (Streissguth, Barr, Kogan, & Bookstein, 1996). For Morel, degeneracy could manifest itself in many seemingly unrelated ways. While heavy drinking could cause degeneracy, the reverse was also the case. Morel did believe that many, due to heredity, were beyond redemption, and he attributed much of the world's ills to chronic drunkenness (Morel, 1857, pp. vi, 83). Morel subscribed to a Lamarckian conception of heredity, held a pessimistic view of modernity, and believed that the symptoms of degeneracy would get worse with each generation (Jaffe, 1981, pp. 17–19; Sournia, 1990, pp. 99–101). "Degenerate" still survives as a term sometimes applied to pathological gamblers, though the multigenerational nature of the concept is no longer apparent.

While insisting that heredity on its own need not doom one to alcoholic excess, Kerr (1894, pp. 202–203) nonetheless was influenced by Morel:

> Morel gives the inebriate genealogy of a family… The first generation exhibited alcoholic excess, depravity and brutish disposition; the second inherited alcoholism, maniacal attacks, and general paralysis; the third was sober but showed hypochondriasis, persecutions mania and homicidal proclivities; the fourth feeble intelligence, mania at sixteen. Stupidity, idiocy, and impotence, the race becoming extinct." (Kerr, 1894. P. 195)

The third generation was sober yet still troubled. Few inebriety experts could seriously claim that intemperance never skipped a generation, yet the governing idea was that even so "it continually exhibits its disturbing and disorganizing tendencies" (American Association for the Cure Of Inebriates, 1981—proceedings from Second Meeting, 1871, "Inebriety by Inheritance", p. 29). The word tendency is key, as these experts were often pointing to latent forces which may not be apparent to the lay observer: "Dr. A. Mitchel says: 'I think it quite certain that the children of habitual drunkards are, in a large portion, idiotic….the habitual drinking is just the shape that insanity takes. What they transmit to their children is really that predisposition which they have themselves" (Mason, 1877, p. 17). An expert should be able to detect the condition before the onset of substance abuse (Mann, 1883). Today's reader might be shocked, or amused, by some of the matter of fact pessimism. According to Crothers, "In those cases where the moral nature is low, weak or absent, no hope can be held out for cure…" (Crothers, 1893, p. 34). Crothers claimed that even moderate drinking can lead to inherited inebriety (if the drinker's spouse is defective). As well, given that inebriety can exist even where there is seemingly no evidence—"alcoholism can exist apart from alcoholic excess"—experts should be given special authority: "Marriage should be under control of law, and from the judgment of the family physician" (Crothers, 1893. p. 155; see also 151–152). Clearly, such notions of latency still survive in many current conceptions of PG—though in much subtler forms. They also reverberate among many GA members (Ferentzy, Skinner, & Antze, 2007).

It was Beard who gave inebriety theorists a stronger social argument, even if their sympathies were generally with those of their own class. Beard's thought involved the amount of nervous energy each person possessed. Neurasthenia was akin to fatigue, suffered by those with insufficient nervous energy. As civilization advanced and placed more stresses on individuals, incidences of nervous disorders such as inebriety would increase. The trend in the direction of mental rather than physical labor was identified as a major culprit, putting stress on the brain and nervous system and leaving a person more vulnerable to the effects of stimulants. (And, at the very least, mental labor can render psychiatric and intellectual difficulties more obvious.) Perhaps unsurprisingly, for Beard the disease of inebriety was reserved for the upper classes, and drunken laborers represented nothing but a moral issue. Neurasthenia was poorly defined and like degeneracy had the potential effect of depriving inebriety of any disease specificity since many (maybe all) mental and behavioral ailments could be understood as functions of nervous depletion (Jaffe, 1981, pp. 19–20; Valverde, 1998, p. 72; White, 1998, p. 35; see, e.g., Beard, 1881, esp. pp. 305–308). As concepts, neurasthenia and degeneracy could be used in tandem, often with the former leading to the latter in following generations. But degeneracy, as first expounded by Morel, could stand on its own. Diathesis, the

constitutional susceptibility to chronic diseases, was another concept of importance to inebriety theory:

> neuropathic decay and degeneracy of brain power is often due to alcohol… Alcoholic excess…. is a tremendous power for evil, a morbific force, which starts in his children a neuropathic diathesis which for two or three generations may result in epilepsy, dipsomania, imbecility, and every grade of mental unsoundness. (Mann, 1886, p. 204)

Here many of the world's ills are pinned on alcohol, and the view is clearly buttressed by a Lamarckian conception of heredity. For Crothers and many other inebriety theorists, the United States was especially vulnerable to inebriety. American "social and psychical states" lead to forms of inebriety specific to that nation: "Its symptomology more nearly resembles that of insanity and general paralysis; its course is in waves and currents; its progress is shorter…" More ominously, the desire for stimulants such as alcohol being hereditary, "There are but very few children now-a-days who have not in them a natural desire for stimulants" (Crothers, 1893, pp. 92, 228; see also Mann, 1886, p. 205). Yet the messages given by inebriety specialists were inconsistent on a few counts. Did inebriety cause degeneracy, or was it the other way around? Either answer could be given. Was civilization doomed given all the degeneracy that was rampant? Inebriety theorists would normally answer in the negative, offering optimistic perfectionist arguments in favor of social reform—contrasting ironically, as Elizabeth Armstrong has pointed out, with the fact that for the most part they located inebriety "in individual morality and biology rather than in social structure" (Armstrong, 2003, p. 39).

Yet no matter how intemperance was explained, according to those present at the first meeting of the American Association for the Cure of Inebriates, its "primary cause is a constitutional susceptibility to the alcoholic impression" (American Association For The Cure Of Inebriates, 1981—First Meeting, 1870, P. 8). A cynic might claim that according to this statement, inebriety is the cause of inebriety. In a discussion of the phenomenon of "craving" associated with addictions to this day, Room (2003) points out how this term simply gives the problem a name without really explaining it. Inebriety specialists were struggling with paradoxes that still trouble us in the twenty-first century. Is inebriety the constitutional susceptibility or the appetite itself? Inebriety, especially in its early formulations, was "referred to as a manifestation of a morbid disease or morbid appetite" (Blumberg, 1978, p. 237). While later formulations tried to go more deeply into the causes of this appetite, dependence—or the "abnormal appetite"—would continue to be the most important symptom (Jaffe, 1981, pp. 31–32; MacLeod, 1967, pp. 220, 232). Kerr held out the hope, similar to one expressed to this day, for the discovery "of a certain portion of the brain in which the capacity to crave for, and be involuntarily impelled to, intoxication resides" (Kerr, 1894, p. 313). As Crothers pointed out, drinking itself may only be a symptom, and Kerr would agree: "By inebriety I mean, not drunkenness, but the tendency…a strong impetuous overmastering impulse…" (Kerr, 1894, p. 184; see also Crothers, 1893, p. 66). Recall that Kerr also said "the characteristic symptom… is an overpowering impulse to indulge in intoxication at all risks. [emphasis added]" (Kerr, 1894, p. 13). Drunkenness, says Kerr, "is at once a moral

and a physical evil," which may help to explain the difficulty (p. 329). Yet, arguably, inebriety was at once a symptom and a disease. As Crothers explains, "the use of alcohol in inebriety is in many cases only a symptom, or one of the many causes that develop positive disease" (Crothers, 1893, p. 66). In this telling statement, Crothers identifies an important difficulty: if a behavior is both cause and symptom, the demarcation of etiology and symptomology is blurred—a paradox that continues to haunt addiction studies to this day (Ferentzy, 2002; Room, 2003).

For many inebriety theorists, any use of stimulants could indicate at least a degree of pathology, and one could be "destroyed" by alcohol without ever showing signs of extreme intoxication (Mason, 1876, p. 5). Plus, even the slightest desire to drink was a sign of inherited or social decay. Crothers says, for example, regarding those who have not inherited a susceptibility to drunkenness: "Thrown into good and upright relations from childhood… They will not even drink liquors moderately" (Crothers, 1893, p. 231). Taken together, the two points make for a non-falsifiable conception. Jaffe has identified one of the logical difficulties haunting inebriety theory: "According to their circular reasoning, degeneracy was accompanied by drug use [including alcohol use] that was the evidence of the underlying disorder itself" (Jaffe, 1981, pp. 32–33).

As well, Valverde has discussed the way inebriety, despite its supposedly physical etiology, tended to be a "hybrid condition," inconsistently physical and spiritual. This was evidenced by how the condition could easily be conceptualized as a "habit." In principle, a habit should be a symptom, and to declare inebriety a habit was to "put it on the same level as exercise, drinking coffee, or eating sweets" (Valverde, 1998, pp. 61–62, 93). Habit suggests an acquired condition, and there was a minority of inebriety reformers who discounted inheritance as a cause (MacLeod, 1967, p. 244). But more prominent figures such as Kerr and Crothers would simply grant that the condition could in some cases be acquired (Kerr, 1981, p. 296; Crothers, 1893, p. 231).[1]

Potential causes of inebriety were many. Beyond heredity, nervous depletion and problems associated with upbringing, brain injuries (Clum, 1871, p. 69), hedonism (Anstie, 1865), masturbation (Crothers, 1893, p. 56), the mass media (Beard, 1876), "indoor life" (Dodge, 1877), excessive religious activity (Crothers, 1893, p. 58; Kerr, 1894, p. 165), sea air (Beard, 1879), and even tapeworms could all be culprits (White, 1998, p. 35—see Countway, 1893). Despite the eclectic etiology, inebriety theorists were arguably more systematic—or at least more in line with the types of personality disorders recognized today—in their attempts to classify various types of inebriety. Classifications were usually made with course of treatment (and other issues pertinent to institutionalization) in mind, though often they could be quite

[1] Note that in behavioral theories of psychology, a habit is a learned behavior and its strength varies instep with habit strength. In behaviorism, an addiction is a strongly conditioned habit. "Operationally, habit strength was defined in terms of the number of times the organism has been reinforced for making a response" (Leahey, 2001, pg. 195).

moralistic. In 1871, Joseph Parrish classified inebriates along the following lines: confirmed inebriates, persons of low moral character who are simply out to gratify all their passions; emotional inebriates, morally neutral in their intentions yet vulnerable to the "promptings of impulse"; and accidental inebriates, "men of good principles, who know and acknowledge their infirmity, and endeavor to overcome it. Students, authors and overworked business men furnish a considerable percentage of this class" (American Association For The Cure Of Inebriates, 1981, Second Meeting, 1871, pp. 61–68; see also Parrish, 1885).

Crothers probably provided the most sophisticated classification systems, though he used the terms "accidental" and "emotional" in ways different from Parrish. By the 1890s, Crothers distinguished between inebriates and dipsomaniacs, though earlier he considered dipsomania "a stage of inebriety" (Crothers, 1878, p. 193; see also Crothers, 1893, p. 27). With dipsomaniacs there is often a "complete absence of any morality … Patients suffering from dipsomania often behave very well for a time, but it is only from the effects of habit… they are not guided by any moral feeling or sense whatever… a dipsomaniac can never be trusted" (Crothers, 1893, p. 33; see also Barton, 1879). Among inebriates, there are accidental inebriates, weak in character and susceptible to environmental influences. Emotional inebriates are unstable souls who use stimulants for what today would be called "self-medication." Solitary inebriates are those who tend to drink alone and in secret in order to protect their social standing. Pauper inebriates are morally empty, those unfit for "healthy life, who are by the higher processes of nature crowded out in the race struggle. Inebriety is simply a symptom of this condition." Crothers acknowledges that this list is by no means exhaustive and that inebriety could be divided into many other categories.

A current PG specialist might be impressed by a few overlaps between Crothers' efforts with inebriety and PG classifications offered over a century later by Blaszczynski and Nower (2002). Essentially, Crothers posits degrees of severity accentuated by higher likelihood of inborn causes. Crothers' accidental and emotional inebriates may compare to PGs Blaszczynski and Nower (2002) would designate as otherwise normal and emotionally vulnerable, respectively. A major difference is the absence of class-related biases in the categories offered by Blaszczynski and Nower (2002). But there was, for Crothers, a uniformity to the condition: "although the symptoms may vary, the line of progress and growth are practically the same" (Crothers, 1893, pp. 27–28). As William White has pointed out: "Crothers and others noted the great 'uniformity of symptomology' and the propensity of these symptoms to 'follow a uniform line of progress'" (White, 1998, p. 35). So, despite some elitism (exemplified by use of the word "pauper"), intemperance seemed to be a democratic disease, affecting all in similar ways. Essentially, we were moving in a direction apparent to this day. As mentioned, the rich had long had a monopoly on certain forms of attention and hence many of the more eccentric diseases that went with that (Foucault, 1979; Porter, 1985, 1987). When British physician George Cheyne (1725) was writing about nervous conditions which supposedly affected mainly the upper classes, it was also becoming fashionable for persons of stature to confess their abnormalities (Porter, 1987). Today, eccentric diseases flourish among both the rich and the poor, as shown each week on television shows that have made such disorders a form of entertainment.

Intemperance was democratic in another sense and has remained so since that time. Recall that in the first section we mention how the original impetus for the medicalization of PG came from GA and other lay advocates more so than from scientists (Rosecrance, 1985). Keeping in mind the influence that AA and assorted lay advocates had on SUD treatment in the twentieth century, the reader should note that the asylum system for drunkards that inebriety experts were trying to initiate in the nineteenth century received, by Crothers' own admission, its first impetus from the Washingtonian homes. First appearing in the mid-nineteenth century, these charitable, mutual aid style operations were rooted more in lay wisdom than in expertise. Though not necessarily affiliated with the Washingtonian movement, as the name would suggest the homes were definitely an offshoot in which Washingtonians or former Washingtonians participated.

> The first practical effort to settle questions was the beginning of the organization of lodging houses for the members of the societies who had failed to carry out the pledges which they had made. This was really the beginning of the hospital system of cure, and was the first means used to give practical help to the inebriate, in a proper home, with protection, until he was able to go out, with a degree of health and hope of restoration. (Crothers, 1911, p. 30, quoted in Baumohl and Room, (1987).

Through the end of the nineteenth century and into the early twentieth, two main philosophies and styles governed the treatment of inebriates: that of the inebriate asylums and that of the Washingtonian-style inebriate homes. Despite general agreement on themes such as the progressive nature of chronic drunkenness and the need for abstinence, there was controversy over the disease label itself, which the Washingtonian types often rejected. Coerced treatment was another issue, favored by most asylum directors and inebriety theorists yet generally rejected as an idea by those running Washingtonian-style homes. Coercion was in many ways consistent with the pessimistic, degeneration theories held by inebriety experts. It was also, arguably, a warped view of the "moral ascendancy" over patients advocated by psychiatry of the time. Growing pessimism over the receptiveness of drunkards to treatment was clearly a factor, as was the fact that moral treatment—involving respect for patients and a kinder, arguably psychological approach—which had inspired figures such as Woodward (1838) a few decades back, was going out of fashion even as the inebriate asylums being created in the late nineteenth century. It was, in fact, the Washingtonian-style homes—generally with a moral rather than disease conception of drunkenness—which demonstrated more respect for drunkards and their struggles than the inebriety activists (Baumohl & Room, 1987; Brown, 1985; White, 1998, pp. 34–40).

Whether running Washingtonian-style homes, or doing God's work in public, spiritually minded reformers were in all likelihood helping more drunkards than the purportedly scientific asylum managers beholden to inebriety theory, or to ideas such as monomania and moral insanity. Just as in the twentieth century, it would be AA, and not the scientific community, that first provided hope that alcoholics could be redeemed, so in the nineteenth century, salvation came mainly from the grassroots—first and notably with the Washingtonians and their predecessors—which science tried to imitate. And, ironically, those with few pretensions to a proper etiology were, as we have argued, closer to the "disease" conception that

would eventually win out in mid-twentieth-century North America: partly because of AA and partly because of the "science" of figures such as Jellinek, twentieth-century North American alcoholism discourse would for some time, like Rush and most of Temperance, mostly sidestep the question of why someone became alcoholic.

Many reasons have been given for why the inebriety movement, along with the inebriate asylum system, failed. The drive for prohibition was accompanied by less sympathy for alcoholics, and inebriety theorists even seemed to cater to this reality in the late nineteenth and early twentieth centuries by taking harsher views of drunkards themselves (Jaffe, 1981, pp. 51–52). As discussed in the following chapter, the transformation of the addict into a criminal and outcast started before drug prohibition (Courtwright, 1982). Society would never have been able to enact prohibition without that backdrop.

By the early twentieth century, the disease conception of chronic drunkenness had become less popular, and faith in the ability of drunkards to reform was waning (Levine, 1978; White, 1998, p. 28). The First World War and prohibition were important markers: the war because it presented an obvious distraction and prohibition because many perceived it as a final solution to the problem of drunkenness. Roy MacLeod has argued, albeit in a British context, that the inebriety movement's emphasis on heredity prevented it from viewing alcoholism as a social disease and thereby from participating in socially oriented public health policy agendas (MacLeod, 1967). Jim Baumohl and Robin Room provide an extensive discussion of why the movement failed and mention Jellinek's suggestion that the intellectual work in the inebriety field was not of very high quality (Baumohl & Room, 1987). Valverde (1998) has argued that the category of "inebriety," for reasons already discussed, was never very stable and hence contained the "seed of its own destruction" (p. 68).

Yet one may question explanations internal to inebriety science itself. First, it is doubtful that the category of inebriety was any less stable than many psychiatric concepts that did survive. As well, much of the twentieth century was dominated by alcoholism concepts and research that was, according to many critics, just as questionable as that of nineteenth-century inebriety research (Courtwright, 1982; Fingarette, 1988; Peele, 1989). Valverde (1998) herself has said that the same paradoxes have returned (pp. 4–9). If nothing else, even those who identify issues internal to inebriety science acknowledge that social and political issues were also key.

The decline of Lamarckian heredity and of degeneration theory certainly hurt the movement, but this does not explain why it could not adapt: why did addiction concepts seemingly go into remission in general? From a historical perspective, inebriety had much to redeem it. Inebriety did provide a broad addiction concept incorporating all substance addictions: it would take almost a century for us to get there again. The main concepts we employ today—craving, withdrawal, loss of control, and tolerance—were well understood. Political and social reality were simply unreceptive to a medical view of addiction, as though for a brief period North America wanted little to do with the idea.

Still, we would hazard another possible explanation, not as an alternative to the others but simply an additional factor. Inebriety theorists claimed to identify alcoholism exclusively in terms of etiology and signs. They did not require a subject's corroboration. The twentieth-century idea that patients themselves must report loss of control reasserts the essential mystery of addiction while at the same time gives the addict an active role in the construction of his or her identity—a more cooperative approach, one that has been central to the successes of AA, GA, a far-reaching recovery movement, and psychiatry itself. Twentieth-century addiction science would, first, be a science of mystery, akin to Freudian psychoanalysis, and, second, attempt to work *through*, *rather than against,* a subject's autonomy (Rose, 1996; Valverde, 1998, p. 17).

The next chapter resumes our PG focus, first exploring the psychoanalytic efforts that governed PG studies in the early and middle twentieth century. Yet even that chapter will turn, like this one, to substance addiction (this time to drugs other than alcohol), in order to present the real foundation upon which our current understating of PG was based. As we shall see, the early psychoanalytic ideas were largely discarded, in favor of ideas beholden to the sciences of substance abuse.

References

Abbott, M., & Volberg, R. (2006). The measurement of adult problem and pathological gambling. *International Gambling Studies, 6*, 175–200.

Alcoholics Anonymous World Services, Inc. (1976). *Alcoholics Anonymous: The story of how many thousands of men and women have recovered from alcoholism*. New York: Alcoholics Anonymous World Services, Inc.

American Association for the Cure of Inebriates. (1981). *Proceedings: 1870–1875*. New York: Arno Press.

Anonymous. (1796). *Red and black*; *or the fates at faro*, *a serious drama*. Philadelphia: W. W. Woodward.

Anonymous. (1838). *The victims of gaming; Being extracts from the diary of an American physician*. Boston: Weeks, Jordan & Company.

Anonymous. (1878). On the diagnosis of acute diseases induced by alcohol. *The Quarterly Journal of Inebriety*, *2*, 171–176.

Anonymous. (1886). The classification of inebriety. *Quarterly Journal of Inebriety*, *8*(2), 114–116.

Anstie, F. (1865). *Stimulants and Narcotics, their mutual relations: with special researches on the action of alcohol, aether, and chloroform on the vital organism. Mercantile Library of Philadelphia*, Philadelphia, 1865.

Asbury, H. (1938). *Sucker's progress: An informal history of gambling in America from the Colonies to Canfield*. New York: Thunder Mouth Press.

Armstrong, E. (2003). *Conceiving risk, bearing responsibility: Fetal alcohol syndrome & the diagnosis of moral disorder*. London: John Hopkins University Press.

Babor, T. (1999). L'alcoologie aux Etats-Unis D'Amerique: un bilan historique et scietifique. *Alcoologie*, *21*(HS), 273–277.

Barton, J. (1879). Dipsomania: Its medical and legal aspects. *Quarterly Journal of Inebriety, 3*, 202–223.

Baumohl, J., & Room, R. (1987). Inebriety, doctors, and the state: Alcoholism treatment institutions before 1940. In M. Galanter (Ed.), *Recent developments in alcoholism* (Vol. 5, pp. 135–174). New York: Plenum.

Beard, G. (1876). Causes of the recent increase of inebriety in America. *Quarterly Journal of Inebriety, 1*, 25–48.
Beard, G. (1879). Are inebriates automatons? *Quarterly Journal of Inebriety, 3*, 8–18.
Beard, G. (1881). *American nervousness: Its causes and consequences, a supplement to nervous exhaustion (neurasthenia)*. New York, Putnam. (Reprint: New York, Arno Press, 1972).
Bergler, E. (1943). The gambler: A misunderstood neurotic. *Journal of Criminal Psychopathology*, *4*, 379–393. Reported in Selected Papers of Edmund Bergler, M.D. 1933–1961. New York: Grune and Stratton, 1969.
Bergler, E. (1957). *The psychology of gambling*. New York: Hill and Wang.
Bernhard, B. (2002). *From sin to sickness: A sociological history of the problem gambler*. Unpublished doctoral dissertation, University of Nevada, Las Vegas.
Bernhard, B. (2007). The voices of vices: Sociological perspectives on the pathological gambling entry in the diagnostic and statistical manual of mental disorders. *American Behavioral Scientist, 51*, 8–31.
Berrios, G. (1989). Obsessive-compulsive disorder: Its conceptual history in France during the 19th century. *Comprehensive Psychiatry, 30*, 283–295.
Blaszczynski, A., & Nower, N. (2002). A pathways model of problem and pathological gambling. *Addiction, 97*, 487–499.
Blocker, J. (1989). *American temperance movements: Cycles of reform*. Boston: Twain Publishers.
Blumberg, L. (1978). The American association for the study and cure of inebriety. *Alcoholism: Clinical and Experimental Research, 2*, 235–240.
Boime, A. (1991). Portraying monomaniacs to service alienists monomania: Gericault and Georget. *The Oxford Art Journal, 14*, 79–91.
Breeden, H. (1899). Gamblers and gambling. In W. C. King (Ed.), *Portraits and principles of the world's great men and women with practical lessons on successful life by over fifty leading thinkers* (pp. 452–457). Springfield, MA: King-Richardson.
Brown, E. (1985). "What shall we do with the inebriate?" Asylum treatment and the disease concept of alcoholism in the late nineteenth century. *Journal of the History of the Behavioral Sciences, 21*, 48–59.
Bruhl-Cramer, C. (Von). (1819). *Uber die Trunksucht und eine rationelle Heilmetode derselben*. Berlin: 1819.
Bynum, W. (1968). Chronic alcoholism in the first half of the nineteenth century. *Bulletin of the History of Medicine, 42*, 160–185.
Caldwell, C. (1834). *An address on the vice of gambling; delivered to the medical pupils of Transylvania University, November 4, 1834*. Lexington: Clarke & Co.
Cassedy, J. (1976). An early American hangover: The medical profession and temperance 1800–1860. *Bulletin of the History of Medicine, 50*, 405–413.
Cheyne, G. (1725). *An essay of health and long life* (4th ed.). Dublin: George Ewing.
Churchill, M. (1894). *Betting and gambling*. London: James Nisbet.
Clouston, T. (1883). *Clinical lectures on mental diseases* (1st ed.). London: Churchill.
Clouston, T. (1887). *Clinical lectures on mental diseases* (2nd ed.). London: Churchill.
Clouston, T. (1890). 'Diseased cravings and paralysed control: Dipsomania, morphinomania, chloralism, cocainism'. *Edinburgh Medical Journal*, *35*, 508–21, 689–705, 793–809, 985–96.
Clum, F. (1871). *Inebriety: Its causes, its results; its remedy*. (Reprint: Philadelphia, Lippincott, 1988).
Collins, A. (1996). The pathological gambler and the government of gambling. *History of the Human Sciences, 9*, 69–100.
Comstock, A. (1883). *Traps for the young*. New York: Funk & Wagnalls.
Conrad, P., & Schneider, J. W. (1992). *Deviance and medicalization: From badness to sickness*. Philadelphia: Temple University Press.
Cotton, C. (1725). *The compleat gamester* (5th ed.). London: J. Wilford.
Countway, F. (1893). *The disease of inebriety – Alcohol, opium and other narcotic drugs: Its etiology, pathology, treatment and medico-legal relations*. New York: E. B. Treat.

Courtwright, D. (1982). *Dark paradise: Opiate addiction in America before 1940*. Cambridge: Cambridge University Press.

Crothers, T. (1878). Inebriety and its symptomology. *Quarterly Journal of Inebriety, 2*, 193–198.

Crothers, T. (1893). *The disease of inebriety from alcohol, opium and other narcotic drugs* (New York: E. B. Treat, 1893), in New York: Arno Press edition (1981).

Cunningham, A. (1989). Thomas Sydenham: Epidemics, expiriment and the "Good old cause". In R. French & A. Wear (Eds.), *The medical revolution of the seventeenth century* (pp. 164–190). Cambridge University Press.

Derevensky, J., Gupta, R., Dickson, L., & Deguire, A. (2001). *Prevention efforts toward minimizing gambling problems*. Report prepared for the National Council for Problem Gambling, Center for Mental Health Services (CMHS) and the Substance Abuse and Mental Health Services Administration (SAMHSA), Washington, DC

Devol, G. (1887). *Forty years a gambler on the Mississippi*. Washington: Devol & Haines.

Dickson, L., Derevensky, J., & Gupta, R. (2004). Harm reduction for the prevention of youth gambling problems: Lessons learned from adolescent high-risk behavior prevention programs. *Journal of Adolescent Research, 19*, 233–263.

Dodge, D. (1877). Inebriate asylums and their management. *Quarterly Journal of Inebriety, 1*, 127–135.

Dorchester, D. (1884). *The liquor problem in all ages*. New York: Phillips & Hunt.

Edwards, J. (1966). *Jonathan Edwards, basic writings*. New York: New York American Library.

Esquirol, J. (1817). *Mental maladies: A treatise on insanity*, trans. E. K. Hunt, from the French edn of 1817, with additions: 1845 Philadelphia, PA: Lee & Blanchard.

Ferentzy, P. (2001). From sin to disease: Differences and similarities between past and current conceptions of chronic drunkenness. *Contemporary Drug Problems, 28*, 363–390.

Ferentzy, P. (2002). Foucault and addiction. *Telos, 125*, 167–191.

Ferentzy, P., Skinner, W., & Antze, P. (2007). *Approaches to Recovery in Gamblers Anonymous.* Final Report Submitted to the Ontario Problem Gambling Research Centre.

Fernandez, B., & Bravo, A. (2003). Impulsivity: Historical and conceptual review. *Actas Espanolas de Psiquiatria, 31*, 220–230.

Fingarette, H. (1988). *Heavy drinking: The myth of alcoholism as a disease*. Berkeley: University of California Press.

Flavin, M. (2003). *Gambling in the nineteenth-century english novel: A Leprosy is o'er the Land*. Brighton: Sussex Academic Press.

Foucault, M. (1973). *Madness and civilization: A history of madness in the age of reason*. New York: Vintage.

Foucault, M. (1978). *The history of sexuality, Volume 1: An introduction*. New York: Vintage.

Foucault, M. (1979). *Discipline & punish: The birth of the prison*. New York: Vintage.

Goldstein, J. (1998). Professional knowledge and professional self-interest: The rise and fall of monomania in 19th century France. *International Journal of Law and Psychiatry, 21*, 385–396.

Greene, J. (1848). *An exposure of the arts and miseries of gambling; Designed especially as a warning to the youthful and inexperienced against the evils of that odious and destructive vice*. Philadelphia: G.B. Zieber and Co.

Jaffe, A. (1981). *Addiction reform in the Progressive Age: Scientific and social responses to drug dependence in the United States*. New York: Arno Press.

Jellinek, E. (1960). *The disease concept of alcoholism*. Hillhouse: New Haven.

Jillette, P., & Lynn, M. D. (2005). *How to cheat your friends at poker: The wisdom of Dickie Richard*. New York: St. Martin's Press.

Keller, M. (1966). Alcohol in health and disease: Some historical perspectives. *Annals of the New York Academy of Sciences, 133*, 820–827.

Kerr, N. (1894). *Inebriety or narcomania: Its etiology, pathology, treatment and jurisprudence*. London: H. K. Lewis (Arno Press, New York, 1981).

Kerr, N. (1981). *Inebriety or narcomania: Its etiology, pathology, treatment and jurisprudence,* Arno Press, New York. (Orig: Kerr, N. (MD) (1894). Inebriety or narcomania: Its etiology, pathology. Treatment and jurisprudence. London: H.K. Lewis).
Korn, D., Gibbins, R., & Azmier, J. (2003). Framing a public policy towards a public health paradigm for gambling. *Journal of Gambling Studies, 19*, 235–256.
Leahey, T. H. (2001). Cognition and leaning. In W. E. Craighead & C. B. Nemeroff (Eds.), *The Corsini encyclopedia of psychology and behavioral science, Third Edition, Volume 1*. New York: John Wiley & Sons.
Lears, J. (2003). *Something for nothing: Luck in America*. New York: Viking.
Lesieur, H., & Custer, R. (1984). Pathological gambling: Roots, phases, and treatment. *The Annals of the Academy of Political and Social Science, 474*, 46–156.
Levine, H. (1978). The discovery of addiction: Changing conceptions of habitual drunkenness in America. *Journal of Studies on Alcohol, 39*, 143–174.
Long, M. (1878). *Mason Long the converted gambler*. Chicago: Donneley, Loyd & Company.
MacLeod, R. (1967). The edge of hope: Social policy and chronic alcoholism 1870–1900. *Journal of the History of Medicine, 22*, 215–245.
Mann, E. (1883). The pathology of inebriety and the importance of the early recognition and the repression of this disease in its incipient stages. *Quarterly Journal of Inebriety, 5*, 139–144.
Mann, E. C. (1886). Alcoholic neurasthenia. *The Quarterly Journal of Inebriety, 8*(4), 204–208.
Marconi, J. (1959). The concept of alcoholism. *Quarterly Journal of Studies on Alcohol, 20*, 216–235.
Maskelyne, J. N. (1894). *Sharps and flats: A complete revelation of the secrets of cheating at games of chance and skill*. London: Longmans, Green.
Mason, T. (1876). Anniversary address. *Quarterly Journal of Inebriety, 1*, 1–24.
Mason, T. L. (1877). Anniversary address: Inebriety a disease. *Quarterly Journal of Inebriety, 2*(1), 1–28.
Maudsley, H. (1868). *The physiology and pathology of mind* (2nd ed.). London: Macmillan.
McCormick, M. (1969). First representations of the gamma alcoholic in the english novel. *Quarterly Journal of Studies on Alcohol, 30*, 957–980.
Melville, H. (1851/2009). *Moby Dick*. London: Arcturus Publishing Limited.
Morel, B. (1857). *Traité des dégénérescences physiques, intellectuelles et morales de l'espèce humaine et des causes qui produisent ces variétés maladives*. Paris: J.B. Baillière.
Moseley, W. (1838). *Eleven chapters on nervous or mental complaints, and on two great discoveries, by which hundreds have been, and all may be cured*. London: Simpkin, Marshall.
Nevill, R. (1909). *Light come, light go: Gambling – Gamesters – Wagers: The turf*. London: MacMillan and Company.
New Zealand Ministry of Health. (2004). *Preventing and minimising gambling harm: Strategic plan 2004–2010, needs assessment, proposed three-year funding plan, proposed problem gambling levy rates. New Zealand*: Author. http://www.moh.govt.nz/moh.nsf/0/CA598932BB52A37DCC256E610016B0AE/$File/ProblemGamblingConsultation.pdf.
Parrish, J. (1885). Solitary midnight inebriates. *Quarterly Journal of Inebriety, 7*, 156–159.
Peele, S. (1989). *Diseasing of America: Addiction treatment out of control*. Lexington, MA: Lexington Books.
Peele, S. (2003). Is gambling an addiction like drug and alcohol addiction? Developing realistic and useful conceptions of compulsive gambling. In G. Reith (Ed.), *Gambling: Who wins? Who loses?* (pp. 208–220). Amherst, NY: Prometheus Books.
Pinel, P. (1806). *A treatise on insanity, trans. D. D. Davis from the French edn of 1801*. Sheffield: Cadell & Davies.
Porter, R. (1985). The drinking man's disease: The 'pre-history' of alcoholism in Georgian Britain. *British Journal of Addiction, 80*, 386–396.
Porter, R. (1987). *Mind forg'd manacles: A history of madness in England from the restoration to the regency*. Cambridge, MA: Harvard University Press.
Prichard, J. (1822). *A treatise on diseases of the nervous system*. London: Thomas & George Underwood.

Prichard, J. (1835). *A treatise on insanity and other disorders affecting the mind*. London: Sherwood, Gilbert & Piper.
Ribot, T. A. (1915). *The diseases of the will*. Chicago: Open Court Publishing Company.
Romano, J. (1941). Early contributions to the study of delirium tremens. *Annals of Medical History, 3*, 128–139.
Room, R. (2003). The cultural framing of addiction. *Janus Head, 6*, 221–234.
Rorabaugh, J. (1979). *The alcoholic republic: An American tradition, 1790–1840*. New York: Oxford University Press.
Rose, N. (1996). *Inventing our selves: Psychology, power, and personhood*. New York: Cambridge University Press.
Rosecrance, J. (1985). Compulsive gambling and the medicalization of deviance. *Social Problems, 32*, 275–284.
Rosenberg, C. (1979). The therapeutic revolution. In V. Vogel & C. Rosenberg (Eds.), *The therapeutic revolution* (pp. 3–25). Philadelphia: University of Pennsylvania.
Rosenthal, R. (2005, December). The categorization of pathological gambling and the impulse-control disorders not elsewhere classified. *Journal of Gambling Issues*, *15*.
Rowntree, B. (1905). *Betting and gambling: A national evil*. London: Macmillan and Co.
Rush, B. (1774). *Sermons to gentlemen upon temperance*. Philadelphia: Kimber & Richardson.
Rush, B. (1790). *An inquiry into the effects of spirituous liquors on the human body*. Boston: Thomas and Andrews.
Rush, J. (1804). *Charges and extracts of charges, on moral and religious subjects: Delivered at Sunday time by the Honorable Jacob Rush*. New York: Cornelius Davis.
Rush, B. (1809). *Medical inquiries and observations, Volume III*. Philadelphia: T. Dobson.
Rush, B. (1812). Medical inquiries and observation upon the diseases of the mind. Philadelphia: Kimber & Richardso. Reprint: New York: Hafner Press, 1962.
Saß, H., & Felthous, A. (2007). Historical and conceptual development of psychopathic disorders. In A. R. Felthous & H. Saß (Eds.), *The international handbook of psychopathic disorders and the law*. Toronto: Wiley.
Schmidt, L. A. (1995). A battle not man's but God's: Origins of the American temperance crusade in the struggle for religious authority. *Journal of Studies on Alcohol, 56*, 110–121.
Shryock, R. (1960). *Medicine and society in America: 1660–1860*. New York: New York University Press.
Simmel, E. (1920). Psycho-analysis of the gambler. *International Journal of Psychoanalysis, 1*, 352–353.
Sournia, J. (1990). *A history of alcoholism*. Cambridge: Basil Blackwell.
Steinmetz, A. (1870). *The gaming table: Its votaries and victims, in all times and countries, especially in England and in France*. London: Tinsley Brothers.
Streissguth, A. (1997). *Fetal alcohol syndrome: A guide for families and communities*. Baltimore: Brookes Publishing.
Streissguth, A., Barr, H., Kogan, J., & Bookstein, F. (1996). *Understanding the occurrence of secondary disabilities in clients with fetal alcohol syndrome (FAS) and fetal alcohol effects (FAE): Final report to the Centers for Disease Control and Prevention on Grant No. RO4/CCR008515 (Tech. Report No. 96-06)*. Seattle: University of Washington, Fetal Alcohol and Drug Unit.
Stough, H. (1912). *Across the dead line of amusements*. New York: Fleming H. Revell Company.
Sydenham, T. (1974). *The works of Thomas Sydenham, M.D*., trans. by R.G. Latham. 2 volumes. London: The Sydenham Society: 1848–50.
Tavares, H. (2008). Impulse control disorders: The return of Esquirol's instinctive monomania. *Revista Brasileira Psiquiatria*, *30*(Suppl. I), S1–S2.
Trotter, T. (1813/1981). *An essay, medical, philosophical, and chemical, on drunkenness*. From first Philadelphia edition, 1813. (Reprinted, New York: Arno Press, 1981).
Tyrrell, I. (1979). *Sobering up: From temperance to prohibition in Antebellum America, 1800–1860*. Westport: Greenwood Press.

Valverde, M. (1998). *Diseases of the will: Alcohol and the dilemmas of freedom*. Cambridge: Cambridge University Press.

Weems, M. (1812). *God's revenge against gambling: Exemplified in the miserable lives and untimely deaths of a number of persons of both sexes who had sacrificed their health, wealth and honor at the gaming tables* (2nd ed.). Philadelphia: Bailey.

White, W. (1998). *Slaying the dragon: The history of addiction treatment and recovery in America*. Bloomington: Chestnut Health Systems/Lighthouse Institute.

White, W. L. (2004). The lessons of language: Historical perspectives on the rhetoric of addiction. In S. W. Tracy & C. J. Acker (Eds.), *Altering American consciousness: The history of alcohol and drug use in the United States, 1800–2000* (pp. 33–60). Boston: University of Massachusetts Press.

Woodward, S. (1838). *Essays on asylums for inebriates*. Massachusetts: Worcester.

Wright, T. (1886). Alcoholism incompatible with accurate perception of facts – The value of legal testimony unsettled and depraved by alcoholic influence. *Quarterly Journal of Inebriety, 8*, 27–29.

Wright, T. (1882). Prominent traits in chronic alcoholism – Organic and ideational. *Quarterly Journal of Inebriety, 4*, 137–150.

Chapter 5
Early to Middle Twentieth Century: Psychoanalysis and Drug Addiction

Abstract This chapter begins with an account of early psychoanalytic theories about PG. These involve themes such as masochism (deep down, the gambler wants to lose) and, unsurprisingly, looked to early childhood determinants and the unconscious. From there, however, we quickly turn to narcotic addiction, which in the early twentieth century came to set the standard for addictions as such. While alcoholism had provided the first prototype, this changed when the term "addict" came to be associated with the stereotypical junkie: a supposedly wretched, dishonest, and reprehensible creature. Given that newly illicit drugs such as heroin and cocaine had become less popular among upper- and middle-class whites, and more often associated with racial minorities and the underclass, public and even scientific discussions of drug addiction were increasingly marked by negative portrayals. Ironically, addicts often vindicated these stereotypes for assorted reasons such as wanting to garner sympathy or (if recovered) to distance themselves from their previous lives. All of this led to a conception of drug addiction that would affect perceptions of other compulsive disorders, and PG was no exception.

Keywords Psychoanalysis • Drug addiction • Stereotypes

5.1 Introduction: PG and Psychoanalysis

Although inebriety theorists and others had touched upon PG, psychoanalysis represents the first concerted and direct attempt to medicalize it (see: Rosenthal, 1987). Von Hattinberg (1914—as cited in Rosenthal, 1987) is said to provide the earliest example of a serious effort to treat PG in such terms, predictably rooting the issue in childhood and associating it with masochism. While we discuss some of these approaches, our treatment will be brief for one main reason: much of what the early psychoanalysts had to offer has been discarded, in favor of what could be called an addiction model (Lesieur & Custer, 1984). It is in fact worthy of note that Freud himself, when discussing Dostoyevsky's gambling problem, identifies two main

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points: the gambler is not necessarily out to win; gambling is an addiction. Freud seemed to have little faith in his own ability to explain PG, and, as Rosenthal points out, for Freud, "Pathological Gambling is an addiction. This is the only diagnostic category that Freud uses—he does not refer to it as an obsessional neurosis" (Rosenthal, 1987, p. 46). Rosenthal also mentions that for Freud, all addictions were linked: "alcoholism and drug abuse were all manifestations of a primary addiction" (p. 47). Whether prescient or simply unable to make sense of PG, Freud's view—one that seemed only loosely related to his psychoanalytic method—would eventually become more important to the PG field than psychoanalysis.

At the time, however, Freud's most influential thought was that of PG as reflecting a need for self-punishment. Simmel (1920) invoked themes such as masturbation, masochism, and anality. While psychoanalytic models often focused on oedipal issues and themes related to masturbation, it was Bergler (1943, 1957) who used psychoanalytic theory to paint the problem gambler as a kind of masochist with an unconscious desire to lose. This notion had the most influence, at least in the middle twentieth century.

When Bergler speaks of the "gambler," he means neither the casual players who are not addicted nor the sharks who prey successfully on suckers. The *gambler* to whom he refers is the PG, the one who "always loses in the long run" (Bergler, 1957, vi). Bergler thinks he knows why: unconsciously, the gambler wishes it. Bergler also claims to know the telltales signs, a set of diagnostic categories, perhaps: "1. The Gambler habitually takes chances; 2. The game precludes all other interests; 3. The gambler is full of optimism and never learns from defeat; 4. The gambler never stops when winning; 5. Despite initial caution, the gamblers risks too much; 6. "Pleasurable-Painful" tension is experienced during the game" (pp. 2–5).

For the sake of historical continuity, it is worth noting that according to Bergler, gamblers overestimate themselves, much like Esquirol's monomaniacs discussed in the last chapter. Due to issues rooted in childhood, the gambler remains childlike, a parasite who does not wish to earn his own living. An important challenge to this whole line of thought would come from figures such as Lesieur (1979), who simply questioned whether a gambler had to be this way prior to the onset of PG. But, till the middle twentieth century, such incursions into childhood were fairly dominant.

What perhaps all of the perspectives covered so far have in common—from Rush and Esquirol through to Lesieur and Room to this day—is that we are targeting a seemingly mysterious behavior: why would people engage in activities that are obviously destroying their lives? The psychoanalytic answer involved the *unconscious*. Bergler's third chapter is titled *Where Logic Ends*, *The Unconscious Takes Over* (Bergler, 1957, p. 15). He claims that PG simply cannot be explained by reference to the conscious level. The gambler's explanations are ridiculous and often grandiose: "It is virtually impossible to match this lordly self-assurance with an equivalent attitude on the part of an average person leading a normal life. A phenomenon like this can be found only among pathological fanatics" (p. 16). Quite simply, the reality principle loses out, and Bergler even invokes a term that all addiction professionals will come to know: "denial" (p. 19).

Rooted in issues pertaining to parents and childhood experiences, the gambler's behavior is a form of self-punishment, though Bergler does refer to it as an "addiction" (p. 55). Few gamblers will ever seek treatment on their own, and self-cure is impossible (P. 239).

But even as psychoanalysis was dominating PG, a minor "field" at the time, the very idea of addiction was being defined by reference to a different breed: the junkie, the outcast, and the derelict. Through the first half of the twentieth century, those addicted to heroin and other illicit substances were used to define the term "addict"—and the term was to carry an incredible stigma. As mentioned in the third chapter, as late as the 1980s, DSM opted for "dependence" rather than "addiction" when labeling SUD (APA, 1987) in order to protect the afflicted from a pejorative; the decision was not based on scientific considerations (O'Brien, 2006). Even as figures such as Bergler, and others such as Custer after him, tried hard to paint the PG as sick rather than as immoral, it was not an easy task. A proper grasp of twentieth-century drug addiction history is key to understanding why. When later figures in the 1980s were opting for an addiction model of PG, it was in the wake of a development that had painted a very unflattering picture of what addicts are: lying, conniving, sociopathic, and psychopathic. Such descriptors may properly apply to some PGs, maybe even many, but obviously not all. The challenge for PG studies in the twenty-first century will be to sift it all out: *to what extent are these descriptors endemic to the affliction?; to what extent are they rooted in historically specific misconceptions*? This chapter was written to give us all a chance—maybe for the first time in Western history—to get it right.

5.2 The Demonized Drug Addict

Current ideas about "the addict," centered primarily in the chronic disease model, are indebted to many determinants. These include the interests of practitioners, domestic (often racist) politics, global (imperialist) politics, science (sometimes respectable, sometimes not), and the testimonies of addicts themselves. Throughout the nineteenth century, alcoholic beverages provided the conceptual standard for other addictive substances, with opium addiction consistently compared to alcohol addiction. By the mid-twentieth century, this rapport had been reversed. It was as though the alcohol addiction concept had receded, with addiction being associated primarily (or exclusively) with illicit substances. Of course there was an alcoholism concept, yet many of us can even recall as a children or teens in the 1960s and 1970s, when authorities and lay commentators would explain alcoholism with statements such as the following: "The alcoholic is just like the dope addict. He can't stop." By then, opiates had come to provide the standard for addiction, a complete reversal from the nineteenth century. The topic and vehicle of the metaphors had swapped places due to the relative familiarity with them. So in place of the alcoholic, the drug-addicted junkie had become the prototype for the addiction category (cf. Lakoff, 1987).

Virginia Berridge and Griffith Edwards have discussed the way, in Britain, a disease view of opiate addiction was, during the nineteenth century, "caught up in the process" which had already laid the ground for a disease conception of chronic drunkenness (Berridge & Edwards, 1987, p. 154). David Musto has provided an added insight to this development, albeit in an American context. "The notion of a vice-disease easily acquired, progressively damaging and difficult to cure" had two solid precedents in the public mind: alcoholism and syphilis (Musto, 1973, p. 75). And Mariana Valverde has offered a good synopsis: the general concept of "addiction" current today is largely a mixture of the disease conception of alcoholism (involving mainly the compromising of free will) and the more nefarious drug addict identity developed in the early twentieth century (Valverde, 1998, p. 9).

To be sure, there have been twists and turns along the way. Most notable perhaps is the late twentieth-century resurgence of a broad addiction concept, applying to all substances (and even behaviors), which went out of vogue shortly after the decline of inebriety. David Courtwright (2004) has pointed out the way, after prohibition, drug-specific addiction concepts became dominant. For political reasons, drugs such as alcohol and tobacco received a status apart from the illicit substances. For scientific reasons, the ideas used in the nineteenth century to invoke notions of susceptibility to all substances of abuse had lost credibility. Yet more recent scientific advances (such as those involving studies of dopamine pathways), along with shifting sociopolitical realities, have taken us back to a more unified conception. Tobacco, for biological as well as sociodemographic reasons, is once more perceived as a gateway drug, as it was in the late nineteenth and early twentieth centuries, often as the first step towards alcohol or cocaine abuse. Opiate addicts and alcoholics are again more likely (as was the case over a 100 years ago) to be viewed through the same psychological lens. Courtwright even speaks of "the rebirth of inebriety" (Courtwright, 2004)—a more inclusive addiction concept is once more in vogue as opposed to the drug-specific ideas more popular during much of the twentieth century. Today's ideas are perhaps more defensible than inebriety theory, and certainly less reductionist. Yet, in a sense, we have come full circle: alcoholics, heroin addicts, and even compulsive (problem) gamblers are often understood in terms that resemble each other far more closely, especially when compared to mid-twentieth-century understandings of smoking and drinking on the one hand and cocaine and heroin use on the other (see, e.g., Jacobs, 1986, 1988). That compulsions such as gambling are also discussed along similar lines suggests that older notions of "disease of the will" have, with different terminology, reappeared (Valverde, 1998; see Blume, 1986; Brown, 1991, 1997; Jacobs, 1986; Lesieur, Blume, & Zoppa, 1986; Peele, 1975; 1989).

Ron Roizen, a top authority on middle to late twentieth-century developments in the addiction field, mentions in a 1993 conference presentation that complaints about the imminent "merging" of addiction concepts could already be heard in the 1960s. For some time, alcohol had been vindicated due to its special status among psychoactive substances: it was perceived in a person-specific fashion and hence as dangerous only to a few unfortunates. A bit of realism in the perception of illicit drugs, combined with a decline in tolerance for many misbehaviors associated with

drinking, has led to a perception that "alcohol is too legal whereas drugs, on the other hand, are somewhat too *illegal*" (Roizen, 1993). One effect of the merging of addiction concepts has been a trend in the direction of unified treatments for drugs, alcohol, and even other disorders such as pathological gambling (Lesieur & Blume, 1991). Another development along these lines is the more recent popularity of the "public health" model—a potentially interventionist perspective normally marked by harm reduction and prevention principles and a very different view of addiction: rather than the either/or, absolutist notion that one either is or is not an addict, this model perceives harms and compulsions along a continuum, applicable to most everyone. The PH model presents a clear challenge to the individual chronic disease model by offering as an alternative a model based on infectious disease. Yet the public health conception has not been able to displace the more individualistic—pathology based—disease conception. Instead, competing perspectives vie for supremacy. To this day, at least in North America, the chronic disease model still reigns. Like the chronic disease model, public health has branched out into other areas such as gambling (Korn, 2005; Leeds, Grenville & Lanark, District Health Unit, Leeds and Unit 2005).

The history of how narcotic addiction came to be identified involves a complex interaction of sociopolitical, pharmacological, and medical developments. Morphine addiction became more common in the USA shortly after the Civil War. Yet, as Musto has pointed out, medical practice during the Civil War is an insufficient explanation since many European countries during the second half of the nineteenth century also fought wars, used morphine as an analgesic, yet experienced nothing close to comparable rates of morphine addiction (Musto, 1973, pp. 1–2.) As drug addiction involving hypodermic needles was the fastest-growing concern in the late nineteenth century, it is worth mentioning that few Civil War doctors had hypodermic equipment which at the time was a new technology (Courtwright, 1982, p. 55). As late as 1865, addiction by means of injection was not a concern, and as late as 1870 many doctors still doubted that morphine was addictive (Morgan, 1974, p. 7). Throughout the 1860s, such injections were, without controversy, suggested as an appropriate cure for opium dependency. It was in 1870 that Thomas Clifford Allbutt publicly identified *morphinism* as a serious danger, and his views were at first poorly received (Howard-Jones, 1947, p. 232).

Musto provides the most comprehensive history of the concerns which eventually led to drug prohibition. By the late nineteenth century, patent medicine companies resisted vehemently the growing efforts to have them list their ingredients on labels (Musto, 1973, p. 4). Often containing opiates, cocaine, or both, such medicines had been in circulation and had not been considered problematic.

Musto sees racist sentiment as, at least in part, responsible for the changing attitude. Chinese began coming to North America at around 1870, settling almost exclusively near the West Coast. Brought in to build railroads, their labor became superfluous during an economic depression in the 1870s. They were even seen as competing with white, unionized labor. That decade witnessed anti-Chinese race riots in both California and Canada. "Thus," Harris Isbell points out, "the 'yellow peril' was born, culminating in the Chinese Exclusion Act of 1888" (Isbell, 1963, p. 159).

Popular among these immigrants, the habit of opium smoking gained attention accordingly in the later nineteenth century. Mistrust and fear of Asians culminated in increasing anti-opium sentiment (Musto, 1973, pp. 5–6: see also: Hickman, 2000). Cocaine, on the other hand, had become the drug of choice for many blacks in the South who had been deprived of alcohol due to local prohibitory statutes. Cocaine originally became popular not just as a stimulant but also as a cure for certain ailments such as sinusitis. It was also used as a cure for addictions to opium, morphine, and alcohol. However, at a time marked by lynchings, segregation laws, and the disempowerment of blacks in general, in the later nineteenth and early twentieth centuries, "Negroes on cocaine" were said to attack whites, rape whites, and even possess the ability to withstand .32 caliber bullets (Musto, 1973, pp. 6–7; Szasz, 1974, pp. 75–87).

There is no need here to go into queries concerning the extent to which actual use by targeted groups was likely to have been exaggerated—moral panic was clearly rampant (Cohen, 2002). More important is the change in perception: whereas in the 1870s opiate addiction was thought to target the "better elements" of society, by 1900 opiate and cocaine use were primarily associated with racial and cultural minorities as well as the poor (Musto, 1973, p. 6; Morgan, 1981). Along the way, though, there was confusion. For a time during the transition, blacks seemed less likely to become opiate addicts—a lack of susceptibility sometimes attributed to the "fact" that their nervous systems were not as evolved as those of whites and Asians (Morgan, 1981, pp. 34–35). In reality, the best explanation for this lower susceptibility lay in medical practice: most opiate addiction among whites was medical in origin; as few blacks had access to doctors, or to Asian contacts, this form of addiction was rare among them (Courtwright, 1982, p. 49). The overall rise, and subsequent decline, of opiate addiction among the population as a whole hinged to a large degree on medical practice. Changes in perception affected the behavior of doctors, which in turn affected perceptions of the problem (Courtwright, 1982, pp. 2–3). Whereas many critics of drug prohibition have (with justification) argued that prohibition turns addicts into criminals, it is also clear that the transformation of the addict into a criminal was underway before 1914 when the Harrison Act became law (Courtwright, 1982, p. 3). The 1914 Harrison Act made all nonmedical use of cocaine, heroin, and related products illegal. Drug prohibition would have been hard to enact and impossible to enforce, without this change in perception. As Courtwright has pointed out in this context, *the way we perceive an addiction will depend largely upon who is addicted* (Courtwright, 1982, p. 3–4).

Throughout the nineteenth century, most opiate addicts were white women. Most were middle or upper middle class. Addiction among these elements can best be understood by bearing in mind that medical practice was the main cause. As mentioned, this changed between the 1870s and the turn of the century. According to Courtwright, the transition was complete by around 1940 (Courtwright, 1982, pp. 38–42, 113). As fewer and fewer opiate addicts were medical in origin, and as fewer were from respectable segments of society, professionals were more likely to see addiction in terms of psychopathy (Courtwright, 1982, p. 126). Our current associations between addiction and criminal mentality are indebted to this transformation.

The use of cocaine as a cure for other addictions can only in part be explained by its novelty and the mystification of the euphoria it could produce. Given that new drugs such as Demerol have been considered for this purpose much more recently, one should bear in mind the state of medicine in the 1870s. Withdrawal symptoms were poorly understood, often confused with other diseases, and then "remedied" by more addictive drugs. To highlight the speed at which perceptions were changing and how it would be imprudent to make a hard distinction between professional and lay opinion, we can note that by the 1890s the general public had a better grasp of withdrawal than did doctors in the 1870s (Morgan, 1981, pp. 37–38). The reform movements of the time, considered so far mainly in the context of alcohol and gambling, were understandably prone to extremes and hysteria when targeting opiate addiction—accentuating the role of moral panic in public attitude towards addictions (Cohen, 2002). Despite the difficulties involved in reducing antidrug reform to any single motive, Musto is able to offer a useful distinction: overall, moral reformers of the time were either concerned with corporate misbehavior or with individual morality (Musto, 1973, p. 10.) This breakdown, which need not preclude cases of overlap, can address two fears of the time: fear of men with money and power and fear of derelicts lurking in the shadows or, worse, derelicts who see no reason to hide.

5.3 The Development of an Opiate Addiction Concept: Alcohol, Denial, and the Need for Ascendancy

Already in the eighteenth century, one could find discussions in the West of what today would be called physical dependence. *The Mysteries of Opium Reveal'd*, written by John Jones and published in 1700, contains some sober comments on the withdrawal phenomenon as well the consequences of excessive doses. One feature distinguishing this text from later nineteenth-century accounts is an absence of judgmental attitudes (though Jones does identify "long and lavish use" as a form of "habitual intemperance") (Jones, 1700, pp. 32, 238–244, 245). The same can be said of Samuel Crumpe's *An Inquiry into the Nature and Properties of Opium,* published in 1793 (Crumpe, 1793). Berridge and Edwards (1987) have noted the lack of "moral condemnation or alarm" (p. xxv). The latter would come often in the form (or guise) of psychological evaluation. While Courtwright (1982) correctly identifies 1895–1935 as key to the transformation of the addict into a derelict, this transformation had precedents in the mid-nineteenth century, as medical wisdom was already transforming the addict into a liar and the lower-class addict into a prototype for the subhuman addict to come (Berridge & Edwards, 1987, pp. 105–109; Berridge, 1978). To be sure, as opiate use became less acceptable, users would be more likely to lie about it – hence, the empirical validity of at least some of the science.

What must concern us here—whether our area is alcoholism, drug addiction or problem gambling—is the way in which addiction came to be identified as a condition which, in itself, causes one to lie. Here, an entire "science" of the soul was built around historically specific developments. Major mid-nineteenth-century figures—Jonathan Pereira in Britain, George Wood in the United States, and Edward Levenstein in Germany—each independently reached similar conclusions regarding the chronic opiate user's propensity to lie and suffer moral decline (Pereira, 1853; Wood, 1868; Levenstein, 1878a/1981). According to Pereira, "It is extremely difficult to discontinue the vice of opium-smoking, yet there are many instances of it being done. The continuance of this destructive practice deteriorates the physical constitution and moral character of the individual, especially among the lower classes" (Pereira, 1853, p. 2013). Yet one could witness differences, as the American author George Wood was considerably less critical of opiates than his British counterpart. It seems that strong condemnation of opiates came a bit later in the USA than in Britain. Musto (1973) has identified England's opium wars with China as a possible reason for this difference. The opium war was fought to open up free trade in opium into China. The British were forcing the Chinese to buy opium from them. This makes Musto's connection somewhat puzzling. The link perhaps is that the war led to a greater trade in opium and greater usage of opium and drew social attention on opium as a potential issue. Before then, opium was largely irrelevant. Another explanation could be America's harsher treatment of alcohol, which Wood considered more dangerous than opium (Wood, 1868, pp. 725–728). Dorchester (1884) also seemed to consider opium a far less serious matter than alcohol (pp. 557–558).

Levenstein's *Morbid Craving for Morphia* first appeared in English in 1878, a year after the German original (Levenstein, 1878b). It was a pivotal text and, as the title suggests, Levenstein is more concerned with the craving itself than with any related complications. In fact, even mental disorders are identified as effects rather than as causes of morphine addiction. Not only does Levenstein identify the craving in ways that later researchers would call "primary" in its disease status, but he also draws upon our culture's long experience with the effects of alcohol:

> The injections of morphia not only relieve sleeplessness and pain, but their action induces a change in the entire system. It produces a state of mental excitement that can only be compared to that produced by alcohol. The temper is altered; depressed persons will become lively; to the fainting person it imparts strength; to the weakly it restores energy; the taciturn become eloquent; shy persons lose their bashfulness… (Levenstein, 1878b, p. 4).

It is telling that morphia's effects "can only be compared" to those of alcohol. Though it was standard practice to explain opium's effects through comparisons to alcohol, Levenstein may have been the first (though certainly not the last) to explicate morphinism by means of comparison to dipsomania. Why would Levenstein compare morphine to alcohol rather than to its kindred, opium? This statement likely is related to an aspect of human categorization—our use of prototypes to define both literal and metaphoric categories (see Lakoff, 1987). In this case, clearly alcohol withdrawal was Levenstein's mental prototype for the withdrawal category.

His own clinical experience with alcohol could be one reason (Sonnedecker, 1963, p. 32). Yet just as the chemical connection between beer and hard liquor had not always been evident, so Levenstein was free to make associations as they appeared (perhaps intuitively) most sensible. Once dependency had set in, "they resort to morphia as the drunkard to the dram bottle" (Levenstein, 1878b, p. 4). Like liquor, morphia can play the devil's role, offering its victims exactly what they need. Similar to "dipsomania" in many respects, morphine addiction is also different in that there are no glaring physical symptoms and no impairment of the intellect (pp. 5–8). Of greater interest is the way Levenstein devotes an entire section of his book to comparing morphine withdrawal to alcoholic delirium tremens, not to opium withdrawal which was well known at the time and, for obvious reasons, more similar. Delirium tremens as caused by morphine withdrawal (for Levenstein this was neither metaphor nor analogy, but delirium tremens as such; see also Levenstein, 1878a/1981) can involve changes in the conditions of the pupils, "severe collapse," "disordered speech," and "double vision" (Levenstein, 1878b, pp. 50–54).

The parallels drawn become more involved when Levenstein addresses what today is called "denial." On questions concerning impotence, it would of course be unwise to trust a morphine addict's responses since even healthy persons will lie about this topic. Furthermore, addicts are said to be especially dishonest on all matters pertaining to themselves (Levenstein, 1878a/1981, pp. 77–78). Yet Levenstein acknowledges that the same addicts can still be functioning, and even virtuous, citizens (Levenstein, 1878b, p. 8). Bearing in mind that we are tracing the development of a "disease" which has been defined in the modern fashion by its self-contained (inner) teleology, it is helpful to note how Levenstein treats the mental aspects of the disease as *extremely self-referential:* addicts who may retain enough virtue, say, not to bear false witness against others would still be prone to lying about their own misdeeds; further, the likelihood of lying increases with questions regarding the addiction itself such as the amount one uses (Levenstein, 1878b, pp. 9 & 112). The denial phenomenon is *primarily about addiction*. We might conclude that an addicted thief will, if there is some honesty remaining, be *less likely to lie about a theft than about the drug use itself*. Self-contained and possessing its own teleology, this disease has a function (denial) which directly targets the disease itself. We are left with a very "private" disease, due as well to the emerging culture of privacy and to the fact that addicts were more prone to lie about use once such use became unacceptable. Nonetheless, the self-referential nature of the phenomenon of denial is beginning to be seen (and perhaps in reality to form) in an addiction-specific fashion. Again, we need not attribute these mental traits solely to context, *but it should be clear that things were changing in ways that eventually led to a situation where (today) many consider the phenomenon of denial to be linked to the habit itself irrespective of context, and regardless of whether the addiction involves alcohol, crack or gambling.*

Levenstein's text is useful on another point as well: Levenstein puts into context his own views on abstinence and immediate cessation of use. This was a time when modern medicine, with its emphasis on drastic measures such as surgery, was gaining ground:

> The human organization, as we know from surgery, midwifery, etc., will, in general, submit more easily to sudden and energetic treatment, even when acting powerfully, than to a milder influence. The gradual deprivation, requiring a long time, excites the physical and moral powers to a greater extent, because every dose smaller than the previous day's quantity will produce new symptoms of reaction. (Levenstein, 1878b, p. 110).

There is no need to deny Levenstein's sincerity, as the above quotation gives plausible reasons for immediate withdrawal, and Levenstein follows with other reasons, many of which are still valid today (though contentious). It was contentious in Levenstein's time as well and more popular in England than in the United States. Berridge and Edwards have pointed out that abrupt withdrawal reflected a harsher and more condemnatory posture than the gradual methods favored before opiates became problematic (Berridge & Edwards, 1987, pp. 160–161). What Levenstein has to say on the drawbacks of gradual withdrawal is less interesting than the results of these drawbacks: "they [patients] lose confidence in themselves and in their doctor, whose full and absolute authority is indispensable for… successful treatment" (Levenstein, 1878a/1981, p. 111). Important to mad doctors, the idea of any doctor having absolute authority—ascendancy—over a patient was still controversial (Musto, 1973, p. 78). Yet it was to became key to the treatment of insanity as well as addiction (Foucault, 1973; Porter, Porter 1987; Rush, 1812; Trotter, 1813/1981).

The extent to which such attitudes would continue to reverberate in the later parts of the twentieth century would hinge, understandably, on the extent to which addicts were considered innately dishonest and even psychopathic. If so considered, such ascendancy would make sense and "client-centered" options would be harder to defend. Furthermore, we are dealing with a development that need not be seen as merely an external imposition upon addicts by the authorities of the day. Addicts played along, and their own confessions were complicit in the creation of the identities of addicts to come.

5.4 Opiate Addiction: Confession of Hidden Identities

Any socially constructed aspect of addiction must be seen in connection to the roles played by addicts themselves. The role of suggestion should never be underestimated when studying behavioral disorders. Yet, interestingly, the development of the addiction concept involved not just *external* labels being placed upon addicts but also a process of *internalization* involving a great deal of cooperation on the part of the targeted population.

Published in 1881, *The Morphine Eater, or From Bondage to Freedom,* provides confessions by addicts along with a claim that these stories are an accurate description of the addict's plight (Morgan, 1974, p. 111). Sympathetic to opiate abusers, the book is filled with statements such as the following: "Were I to continue writing both day and night for a week I could not then fully relate the unutterable torments I have gone through" (Morgan, 1974, p. 112). In this anonymous confession, the plea for sympathy and understanding among respectable folk is evident: "To a man

of a once proud spirit this is intensely galling" (Morgan, 1974, p. 113). There is, in fact, little reason for others to despise him: "I have acquired as profound contempt for myself, and believe *I really do despise* myself more thoroughly, (if possible), than anybody else does" (Morgan, 1974, pp. 113–114). And yet, "One in my condition gets little sympathy. Men say, 'he ought to stop,' &c., as though he *could* stop of his own volition, and regard him more as an offender against society, than as a helpless victim, bound hand and foot with bands of iron. I have born the most unfair comments and insinuations from people utterly incapable of comprehending for one second the smallest part of my suffering…" (p. 114).

Now, for the clarification of historical developments, this addict's following complaint is noteworthy: "Why do not the temperance lecturers now so numerous and 'eloquent' pass now and then from their vivid pictures of the horrors of alcohol, to speak of the more deadly, because more secret, monsters of opium and chloral?" (Morgan, 1974, p. 115). It was indeed still a "secret" to many, and this secrecy served to conjure intrigue along with hysteria. With newer drugs, a lack of understanding made possible a more earnest attempt at finding the Devil himself behind addiction. One need not deny the tragedy of this last addict's situation in order to note his attempt to garner sympathy and his willingness to attack the drug and its effects in order to achieve that end. This way, any addict could play a role in the creation of the stereotypical addict—conniving and pathetic—in the very attempt to vindicate himself. This still goes on today, with unfortunate political repercussions.

Cooperation between mythmakers and the very targets of the derisive myths has been an essential part of the formation of the chronic disease model of addiction. Along these lines, another confession merits attention:

> I had been a user of opium about eight months when I first began to realize a mental change in myself—a new moral viewpoint, so to speak. I handled a story of the arrest of a criminal with real regret, while the news of a clever crime with the perpetrators safely at liberty was a personal gratification. (Morgan, 1974, pp. 125–126)

This man, a journalist, even describes how he got to the bottom of a mystery involving a criminal's whereabouts. As an opium user, he now possessed the mind of a criminal. Working on the story (with his newfound ability), he put himself in the fugitive's place. "The answer came to me like a flash. I roused my lethargic body with a sudden start. *I knew where that criminal would hide*" (Morgan, 1974, p. 126.). Apparently the journalist tracked down the individual in order to get a story and was able to further astound the criminal by informing him of his own plans. The criminal was then able to guess that the journalist must have been an opium smoker, for no one else could think this way.

Yet, only a few decades prior, the typical opiate addict was a respectable lady who went to church and, given her upbringing, might never consider anything like stealing. What happened? A process requiring no conspirators in the corridors of power, the internalization, and subsequent confession of delinquent identities has had undeniable effects on the formation of psycho-behavioral theories which have been built around the addiction concept.

Foucault (1978) has said:

> We have since become a singularly confessing society. The confession has spread its effects far and wide. It plays a part in justice, medicine, education, family relationships, and love relations, in the most ordinary affairs of everyday life, and in the most solemn rites; one confesses one's crimes, one's sins, one's thoughts and desires, one's illnesses and troubles; one goes about telling, with the greatest precision, whatever is most difficult to tell. (p. 59)

Anyone familiar with North American television has probably seen at least segments of talk shows, reality television, and other programs vindicating this observation. Recovered addicts will talk about their once complete lack of morality and their dishonesty (in contrast to their current redemption). So the tradition continues into the twenty-first century, with fellowships such AA, NA, and GA playing a central role. This is not to suggest that discourse in these organizations is dominated by the types of self-deprecating monologues presented above. After all, AA is for alcoholics—a condition less stigmatized than drug addiction. NA, though formed in the 1950s, only began to flourish in the 1960s and 1970s, when addiction was being destigmatized. Yet, even if the picture has become inconsistent, the early twentieth-century images still reverberate. One need look no further than AA and NA literature for evidence. The AA Big Book states that "Selfishness—self-centeredness! That, we think, is the root of our troubles… the alcoholic is an extreme example of self-will run riot." Consistent with some of the characterizations discussed in this chapter, the Big Book also says that "We alcoholics are undisciplined…" Like the morphine addict who may be honest about all matters except morphine, the alcoholic "may be sensible and well balanced concerning everything except liquor, but in that respect he is incredibly dishonest and selfish." Like the opiate addict who possessed a unique ability to see into the mind of a criminal, so only the alcoholic can consistently see through the lies of another alcoholic. What kind of person is this alcohol addict? He is someone who, given the nature of his disease, must be subject to complete control (or *ascendancy* if we like—though ironically he must agree to this himself). When trying to help a drunk, the AA must work with this in mind: the disease of alcoholism requires a complete breakdown of the alcoholic's current sense of self and values: "The more hopeless he feels, the better. He will be more likely to follow your suggestions" (Alcoholics Anonymous World Services, Inc., 1976, pp. 62, 88, 21, 94—first published in 1939). Dealing with addiction to illicit drugs, the NA text is often more blunt. There is no question of a pure physical addiction concept (which may vindicate the addict's character). Like Lawrence Kolb, whom we will discuss shortly, NA views the addict as, if nothing else, at least potentially psychopathic: "There is something in our self-destructive personalities that cries for failure." "Through our inability to accept personal responsibilities we were actually creating our own problems. We seemed to be incapable of facing life on life's terms" (World Service Office, 1988, pp. 77, 13). "The sick, self-seeking, self-centered, and self-enclosed world of the addict hardly qualifies as a way of life; at best, perhaps it is a way to survive for a while. Even in this limited existence it is a way of despair, destruction, and death" (World Service Office, 1976, p. 2).

This is not to suggest that the attitudes of these fellowships could be reduced to such generalizations, only that these notions—highly questionable in that they are said to apply to all alcoholics and drug addicts—still reverberate throughout the world of addiction. Above all, the afflicted themselves—often to put distance between themselves and their deviant pasts—will readily give experiential vindication to these ideas. That they may, in many cases, contain some truth is not at issue. That these notions are culturally and historically specific is hard to deny.

5.5 The Science of Opiate Addiction: Psychopaths and Derelicts

Berridge and Edwards (1987) have commented on how, in England, the inebriety movement was too closely allied with temperance for any serious science of alcoholism to emerge. Properly scientific work on the topic came mostly from continental Europe (pp. 154–155). North American opium studies did not fare much better, as the highly ideological anti-opiumists were too influential. Historically, a key feature of inebriety was a greater emphasis on psychological matters in contrast to the straightforward discussions of dependence available before opiates had become a prominent concern (the trend would continue in this direction when psychoanalytic and related ideas achieved prominence). Despite purportedly biological underpinnings, neurasthenia and degeneracy were essentially psychological notions (based on psychological assumptions rather than any psychological research), leaning upon questionable biology and marked by a trend in the direction of perceiving addiction as something that could only afflict certain individuals[1]. As seen in the last chapter, some substance addicts were treated more sympathetically than others. The tendency to lie, or the absence of a desire to cease using drugs, could be used as evidence of hereditary afflictions, whereas the physical symptoms of withdrawal could be insufficient to identify a true "morphinomaniac." Though Americans trailed the British in their condemnation of opiates, they soon rectified this and were the first to produce, in significant numbers during the late nineteenth and early twentieth centuries, texts dealing specifically with drugs other than alcohol rather than as a subset of the latter (Berridge & Edwards, 1987, p. 151; See Crothers, 1911; Kane, 1881,; Mattison, 1890). Still, inebriety was an overall theory of addiction applicable to various substance addictions, the essence of which was discussed in the preceding chapter. Courtwright (1982) has identified an aspect of inebriety

[1]The link between the harshness and individual vulnerability is not all that clear. The idea that an addiction only afflicts certain individuals is still prominent today in terms of vulnerabilities. It is widely acknowledged that most severe PGs have some preexisting problems such as anxiety, depression, and ADHD. Individual vulnerability is also compatible with public health models which often view some individuals as being more vulnerable than others.

theory that was to become pivotal to the understanding of drug addiction even after the notions of degeneracy and neurasthenia had lost favor:

> Thomas Crothers… argued that those who took morphine to relieve pain received a pathological impression, the intensity and permanency of which varied with the individual. If the patient had an inherited or neurotic tendency or predisposition to seek relief from every pain and discomfort or if he suffered from neurasthenia or some other nervous ailment, the pathologic impression was likely to be 'more or less permanent' and repeated administration would intensify the impression into a morbid craving. (pp. 127–128)

It is this "pathological impression[2]" that would retain currency, though in a mutated form, despite the obsolescence of Crothers' ideas. Jaffe has made similar observations (Jaffe, 1981, pp. 239–244). Degeneracy and neurasthenia were originally bolstered by the currency of a Lamarckian conception of heredity that was becoming less respectable in the early twentieth century, and by 1920 these psychological constructs had become obsolete.

As mental tests for feeblemindedness briefly replaced degeneracy as a means of studying deviance (Jaffe, 1981, pp. 237–239), psychoanalytic ideas were gaining ground (Abraham, 1908; Healy, 1917; Rado, 1933; Simmel, 1929; Steckel, 1924). The psychoanalytic approach to the explanation of deviancy had some advantages. To start, it made possible discussions that were more sophisticated (or at least more intellectually stimulating) than inebriety theory. As well, it did not have to rely upon unproved biological ideas;[3] instead, it would rely on ideas about the unconscious which, in practical terms, could not be disproved (or proved). William White has pointed to a key consideration: "psychoanalytic ideas…enhanced the view that a wide variety of behaviors could be the results of hidden forces over which the individual had no conscious control" (White, 1998, p. 96). This affinity, along with the theme of denial (often called "resistance" in psychoanalytic circles), rendered psychoanalysis compatible with much of the addiction discourse. Conversely, the idea that addictions are functions of other issues (usually but not always sexual) would put the psychoanalytic method at odds with proponents of alcoholism or drug addiction as primary diseases. On this score, psychoanalysis would be more compatible with the *adaptive* model of addiction, though the latter would often involve a psychosocial dimension, quite political and anathema to some of the stricter psychoanalytic interpretations. "Self-medication" would eventually become a popular term, suggesting that addicts use substances in order to assuage unresolved difficulties (Khantzian, 1999). To this day, the influence of psychoanalysis reverberates throughout many of the popular addiction-related ideas such a codependency or the importance of childhood trauma. Yet it has lost most of its impact in professional

[2] This section is about how the term "pathological" came to be more and more negative in its implications. This particular statement however is not inherently negative. The idea of an impression is likely a reference to the wax tablet metaphor of the memory. This particular statement may even be an early attempt at a learning theory of addiction.

[3] Though of course in other areas psychoanalysis relied very much on unproven biological assumptions such as the division of the mind into three components and the assertion of the inevitability of sexual attraction of a child to their opposite sex parent as a basis for mental illness.

and academic circles. Though providing intellectuals with much to ponder, and analysts with many clients, the approach, in White's (1998, p. 99) words, "was long on its description of the etiological roots of alcoholism but woefully short on its prescriptions for treating alcoholism." The same applies to other substance addictions. Like inebriety, psychoanalysis would be well suited to an overall addiction concept and poorly suited to substance-specific ideas—at least logically, if not always in practice. If addictions are functions of underlying psycho-issues, then the most logical course is to understand all compulsive behaviors in similar terms (see, e.g., Steckel, 1924). Above all, psychoanalysis provided mystification. In the early twentieth century, in the heat of a war on drugs, mystification was not necessarily a drawback.

Essentially, two views competed for supremacy. First, and eventually prevalent, was the idea that addiction was, at least in most cases, a function of "psychopathy." Though not necessarily psychoanalytical, the psychopathy discourse could be compatible with that approach. Lawrence Kolb (1925a, 1927, 1939) was the most prominent spokesman for the psychopathy hypothesis. Second, and spearheaded by Charles Terry (1921), was the conviction that addicts were mostly the same as anyone else save for the physical dependence. This position laid the blame for opiate addiction primarily on iatrogenic (accidental, medically induced) origins, though Terry did acknowledge the existence of a minority of addicts who were true delinquents and for whom he had much less sympathy. As well, Terry granted that due to a host of psychological factors, some would be more prone than most to addiction (Terry, 1931, p. 344). With respect to policy, on issues ranging from permitting drug maintenance to the criminalization of drug users, it was Terry and his camp who took the gentler, arguably more permissive tack, whereas the advocates of the psychopathy theory favored harsher measures.[4]

Jansen Mattison, originally a proponent of inebriety theory who discarded that position in favor of the idea that addiction to morphine could afflict anyone, laid much of the groundwork for figures such as Terry (Mattison, 1890, p. 600; Mattison, 1883, 1890, 1894, 1895). Courtwright suggests that Mattison's views changed after he had read Levenstein, who argued convincingly that morphine addiction could afflict even those with strong constitutions (Courtwright, 1982, p. 216 (n. 60); Levenstein, 1878a/1981). Either way, Mattison gave impetus to the side of the debate that demonstrated more sympathy for addicts. He was an open-minded individual. Rather than take a stand on the controversy pertaining to abrupt versus gradual withdrawal, Mattison argued that such decisions should be made case by case. Nor did he deny that many addicts ended up that way partly because of other issues, he simply denied that this was necessary. After successful withdrawal, "Neurotic and other disorders noted prior to addiction, whether genetic or not, must be relieved or removed" (Mattison, 1890, p. 604).

[4] For those readers expecting logical coherence among these ideas, this section may seem frustrating. The truth is that there is no clear link between the theoretical models and the attitude towards prohibition or the hardness of their views about addicts.

Similar to Rush's (1774, 1812) views on ardent spirits, Terry and Mattison viewed addiction as a disease that was caused by use and the effects of the substance . In a book coauthored with Mildred Pellens, Terry devoted a chapter to the topic of "types of users," wherein much of the available knowledge about etiological precedents is discussed and various authors referenced. While insisting that such knowledge would be of value, Terry and Pellens also point out that "any such detailed classification into types involves an abundance of material dealing with several aspects of this problem which… is lacking or is of such fragmentary nature as to preclude its use for purposes of generalization" (Terry & Pellens, 1926, p. 468). After listing the divergent views of many experts, they make a strong sociological argument:

> It is not unnatural, for instance, for the head of a penal institution…to come to the conclusion that the underworld and criminal classes are especially prone to this condition; for the head of a state hospital to conclude that the mentally unstable form a considerable majority… and for the proprietor of a private institution, where the cost of treatment is within the means only of a favored few, to claim that financiers, individuals highly successful in the business world… are susceptible to opiumism (Terry & Pellens, 1926, pp. 513–514).

The point was not merely polemical. The extent to which perceptions were colored by experience is well exemplified by one of Courtwright's observations: "psychopathic addicts were first described in Northern cities, where nonmedical users were especially abundant, while elements of the outmoded degeneration/neurasthenia theory lingered longest in the writings of southern physicians, who were still exposed to numerous medical cases" (Courtwright, 1982, pp. 136–137: see also, Stanley, 1915). Terry and Pellens go on to argue that those who attribute addiction to certain morbid tendencies are likely confusing causes with effects (Terry, 1931, pp. 342–346).

Though sound, this position was eventually hurt by what at first seemed a blessing. The late nineteenth-century idea that long-term opiate administration caused organs and tissues to degenerate was being discredited between 1910 and 1920 (Acker, 2002, pp. 37–38). Scientific legitimation came through the work of figures such as Ernest Bishop, who developed his antitoxin theory of addiction. Drawing upon popular currents in immunology, and consistent with the excitement over the germ theory of disease during the 1910s, Bishop hypothesized that dependence was caused by antitoxins produced in the body as a response to the presence of morphine (analogous to the production of antitoxins in response to bacteria) (Bishop, 1913, 1916). Similar ideas reverberating at the time included George Pettey's contention that the presence of "autotoxins" in the intestines caused by the ingestion of morphine led to complications which in turn required more morphine as a corrective (Pettey, 1913, pp. 12–27). Bishop had a benign view of addict's themselves, demonstrating a sociological tack that would become popular a half century later: "the attitude of society itself, medical and lay, forces upon the morphinist conditions and environment which are responsible for much of his apparent mental and ethical alteration" (Bishop, 1916, p. 35). Yet he dogmatically rejected psychiatric explanations for the onset of addiction, reducing the issue to biology. And his biological science was weak, trendy—adopted by many largely for political convenience as it

"proved" the reality of physical addiction and thereby helped to demonstrate the normality of the typical addict. A compilation of Bishop's views can be found in his book, *The Narcotic Drug Problem*, wherein he states with confidence, yet without convincing evidence, the tenets of his antitoxin theory (Bishop, 1920). In 1920, Emil Pellini and Arthur Greenfield produced evidence to counter Bishop's ideas (Pellini, 1920; Pellini & Greenfield, 1920). A 1925 article by Kolb, coauthored with Andrew DuMez, based upon some sound research and authoritatively refuting Bishop's theory, was also able to discredit the physical underpinnings of addiction (DuMez & Kolb, 1925). Terry (1915) had endorsed Bishop's work, and the proponents of the "normal personality" conception of addiction paid a high price for having relied on bad science. Such was Bishop's stature that the refutation of his ideas led many on the other side of these debates to dismiss entirely the organic dimension of opiate withdrawal (See Musto, 1973, pp. 73–87).

Of course, such scholarly benchmarks cannot explain everything. The time was ripe for the "psychopathy" theory, and Kolb simply added weight to his cause. As the composition of the addict population became less respectable, and the politics of drug prohibition were taking hold, figures such as Terry were simply running against the current (Acker, 2002, pp. 59–61). As authors such as Jaffe and Alfred Lindesmith (in 1947) have pointed out, Terry and his fellows did work that in many ways was superior to that of their opponents (Lindesmith, 1968, pp. 157–189). Scientists tended to complain that they lacked clout when it mattered. Advocates of physical dependence theories were going against the grain of policy, and much of their funding came from private sources. Jaffe suggests that negative portrayals of addicts can only partly explain why restrictive policies took hold and that the decisions of policy makers must also be considered (Jaffe, 1981, pp. 159, 230–235, 257–258).

Courtwright (1982) has given a perceptive account of a key transition. Inebriety had been a disease mostly of the middle and upper classes. It was said to affect those with delicate constitutions and those most subject to the stresses of modernity. A common view in the later nineteenth century was that blacks had a low addiction rate because their nervous organizations were not as delicate as those of whites (Courtwright, 1982, pp. 128–129). There were also more attempts to contrast this disease with true moral depravity. Inebriety authority H. H. Kane, for example, would point out that "There are those who use hashisch steadily the year round… but this is due more to moral depravity than to any special morbid craving for the substance used" (Kane, 1881, p. 207). We might recall that cocaine addiction was in some quarters denied disease status partly because of its association with blacks (lack of physical withdrawal was also a factor). Though this distinction between opiates and cocaine was highly influential until about 1915, it was on the wane. The attempts to paint a somewhat benign picture of opiate addiction became less frequent as use of the drug was taken up by segments of the population poorly represented among those responsible for its explication. To be sure, there was continuity amid the changes. *A "pathological impression" had already been identified, so the shift to addicts having "psychopathic" tendencies did not seem overly radical*. This was, however, a huge change in thinking. Addiction shifted from a learned condition (a pathological impression) to a flawed personality (psychopathic personality).

The shift from impression to personality was not established scientifically. Further, it served as a catchall to identify the more repugnant social strata. The delicacy and precision (or at least the attempts at precision) aimed at a more respectable addict population were no longer required. Courtwright provides an excellent synopsis:

> The term *psychopathic personality* was distressingly vague (one authority has called it 'a psychiatric wastebasket') but some attempts were made to winnow out its essential elements. During the early twentieth century a German term, *psychopathische Personlichkeit*, was grafted to an older English concept called *moral insanity*. This phrase, coined by the Bristol physician James C. Prichard in 1835, described a state in which the moral faculty alone was disrupted or atrophied, the affected person retaining his reason but not the capacity to conduct himself 'with decency and propriety in the business of life.' Serious criminal acts, such as theft, sexual perversion, or murder, might be committed with blithe indifference, even though the morally insane or psychopathic patient was perfectly cognizant of the codes he was transgressing… The psychopath, though not overtly insane, was thus a stubborn and wholly irresponsible individual, completely unaffected by accepted moral and legal standards. The nonmedical opiate addict qualified on every count (Courtwright, 1982, pp. 132–133).

Jaffe has also discussed how Crothers had anticipated later developments. Crothers had said that opiates affect the part of the brain that "controlled conscience, the sense of duty to others, and general ethical feelings" (Jaffe, 1981, p. 243). For Crothers, addicts were selfish, childish, and irrational, though not prone to violence.

This middle ground, between derision and vindication of the addict's personality and mindset, was later taken up by psychoanalysis. But, at least in the early twentieth century, psychoanalytic methods were often used to bolster interpretations that could lend themselves to more negative portrayals. William Healy, for example, was quite prominent (see Healy, 1917; Southard & Jarrett, 1922). Authors such as Elmer Southard identified a psychopathic individual, a move away from psychoanalysis notably in the sense that the psychopath was not neurotic. Like the addict, the psychopath could not truly be identified as insane, either. So we have a category which, like addiction, falls through the cracks left by traditional categories. In viewing addiction as peripheral to underlying psychological issues, psychoanalysis could challenge addiction's status as a primary disease. With the push for prohibition and the tide turning against permitting maintenance doses for addicts, the American Medical Association was keen to dismiss disease conceptions of addiction altogether (White, 1998, pp. 98, 111; see American Medical Association Narcotic Committee, 1920). Whereas in the late twentieth century, psychological explanations for addiction were often used by figures such as Peele to make a case for less punitive[5] measures (Peele, 1985, 1989, 2000), in the early twentieth century such arguments were often employed by prohibitionists (Musto, 1973, pp. 82–84).

The way psychoanalysis, and psychology in general, can be bent in different directions speaks to how it is unwise to presume that such associations are carved in

[5]By punitive, we are referring to the legal punishment such as incarceration for possession. Prohibition in itself is not punitive, but it is often associated with legal punishment for people who continue to use despite prohibition.

stone. Acker has discussed the contributions of Bingham Dai in the 1930s. Dai used a psychoanalytic method yet viewed drug use in socioeconomic terms and challenged both strictly medical and punitive approaches (Acker, 2002, pp. 192–201). Similarly, in a 1917 address to the Medico-Legal Society of New York, Alfred Gordon made a case for curtailing the excesses of the Harrison Act, notably a call for compassion and for ensuring that limits placed on a doctor's ability to prescribe narcotics do not lead to undue suffering. Gordon used psychoanalytic language, perceived the addict as a liar and many other unpleasant things, invoked hereditarian explanations for this, supported prohibition, yet clearly was on side with a more compassionate approach (Gordon, 1917).

The above illustrates that certain psycho-conceptions one might associate with certain politics could buttress the opposing political views: there is no straight line from psychological theory to political practice. Ideas such as Dai's would not resurface until the 1960s and 1970s. In the 1920s and 1930s, the trend among professionals was to view addiction as a function of psychopathy with little regard for determinants such as economic and racial marginalization. Further, the addiction concept helped to marginalize the details surrounding someone's deviancy: addicts were out of control simply because they were out of control. As the worst of all delinquents, or perhaps the ideal typical delinquent, the psychopath had this trait: everything was intact save for the capacity to impose morality upon one's behavior (Kolb, 1925a, 1927, 1939). In the early twentieth century, addicts were being transformed into prototypes for mental disorders of the worst kind. Inebriety had presented a conception of essentially good (though deficient) person's gone bad because of substance use. But "the psychopathic addict was someone whose moral sense was hopelessly perverted in the first place, and whose rapid descent to addiction was unchecked by the slightest ethical compunction" (Courtwright, 1982, p. 133).

Kolb's (1925b, 1927, Kolb 1939) views on addiction were not that complex, though they were in many ways well thought out, and with a few adjustments could make for a framework that would be acceptable even today. His views resembled that of later scholars such as Khantzian who proposed a "self-medication" model (Khantzian, 1985, 1999; Khantzian et al., 1974). For Kolb, most addicts were psychologically deficient, marked by feelings of inferiority or saddled with unhealthy impulses (sometimes conscious, sometimes not) which could be assuaged with narcotics. His addiction concept was not drug specific and like inebriety could apply to alcohol, cocaine, and many other substances (Kolb, 1925b, pp. 302–304, 311–312).

Kolb's views were less harsh than that of many other proponents of the psychopathy theory. Notably, Kolb denied that addicts were violent. Despite supporting punitive prohibition and the incarceration of addicts (for their own protection), Kolb was against some of the harsher interpretations of the Harrison Act and even made observations that resemble (in some respects) those of late twentieth-century advocates of legalization or harm reduction:

> Opiates have such a soothing effect that it is conceivable that the number of violent crimes could be drastically reduced if all habitual criminals were addicts and would obtain sufficient morphine or heroin to keep sedated at all times. The effect of addiction on the behavior of the mentally abnormal criminal is to inhibit his impulse to crime… Under the influence of opi-

> ates, the psychopathic murderer becomes less inclined to commit murder, but he is more motivated to become a thief or a burglar so that he can obtain his drugs (Kolb, 1962, p. 17).

Acker has identified many of the main conceptual issues that marked addiction science at the time. To start, the essentialist bias of the psychopathy label often implied that relapse was inevitable and a function of the addict's inferiority rather than a reflection on rehabilitation methods. And such diagnoses were thrown at so many troubled or peculiar individuals, that clear definitions were not forthcoming. Categories such as psychopath or "constitutional inferior" were vague. A humanitarian in his own way, Kolb did distinguish between such addicts and the "innocent" ones who had been addicted iatrogenically (accidental, medically induced) and deserved compassionate treatment. Yet, as Acker has argued (using real cases to make the point), "this distinction was not always as clear in the experience of addicts as it was in the minds of clinicians" (Acker, 2002, p. 126 & pp. 99, 122; Jaffe, 1981, p. 240).

In "Types and Characteristics of Drug Addicts," Kolb provides a list of five types:

1. People of normal nervous disposition accidentally or necessarily addicted through medication in the course of illness.
2. Care-free individuals, devoted to pleasure, seeking new excitements and sensations, and usually having some ill-defined instability of personality that often expresses itself in mild infractions of social customs.
3. Cases with definite neuroses not falling into Classes 2, 4, or 5.
4. Habitual criminals, always psychopathic.
5. Inebriates. (Kolb, 1925b, p. 301)

Kolb also spoke of a sixth category, those afflicted with psychosis. For Kolb, the first category of addict was unlikely to relapse after detoxification. Serious deviance, therefore, involved a permanent condition. As well, these "normal" addicts for the most part did not enjoy opiate use according to Kolb, so the issue was one of pure dependency. It is noteworthy that despite the obsolescence of the scientific underpinnings of inebriety theory, Kolb still retains the idea (or at least the word). The category here resembles the older notion of dipsomania, referring to a susceptibility to periodic bouts of intoxication, yet often resulting in permanent opiate dependency. The second category was arguably the most interesting. These addicts were not quite psychopathic (the latter tended to have criminal careers prior to drug use and serious problems with impulse control), yet had a psychopathic tendency which could remain indefinitely dormant yet could be triggered by intoxicants:

> A striking characteristic of the cases in Class 2 was their open personalities. As boys, they were tomboys, and later on they enjoyed the society of women as well as that of men; they engaged in games and sports, had fights, took an interest in social activities, and in general showed traits supposed to be characteristic of real men. (Kolb, 1925b, p. 303).

Jaffe's thoughts are worthy of consideration:

> Investigators assumed that mental and behavioral abnormalities correlated with each other, and they tested their theories on deviants. Their approach did not prove that the theories were valid, since nondeviants would have to be tested, as well. The feeble-minded type, like the degenerate before it and the psychopath after it, was neither insane nor clearly definable. In other words, these types were sufficiently vague to apply to anyone. The starting point was the commission of the act, which then could be used as evidence of a condition predisposing the perpetrator to its execution. In effect, degeneracy or diathesis, or at least the circular pattern of their logic, was preserved by 20th century psychological students of abnormal behavior (Jaffe, 1981, p. 240; see also Lindesmith, 1968, pp. 164–170).

Was psychopathy a symptom, a disease, or both? Is it a condition, or is it the behavior? The previous chapter discussed the obsolescence of the notion that deviancy could be identified by means of lesions in the brain. Adolf Meyer provided some basis for newer, purely psychological approaches by putting forward the notion of "psychopathology." Influenced by pragmatism and functionalism, Meyer provided the kind of conservative, or at least conformity oriented, psychology well suited to early twentieth-century North America (Acker, 2002, pp. 133–140). Consistent with trends discussed in the previous two chapters, the model could be applied to all citizens in various degrees. Essentially, psychopathy involved straying from social norms. Above all, the category could apply to "those whose behavior betokened future problems" (Acker, 2002, p. 135). Psychopathy was bringing the importance of latency to center stage: "That line officers could spot the subtle signs of mental problems emphasizes the behavioral focus of diagnosis in a setting where absolute obedience and conformity were required" (Acker, 2002, p. 138). Essentially, the governing idea was more and more that certain deviants were so striking and obvious that they could be identified by lay observers prior to any telltale behavior. A person who showed no signs of problematic behavior could still be labeled as latently deviant.

5.6 Changing Social, Medical and Scientific Perceptions: Strategies Without Conspiracies

What can we mean by a non-conspiratorial political strategy? One might reasonably ask who is behind all this misinformation about addiction that has been common in the twentieth century. Here we emphasize the organic aspect of a process that can still involve some kind of collective brainwashing. It is important to be clear that, in principle, this kind of thing can happen without any agent consciously initiating it all. Political, sociological, professional, and other ends are served. It can simply be a matter of each player doing what they do for their own reasons.

William McLoughlin has identified 1890–1920 as the "Third Great Awakening," perhaps not rivaling the two religious revivals of the eighteenth and nineteenth

centuries but at least mimicking them in both style and significance.[6] While the label is debatable, the importance of religious revival to this time frame is not. At this point, it is likely that religious conceptions had a smaller impact—at least directly—on the development of addiction concepts themselves than in the nineteenth century. Yet they affected the mood of the times, with Darwinism often functioning as exemplary of everything wrong with modernity (McLoughlin, 1978, pp. 141, 151). This "Awakening" was also marked by a scientization of religion,[7] with nature's laws perceived by many religious figures as immutable—in a sense imposing limits on God's power.

> The old perfectionism and free will of Romantic Evangelism portrayed man as unconditioned by nature, unbound by contingencies of heredity and environment, and capable of miraculous power over all obstacles in personal and social reformation. But the new light of this Third Awakening described God's power as locked into nature's laws. Even with God's help men could not leap over nature or culture to challenge the "realities" of life as it is. (McLoughlin, 1978, p. 156)

One can speculate about the extent to which this mood helped to shape the more negative, and even hopeless, ideas about addicts coming to prominence at the time. Either way, the need for social control would eclipse the belief in laisser-faire. America's changing attitude to global conflict serves as an example. Though Americans at first had little interest in entering the Great War, according to McLoughlin, this Third Great Awakening instilled in many a new kind of confidence in their "mission to stamp their character on the decadent civilizations of Europe" (McLoughlin, 1978, p. 178).

This is not the place to dwell upon the contradictory impulses and beliefs governing this religious development, nor is there room here for an appraisal of McLoughlin's analysis. It is, however, incumbent upon us to keep in mind the role of religion in our history, especially with respect to issues laden with moral dilemmas. The global push to ban narcotics was, after all, spearheaded by the United States (Berridge, 2004). Attitudes such as those described by McLoughlin were rampant. In 1924, for example, anti-opium crusader Ellen La Motte noted that "In our fight against opium we find ourselves pitted against the shrewdest brains of Europe…" (La Motte, 1981/1924, p. 12). Religion had at least something to do with America's self-perception, and the seeming need to push drug prohibition on the world would affect the way addicts were treated—and hence understood—at home.

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[6] The first Great Awakening (circa 1725–1750) was a religious revival wherein new sects and the conversion experience were established. Traditional Calvinist religious authority often gave way to uneducated lay preachers, often emphasizing a voluntaristic conception of redemption (labeled Arminianism). The Second Great Awakening (circa 1800–1835) established even more distance from traditional Calvinism, opening the door to even greater human agency in the reception of Divine Grace (see: Fraser, 1985; Keller, 1942; McLoughlin, 1978).

[7] Scientization is the rendering of something more scientific. Scientism is a trend in Western thought wherein everything is rethought from a scientific point of view. The term is typically a pejorative, suggesting that people are overdoing it, for example, applying scientific methods where such methods do not belong.

Timothy Hickman (2004) has made a contribution along lines that compliment McLaughlin's analysis. Turn of the century, America experienced a crisis of bourgeois identity. Changes ranging from the rise of corporate capitalism and early mass communication to the influx of European ideas such as those of Freud, Spencer, and Darwin all conspired to reduce confidence in individual self-determination. The addict, says Hickman, represented a threat from modern technology to older conceptions of human agency. More alien than alcoholism, narcotic addiction was relatively new and, notably in the case of hypodermic drug addiction, the product of medical technology—showing the darker side of technology and science in contrast to the promises with which they were associated in the nineteenth century. We have seen how late nineteenth-century authors such as Beard already saw inebriety as a modern disease, and Hickman points to how ex-addicts blaming their ills on modernity helped to support this medical perception. Whether a statement of fact or simply expressing a wish to blame their addiction on something, personal renditions could converge with medical ones (Hickman, 2004).

It is also important to keep in mind the interplay of scholarly perceptions and those of the general public. While scholarly opinion involved struggles between physical addiction theories and psychopathy, in the public mind, a coarser division was at work: disease versus habit (Lindesmith, 1965, p. 145). In downplaying, or even denying, the physical basis of addiction, the psychopathy advocates were more easily allied with the notion of habit which at the time was associated with less sympathy and harsher measures.

At the same time, advances in medicine, notably revolving around the germ theory of disease, enabled doctors to become less reliant on opiates. The germ theory of disease also induced a greater awareness of the distinction between diseases and symptoms, with the corollary that in many cases opiates could only address the latter. So the proportion of medically induced addiction declined—hence a larger proportion of nonmedical addicts more easily labeled deviant (Courtwright, 1982, pp. 52, 126). Wanting as well to distance themselves from opiates, doctors were surely—though perhaps not deliberately—more receptive to negative portrayals of addicts.

One could certainly be critical of such harsh portrayals of medical and other authority figures, so we should at least bear in mind the novelty of the subject matter. As the nature of opiate dependence was, simultaneously, being discovered and constructed in the nineteenth and early twentieth centuries, there was an innocence among researchers and other concerned persons which can almost be heard through the lines. As late as 1870, Clifford Allbutt said the following:

> the conviction began to force itself upon my notice, that injections of morphia, though free from the ordinary evils of opium-eating, might, nevertheless, create the same artificial want and gain credit for assuaging a restlessness and depression of which it was itself the cause. (Allbutt, 1870, from: Musto, 1973, p. 74).

The phrasing indicates a lack of readily accessible terminology associated with the symptoms of withdrawal. The terminology had begun to form, but the author does not use it. Instead, we get the more straightforward construction, "of which it was itself the cause."

Despite sincerity and commitment to scientific autonomy, medical and scientific perceptions rarely operate outside of cultural trends. This is especially so with any inquiry into psycho-behavioral issues. From the start, this study has attempted to highlight the contingency inherent to any science of addiction. Targeting a so-called disease of the will, the addiction concept will confound scientific endeavors at the very outset simply because even the definitions of will and disease are culture-bound.

For our purposes, the meaning of "disease" did not remain static even throughout the twentieth century. Whereas in contemporary North America addiction is often identified as a disease by means of terms and concepts resembling those of psychoanalysis—denial, obsession, etc.,—in the early twentieth century, addiction as disease owed more to medical advances such as those in immunology (see Musto, 1973, pp. 82–90). Psychoanalysis actually provided a model distinct from that of disease—a non-disease alternative.

This chapter has drawn attention to the many determinants that helped to shape the (sometimes comical) negative perceptions of the drug-addicted individual. Charles B. Towns, a great popularizer of such attitudes who achieved fame in the early twentieth century with an alleged cure for opiate addiction, refers to the "amazing cunning" the habit inevitably produces (Musto, 1973, p. 187). It is in this context, for example, that the idea of "complete control" over the patient must be understood. Medical authority made use of—and for the sake of sympathy and redemption was used by—addicts. We need not seek for conscious conspirators promulgating all the misinformation about addictions, even though undoubtedly such persons could be found. There was (and still is) no need for conspiracies. With addicts, professionals, and moralizers all making similar exaggerations (or downright falsehoods)—with different segments saying the same thing, each with different motives—the weight of evidence could grow, vindicating each player's belief in their own sincerity (see Cohen (2002) for other examples of exaggerated fear and moral panic). It was in this context that honest thinkers, practitioners, and even politicians could advocate for total control over addicts.

References

Abraham, K. (1908). The psychological relations between sexuality and alcoholism. *International Journal of Psycho-Analysis, 7*, 2–10.

Acker, C. J. (2002). *Creating the American junkie: Addiction research in the classic era of narcotic control*. Baltimore: John Hopkins.

Alcoholics Anonymous World Services, Inc. (1976). *Alcoholics Anonymous: The story of how many thousands of men and women have recovered from alcoholism*. New York: Alcoholics Anonymous World Services, Inc.

Allbutt, C. (1870). On the abuse of hypodermic injections of morphia. *Practitioner, 3*, 327.

American Medical Association Narcotic Committee. (1920). Report of the committee on the narcotic drug situation in the United States. *Journal of the American Medical Association, 74*, 1326.

American Psychiatric Association [APA]. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed., Rev. ed.). Washington: Author.

Bergler, E. (1943). The gambler: A misunderstood neurotic. *Journal of Criminal Psychopathology*, *4*, 379–393. Reported in Selected Papers of Edmund Bergler, M.D. 1933–1961. New York: Grune and Stratton, 1969.

Bergler, E. (1957). *The psychology of gambling*. New York: Hill and Wang.

Berridge, V. (1978). Professionalization and Narcotics: The medical and pharmaceutical professions and British narcotic use 1868-1826. *Psychological Medicine, 8*, 361–372.

Berridge, V. (2004). Why alcohol is legal and other drugs are not. *History Today, 54*(5), 18–20.

Berridge, V., & Edwards, G. (1987). *Opium and the people: Opiate use in nineteenth century England*. New Haven: Yale University Press.

Bishop, E. (1913). Narcotic addiction – A systemic disease condition. *JAMA, LX*, 431–434.

Bishop, E. (1916). Facts about morphinism. *American Medicine, 11*, 31–39.

Bishop, E. (1920). The narcotic drug problem. New York: Arno Press. (Reprinted from New York: MacMillan).

Blume, S. B. (1986). Treatment for the addictions: Alcoholism, drug dependence and compulsive gambling in a psychiatric setting – South Oaks Hospital, Amityville, New York. *Journal of Substance Abuse Treatment, 3*, 131–133.

Brown, I. (1991). Gaming, gambling and other addictive play. In J. Kerr & M. Apter (Eds.), *Adult play: A reversal theory approach* (pp. 101–118). Amsterdam: Swets & Zeitlinger.

Brown, I. (1997). A theoretical model of the behavioural addictions – Applied to offending. In J. E. Hodge, M. McMurran, & C. R. Hollin (Eds.), *Addicted to crime?* (pp. 13–65). Chichester: Wiley.

Cohen, S. (2002). *Folk devils and moral panics* (3rd ed.). London: Routledge.

Courtwright, D. (1982). *Dark paradise: Opiate addiction in America before 1940*. Cambridge: Cambridge University Press.

Courtwright, D. (2004). Mr. ATOD's wild ride: What do alcohol, tobacco, and other drugs have in common? Keynote Address, International Conference on Drugs and Alcohol in History. Huron University College, London, Ontario. May 14, 2004.

Crothers T. (1911). Inebriety: A clinical treatise on the etiology, symptomatology, neurosis, psychosis and treatment and the medico-legal relations. Cincinnati, Harvey Publishing, 1911. (Reprinted, New York: Arno Press, 1981).

Crumpe, S. (1793). An inquiry into the nature and properties of opium; wherein its component principles, mode of operation, and use and abuse in particular diseases, are experimentally investigated; and the opinions of former authors on these points impartially examined. London: G. G. and J. Robinson.

Dorchester, D. (1884). *The liquor problem in all ages*. New York: Phillips & Hunt.

DuMez, A., & Kolb, L. (1925). Absence of transferable immunizing substances in the blood of morphine and heroin addicts. *Public Health Reports, 40*, 548–558.

Foucault, M. (1973). *Madness and civilization: A history of madness in the age of reason*. New York: Vintage.

Foucault, M. (1978). *The history of sexuality, Volume 1: An introduction*. New York: Vintage.

Fraser, J. W. (1985). *Pedagogue for God's kingdom: Lyman Beecher and the second great awakening*. London: University Press of America.

Gordon, A. (1917). The relation of legislative acts to the problem of drug addiction. *Journal of the American Institute of Criminal Law and Criminology, 8*, 211–215.

Healy, W. (1917). *Mental conflicts and misconduct*. Boston: Little, Brown.

Hickman, T. A. (2000). Drugs and race in American culture: Orientalism in the turn-of-the-century discourse of narcotic addiction. *American Studies, 41*(1), 71–91.

Hickman, T. (2004). Drugs and race in American culture: Orientalism in the turn-of-the-century discourse of narcotic addiction. *American Studies, 41*, 71–91.

Howard-Jones, N. (1947). A critical study of the origins and early development of hypodermic medication. *Journal of the History of Medicine and Allied Sciences, 11*, 201–249.

Isbell, H. (1963). Historical development of attitudes toward opiate addiction in the United States. In S. M. Farber & R. H. L. Wilson (Eds.), *Man and civilization: Conflict and creativity* (pp. 154–170). New York: McGraw-Hill.
Jacobs, D. (1986). A general theory of addiction: A new theoretical model. *Journal of Gambling Behavior, 2*, 15–31.
Jacobs, D. (1988). Evidence for a common dissociative-like reaction among addicts. *Journal of Gambling Behavior, 4*, 27–37.
Jaffe, A. (1981). *Addiction reform in the Progressive Age: Scientific and social responses to drug dependence in the United States*. New York: Arno Press.
Jones, J. (1700). *The mysteries of opium revealed*. London: Richard Smith.
Kane, H. (1881). Drugs that enslave: The opium, morphine, chloral and hashish habits, (New York: Arno Press, New York, 1981). (Reprint from Philadelphia: Presley Blakiston).
Keller, C. R. (1942). *The second great awakening in Connecticut*. New Haven: Yale University Press.
Khantzian, E. (1985). The self-medication hypothesis of addictive disorders: focus on heroin and cocaine dependence. *American Journal of Psychiatry, 142*, 1259–1264.
Khantzian, E. (1999). *Treating addiction as a human process*. Northvale, N.J: Jason Aronson.
Khantzian, E., Mack, J., & Schatzberg. (1974). Heroin us as an attempt to cope: Clinical observation. *American Journal of Psychiatry, 131*, 160–164.
Kolb, L. (1925a). Pleasure and deterioration from narcotic addiction. *Mental Hygiene, IX*, 699–724.
Kolb, L. (1925b). Types and characteristics of drug addicts. *Mental Hygiene, IX*, 300–313.
Kolb, L. (1927). Clinical contribution to drug addiction: The struggle for cure and the conscious reasons for relapse. *Journal of Nervous and Mental Disease, 66*, 1–18.
Kolb, L. (1939). The United States public health service narcotic hospitals. *American Journal of Medical Jurisprudence, 2*, 100–103.
Kolb, L. (1962). *Drug addiction: A medical problem*. Springfield: Charles C. Thomas.
Korn, D. (2005). A public health perspective. *Journal of Gambling Issues, 15*, www.camh.net/egambling/issue15/jgi_15_korn.html.
Lakoff, G. (1987). *Women, fire and dangerous things: What categories reveal about the mind*. Chicago: The University Press.
La Motte, E. (1924). The ethics of opium (New York: Arno Press, 1981). (Reprinted from New York: The Century Co.).
Leeds, Grenville & Lanark District Health Unit. (2005). A public health perspective on gambling in Ontario. Leeds, Grenville & Lanark District Health Unit.
Lesieur, H. (1979). The compulsive gambler's spiral of option and involvement. *Psychiatry, 42*, 79–87.
Lesieur, H., & Blume, S. (1991). Evaluation of patients treated for pathological gambling in a combined alcohol, substance abuse and pathological gambling treatment unit using the Addiction Severity Index. *British Journal of Addiction, 86*, 1017–1028.
Lesieur, H. R., Blume, S. B., & Zoppa, R. M. (1986). Alcoholism, drug abuse, and gambling. *Alcoholism, Clinical and Experimental Research, 10*, 33–38.
Lesieur, H., & Custer, R. (1984). Pathological gambling: Roots, phases, and treatment. *The Annals of the Academy of Political and Social Science, 474*, 46–156.
Levenstein, E. (1878a). Morbid craving for morphia. New York: Arno Press (1981).
Levenstein, E. (1878b). Delirium tremens: A symptom of morbid craving for morphia. *Quarterly Journal of Inebriety, 2*, 217–220.
Lindesmith, A. (1965). *The addict and the law*. Bloomington: Indiana University Press.
Lindesmith, A. (1968). *Addiction and opiates*. Chicago: Aldine.
Mattison, J. (1883). Opium addiction in medical men. *Medical Record, 23*, 621–623.
Mattison, J. (1890, February). The treatment of the morphine-disease. The Therapeutic Gazette (pp. 599–606).
Mattison, J. (1894). Morphinism in medical men. *JAMA, 23*, 186–188.

Mattison, J. (1895). Morphinism in women. *American Medico-Surgical Bulletin, 8*, 1399–1400.
McLoughlin, W. (1978). *Revivals, awakenings and reform: An essay on social change in America, 1607–1977*. Chicago: University of Chicago Press.
Morgan, H. (1974). *Yesterday's addicts: American society and drug abuse: 1865–1920*. Norman, Oklahoma: University of Oklahoma Press.
Morgan, H. (1981). *Drugs in America: A social history, 1800–1980*. Syracuse: Syracuse University Press.
Musto, D. (1973). *The American disease: Origins of narcotic control*. New Haven: Yale University Press.
O'Brien, C. (2006). What's in a word? Addiction versus dependence in DSM-V. Editorial. *American Journal of Psychiatry, 163*, 764–765.
Peele, S. (1975). *Love and addiction*. New York: Taplinger.
Peele, S. (1985). *The meaning of addiction*. Lexington, MA: D. C. Heath.
Peele, S. (1989). *Diseasing of America: Addiction treatment out of control*. Massachusetts: Lexington.
Peele, S. (2000). A prototypical case of alcoholism treatment and coercion: G. Douglas Talbott. In S. Peele, C. Buffe, & A. Brodsky (Eds.), *Resisting 12-step coercion: How to fight forced participation in AA, NA, or 12-Step treatment* (pp. 143–153). Tuscon: See Sharp Press.
Pellini, E. (1920). Report to the special committee on public health of the Greater City of New York to the House of Delegates of the New York State Medical Society. *New York State Journal of Medicine, 20*, 117.
Pellini, E., & Greenfield, A. (1920). Narcotic drug addiction: I. The formation of protective substances against morphine. *Archives of Internal Medicine, 6*, 279–292.
Pereira, J. (1853). *The elements of materia medica and therapeutics, Volume II. Part II* (3rd ed.). London: Longamn, Brown, Green, and Longmans.
Pettey, G. (1913). *The narcotic drug diseases and allied ailments*. Philadelphia: Davis.
Porter, R. (1987). *Mind forg'd manacles: A history of madness in England from the restoration to the regency*. Cambridge, MA: Harvard University Press.
Rado, S. (1933). The psychoanalysis of pharmacothymia. *Psychoanalytic Quarterly, 2*, 1–23.
Roizen, R. (1993). *Merging alcohol and illicit drugs: A brief commentary of the search for symbolic middle ground between licit and illicit psychoactive drugs*. Paper presented at the International Conference on Alcohol and Drug Treatment Systems Research, Toronto, Ontario, Canada, October 18–22.
Rosenthal, R. (1987). The psychodynamics of pathological gambling: A review of the literature. In T. Galski (Ed.), *The handbook of pathological gambling* (pp. 41–79). Springfield: Charles C, Thomas.
Rush, B. (1774). *Sermons to gentlemen upon temperance*. Kimber & Richardson: Philadelphia.
Rush, B. (1812). Medical inquiries and observation upon the diseases of the mind. Philadelphia: Kimber & Richardso. (Reprint: New York: Hafner Press, 1962).
Simmel, E. (1920). Psycho-analysis of the gambler. *International Journal of Psychoanalysis, 1*, 352–353.
Simmel, E. (1929). Psycho-analytic treatment in a sanatorium. *International Journal of Psycho-Analysis, 10*, 70–89.
Sonnedecker, G. (1963). Emergence of the concept of opiate addiction. *Journal Mondial de Pharmacie, 1*, 27–34.
Southard, E., & Jarrett, M. (1922). *The kingdoms of evil*. New York: Macmillan.
Stanley, L. (1915). Morphinism. *Journal of the American Institute of Criminal Law and Criminology, 6*, 586–593.
Steckel, W. (1924). *Peculiarities of behavior: Wandering manias, dipsomania, kleptomania, pyromania and allied impulsive acts*. New York: Liverlight.
Szasz, T. (1974). *Ceremonial chemistry: The ritual persecution of drugs, addicts, and pushers*. Garden City: Anchor Press.
Terry, C. (1915). Narcotic drug addiction. *American Medicine, 26*, 29–35.

Terry, C. (1921). Some recent experiments in narcotic control. *American Journal of Public Health, 11*, 32–44.
Terry, C. (1931). The development and causes of opium addiction as a social problem. *Journal of Educational Sociology, 4*, 335–346.
Terry, C., & Pellens, M. (1926). *The opium problem*. New York: Bureau of Social Hygiene.
Trotter, T. (1813/1981). An essay, medical, philosophical, and chemical, on drunkenness. From first Philadelphia edition, 1813. Reprinted, New York: Arno Press, 1981.
Valverde, M. (1998). *Diseases of the will: Alcohol and the dilemmas of freedom*. Cambridge: Cambridge University Press.
White, W. (1998). *Slaying the dragon: The history of addiction treatment and recovery in America*. Bloomington: Chestnut Health Systems/Lighthouse Institute.
Wood, G. (1868). *A treatise on therapeutics and pharmacology or materia medica*. Philadelphia: Lippincott.
World Service Office, Inc. (1976). *Another look*. Van Nuys, CA: World Service Office, Inc.
World Service Office, Inc. (1988). *Narcotics Anonymous*. Van Nuys, CA: World Service Office, Inc.

Chapter 6
The Pendulum Swings Back

Abstract This chapter brings us up to the late twentieth century. Early twentieth-century conceptions, such as the unscientific though popular notion of alcoholism as an allergy, are discussed with an eye on how negative portrayals of addicts continued to influence discussions of all addictions (including PG) in tandem with more benign approaches to medicalization. If nothing else, the allergy theory was benign in its intent. Learning theory is identified as a more scientific, and more useful, advance upon earlier conceptions. Yet many notions born in the early twentieth century, such as the idea that addicts of all stripes must suffer extremes of degradation (hit bottom) prior to recovery, continued to hold sway. This chapter represents an attempt to sift out many myths—often harmful ones at that—which continued to influence mainstream medical and scientific discourse. We end the chapter with a discussion of late twentieth PG studies, doing our best to separate reality from culture-bound prejudices.

Keywords Allergy • Medicalization • Learning theory

6.1 Silkworth and AA: Alcoholism as "Allergy"

In the middle of the twentieth century, the addict was still viewed in a remarkably negative light. Although the prohibition against alcohol had failed and was repealed, prohibitions against drugs were still in effect, rarely questioned, and additional drugs were either banned or more strictly controlled.

One important change that occurred at this time was the development of mutual aid groups. The first and most notable was AA, which was founded and run by alcoholics who helped each other to achieve and maintain sobriety. This approach to alcohol problems was similar in many respects to that employed by the Washingtonian movement described in Chaps. 2 and 4.

Related to this was another addiction-related precedent that dominated the scene in which current PG studies were born. Applied at first to alcoholism (Alcoholics

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Anonymous World Services, Inc., 1976), and later to illicit drug addiction (Cocaine Anonymous World Services, 1993), the idea that alcoholics react allergically to alcohol resonated at popular levels with the rise of AA and still does resonate in 12-Step circles. W. D. Silkworth is now well known as the doctor responsible for AA's adoption of the allergy theory of alcoholism (Alcoholics Anonymous World Services, Inc., 1976). While never tenable scientifically in its own time (Haggard, 1944), and hopelessly dated today, many AAs (and even treatment professionals) still cling to it. Silkworth himself did not consider the reference to allergy as metaphoric: "It is our purpose to show that there is a type of alcoholism characterized by a definite symptomatology and a fixed diagnosis indicative of a constant and specific pathology; in short, that true alcoholism is a manifestation of allergy" (Silkworth, 1937). Clearly, the conclusion does not follow: while the description may indeed point to some disease, it does not prove the presence of an allergy. In fairness, Silkworth was eager to establish a disease status for alcoholism. His devotion to those afflicted was admirable. Yet Silkworth felt compelled to draw upon an already established disease. Like Levenstein (1878a, b) before him, who compared opiate withdrawal to delirium tremens, Silkworth struggled to provide a familiar designation to a poorly understood affliction. Arguments made in the body of the text are no more convincing. Here is an example:

> The spree is characterized by certain definite physical symptoms in all such cases. The phenomenon of craving is prominent; there are complete loss of appetite, insomnia, dry skin and hypermotor activity. He has a feeling of anxiety which amounts to a nameless terror…The inevitable conclusion is that true alcoholism is an allergic state (Silkworth, 1937).

The importance of this analogy was that although it still depicted the person as having an individual weakness, the allergy removed the stigma or moral issues from the disorder. Silkworth's case, in short, is that alcoholics react abnormally to alcohol. If we grant the premise, it still remains that not all abnormal reactions qualify as allergic reactions. It would seem that Silkworth needed a familiar metaphor, though perhaps there was some therapeutic merit to this effort. Today, allergies can often be treated with drugs or antihistamines. Yet, when the allergy analogy was first used, allergies were less clearly understood and the only solution was avoidance, leaving the alcoholism field with another transposition rooted (ironically) in biology rather than morality: that of an abstinence principle.

This chapter has already discussed how late nineteenth-century addiction studies were beholden to immunology. One can speculate that advances in immunology associated with the germ theory of disease helped to inspire much of this work. It is in any case well established that late nineteenth-century psychiatry borrowed from Pasteur's germ theory of disease in order to gain stature and to render respectable its own advances in the positing of single, identifiable mental ailments (Dowbiggin, 1985, p. 212). Consistent with the excitement over the germ theory of disease during the 1910s, Bishop hypothesized that opiate dependence was caused by antitoxins[1] produced in the body as a response to the presence of morphine (analogous to the production of antitoxins in response to bacteria) (Bishop, 1913, 1916). To call alcoholism an allergy is to suggest a difficulty with immune responses. One project

lasting from 1899 to 1903 even involved the attempt to "vaccinate" with alcohol against intoxication (Sournia, 1990, p. 94). The allergy theory of alcoholism was consistent with a host of scientific and pseudoscientific developments of the time, and, no matter how unsound, the conception left a mark that reverberates to this day.

It was in this intellectual climate—with metaphors building upon metaphors—that a concerted and serious effort to medicalize PG took its first steps.

6.2 Learning Theory

Another important mid-twentieth-century innovation was the development of learning theory. Through the careful manipulation of environmental triggers and reward contingencies, B.F. Skinner (1953) found that he could teach pigeons and rats an impressive range of behaviors through positive and negative reinforcement. Positive reinforcement involved rewarding the organism with something it likes (e.g., food) after the organism has displayed the desired behavior such as pressing a lever. Negative reinforcement was the removal of a noxious stimulus (e.g., a mild electric charge) after the organism has displayed the desired behavior (e.g., pressing a lever). More importantly, Skinner's manipulation of schedules of reinforcement resulted in the discovery that an intermittent reinforcement schedule resulted in learning that was more resistant to extinction. In fact, his research showed that if the reinforcement was gradually reduced, an animal would continue to engage in the behavior even though it was using more energy pressing the lever in order to receive diminishing rewards. Skinner's work was a huge step forward from the more simplistic Pavlovian learning models that only involved the temporal pairing of an instinctual reward with a novel stimulus (e.g., a bell; Gray, 1991, pg. 126). A well-designed reinforcement program could, for example, be used to teach a pigeon to play a simple tune on a piano (Hill, 1980, pg. 97). Skinner (1953) discusses how his learning model could account for the popularity of gambling and gambling machines. Most importantly, Skinners' laboratory-based demonstrations of the power of variable ratio (or intermittent) reinforcement had the potential to explain why some people become addicted to gambling (Gray, 1991, pg. 136) and other addictions (Flora, 2004; Marlatt, 1985). In the late 1950s, Skinner's radical behaviorism fell out of favor and was replaced by neo-behaviorism and cognitive psychology (Gardner, 1985). However, many of his ideas were incorporated into cognitive behavioral therapy (e.g., Beck, 1975; Ellis, 1975; Bandura, 1969, 1977) and later into a treatment approach for addictions developed by Marlatt and colleagues (Marlatt, 1985; Marlatt, Baer, Donovan, & Kivlahan, 1988; Marlatt, 1979).

[1]This idea of antitoxins is somewhat like Silkworth's allergy analogy. There is clearly a trend involving the use of certain systems in the body to address issues that really have nothing to do with those systems. As stated before, analogy or metaphor is a fundamental aspect of human reasoning, so it is not surprising that this mode of thinking is used in addiction sciences.

What is particularly important about the development of learning theory is that for the first time it provided a scientifically based model of learning that could explain how people can become so strongly conditioned that they would feel compelled to engage in a behavior in which they may no longer wish to engage. It provided a model that would suggest that an ordinary person (e.g., non-psychopathic) could because addicted to a drug or behavior through a combination of positive and negative reinforcement. In addition, it provided the basis for the development of cognitive behavioral methods of treatment that also made use of these very same theories of learning. Learning theory has been incorporated into the thinking of many researchers who have argued against the chronic disease model (Marlatt, 1985; Peele, 2003). Skinner's model is, in fact, more compatible with sociological arguments and ideas pertaining to degrees of addiction severity. All of this will figure in the following chapter which discusses the current situation including debates about hard pathological constructs versus harm treated in degrees (or on a continuum), whether addiction is a learned behavior that might in some cases be unlearned (would moderation then be possible?)—these and other issues were presaged in many respects by Skinner's approach.

6.3 Medicalization of PG in the Later Twentieth Century

As mentioned in the second and third chapters, large-scale efforts to medicalize PG first took hold in the later twentieth century in response to the legalization of many gaming venues and, because of this, rising numbers of middle class PGs (Rosecrance, 1985). So these early efforts at medicalization stem more from a benign desire to understand and help the afflicted. This was not the *other kind of medicalization (e.g., call addicts psychopaths)*—discussed in the previous chapter—typically aimed at persons considered less deserving of such attention. At the same time, however, the efforts to medicalize PG were beholden to an addiction concept which, given its history, was itself beholden to a range of tendencies—some benign, some not. If we explore the DSM inclusion of PG as a marker, two important themes come out immediately (APA, 1987, 1994). Though discussed in the third chapter, each theme has more significance in light of the type of addict that still represented addiction discourse at the time.

1. Despite its designation as a disorder of impulse control, PG was defined through reference to an SUD model with a commensurate list of symptoms. That the DSM designation of PG is based upon SUD, and that it can easily be seen as an addiction model, has been discussed by many in the field (Brown, 1991; Ferentzy & Skinner, 2003; Petry, 2006; Potenza, 2006; Rosenthal, 2005). First, both PG and SUD are characterized by issues such as loss of control over the behavior in question and the abandonment of other interests and commitments. Yet the similarities are more specific. Whereas the first DSM criterion for substance dependence is tolerance, "a need for markedly increased amounts of the substance"

(APA, 1994, p. 181), for PG the second criterion reads: "needs to gamble with increasing amounts of money in order to achieve the desired excitement" (APA, 1994, p. 618). The second marker for SUD is withdrawal, which relates to the fourth one for PG: "is restless or irritable when attempting to cut down or stop gambling" (APA, 1994, p. 618).

2. This SUD model invokes the term dependence rather than addiction, and this is largely because through much of the twentieth century, "addiction" was a dirty word. O'Brien (2006) has discussed how the decision to forego "addiction" in favor of "dependence" in the revised DSM-III; DSM-III-R (APA, 1987) was made because the term, "addiction," was thought to stigmatize the afflicted. This may no longer be as true as it was in the 1980s, and O'Brien in fact is making a case for bringing the term addiction into the next DSM. At the time, however, *addiction* was not a welcome designation and came with certain connotations—*connotations that would, to various degrees, surface when PG was being explained, understood, and theorized.*

Many advocates of PG medicalization in the 1970s and 1980s were keen to ensure that problem gamblers would not be stigmatized and, worse, demonized. Robert Custer, arguably the most notable figure with the possible exception of Henry Lesieur, once identified four types of gamblers: social, compulsive, antisocial, and professional (Custer, 1982). Of interest is Custer's insistence that PGs are not antisocial types and that punishment is not a good approach to solving a gambling problem. Of even greater interest is how adamantly Custer insists that the compulsive (problem) gambler is someone who starts out with good core values, which of course may become less stable as the affliction chips away at a person's moral center. But the PG is not a derelict: "Unlike the psychopath, he does not want to hurt others, and he cares what others think of him" (Custer, 1982, p. 370). Could this generalization apply to all PGs? Scientifically, the conception could be (and has been) defended in the following manner: if one's gambling is due to psychopathy or ASPD, then the gambling itself is not a primary affliction but an offshoot (Lesieur, 1988). Fair enough, though one might still ask why some PGs at least could not be both properly psychopathic and properly PG. Yet Custer, at least in this text, posits an uncompromising typological division. Given some of the history discussed in this chapter, many would surely understand and support Custer's efforts. He was fighting hard to garner sympathy for a population that prior to the 1980s was perceived unequivocally as morally degenerate.

But there is more. Custer's (1982) text was the last chapter of a compilation titled *Drug Dependent Patients* (Craig & Baker, 1982) wherein discussions abound pertaining to the extent to which drug addicts are psychopathic (see, e.g., pp. 52, 173–174, 176, 180–182, 197). Here, in the more benign late twentieth-century climate, the overall gist involved degrees of psychopathy identified with measures that were more respectable than what was available to the earlier figures already noted in this chapter. One can reasonably ask: what is in a word? We might recall, however, that in the 1980s, DSM even shied away from the term "addiction" as applied to SUD (O'Brien, 2006). Medicalization is a tenuous endeavor, and the effort to generate

sympathy and understanding can often be laden with baggage that might thwart that effort. Musto (1973) provides an excellent example from the early twentieth century: persons addicted by physicians, through no fault of their own, could be absolved with a designation such as "involuntary fiends[2]" (p. 105). Custer knew what he was doing.

Lesieur and Custer (1984) identify five types of PGs but notably offer only one trajectory: the disease's natural history involves winning, losing, and finally desperation. Only at this point will a gambler be amenable to treatment and recovery. While rejecting the old-fashioned moral paradigm (the PG is not just a degenerate) in favor of a medical view (PG is marked by compulsion and disease progression), these authors by no means suggest that morality is irrelevant. In fact, making amends to those who have been wronged by one's gambling is integral to the remedy.[3] They also reject psychoanalytic suggestions that a PG must be a masochist (Bergler, 1957). To the contrary, PG typically starts with a winning phase which the gambler might enjoy. It is the losing phase that the gambler cannot stand, so how can this be explained by reference to masochism? (Lesieur & Custer, 1984). While acknowledging that PGs tend to produce elevated scores on "psychopathic deviation" (p. 150), their take on the matter is different from earlier depictions of drug addicts already discussed. Here, the emphasis is on themes such as an inability to profit from experience, a lack of loyalty, and defective judgment. While perhaps unattractive, such a person is not a monster. Above all the traits are, for the most part, probably derivative: "It is quite likely that experiences, pressures, and strains of pathological gambling produce alterations in personality that show up on personality tests" (Lesieur & Custer, 1984, pp. 150–151). Also, PGs are said to have high IQs. Five types are offered: (1) subcultural (contingent upon social setting), (2) neurotic, (3) impulsive, (4) psychopathic (gambling is part of a global disturbance), and (5) symptomatic (gambling is associated with mental illness). Yet, as mentioned, the stages of the disorder are said to be the same in each case. The solutions—GA, formal treatment, or both—are also quite uniform. So, apparently, are the reactions to interventions: "Gamblers believe that lack of money is the problem, they expect an instant or miraculous cure, they cannot conceive of life without gambling, and they see complete restitution of debts or stolen money as desirable but impossible" (p. 155). This generalization is, of course, rooted in solid experience—many PGs react this way. One might still wonder whether these authors—who obviously would not deny that exceptions occur—have been influenced by a propensity for streamlining which governed much of twentieth-century addiction discourse. We are dealing here with subtle processes and with a totally new approach to PG studies. It would be hard, maybe impossible, not to be influenced at least to a degree by a well-established and dominant mindset.

[2]The phrase "drug fiend" had become so common that someone trying to be nice would actually say it is not his fault; he is an "involuntary fiend."

[3]By drawing a link to the moral responsibility, we are not criticizing this model. Far from it, in that we believe that taking responsibility for action is a good step in that it ends denial. We are merely pointing out that there is some continuity between this model and previous moral models.

At a time when the very notion of behavioral addiction was far more controversial than today, Jacobs (1986) made a case for a *general theory of addictions* using the compulsive gambler as a prototype

> Addiction is defined as a dependent state acquired over time to relieve stress. Two interrelated sets of factors predispose persons to addictions: an abnormal physiological resting state, and childhood experiences producing a deep sense of inadequacy. All addictions are hypothesized to follow a similar three-stage course. A matrix strategy is outlined to collect similar information from different kinds of addicts and normals. The ultimate objective is to identify high risk youth and prevent the development of addictions. (Jacobs, 1986, p. 15)

A few themes surface right away: all addictions stem from similar physiological and psychological (deep sense of inadequacy) shortcomings; they all follow a three-stage course (very consistent with the one outlined by Lesieur & Custer, 1984), and prevention is the ultimate goal. Jacobs is confident that *latent* addiction could be identified and that "one can predict the course of any and all addictive patterns, as they progress through three common sequential stages" (discovery, resistance to change, exhaustion) (Jacobs, 1986, p. 19). Like many nineteenth- and twentieth-century authors discussed throughout this book, Jacobs considers the temptations of modernity a major culprit: "more addictions in a variety of manifestations appears to be the tragic cost that must be paid among the gains obtained from what society considers to be 'progress'" (pp. 22–23).

The second stage, "resistance to change," is of course very similar to the losing phase offered above by Lesieur and Custer (1984). Despite negative consequences, an addict will resist all suggestions that the addictive behavior be relinquished. Only with the third stage, exhaustion, will an addict be amenable to treatment. Jacobs actually posits an "addictive personality syndrome" (p. 25), partly innate and partly caused by the addictive lifestyle, such that until real desperation sets in "the addict is not the least motivated to abort or terminate his use pattern for any extended time" (p. 26). Resistance to change is fear based, given the apparent alternative to the addiction behavior: "fear of a future 'catastrophic' event is common, even central, to all types of addiction"[4] (p. 26). So, it would take a lot to convince an addict (any addict) to change.

> Towards the end of Stage II, pleasure once gained from the addictive pattern has been largely lost, and the build-up of punishing consequences from years of addiction brings the individual, emotionally distraught, dilapidated in mind and body, and bereft of social and economic supports, to the threshold of Stage III ("Exhaustion"). (Jacobs, 1986, p. 27)

Soon, we will say a bit about whether such a view can account for the now well-established fact that social support, for example, is associated with success in recovery rather than with its failure. For now, let us consider some of the generalities said to apply to every type of addiction: without a complete collapse, for example, addicts have absolutely no desire to change; all resistance to change stems from fear; the course of all addictions can be predicted. Must someone (anyone) with an

[4]The use of the word catastrophic is probably an exaggeration: its more anxiety about the future and a difficulty dealing with stress.

addiction be brought to extremes of degradation or the brink of destruction in order to generate readiness for change? So it would seem:

> Stage III in the Addictive Personality Syndrome is one of rapid collapse of the entire pattern and a plummeting into a state of physical and psychological exhaustion. It is at this point, however, that the addict is most amenable to treatment. These three stages reflect the onset and course of the Addictive Personality Syndrome once acquired by predisposed persons. This behavior pattern is amenable to modification and reversal almost exclusively during Stages I and III. (Jacobs, 1986, p. 28)

Yet, even in the 1980s, these ideas about addiction in general and PG in particular were being challenged. Miller (1986) questioned the need for PGs to "hit bottom" (p. 105) prior to recovery. Blaszczynski and McConaghy (1989) suggested that the difference between PG and normal gambling be considered along a continuum rather than exclusively via hard pathological designations and suggested that controlled gambling may be a possible outcome for many. While granting that PGs may be at higher risk for SUD and that the two afflictions are similar and hence arguably related, they questioned the presence of an "addiction-prone personality" (p. 42). Evidence for any categorical distinction between PGs and normal gamblers was thrown into question, as was our ability to determine with accuracy who would be at risk (Blaszczynski & McConaghy, 1989, pp. 44–45). Despite some association between psychopathy and PG as well as SUD,

> Psychological tests of gamblers have failed to establish homogenous 'ideal types.'… Psychological tests have also been of limited predictive value identifying individuals at risk for the development of pathological gambling, the identification of common personality traits or the validation of gambling typologies. (Blaszczynski & McConaghy, 1989, p. 48)

These authors observe that Lesieur (1984) himself was not entirely comfortable with the so-called medical model. Given the roles that Blaszczynski and Lesieur would come to play in the PG field, the rendition of Lesieur's concerns is worth noting verbatim:

> 1) that categorizing individuals into discrete compartments distorted reality and promoted the reification of the 'disease' concept.
> 2) that the illness model implied a behavioral determinism that undermined self-esteem and self-control.
> 3) that biological and psychological factors received prominence over socioenvironmental forces.
> 4) that the medical model was not morally neutral but reflected values inherent in the Protestant Work Ethic, that is that principles of thrift and work are valued more than the pursuit of hedonism. (Blaszczynski & McConaghy, 1989, p. 46).

PG studies, for the first time ever, amounted to a large-scale effort to generate real science. Understandably, it was an eclectic endeavor. While Kusyszyn and Rutter (1985) claimed that heavy gamblers are emotionally healthy according to "humanist-existential" theory (p. 1),[5] Brown (1987) gave the research community what amounted to a tap on the shoulder: evidence would suggest that most PGs who commit crimes do so as a result of the affliction, thereby offering empirical support

for Custer's (1982) benign view of the afflicted. One attempt to identify PG subtypes provides insight into a development that, today, we can observe with the eyes of a historian. Many of the ideas and assumptions, as well as the terms used, are from a different time:

> The C2 profile type, with elevations on scales 8, 7, 2, and 4, corresponds closely to the 8-7-2-4 code type… Male VA inpatients with this code type often had histories of overly close, often seductive, relationships with mothers due to the absence of a father in the home as a result of desertion, death, divorce, or illegitimacy. In some cases, there was a history of childhood sickness resulting in overindulgence by the mother. The overly close relationships with their mothers tended to arrest psychosexual development, resulting in sexual preoccupation, inadequacy, and disorganization. (Graham & Lowenfeld, 1986, p. 64).

It is fair to ask to what extent were PG studies at the time able to free themselves from the many early twentieth-century conceptions of addiction—political, social, religious, and other—discussed in the previous chapter? Such queries are not meant to disparage anyone's integrity or intelligence. Science does not operate in a vacuum. All researchers are products of culture. So the question pertains not to whether these PG studies were influenced but to how, to what degree, and to the ways in which the influences are still desirable. We can certainly wonder about the extent to which the designation "pathological gambling" was beholden to (or perhaps unduly influenced by) earlier conceptions of pathology and psychopathy, and again the best answers would involve degrees rather than absolutes. Recall how Charles Towns spoke of the "amazing cunning" produced by opiate addiction (Musto, 1973, p. 187), with little consideration for how such cunning may be specific to a setting wherein addicts are shunned. Nineteenth-century figures might, in such a climate, have cause to advocate for ascendancy or complete control over clients (Levenstein, 1878; Trotter, 1813/1981)[6]. This became even more accentuated in the early twentieth century. After all, addicts could not be trusted. In the previous chapter, we discussed the ways in which addicts would participate in their own demonization. Was this still going on in the 1980s? Once more, the answer will involve degrees. One of this book's authors is well acquainted with 12-Step recovery, and the experience includes participant observation at both GA and NA meetings (Ferentzy, Skinner, & Antze, 2004). Yet any reader well acquainted with the 12-Step movement could attest to how their peer-based approach is often vindicated with statements such as "You can't con a con" and to how many in this movement seem to believe that they could never be fooled by another addict (and of course that nonaddicts can easily be fooled). Without denying that similar experiences would generate some insight, and without meaning to undermine the value of peer-based recovery, one can still wonder about the extent to which addicts play along much as they did in the early twentieth century—with motives ranging from vanity, wanting to garner sympathy, or

[5]Of note, Kusyszyn was a professional gambler and as such was more aware of the difference between the professional and the problem gamblers than most other researchers in this field.

[6]Note how this treatment of drinkers was apparent in Trotter's work but emerged only later with respect to opiate users. Given Britain's eighteenth-century gin epidemic (Warner, 2002), Trotter's perspective is easy to place historically. The same stigmatization of opiate users came later.

perhaps just wanting to say what others (including both peers and practitioners) want to hear. When Lesieur and Custer (1984)—both of whom can be credited with challenging negative PG stereotypes—suggest that PGs have privileged insight into other PGs, there certainly must be some truth to it. But how much? "Fellow gamblers… know the facades and lies the neophyte has constructed" (p. 155). Perhaps, but this perspective was born in a setting wherein addicts of all stripes had long been demonized. If nothing else, we should acknowledge that sifting through all the determinants in order to generate clarity on this topic would be no cinch. To recap*: how is the research community expected not to mystify addicts if the addicts play along, and mystify themselves?*

Then there is the idea that addicts of all stripes must hit *bottom—desperation* (Lesieur & Custer, 1984) and *exhaustion* (Jacobs, 1986)—before recovery can proceed. If the addict, or PG, is unequivocally dishonest and psychopathic, then a pure bottom would likely be the only way. To whatever extent the addict is *normal,* which is to say much like anyone else, extremes of emotional and physical degradation would be unnecessary. In the same vein, any purported need for absolute control over a client (or a 12-Step newcomer) would be linked to how addicts are perceived. Similarly, our understanding of *denial*—undoubtedly associated with addictions to some degree—will be affected by the extent to which the persons in question are considered in terms of hard pathological constructs. How much self-deception *must* be involved? Some would say a great deal, as though honesty could only follow extremes of degradation. Some have insisted that addicts must be defective at the outset. In addition, only after the bottom will an addict (or PG) be able to understand that the addiction was a response to that: "He suddenly comes to perceive how really terrible his previous existence had been" (Jacobs, 1986, p. 24). Could an insistence that one's life was quite good prior to an addiction's onset ever be believed, or must it be taken as further proof of pathology?

We end this chapter with a few points. Already in the 1970s, there was a growing awareness that a client's attributes are a better predictor of success in SUD treatment than the choice of modality or even a practitioner's expertise (Ogborne, 1978). Higher cognitive and psychosocial functioning, as well as social support, was starting to receive credit as perhaps the best predictors of success (Marlatt et al., 1988; McLellan, Woody, Luborsky, O'Brien, & Druley, 1983; Ogborne, 1978; Stein, 1993). Obviously, any addict (PG, alcoholic, or other) would be much closer to a real bottom after these markers have been compromised or shattered outright. Yet apparently losing one's ability to function (or just losing one's job and overall social standing) will lessen the odds of success. That fact, as we will see in the next chapter, is taken up by a newer generation of PG researchers who seem farther removed from the mindset that governed the early twentieth century. Drug prohibition, and the mentality that went with it, was clearly conducive (and beholden) to the idea that addiction can only be prevented in the early going or halted only after the addict has been crushed. Yet, as the designation "high bottom"—meaning a point of change involving far less pain and humiliation—becomes more and more popular even within the 12-Step movement, certain older conceptions become less and less credible.

Other themes to surface include a strong questioning of the overreliance on hard, pathological constructs in favor of an emphasis on degrees—a continuum without identifiable cutoff points—already promoted by Blaszczynski and McConaghy (1989). Recall that even in the early twentieth century, many questioned the association of addiction with any single personality. Apparently, many addicts had normal personalities despite the addiction (Terry, 1915) Bishop (1920) also recognized that not all addicts are the same. Over half a century later, Taber et al. (1987) suggested much the same in the PG field: "It would be a serious error for the reader to assume that we are here staging a debate from which ultimately will emerge the one, the final, the really correct explanation of problem gambling… Unsettling as it may seem, it is entirely possible for equally qualified scholars to be correct while holding what may seem to be opposing views." (pp. 21–22). Why not? As we will see, on many points, the next generation of PG scholars would have less in common with mainstream twentieth century (chronic disease model) thinking than with figures such as Bishop (1920):

> What is true of one man who has opiate addiction, may be absolutely false of another. One narcotic addict is honest, competent, truthful and intelligent. Another is dishonest, untruthful, and incapable of appreciation… If the addict of a higher type displays at times attributes not typical of his pre-addicted days… it is well to estimate in his case the influences of past worry, fear, suffering, strain and struggle, the attitude of society, medical and lay, towards him, and the manner in which he has been handled… (Bishop, 1920, pp. 23–24).

Later inquiries into PG would reveal that the same applies to many addicted gamblers. All the while, there is a growing awareness that assorted behaviors can induce struggles with temptation and take over someone's life. So substance use should not be singled out. It has taken us a long time to catch up to the eighteenth century.

References

Alcoholics Anonymous World Services, Inc. (1976). *Alcoholics Anonymous: The story of how many thousands of men and women have recovered from alcoholism*. New York: Alcoholics Anonymous World Services, Inc.

American Psychiatric Association [APA]. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed., Rev.) Washington: Author.

American Psychiatric Association [APA]. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington: Author.

Bandura, A. (1969). *Principles of behavior modification*. New York: Holt, Rinehart and Winston.

Bandura, A. (1977). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice Hall.

Beck, A. T. (1975). *Cognitive therapy and the emotional disorders*. Madison, CT: International Universities Press Inc.

Bergler, E. (1957). *The psychology of gambling*. New York: Hill and Wang.

Bishop, E. (1913). Narcotic addiction – A systemic disease condition. *JAMA, LX*, 431–434.

Bishop, E. (1916). Facts about morphinism. *American Medicine, 11*, 31–39.

Bishop, E. (1920). *The narcotic drug problem*. New York: Arno Press. (Reprinted from New York: MacMillan).

Blaszczynski, A., & McConaghy, N. (1989). The medical model of pathological gambling: Current shortcomings. *Journal of Gambling Behavior, 5*, 42–52.
Brown, I. (1987). Pathological gambling and associated patterns of crime: Comparisons with alcohol and other drug addictions. *Journal of Gambling Behavior, 3*, 96–114.
Brown, I. (1991). Gaming, gambling and other addictive play. In J. Kerr & M. Apter (Eds.), *Adult play: A reversal theory approach* (pp. 101–118). Amsterdam: Swets & Zeitlinger.
Cocaine Anonymous World Services. (1993). *Hope, faith and courage: Stories from the Fellowship of Cocaine Anonymous*. Los Angeles: Cocaine Anonymous World Services.
Craig, R., & Baker, S. (Eds.). (1982). *Drug dependent patients: Treatment and research*. Springfield: Charles C. Thomas.
Custer, R. (1982). Gambling and addiction. In R. Craig & S. Baker (Eds.), *Drug dependent patients: Treatment and research* (pp. 367–381). Charles C. Thomas: Springfield.
Dowbiggin, I. (1985). Degeneration and hereditarianism in french mental medicine 1840–90: Psychiatric theory as ideological adaptation. In W. F. Bynum et al. (Eds.), *The anatomy of madness: Essays in the history of psychiatry, Vol. 1. People and ideas* (Vol. 1, pp. 188–232). London and New York: Tavistock.
Ellis, A. (1975). *A new guide to rational living*. New Jersey: Prentice Hall.
Ferentzy, P., & Skinner W. (2003, October). Gamblers anonymous: A critical review of the literature. *Electronic Journal of Gambling Issues*, *9*.
Ferentzy, P., Skinner, W., & Antze, P. (2004). *Exploring mutual aid pathways to gambling problems*. Final Report submitted to the Ontario Problem Gambling Research Centre after a sixteen month study of Gamblers Anonymous and Narcotics Anonymous.
Flora, S. R. (2004). *The power of reinforcement*. Albany: State University of New York Press.
Gardner, H. (1985). *The mind's New Science: A history of the cognitive revolution*. New York: Basic Books.
Graham, J., & Lowenfeld, B. (1986). Personality dimensions of the pathological gambler. *Journal of Gambling Behavior, 2*, 58–66.
Gray, P. (1991). *Psychology*. New York: Worth Publishers.
Haggard, H. (1944). Critique of the concept of the allergic nature of alcohol addiction. *Quarterly Journal of Studies on Alcohol, 5*, 233–241.
Hill, W. F. (1980). *Learning: A survey of psychological interpretations* (3rd ed.). London: Richard Clay (The Chaucer Press) Ltd.
Jacobs, D. (1986). A general theory of addiction: A new theoretical model. *Journal of Gambling Behavior, 2*, 15–31.
Kusyszyn, I., & Rutter, R. (1985). Personality characteristics of heavy male gamblers, light gamblers, nongamblers, and lottery players. *Journal of Gambling Behavior, 1*, 59–63.
Lesieur, H. R. (1984). *The chase: Career of the compulsive gambler*. Cambridge: Schenkman.
Lesieur, H. R. (1988). Altering the DSM-III criteria for pathological gambling. *Journal of Gambling Behavior, 4*, 38–47.
Lesieur, H., & Custer, R. (1984). Pathological gambling: Roots, phases, and treatment. *The Annals of the Academy of Political and Social Science, 474*, 46–156.
Levenstein, E. (1878a). *Morbid craving for morphia*. New York: Arno Press (1981).
Levenstein, E. (1878b). Delirium tremens: A symptom of morbid craving for morphia. *Quarterly Journal of Inebriety, 2*, 217–220.
Marlatt, G. A. (1979). A cognitive-behavioral model of the relapse process. In N. A. Krasnegor (Ed.), *Behavioral analysis and treatment of substance abuse* (pp. 191–200). National Institute on Drug Abuse Research Monograph, 25. Rockville, MD.
Marlatt, G. A. (1985). Situation determinants of relapse and skill-training interventions. In G. A. Marlatt & J. R. Gordon (Eds.), *Relapse prevention: Maintenance strategies in the treatment of addictive behaviours* (pp. 71–126). New York: Guilford.
Marlatt, G., Baer, J., Donovan, D., & Kivlahan, D. (1988). Addictive behaviors: Etiology and treatment. *Annual Review of Psychology, 39*, 223–252. doi:10.1146/annurev.ps.39.020188.001255.
McLellan, A., Woody, G., Luborsky, L., O'Brien, C., & Druley, K. (1983). Increased effectiveness of substance abuse treatment: A prospective study of patient- treatment "matching.". *The Journal of Nervous and Mental Disease, 171*, 597–605.

Miller, W. (1986). Individual outpatient treatment of pathological gambling. *Journal of Gambling Behavior, 2*, 95–107.

Musto, D. (1973). *The American disease: Origins of narcotic control*. New Haven: Yale University Press.

O'Brien, C. (2006). What's in a word? Addiction versus dependence in DSM-V. Editorial. *American Journal of Psychiatry, 163*, 764–765.

Ogborne, A. C. (1978). *Patient characteristics as predictors of treatment outcomes for alcohol and drug abusers*. Toronto: Evaluation Studies Department, Addiction Research Foundation.

Peele, S. (2003). Is gambling an addiction like drug and alcohol addiction? Developing realistic and useful conceptions of compulsive gambling. In G. Reith (Ed.), *Gambling: Who wins? Who loses?* (pp. 208–220). Amherst, NY: Prometheus Books.

Petry, N. (2006). Should the scope of addictive behaviors be broadened to include pathological gambling? *Addiction, 101*(Suppl. 1), 152–160.

Potenza, M. (2006). Should addictive disorders include non-substance related conditions? *Addiction, 101*(Suppl. 1), 142–151.

Rosecrance, J. (1985). Compulsive gambling and the medicalization of deviance. *Social Problems, 32*, 275–284.

Rosenthal, R. (2005, December). The categorization of pathological gambling and the impulse-control disorders not elsewhere classified. *Journal of Gambling Issues*, *15*.

Silkworth, W. (1937). Alcoholism as a manifestation of allergy. *Medical Record, 145*, 249–251.

Skinner, B. F. (1953). *Science and human behavior*. Free Press, New York.

Sournia, J. (1990). *A history of alcoholism*. Cambridge; Basil Blackwell.

Stein, S. (1993). The role of support in recovery from compulsive gambling. In W. Eadington & J. Cornelius (Eds.), *Gambling behavior and problem gambling*. Reno, NV: University of Nevada, 627–637.

Taber, J., McCormick, R., Russo, A., Adkins, B., & Ramirez, L. (1987). Follow-up of pathological gamblers after treatment. *American Journal of Psychiatry, 144*, 757–761.

Terry, C. (1915). Narcotic drug addiction. *American Medicine, 26*, 29–35.

Trotter, T. (1813/1981). *An essay, medical, philosophical, and chemical, on drunkenness*. From first Philadelphia edition, 1813. (Reprinted, New York: Arno Press, 1981).

Warner, J. (2002). *Craze: Gin and debauchery in the age of reason.* Random House: New York.

Chapter 7
Current Situation and Future Directions

Abstract This chapter deals with the current situation and offers some thoughts on future prospects. Issues raised throughout the book are revisited, and accounts are given of seemingly ascendant perspectives such as the public health and the biopsychosocial models. The ongoing role of metaphors, exemplified by the development of "vaccines" against addiction, reinforces a point we have been making throughout: ideas and concepts will invariably travel from one sphere to another. Today, there is a greater awareness of cultural determinants and the many ambiguities that haunt all studies of PG and addictions in general. We build on this through reference to many of the historical currents addressed in this book, discuss the ongoing resilience of the mainstream disease conception, and do our best to sift out what aspects of assorted models are promising as well as ones that would best be left behind. Theories of positive and negative reinforcement are discussed, and we argue that the two conceptions are in some ways compatible. We end by reminding the reader of the pejorative portrayals of addicts originating in the early twentieth century and argue strongly that the idea of the afflicted requiring extremes of degradation (hitting bottom) in order to recover is a relic from a time when addictions were poorly understood.

Keywords Biopsychosocial • Public health model • Hitting bottom

7.1 Ongoing Rapport Between Problem Gambling and Substance Use Disorders

While problem gambling (PG) has developed greater legitimacy as a field in its own right, substance use disorders (SUD) continue to serve as the most significant prototype. Whether the issue is prevention (Dickson, Derevensky, & Gupta, 2002; Winters & Anderson, 2000), identification (Gillespie, Derevensky, & Gupta, 2007; Potenza, Fiellin, & Heninger, 2002), or treatment (DiClemente, Story, & Murray,

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2000; Lesieur & Blume, 1991; Littman-Sharp, 2004), SUD still leads the way. Yet, in another sense, a growing concern with a range of seemingly addictive behaviors has received its greatest impetus from PG, obviously the most well-studied behavioral (i.e., non-substance) addiction of all. In the third chapter, we mentioned how PG, which involves no ingested substance, has been described as a *pure addiction* (Custer, 1975; Jacobs, 1986; Rosenthal, 1992) and has been well suited to ideas about addictions in general (Jacobs, 1986; Orford, 2001). Arguably, PG scholars have led the way in applying what they know about this behavioral addiction to other behaviors ranging from committing crimes to playing video games (see e.g., Brown, 1991, 1997; Griffiths, 2008a; Orford, 2001). Peele (2003), who takes issue with many bio-focused accounts of SUD, has argued that a greater awareness of PG may in fact help to dispel these purportedly myopic accounts of addictions, including SUD. So despite an ongoing reliance on SUD, PG studies have been affecting the many ways in which addiction is understood.

If PG research is often informed by SUD research, one obvious reason is that the disorders are similar, something that earlier PG scholars were quick to point out (see e.g., Lesieur & Blume, 1993; Rosenthal, 1992). PG has been defined as an impulse control disorder (APA, 1987; 1994), but it is no secret that SUD provided the prototype (Ferentzy & Skinner, 2003; Potenza, 2006). Common symptoms include loss of control, disease progression, and even tolerance (Blume, 1986; Griffiths, Parke, & Wood, 2002; Spunt, 2002). Despite variations, each disorder seems to take hold at comparable ages, and many risk factors overlap (Hall et al., 2000; Petry, Stinson, & Grant, 2005). In many (though not all) cases, psychiatric issues like impulsivity may indicate a single disorder expressing itself in different ways (Griffiths et al., 2002; Ibanez et al., 2001; Ladd & Petry, 2003; Petry, 2001). Orford (2001) notes that many maladaptive behaviors, including PG and SUD, demonstrate comparable distribution curves in that similarly small percentages of the population exhibit unduly high rates of engagement.

In a discussion of the merits of applying the SUD addiction concept to PG, Petry (2006) also notes the high comorbidity rates (Cunningham-Williams, Cottler, Compton, Spitznagel, & Ben-Abdallah, 2000; Hall et al., 2000; Langenbucher, Bavly, Labouvie, Sanjuan, & Martin, 2001; Ledgerwood & Downey, 2002; Spunt, 2002; Toneatto & Brennan, 2002). This is another possible reason for each area influencing the other. Despite objections that much of the earlier evidence came from treatment samples and hence may not be representative (De Carvalho, Collakis, de Oliveira, & da Silveira, 2005; Feigelman, Kleinman, Lesieur, Millman, & Lesser, 1995; Hall et al., 2000; Ibanez et al., 2001; Kausch, 2003; Lesieur, Blume, & Zoppa, 1986; Spunt, Lesieur, Liberty, & Hunt, 1996), community samples have also confirmed this correlation (Cunningham-Williams et al., 2000; el-Guebaly et al., 2006). The previous chapter dealt with PG studies till no later than the early 1990s, when the relationship between PG and SUD was arguably hypothetical (Ciarrocchi, 1987; Grodsky & Kogan, 1985; Steinberg, Kosten, & Rounsaville, 1992). That is no longer the case. While numerical estimates may vary, we are now dealing with a confirmed association (Cunningham-Williams, Ben-Abdallah, Callahan, & Cottler, 2007; Petry et al., 2005).

7.2 PG Today: A Greater Awareness of Cultural Determinants and Conceptual Ambiguity

The PG field has certainly become more self-critical, aware of potential biases and aware, as well, of the many ways in which the affliction can be understood. It would seem that one effect of many perspectives is a greater acceptance of the idea that no single conception will do justice to the topic. For one, more researchers are now insisting that it would be futile to reduce PG to a single cause (Blaszczynski, 2000; Blaszczynski & Nower, 2002; Sanju & Murali, 2005; Turner, Littman-Sharp, & Zangeneh, 2006; Turner, Jain, Spence, & Zangeneh, 2008). The point is not that the PG scholars discussed in the last chapter were reductionist but that the field has advanced considerably. There is a greater awareness of the ways in which our scientific conceptions, despite all efforts at detachment, are also culturally determined. The following, for example, is not even controversial in today's scholarly climate: "The everyday vocabulary and experience of our psychological world is shaped by professional vocabularies and practices (i.e., experiences and claims are made available to all of us by these vocabularies). Equally, as social scientists, we can never entirely separate our 'academic' understandings of psychological phenomena from those experiential and cultural presuppositions which we bring to the topic" (Larkin, Wood, & Griffiths, 2006, p. 207). One can speculate that PG's own context has given some impetus to a better grasp of such matters. As discussed in previous chapters, PG's recent medicalization was obviously a product of social and political changes (Rosecrance, 1985). Further to this, our field emerged in conjunction with the identification of newer and more interesting behavioral addictions (Brown, 1991; Carnes, 1983; Griffiths, 1996; Hodge, 1991). This process was clearly linked to a growing 12-Step recovery culture that has practically taken North America by storm since the 1980s (Peele, 1989), and it is hard not to see the newer emerging pathologies in their social context.

As explained in the third chapter, a grasp of such determinants need not entail the derision of the pathological construct in question. Obviously it can, and some authors have argued strongly against themes such as disease progression, chronicity, and the need for abstinence, suggesting that they need not be endemic to the affliction and often simply play out as self-fulfilling prophecies (Peele, 1989; Reinarman, 2005). Given the many social and historical precedents discussed in the last two chapters, it is understandable that such questions are still vexing and far from settled. Similar issues have long haunted SUD as well as mental illness (Al-Issa, 1982; Larkin et al., 2006; Reinarman, 2005; Triandis & Draguns, 1980), with even symptoms such as loss of control and withdrawal are hard to pin down across cultures (Schmidt & Room, 1999; see Chap. 3).

One might say that thinking about PG has become less rigid and that some of this has to do with the exploratory endeavors surrounding behavioral addictions as such. In an effort to provide structure to the identification of other behavioral addictions, Griffiths (2005) essentially makes a case for fewer preconceptions and more intuition, asserting that practice must often precede theory: reasoning in these matters

must progress in a "bottom-up" fashion (p. 191). Is a case being made for not being able to say what an addiction is, but being able to know it when one sees it? Not quite, but there is a greater awareness that no set of etiological determinants or symptoms would, on their own, apply to each case (Griffiths, 1996). It is perhaps worth noting that DSM-IV posits ten criteria for PG and that only five are necessary for a designation—so it is possible for two bona fide pathological gamblers to exhibit no common symptoms (APA, 1994). With SUD, only three out of seven are needed. Shaffer, LaBrie, LaPlante, Nelson, and Stanton (2004) suggest that addiction be viewed as a syndrome: "A syndrome is a cluster of symptoms and signs related to an abnormal underlying condition; not all symptoms or signs are present in every expression of the syndrome, and some manifestations of a syndrome have unique signs and symptoms" (p. 367). Offering our earlier experience with AIDS as an example of how seemingly unrelated ailments had not been identified as stemming from immune deficiency; Shaffer, LaPlante et al. (2004) suggest that many addictive behaviors are likely to stem from a single origin. In this chapter, we will discuss how the latter tendency might have less to do with promoting a hard pathological construct (though obviously it might) and, rather, is more associated with rendering addictions a bit more normal. At issue is the idea of kindred afflictions involving too many behaviors for the kind of stigma associated with a few substance addictions. As a unit they affect broad segments of the public, often necessitate a greater emphasis on psychosocial accounts (McMurran, Hodge, & Hollin, 1997), and are clearly amenable to conceptions involving degrees of harm over (though not at the exclusion of) hard pathological constructs (Dickson, Derevensky, & Gupta, 2004).

7.3 A Resilient Medical/Disease/GA Conception

Arguably prescient, Lesieur and Custer (1984) asserted confidently that "by the year 2000" the medical model "will be firmly entrenched" (p. 156). They also laid down the model's essentials: "There are persons who have a chronic and progressive failure to resist impulses to gambling…The cardinal features are emotional dependence on gambling, loss of control, and interference with normal functioning" (Lesieur & Custer, 1984, p. 147). Disease progression, chronicity, and loss of control are sufficient to establish something akin to the dominant conception, with "loss of control" generally linked to an abstinence principle. Though there are many models one might consider "medical," as discussed in the Introduction, the one just mentioned is often taken as the "medical" conception and has been identified as dominant by authors who have surveyed the literature (Ferentzy & Skinner, 2003; Ferris, Wynne, & Single, 1999). Yet this model has also been questioned on grounds similar to those upon which it was originally invoked. Appeals to kindness and understanding, along with calls for less judgmental attitudes designed to help rather than harm the gambler, can all involve critiques of—or at least alternatives to—this very conception. Sociological arguments treat much of PG as situational rather than *internal* to

the gambler (Ocean & Smith, 1993) and share much with social learning theory in that PG is typically viewed in terms of a continuum of harm rather than qualitatively different from normal gambling (Ferris et al., 1999, p. 25). Peele (1989) has been one of the most prominent advocates of this perspective in the substance abuse field, and similar harm reduction approaches in the PG field have challenged the strict application of pathological constructs found, for example, in DSM-IV (Strong, Breen, Lesieur, & LeJuez, 2003). The public health model (discussed below: Sect. 5.4) has also been offered as an alternative to the so-called medical conception (Dickson et al., 2002; Marotta & Hynes, 2003).

In a review of the literature on GA, Ferentzy and Skinner identify the main tenets of a conception of addiction that has long been promoted by GA, DSM, and is of course beholden to AA (Alcoholics Anonymous World Services, Inc., 1976) as well as alcoholism experts (Flavin & Morse, 1991; Jellinek, 1960): "(1) addiction is primary disease, the cause rather than the effect of other difficulties; (2) addiction is progressive, meaning that untreated it can only get worse; (3) addiction is chronic, meaning that it can be arrested but never cured (hence abstinent subjects must forever remain on guard); (4) abstinence is the only solution" (Ferentzy & Skinner, 2003, p. 7). These authors also observe that a cursory glance at PG literature could lead to a mistaken conclusion that the model is no longer dominant. This, however, is really a sign of the model's currency as adherents often do not defend it explicitly and simply acknowledge some or all of its tenets, whereas detractors are more inclined to make explicit mention of the model in order to bring attention to it (Abbott & Volberg, 2006; Derevensky, Gupta, Dickson, & Deguire, 2001; Dickson et al., 2004; Ferris et al., 1999; Korn, Gibbins, & Azmier, 2003; New Zealand Ministry of Health, 2004; Strong & Kahler, 2007).

One might consider what this model's long-standing dominance entails. DSM-IV describes pathological gambling in the following way: "few individuals are 'hooked' with their very first bet…the course of the disorder is typically chronic. There is generally a progression in the frequency of gambling, the amount wagered…" (APA, 1994, p. 617). As discussed in the previous chapter, Lesieur and Custer (1984), despite a sophisticated discussion of many potential etiological accounts, identify the stages of the disorder as generally the same: "winning, losing, and desperation" (p. 151). The proposed solutions, despite an acknowledgement of person-specific needs, are also similar. GA is advocated—with the caveat that it may become more effective with greater acceptance of the medical model—and group therapy is considered more effective than individual counseling (p. 155). The marginalization of etiological considerations has been a hallmark of this conception, and there is a simple reason for it: a stated or implicit belief in "disease primacy." The latter notion has been well developed in the substance abuse field. Flavin and Morse (1991) identify two meanings of "primary alcoholism" (pp. 267–268). One involves alcoholism as independent of other factors and chronologically prior to related psycho-emotional problems. Another may treat the drinking or the alcoholism itself as originally symptomatic of other psychiatric problems, yet currently as independent of what may originally have been the cause. In either case, the

addiction is considered "primary" and hence as something that must be targeted directly as it cannot be addressed solely by alleviating other difficulties.

Authors have long discussed this model in terms of therapeutic merit rather than veracity (Blume, 1986, 1987; Ferentzy, Skinner, & Antze, 2007). Yet it has been critiqued along similar lines, both in the substance abuse and PG fields, with the suggestion that a rigid focus on abstinence can lead, after even a small slip, to excessive and destructive behavior (Halliday & Fuller, 1974; Larimer, Palmer, & Marlatt, 1999; Peele, 1989). As mentioned, a hard question facing both the PG and SUD fields is whether the internalization of such a disease conception can, in the form a self-fulfilling prophecy, lead to destructive behavior resulting from the suggestions of professionals, mainstream culture, and others who have been afflicted. Yet the competing conceptions have yet to generate an overpowering alternative. Perhaps this should not be surprising. As Roizen (1987) has pointed out, debates over controlled drinking emerged more because of the high failure rates associated with abstinence goals than because of any great faith in controlled drinking outcomes. The same has been true for PG (Scodel, 1964; Lester, 1980).

Controversial from the start, the disease model has been subject to criticisms that parallel critiques of disease conceptions of substance addiction. As discussed in the first chapter, these include, but are not limited to, the following:

1. It is overly rooted in clinical perspectives (Alberta Alcohol and Drug Abuse Commission, 2002; Shaffer, Hall, & Vander Bilt, 1999).
2. It was developed with a focus on the hardest cases—often those relying upon either treatment or mutual aid—and wisdom so derived is applied to the entire population of problem gamblers without considering possible differences between severe and milder cases (Messerlian, Derevensky, & Gupta, 2004).
3. For these and other reasons, such as the view that problem gamblers must suffer sufficiently ("hit bottom") in order to recover, it inhibits harm reduction and moderation therapy approaches—an idea at odds with general medical practice where emphasis is placed on early intervention. With no other medical condition (save for those designated as addictions) do treatment professionals suggest (or insist!) that the disease must be allowed to get worse (and cause sufficient harm) in order to render treatment more effective.
4. It does not fit well with sociological inquiries because it encourages the view that the disorder is located within the individual rather than in social problems that the individual might experience (e.g., poverty, oppression, or, with gambling, even issues such as game features). In short, it can marginalize psychosocial inquiries and solutions [Raylu & Oei, 2004; Tse, Wong, & Kim, 2004; see also Peele (1989, 2003)].
5. It paints pathology in black and white terms without allowing for degrees (Abbott & Volberg, 2006; Strong & Kahler, 2007).
6. It still has too much in common with the moral model it supplanted—calling a behavior disease rather than vice need not, on its own, drastically alter our approach [Brown, 1991, 1997; see also Ferentzy (2001), Levine (1978), Peele (1989, 2003), Warner (1994)].

7. The model suggests that a cure is impossible, with lifelong abstinence as the only solution (Abbott & Volberg, 2006; Peele, 2003).
8. Many adherents of this model view mutual aid societies, rather than medical professionals, as the only means to recovery. We are left with an odd situation wherein the disease or medical model of substance abuse and PG are often defined by nonmedical people. This odd situation is often supported in part by the US political climate and its healthcare system because it places responsibility for recovery on the individual and places much of the solution in the hands of (cost free) self-help groups.

One challenge that encompasses, or at least touches upon, the properties just listed involves the notion that PG be viewed from a public health perspective on a continuum of harm rather than with a focus on pure pathology. This public health model is often viewed as an alternative to the "medicalized" model of problem gambling (Svetieva & Walker, 2008) even though it is rooted in epidemiological models of infectious disease (e.g., see Korn, 2005). Harm reduction, moderation management, and many (though not all) preventative measures fit well with the notion of degrees of harm and less so with a focus on those who must simply abstain.

Debates about addiction as disease often involve this particular "medical" conception. As discussed here and in the third chapter, while the DSM-IV sections on substance dependence and pathological gambling (APA, 1987, 1994) do not use the terms "addiction" or "disease," they do share much with the AA and GA models (Dickerson, 2003; Ferentzy & Skinner, 2003; Petry, 2006; Potenza, 2006). One of the great ironies in the addiction field is that the so-called medical model is not "medical" in any normally accepted way. A scientifically derived model is founded on observation, research, hypothesis, and testing. The GA model was derived mostly from the experiences of the afflicted and has become an established doctrine of belief that is not modified by scientific research. Again, this dilemma is not specific to gambling and originated in the substance abuse realm with AA and NA. As well, the uncompromising thinking surrounding the disease model of addictions is not unique to the supporters of the model. Those who attack the "medical model" often presuppose that there is one specific medical model that has to be attacked and overturned entirely (Dickerson, 2003; Fingarette, 1988; Peele, 2003) rather than redefining the model in light of new evidence. In contrast, in medicine, new evidence about the nature of a disease is added in a cumulative manner to what is known about the disease. When new evidence was found regarding the causes of heart disease such as the role of bacterial infections (University of Wisconsin—Milwaukee, 2007, November 22), doctors expanded their view of the disease's etiology, but they did not entirely reject the previous model and demand that it be replaced with a completely new perspective. Rather than advocating a shift in the emphasis in the model, those who attack the disease model often wish to replace it entirely (Dickerson, 2003; Fingarette, 1988; Peele, 2003). This makes the adoption of the public health model as the main alternative to the disease model seriously ironic. As discussed already, those who adopt the public health model seem to view it as a non-disease model, and yet it is actually derived from a medical model of infectious disease

(or toxins); conversely, the so-called medical model is based mainly on experience derived from mutual aid groups. In many ways, the so-called medical model is less medical than many of the proposed alternatives.

7.4 The Public Health Model

Though not originally designed to target psycho-behavioral ailments, the public health model has from the start been focused on promoting healthy behaviors. In 1854, British physician John Snow identified polluted water as a source of cholera (Vinten-Johansen, Brody, Paneth, Rachman, & Rip, 2003, p. 437). Snow was an innovator in notions such as *medical hygiene,* highlighting an approach that later came to be associated with Pasteur and the germ theory of disease, which in turn influenced various attempts at imitation in nineteenth century psychiatry (Dowbiggin, 1985; Rosenberg, 1979). These attempts were mentioned in the previous chapter, along with the effects that immunology as well as vaccinations had upon ideas surrounding addictions to alcohol and other drugs. Serving as a prototype for newer approaches to psycho-behavioral issues, epidemiology had from the start made use of concepts such as "host," "agent," and "environment" in order to understand and address the spread of contaminants. Twentieth-century psychiatrist Paul Lemkau, founding chairman of the Mental Hygiene department at the Johns Hopkins School of Public Health, was among the first to apply a public health model to mental disorders. Of note is the department's title: *Mental* Hygiene, just like one of Lemkau's books: *Mental Hygiene and the Public Health* (Lemkau, 1955). A promoter, for example, of community walk-in clinics in the place of larger scale residential institutions, Lemkau advocated a more sociologically grounded approach to mental health with an interesting twist. Lemkau challenged an arguably reductionist approach to medicalization rooted largely in clinical perspectives, but his challenge involved an alternative type of medicalization which borrowed ideas from epidemiology. Figures such as Justice (1976), Duncan (1974b), and Roger Meyer (1972) later applied the model to issues ranging from child abuse to substance abuse. If nothing else, the conceptual and metaphorical transpositions were creative:

> In this model, **host** refers to the person susceptible to the illness condition and those individual characteristics which affect his or her susceptibility to the condition. The **agent** is the element (germ, toxin, nutrient, etc.) which by its presence or absence in the host may produce the illness condition. The **environment** affects both the probability of the agent's presence and the host's resistance to the agent. A fourth concept known as **vector** originally referred to insects, such as mosquitoes or flies, which carried disease. The term vector has now been broadened in use to include any animate carrier of infection or even any vehicle by which the agent is transmitted from host to host…
>
> The **agent** then, is one or more psychoactive drugs. The **host** is an individual whose susceptibility is increased by internal conflicts and poor coping skill. The **environment** is the social and interpersonal setting in which the host exists, with high levels of stress

> contributing to the probability of drug dependence. The **vector** by which the agent is transmitted to the host is the drug using peer group (Duncan, 1974c, p. 211).

Often associated today with harm reduction approaches to substance abuse problems, the public health model has been applied to PG and has posed a challenge to the mainstream chronic disease conception with respect to each of the eight issues listed in the previous subsection (Korn & Shaffer, 1999; Messerlian et al., 2004; Marotta & Hynes, 2003; Raeburn, 2004; Shaffer, 2003; Shaffer & Korn, 2002; Shaffer, LaBrie, & LaPlante, 2004; Taylor, Taske, Swann, & Waller, 2007).

> For gambling, the "host" is the individual who chooses to gamble and who may be at risk for developing problems depending on their neurobiology, psychology and behavior patterns. The "agent" represents the specific gambling activities in which players engage (e.g., lotteries, slot machines, casino table games, bingo, horse race betting). The "Vector" can be thought of as money. The "environment" is both the gambling venue and the family, socioeconomic, cultural and political context within which gambling occurs (e.g., whether it is legal, how available it is, and whether it is socially sanctioned or promoted) (Korn & Shaffer, 1999, pp. 290–291).

In terms of ideology and policy, some sympathize with many or all of the criticisms of the disease concept—favoring, for example, the treatment of harm as a continuum and questioning the rigid application of an abstinence principle—but still take issue with the use of notions such as host, agent, and vector when targeting psycho-behavioral issues (Gruenewald, Treno, Taff, & Klitzner, 1997) including PG (Ferris et al., 1999). Certain concepts borrowed from epidemiology are said to be a poor fit for human behavioral issues, with the effect of broadening the notion of *disease* in ways that are not very useful (Ferris et al., 1999; Gruenewald et al., 1997).

Developed as an alternative to the medical model,

> the major contribution of the public health model has been its application to the spread of infectious diseases. This model shifts attention away from ill individuals to the environmental conditions that lead to the spread of illness. Unfortunately, the more general public health version of this model, the one often applied to alcohol or drug problems, takes the same conceptual approach, redefining the notions of disease and environment to include the broader aspects of human behavior. Thus, the concept of disease is expanded to include public health 'problems' and the concept of the environment is expanded to include not only vectors of disease transmission but the culture as a whole. In this way, "public health problems" came to include a broad panoply of social problems that appear in the United States…Virtually any social phenomenon or condition can be considered an agent, a host, or a part of the environment, depending on the intellectual or political predilections of the person using it. Unfortunately, the model leaves practitioners with three empty conceptual boxes into which various social phenomena may be grouped… [Ferris et al., 1999, p. 41; see also Gruenewald et al. (1997)].

Clearly, these critics view the transpositions of host, agent, and vector to be about as scientific as the allergy theory of alcoholism discussed in the previous chapter. This is not the place to decide whether they are right. Our intention has been to show some historical continuity. That such a case could be made without these constructs is well exemplified by the following: David Korn, coauthor of the paper quoted prior to the one above, later coauthored another in which those very terms are not mentioned, even as a case is made for a public health/harm

reduction-oriented approach to PG (Korn et al., 2003). If public health advocates favor a broad-based, societal perspective on addictions and related matters, it is at least arguable that some of their reliance upon epidemiological notions—though perhaps needed when the public health model was newly applied to the field—is by now superfluous. In fact, late nineteenth-century psychiatry actually borrowed from Pasteur's germ theory of disease by positing single, identifiable mental ailments (Dowbiggin, 1985). Rather than a continuum of harm, germ theory and constructs related to it were originally used to buttress hard pathological constructs in psychiatry—arguably a more consistent metaphorical application than the one in use today. One may also note that for substance abuse, the chosen "vector" is the peer group, whereas for gambling it is money. One could imagine, for example, the vector being a peer group in either case or something else. While epidemiology does provide a useful prototype in some respects, perhaps the specifics of its application to addictions could be revised.

Another offshoot of public health science involves discussions of PG in terms of toxins and adaptation. First, a casino might be viewed as a "toxin" and hence conducive to PG; second, persons could become resistant to the aggravating agent (Shaffer, LaBrie, & LaPlante, 2004). Exposure and adaptation are explored in these terms: "sources of exposure likely include, but are not limited to, interpersonal (e.g., peer pressure), societal (e.g., advertising), civic (e.g., venues), and occupational factors (e.g., employment)" (p. 41). Other issues pertaining to "dose," such as "potency" and "duration," are explored (p. 43). These authors also point out that even if casino employees are at high risk for PG because of their exposure, this is more accentuated among newer employees—suggesting that both exposure and adaptation ought to be taken into account. Here the parallels between biological and social processes seem to fit, though perhaps terms such as "exposure" and "adaptation" would suffice (Sevigny, Ladouceur, Jacques, & Cantinotti, 2008). Nonetheless, the toxin model might fit well with the differences in problems associated with different games. Some games could conceivably be viewed as less toxic than others. Evans (2003) has discussed how ideas about "social inoculation" (p. 287) in the substance abuse field could be transposed to PG. The following statement exemplifies the way in which the term "inoculate" has come to be used: "The present results appear to negate the idea that educating people about computers and how computerized games of chance are programmed could potentially inoculate individuals from becoming problem gamblers" (Christopherson & Weatherly, 2006. p. 1072). Obviously the authors are not referring to medical inoculation but to an interpersonal phenomenon that may, indeed, share traits with inoculation in the sense that each is meant to be preventative. In this case, "inoculation" was unsuccessful, but the concept itself (or the choice of terminology) has gone unquestioned.

So as ideas, and terms, travel to our field, metaphors still seem necessary. That on its own need not invalidate current constructs. They could still be useful, metaphoric, or not. An interesting development in this vein involves the potential application of vaccines to the treatment of substance addiction. Essentially, techniques are being developed to block the effects of a drug on the brain, often employing antibodies (which are involved in traditional vaccinations as well) (Orson et al.,

2008; STASH, 2008). Results, however, are ambiguous: such interventions reduce the likelihood of using cocaine, for example, but do not completely protect an addict from use (Martell, Mitchell, Poling, Gonsai, & Kosten, 2005). This kind of vaccination is meant to be applied in conjunction with standard treatment approaches (Orson et al., 2008)—different from the original smallpox vaccine which could spare a patient the need to seek other remedies. Yet since even viral immunizations do not necessarily prevent disease, and sometimes merely reduce the severity and the death rate, we will leave it to the reader whether, and to what extent, these newer interventions are literally vaccines or a metaphorical transposition. It is also worth speculating about whether, and in what form, a "vaccine" for PG may be on the horizon.

7.5 An Emerging Conception: Implications for Future Directions

For etiological as well as treatment considerations, the biopsychosocial model (e.g., Blaszczynski & Nower, 2002) is perhaps the most promising development in the PG field right now. Again there is a strong tradition in the SUD field upon which to rely (Ewing, 1980). As well, given that readiness to change is emerging as one of the most important treatment considerations in the PG field (DiClemente et al., 2000), it is worth noting that over 20 years ago, Marlatt, Baer, Donovan, and Kivlahan (1988) identified a *stages-of-change* analysis as one of the model's essential features with respect to SUD.

Observing that many etiological perspectives have been posited for PG and that many differing views have merit, Blaszczynski and Nower (2002) call for more empirical validation in conjunction with an integrated conceptual framework that might do justice to a range of psychosocial and biological determinants. To this end, many of the available models should be taken as complimentary rather than exclusive, and these authors identify the principle of reinforcement as an example of a consideration all the models seem to share (p. 489). Blaszczynski and Nower (2002) argue that a major problem is that each etiological account assumes that PG must be a single disorder, thereby discounting other possibilities. Furthermore, they point out that debates over treating PG either in terms of hard pathological constructs or as a point along a continuum can at times be misleading: a continuum of harm conception must suppose a cutoff point, leaving one with a single notion of pathology often with little or no regard for subtypes (p. 489). Blaszczynski and Nower (2002) identify three *pathways* to PG (1) behavioral conditioning, (2) emotional vulnerability, and (3) antisocial and impulsive tendencies. Members of the first group would often be psychiatrically normal aside from the problem gambling itself (though they might develop a secondary affliction such as depression as a result of their PG). Usually their gambling is less troublesome than among the other subtypes, and the principles of learning theory and exposure may be most significant etiologically.

Members of the second group are emotionally vulnerable and typically suffer from depression or anxiety. The third subtype comprises individuals who are impulsive and often exhibit anti social personality disorder (p. 494). Not only would risk factors be person specific, but a diagnostic challenge would also involve distinguishing between assorted etiological subtypes among persons who may exhibit very similar behaviors.

This perspective certainly differs from one offered two decades prior: "Addiction is defined as a dependent state acquired over time to relieve stress. Two interrelated sets of factors predispose persons to addictions: an abnormal physiological resting state, and childhood experiences producing a deep sense of inadequacy. All addictions are hypothesized to follow a similar three-stage course" [Jacobs, 1986, p. 15; see also Lesieur and Custer (1984)]. We might qualify that the latter is dealing only with *addiction,* whereas Blaszczynski and Nower (2002) address a range of behaviors, many of which are said not to suit an addiction model. Nonetheless, in the last chapter, we already discussed how a linear conception of PG has implications that a newer generation of scholars has been keen to avoid. The primary objective—which does follow from this conception—is prevention directed at youth (Jacobs, 1986). Given that "all addictions" are said to necessitate extremes of degradation once initiated—there can be no stopping the disease till then—only two points of entry are feasible: before and after; in all but a very few cases, little or nothing can be done while the process develops. So the secondary objective is to help those—and only those—who are completely desperate. In the previous chapter, we raised the question about whether doing anything at all to alleviate desperation, or suffering in general, must be counterproductive according this view. Does it simply offset the desperation required to stop an addiction? This topic is addressed below (7.9 Hitting Bottom).

7.6 PG and Other Addictions: Negative, Positive, or Both?

A subtle distinction between two current conceptions, one of which is arguably a perspective rooted in earlier twentieth-century mindsets, involves the contrast between positive and negative reinforcement models. The distinction is subtle because there can be a great deal of overlap between the two perspectives, so much in fact that either view might account properly for addiction. True to its title, negative reinforcement involves treating addiction as a reaction to something negative, be it biological, psychosocial, or both. In behavioral theory, negative reinforcement might mean pressing a lever in order to avoid an electrical shock. In the addiction field, an individual is viewed as seeking out the behavior (e.g., gambling, drinking alcohol, using drugs) as an escape from negative or aversive stimuli. In the case of gambling, the aversive stimuli is often viewed as an emotional state such as depression or anxiety, but it may also be more external such as an escape from an abusive relationship. In this vein, the *self-medication* hypothesis was very influential in SUD studies during the middle and later twentieth centuries, with notable figures

such as Khantzian (1985), Khantzian, Mack, and Schatzberg (1974) and Duncan (1974a, 1974c) leading the way. The flexibility of this conception is evidenced by how the former author worked from a psychoanalytic perspective, whereas the latter was (and still is) more sympathetic to behaviorism. The model also had precedents in psychoanalysis (Fenichel, 1945) as well as addiction theory (Rado, 1957). Jacobs' (1986) model also stems from this tradition.

Positive reinforcement is, in its simplest rendition, a normal seeking of pleasure. A proponent of a negative a reinforcement conception of addiction could perceive nonaddictive drug use in this light (e.g., Duncan, 1974a, 1974c). Yet there is an emerging trend, exemplified, for example, in biological science, wherein addiction is understood more in terms of its continuity with normal behaviors. In short, normal drives such as sexual desire can be hijacked by drugs of abuse (Bechara, 2005; Lopez-Moreno, Gonzales-Cueva, Moreno, & Navarro, 2008; Szalavitz, 2002). Rather than an aberration with unique qualities, addiction is viewed more as an excessive extension of normal drives. Though not necessarily beholden to biological science, PG theorists such as Brown (1997) and Griffiths (2005) have also taken such a tack.

If we recall the last chapter's discussions of early twentieth-century debates over whether addicts may be normal aside from the addiction, and whether or not they had to be psychotic or degenerate to begin with, the etiological distinction between positive and negative reinforcement should, at the very least, be considered in this light. The point is not that negative reinforcement must entail stigma or that a positive conception will alleviate it. As mentioned, the distinction between the two models can be subtle. Obviously, advocates of positive reinforcement conception need not deny that many addicts are predisposed to begin with. And from the start, major proponents of negative reinforcement conceptions worked hard to destigmatize addiction (Duncan, 1974a, 1974c; Khantzian, 1985; Khantzian et al., 1974). So let us be clear: we are not out to *stigmatize* the advocates of this conception. The main difference centers on whether the addiction results from something wrong with the individual, perhaps depression, or if it centers in a substance or activity. The type of positive reinforcement that follows from wins could happen to anyone, but the negative reinforcement related to negative mood states could only happen to someone who is experiencing a negative mood state. Both positive and negative reinforcement are important concepts in addition (see Annis & Davis, 1989; Blaszczynski & Nower, 2002; Marlatt 1979, 1985; Peele, 2003; Skinner, 1953; Turner, Annis, & Sklar, 1997), but a positive reinforcement model suggests that everyone is to some extent vulnerable. In contrast, a negative reinforcement model suggests that only some individuals are vulnerable. Possibly, one conception might more likely stigmatize the individual and the other to target the activity. Neither, however, should be seen as inherently associated with any agenda. One might even say that the argument involves chickens and eggs: are we dealing more with predispositions or the effects of maladaptive behaviors (Blume, Schmaling, & Marlatt, 2000)? Once more, if we recall the twentieth-century debates over whether addicts may or may not be *normal* aside from the addiction, it is at least worth noting that a term such as "negative" was more likely to surface in a context wherein addictions were stigmatized

and very harshly at that. One might easily argue that distinctions between negative and positive reinforcement models are largely semantic. Yet the last chapter discussed psychopathy as applied to addiction in one political context, along with the residual effects—semantic as well as substantive—that these earlier conceptions had upon later sciences of addiction. If we are to approach future PG studies with a keener grasp of all the determinants that shaped (and continue to shape) our thoughts, the choice of terms, along with their origins and potential implications, is least worthy of note.

Of note as well are the many new perspectives on *reinforcement* itself, which has been identified by Blaszczynski and Nower (2002) as a constant running through all PG models. The field is now identifying "instant reinforcements" (Griffiths & Barnes, 2008, p. 194), for example, as well as assorted forms of social reinforcements for addiction and those specific to gaming (Hardoon & Derevensky, 2002; Winters & Anderson, 2000). It seems apparent that our understanding of "reinforcement" will be more and more multifaceted, well beyond what the twentieth century had to offer on the topic. The emphasis on negativity might remain, but it is unlikely to assume some of the less compromising forms that it once took.

7.7 Socioeconomic Roots of PG

While it was certainly not a secret 30 years ago that social and economic circumstances may contribute to self-destructive behaviors in general, there is now more information on this that is specific to gambling (Committee on the Social and Economic Impact of Pathological Gambling, 1999; Griffiths, 1994; Korn & Shaffer, 1999; Shaffer, Freed, & Healea, 2002; Welte, Barnes, Wieczorek, Tidwell, & Parker, 2004). Simply put, there is a better grasp of how questions pertaining to social justice cannot be avoided in the name of scientific detachment. Shaffer et al. (2002) have discussed in depth how poverty can on its own trigger a desire to gamble in the hopes of assuaging the affects of deprivation. In this vein, one might consider that PG scholars have observed how in the 1980s and 1990s many did not consider gambling to be a problem among street drug addicts, in the belief that these addictions left people without the means to gamble (Griffiths, 1994; Shepherd, 1996). Today this misconception is much less prevalent, with a better awareness of how the need (in this case) for drug money can itself be causal (Knowles, 1999; Liu, Maciejewski, & Potenza, 2009; Spunt, 2002; Spunt et al., 1996; Spunt, Dupont, Lesieur, Liberty, & Hunt, 1998). Less schooling (Baldo et al., 2006) and issues related to being African American (Barnes, Welte, Hoffman, & Tidwell, 2009; Cunningham-Williams et al., 2000; Petry & Tawfic, 2001) have also been associated with problem gambling among substance abusers. While social and economic disadvantages cannot explain everything, clearly they explain a great deal.

Orford, Wardle, Griffiths, Sproston, and Erens (2009) offer a perceptive sociopolitical account of PG etiology—of a kind that simply did not exist in the field 25 years ago. The study takes income and occupational category into account, and

unsurprisingly wealth and status are negatively associated with PG. Of greater interest is the third variable, area deprivation, which assesses an area with respect to markers such as crime, income, health, living environment, and education. That area deprivation was found to be a stronger predictor of gambling volume than of PG itself is, for our purposes, of lesser interest than the increasing precision with which the sociopolitical roots of PG are being analyzed. Area deprivation was, for example, associated with the identification of PG among one's relatives. The study, therefore, targeted people's networks and relations rather than just their personal pathologies. Orford et al. (2009) observe that the PG field may still be behind other health-related fields in the study of such matters. The rectification of this shortcoming has clearly begun and is another step in the development of approaches that move beyond a single-minded focus on individual pathology.

7.8 PG's Place in a Complex Diagnostic Schema

The third chapter touched upon the merits and drawbacks of either OCD or ICD labels for PG. The fourth chapter highlighted some historical precedents and identifies ICD, OCD, and addiction as kindred disorders with a long tradition of overlap. While a designation such as *disorder of impulse control* may at first glance appear to save PG from many of the foibles associated with addiction concepts, the truth is that ICD holds a poorly defined (arguably muddled) place in the larger body of psychiatric disorders (Moeller, Barratt, Dougherty, Schmitz, & Swann, 2001; Potenza, 2006). Perhaps this should not be surprising: how could something like *impulsivity* not be associated with many different maladaptive behaviors? Ailments that many would consider addictions, such as kleptomania and pyromania, are currently classified as ICDs (APA, 1994). Furthermore, given that PG and SUD are often marked by underlying impulsivity, a case could be made for treating the two as elements of a single disorder (Ibanez et al., 2001; Ladd & Petry, 2003; Petry, 2001, 2006; Rosenthal, 2005). It may be worth repeating Rosenthal's (2005) point referred to in the third chapter: all addictions are, in reality, disorders of impulse control.

PG's place in the diagnostic schema should also be viewed in the context of the many behavioral addictions being identified. While it would be difficult to determine which are most common, a few have received a fair bit of attention. Sexual addiction (hypersexuality, compulsive sexual behavior, sexual compulsivity) has been prominent for some time (Carnes, 1983) and has been associated with many other addictions (Carnes, Murray, & Charpentier, 2005). Workaholism (work addiction, ergomania) has also been a concern for many years (Burke, 1999; Deschamps & Signoret, 2004). Exercis e addiction (exercise dependence) is a newer concern (Davis, 2000; Rodgers, Hall, Blanchard, & Munroe, 2001; Szabo & Griffiths, 2007). Video game addiction has received attention even more recently (Griffiths, 2008a, 2008b) as has Internet addiction (Caplan, 2003; Davis, 2001; Widyanto & Griffiths, 2006). In a study of psychiatric patients, Malat, Collins, Dhayanandhan, Carullo,

and Turner (2010) found the most common non-SUD problem behaviors to involve unhealthy relationships (27%), overeating (26%), excessive shopping (17%), excessive TV watching (14%), excessive Internet use (6%), and sexual behavior (5%). In 2010, an entire issue of The American Journal of Drug and Alcohol Abuse was devoted to behavioral addictions. An article appears on each of the following: PG and SUD, compulsive buying, sexual addiction, love, computers and video games, the Internet, tanning, kleptomania, and skin picking.

Identifying and classifying these conditions can be challenging. For example, Widyanto and Griffiths (2006) point out that Internet addiction could be treated as one of many technological addictions which in turn may simply be a subset of behavioral addiction. Internet addiction might overlap with sexual addiction, leading to compulsive online behavior, and these may overlap with criminal activity such as "cyberstalking" (Griffiths, 2004, p. 538). Problems of classification arise: is someone addicted to the Internet, sex, crime, all three, or something else? Etiological complications will also arise, a good example being how exercise addiction is etiologically related to anorexia (Allegre, Souville, Therme, & Griffiths, 2006; Griffiths, Szabo, & Terry, 2005). Carnes et al. (2005) consider "sexual anorexia" (undue aversion to sex) to be a function of sex addiction. Giugliano (2009) distinguishes between addiction, compulsivity, and impulsivity, claiming that not all maladaptive sexual behaviors should be treated with the same labels. If we recall that Blaszczynski and Nower (2002) argued for appropriate subcategories within PG, it does follow that similar distinctions could be made for other maladaptive behaviors. As these words are being written, the entire addiction field is struggling with two opposing currents: first, a call for broader designations designed to encompass many seemingly different behaviors and second, a call for more specificity applied to each behavior. While the two agendas need not be in conflict, there is certainly some ambiguity as to how PG will come to be defined and understood over the next few decades.

Many of the current perspectives on PG were discussed in the third chapter, and the previous chapter finished with a discussion of more recent precedents. Some of the newer theoretical approaches to PG are undeniably impressive. Systems theory provides a sophisticated sociological perspective (Ferris et al., 1999) and offers a constructivist approach to knowledge generation which need not take a stand, for example, on whether a certain behavior is objectively a disease (Gruenewald et al., 1997, p. 20). It can, therefore, accept PG as a "public health" problem and accommodate many potentially divergent perspectives.

We devoted an entire subsection to the biopsychosocial model (see above: Sect. 7.5). This model stems in part from a recognition of the assorted ways in which addictions can be conceptualized, presents a challenge to any overreaching conception, and has had a serious impact on the PG field (Griffiths & Delfabbro, 2001; Turner et al., 2006). As discussed, the model can be used to identify different *pathways* (biological and other) that may lead to PG (Blaszczynski & Nower, 2002). In fact, one problem with the view of a general propensity to addiction is that some addictions are very common (e.g., smoking, coffee drinking, and overeating), whereas other addictive behaviors are much less common (e.g., problem gambling,

heroin). Psychological theories pertaining to roots and causes can be psychoanalytic or "psychodynamic" (Rosenthal & Rugle, 1994; Rosenthal, 1992). They can focus social learning—the latter often tied to the idea that one may mature out of PG (Lesieur & Rosenthal, 1991; Hardoon & Derevensky, 2001). Of the psychologically oriented options, cognitive-behavioral theory, closely tied to learning theory, is probably the most popular in the treatment field (Toneatto & Kosky, 2006). Efforts have been made to demonstrate that psychological models can be compatible with GA's approach (Rugle & Rosenthal, 1994; Toneatto, 2008). Genetic (Ibanez, Blanco, & Saiz-Ruiz, 2002) and other biological explanations are, of course, easily rendered compatible with medical conceptions, including the "GA model." In this regard, however, future prospects are unclear: a genetic disorder could theoretically be treated biochemically, suggesting the potential for treatment rather than abstinence. The pharmaceutical treatment of PG is already being explored regardless of genetics—depression, a major comorbid condition, is strongly associated with PG. These efforts are however limited by a relatively poor understanding of the biology of gambling per se. While there has, for example, been evidence for a common genetic vulnerability to PG and alcoholism (Slutske et al., 2000), overall there is little consensus on PG etiology. Several researchers have argued that problem gambling is a complex disorder that may have multiple causes (Blaszczynski & Nower, 2002; Blaszczynski, 2000 Turner et al., 2006; Turner et al., 2008). We are left with a situation that Sanju and Murali (2005) correctly identify as "eclectic" (p. 452).

Despite the complexity, it might help to consider the situation with respect to the two currents mentioned above (1) a broadening of "addiction" as a concept and the possible ascendancy of a unified disorder and (2) a more detailed look at PG throwing into question its status as a single disorder. These seemingly conflicting trends might turn out to be complimentary. For example, if not all cases of PG qualify as addictions, the ones that do may still be considered as a subset of a broader addiction schema. If we take the breakdown offered by Blaszczynski and Nower (2002) as a guide, it is clear that each category can be treated in isolation. Such subcategories could play out in many ways. For example, while some may consider them an alternative to the older distinction between action and escape gamblers, this distinction could in fact surface within each typology. Overall, there are many ways in which the field might develop.

7.9 The Ideology of Hitting Bottom: A Relic from the Twentieth Century?

We end this chapter with a discussion of an issue that brings many themes—moral, scientific, political—into focus. In the fifth chapter, we discussed the sociopolitical history of additions. In so doing, we made it clear that the ways in which addicts are perceived would affect ideas about what might change them. In short, if the addict is a pure psychopath or degenerate, then some might conclude that only extreme

degradation would suffice (though it is well known that the degradation of prison, for example, does not cure psychopaths or even ordinary offenders). We identified PG studies as an area that has been marked by these historical currents. The question here is not about if we have been influenced but in what ways and to what degrees. This last subsection can be viewed as an attempt, however imperfect, to capture that idea in a more contemporary light. It may serve as a synopsis of how facing up to our intellectual history is both ethically and scientifically imperative.

The previous chapter discussed the ways in which the ideology of hitting bottom has been beholden to the 12-Step movement and how even that movement has had to fudge the idea by acknowledging the possibility of so-called high bottoms—essentially turning points that do not require extremes of degradation and desperation (Alcoholics Anonymous World Services, Inc., 1976; Gamblers Anonymous International Service Office (GAISO), 1984; WSO, 1982). That a "bottom" will be different for each addict may seem reasonable, but it does leave the term empty: in principle, even the slightest discomfort could qualify as a bottom so long as it preceded recovery. Since circular reasoning of this kind proves nothing, the issue must also be tackled empirically.

As with many other topics, SUD studies are more advanced than PG on the vexing topic known as *readiness to change* (see e.g., Bertholet, Cheng, Palfai, Samet, & Saitz, 2009; Center for Substance Abuse Treatment, 2009). The last chapter discussed how many of the predictors for success in SUD as well as PG treatment—social support, cognitive, and psychosocial functioning (Marlatt et al., 1988; McLellan, Woody, Luborsky, O'Brien, & Druley, 1983; Ogborne, 1978; Stein, 1993)—are attributes that would be less evident in someone who has hit an extreme bottom. Quite simply, the stereotypical bottom—whether it involves depression, loss of status or income, or any type of misfortune—is more likely to inhibit recovery. Moreover, the field of tobacco addiction has entirely rejected the idea of hitting bottom simply because the only bottom a smoker is likely to hit is lung cancer or some other equally horrifying terminal illness. Instead, the tobacco field has accepted the idea that smoking can be treated through counseling, public awareness, prevention campaigns, and pharmaceutical aids such as the nicotine patch. Here, at least, even the general public is fairly enlightened: most people do understand that someone is more likely to relinquish a tobacco addiction when content in most areas and less likely to do so under duress (e.g., divorce, job insecurity). If hitting bottom were the solution to addictions, would it not follow that persons who feel hopeless or extremely stressed would be better candidates for success in quitting smoking and that those who are relatively better adjusted would be unlikely to quit until a catastrophe set in? Beyond that, while readiness to change is evolving into a more developed idea in the PG field (DiClemente, 2003; DiClemente et al., 2000), there is also a growing awareness in the broader addiction field (including PG) that readiness to change one unhealthy behavior need not imply readiness to change others (Carnes et al., 2005; Freimuth, 2005; Grant & Steinberg, 2005; Griffiths, 2008b; Gupta & Derevenski, 2000; Nightingale & Fischhoff, 2001; Reid, 2007; Schneider, Sealy, Montgomery, & Irons, 2005). Issues surrounding substitution raise even more questions pertaining to why readiness applies to one behavior yet not to

another (Alberta Alcohol and Drug Abuse Commission, 2002; Barnes, Welte, Hoffman, & Dintcheff, 2002; Giugliano, 2009; Glass, 2002; Grant & Steinberg, 2005; Schneider et al., 2005; Vitaro, Brendgen, Ladouceur, & Tremblay, 2001). The point here is not that such awareness is entirely new but that a better understanding of it will also entail difficulties with any attempt to simply conflate readiness with negative motivation whether we call it exhaustion (Jacobs, 1986), desperation (Lesieur & Custer, 1984), or something else.

An important corollary is a whole culture of *tough love* based on the idea that any assistance offered to someone active in their addiction will simply derail the process that may lead to meaningful change. Needle exchange programs serve as an excellent example. They save lives and yet, technically fall under the head of "enabling"—which to many disease model proponents essentially means anything that might make an addict's life more manageable. Methadone maintenance is subject to the same criticism (conceivably, even nicotine patches could be critiqued in a similar manner). Still controversial to this day, these and other harm reduction initiatives are derided in many quarters. If we take seriously the idea that desperation—hitting bottom—is the only answer, then such conclusions could follow. Keeping in mind the early and middle twentieth-century currents that have clearly buttressed these ideas and attitudes, it should not be hard to understand why mainstream thought—including scientific thought—has been amenable to the idea that an addict will only be ready to change when "emotionally distraught, dilapidated in mind and body, and bereft of social and economic supports" (Jacobs, 1986, p. 27).

One may ask how this jives with emerging awareness of how social (including familial) support is in fact a good predictor of success in recovery, and we should note that the intellectual climate has been evolving. Research on social support began mainly with psychological and sociological inquiries (Rosenfeld, 1997). Unsurprisingly, such "support" has many definitions and interpretations, ranging from a focus on beneficial attachments (O'Dea, 1989) to elaborations of potentially negative aspects (Franks & Campbell, 1992). While attempts to measure support and related variables are certainly not new (House & Kahn, 1985; Oritt, Paul, & Behrman, 1985), surveys dealing with behavioral health issues including PG are now much more likely to pay closer attention to support and other social factors (see e.g., Focal Research Consultants Ltd., 2001; Centre for Addiction and Mental Health, 2007). Currently the PG field is developing a respectable body of literature on the many facets of support, be it positive, negative, or ambiguous (Hardoon, Gupta, & Derevensky, 2004; Saint-Charles, Mongeau, & Jean-Franccedilois, 2008).

On a speculative note, the PG field might be in a position to lead the way in some of these matters. If we have been right to argue that many scientific attitudes and beliefs have been influenced by historical developments and grassroots determinants, it is worth noting that in one significant respect the PG field's experience with mutual aid has been unique. Though modeled on AA, GA has set itself apart from mainstream 12-Step culture: the role of GamAnon has long entailed a much stronger reliance upon spousal support than has been the case with either AA or NA. Authors who have studied this fellowship have observed that GA members often consider their spouses to be their *sponsors* in recovery, something practically

unheard in the larger world of 12-Step recovery (Ferentzy, Skinner, & Antze, 2009, Ferentzy, Skinner, & Antze, 2010). These authors also observe that GA has long been "ahead of its time in its grasp of how important spousal support can be—ahead, in fact, of the research and treatment communities" (Ferentzy et al., 2009). How significant this may become is an open question, and GA has long supported the ideology of hitting bottom. At the same time, it has turned against many of the individualistic notions of recovery that this conception has generally entailed (Ferentzy et al., 2010). Whether the PG field can draw upon its unique experience with mutual aid, and thereby play a leading role in one key area of addiction studies, is an open question.

Either way, while there is still no denying that the unpleasant aspects of addiction are integral to the generation of readiness to change (Evans & Delfabbro, 2005; Iowa Department of Public Health, 2008), the idea that assistance and guidance should be directed almost exclusively at those at risk and those who have been completely shattered no longer seems tenable (see e.g., Joukhador, Blaszczynski, & Maccallum, 2004; Toneatto & Kosky, 2006). The ideology of hitting bottom, especially in its uncompromising manifestations, is a holdover from the early and middle twentieth century when stigmatization and moralizing were far more prominent than reason, science, and understanding.

References

Abbott, M., & Volberg, R. (2006). The measurement of adult problem and pathological gambling. *International Gambling Studies, 6*, 175–200.

Alberta Alcohol and Drug Abuse Commission. (2002). *Patterns of exposure to risk and protection for substance and gambling use and abuse: Alberta Youth Experience Survey*. Edmonton, AB: Author.

Alcoholics Anonymous World Services, Inc. (1976). *Alcoholics anonymous: The story of how many thousands of men and women have recovered from alcoholism*. New York, NY: Alcoholics Anonymous World Services, Inc.

Al-Issa, I. (Ed.). (1982). *Culture and psychopathology*. Baltimore: University of Park Press.

Allegre, B., Souville, M., Therme, P., & Griffiths, M. D. (2006). Definitions and measures of exercise dependence. *Addiction Research and Theory, 14*, 631–646.

American Psychiatric Association [APA]. (1987). *Diagnostic and statistical manual of mental disorders*, Third Edition, Revised. Washington: Author.

American Psychiatric Association [APA]. (1994). *Diagnostic and statistical manual of mental disorders*, Fourth Edition. Washington: Author.

Annis, H. M., & Davis, C. S. (1989). Relapse prevention. In R. K. Hester & W. R. Miller (Eds.), *Handbook of alcoholism treatment approaches* (pp. 170–182). New York, NY: Pergamon.

Baldo, V., Cristofoletti, M., Majori, S., Cibin, M., Peron, C., Dal Zotto, A., et al. (2006). Relationship between pathological gambling, alcoholism and drug addiction. *Annali di igiene: medicina preventiva e di comunità, 18*, 147–153.

Barnes, G., Welte, J., Hoffman, J., & Dintcheff, B. (2002). Effects of alcohol misuse on gambling patterns in youth. *Journal of Studies on Alcohol, 63*, 767–775.

Barnes, G., Welte, J., Hoffman, J., & Tidwell, W. (2009). Gambling, alcohol, and other substance use among youth in the United States. *Journal of Studies on Drugs and Alcohol, 70*, 134–142.

Bechara, A. (2005). Decision making, impulse control and loss of willpower to resist drugs: A neurocognitive perspective. *Nature Neuroscience, 8*, 1458–1463.
Bertholet, N., Cheng, D., Palfai, T., Samet, J., & Saitz, R. (2009). Does readiness to change predict subsequent alcohol consumption in medical inpatients with unhealthy alcohol use? *Addictive Behaviors, 34*, 636–640.
Blaszczynski, A. (2000). Pathways to pathological gambling: Identifying typologies. *The Electronic Journal of Gambling Issues*, *1*. Accessed October 18, 2006, from http://www.camh.net/egambling/archive/index.html.
Blaszczynski, A., & Nower, N. (2002). A pathways model of problem and pathological gambling. *Addiction, 97*, 487–499.
Blume, S. B. (1986). Treatment for the addictions: Alcoholism, drug dependence and compulsive gambling in a psychiatric setting – South Oaks Hospital, Amityville, New York. *Journal of Substance Abuse Treatment, 3*, 131–133.
Blume, S. B. (1987). Compulsive gambling and the medical model. *Journal of Gambling Behavior, 3*, 237–247.
Blume, A., Schmaling, K., & Marlatt, G. (2000). Revisiting the self-medication hypothesis from a behavioral perspective. *Cognitive and Behavioral Practice, 7*, 379–384.
Brown, I. (1991). Gaming, gambling and other addictive play. In J. Kerr & M. Apter (Eds.), *Adult play: A reversal theory approach* (pp. 101–118). Amsterdam: Swets & Zeitlinger.
Brown, I. (1997). A theoretical model of the behavioural addictions – Applied to offending. In J. E. Hodge, M. McMurran, & C. R. Hollin (Eds.), *Addicted to crime?* (pp. 13–65). Chichester: Wiley.
Burke, R. (1999). Workaholism in organizations: Measurement validation and replication. *International Journal of Stress Management, 6*, 45–55.
Caplan, S. (2003). Preference for online social interaction: A theory of problematic internet use and psychosocial well-being. *Communication Research, 30*, 625–648.
Carnes, P. (1983). *Out of the shadows: Understanding sexual addiction*. New York, NY: CompCare.
Carnes, P., Murray, R., & Charpentier, L. (2005). Bargains with chaos: Sex addicts and addiction interaction disorder. *Sexual Addiction and Compulsivity, 12*, 79–120.
Center for Substance Abuse Treatment. (2009). *Treatment improvement protocol series*. Available at: http://tie.samhsa.gov/externals/tips.html.
Centre for Addiction and Mental Health. (2007). *Ontario student drug use and Health Survey*. http://www.camh.net/Research/osdus.html.
Christopherson, K. M., & Weatherly, J. N. (2006). The effect of visual complexity when playing a slot-machine simulation: the role of computer experience, computer anxiety, and optimism. *Computers in Human Behavior, 22*, 1072–1079.
Ciarrocchi, J. (1987). Severity of impairment in dually addicted gamblers. *Journal of Gambling Studies, 3*, 16–26.
Committee on the Social and Economic Impact of Pathological Gambling. (1999). *Pathological gambling: A critical review*. Washington, DC: National Research Council.
Cunningham-Williams, R., Ben-Abdallah, A., Callahan, C., & Cottler, L. (2007). Problem gambling and violence among community recruited female substance abusers. *Psychology of Addictive Behaviors, 21*, 239–243.
Cunningham-Williams, R. M., Cottler, L. B., Compton, W. M., Spitznagel, E. L., & Ben-Abdallah, A. (2000). Problem gambling and comorbid psychiatric and substance use disorders among drug users recruited from drug treatment and community settings. *Journal of Gambling Studies, 16*, 347–376.
Custer, R. (1975). *Characteristics of compulsive gamblers*. Paper presented at the 2nd Annual Conference on Gambling, Lake Tahoe, NV.
Davis, C. (2000). Exercise abuse. *International Journal of Sport Psychology, 31*, 278–289.
Davis, R. (2001). A cognitive-behavioral model of pathological internet use. *Computers in Human Behavior, 17*, 187–195.

De Carvalho, S., Collakis, S., de Oliveira, M., & da Silveira, D. (2005). Frequency of pathological gambling among substance abusers under treatment. *Revista de Saúde Pública, 39*, 1–6.

Derevensky, J., Gupta, R., Dickson, L., & Deguire, A. (2001). *Prevention efforts toward minimizing gambling problems*. Report prepared for the National Council for Problem Gambling, Center for Mental Health Services (CMHS) and the Substance Abuse and Mental Health Services Administration (SAMHSA), Washington, DC.

Deschamps, F., & Signoret, B. (2004). Prevalence and typology of workaholic workers. *Occupational and Environmental Medicine, 61*(11), P1.17.

Dickerson, M. (2003). Pathological gambling: What's in a name? Or, how the United States got it wrong. In G. Reith (Ed.), *Gambling: Who wins? Who loses?* (pp. 191–207). Amherst, NY: Prometheus Books.

Dickson, L., Derevensky, J., & Gupta, R. (2002). The prevention of gambling problems in youth: A conceptual framework. *Journal of Gambling Studies, 18*, 97–159.

Dickson, L., Derevensky, J., & Gupta, R. (2004). Harm reduction for the prevention of youth gambling problems: Lessons learned from adolescent high-risk behavior prevention programs. *Journal of Adolescent Research, 19*, 233–263.

DiClemente, C. (2003). *Addiction and change: How addictions develop and addicted people recover*. New York, NY: Guilford Press.

DiClemente, C., Story, M., & Murray, K. (2000). On a roll: The process of initiation and cessation of problem gambling among adolescents. *Journal of Gambling Studies, 16*, 289–313.

Dowbiggin, I. (1985). Degeneration and hereditarianism in french mental medicine 1840-90: Psychiatric theory as ideological adaptation. In W. F. Bynum et al. (Eds.), *The anatomy of madness: Essays in the history of psychiatry* (*People and ideas*, Vol. 1, pp. 188–232). New York, NY: Tavistock.

Duncan, D. (1974a). Drug abuse as a coping mechanism. *American Journal of Psychiatry, 131*, 724.

Duncan, D. (1974b). The acquisition, treatment and maintenance of polydrug dependence: A public health model. *Journal of Psychedelic Drugs, 7*, 209–213.

Duncan, D. (1974c). Reinforcement of drug abuse: Implications for prevention. *Clinical Toxicology Bulletin, 4*, 69–75.

el-Guebaly, N., Patten, S., Currie, S., Williams, J., Beck, C., & Maxwell, C. (2006). Epidemiological associations between gambling behavior, substance use and mood and anxiety disorders. *Journal of Gambling Studies, 22*, 275–287.

Evans, R. (2003). Some theoretical models and constructs generic to substance abuse prevention programs for adolescents: Possible relevance and limitations for problem gambling. *Journal of Gambling Studies, 19*(3), 287–301.

Evans, L., & Delfabbro, P. (2005). Motivators for change and barriers to help-seeking in Australian problem gamblers. *Journal of Gambling Studies, 21*(2), 133–155.

Ewing, J. (1980). Biopsychosocial approaches to drinking and alcoholism. In W. Fann, I. Karacan, A. Pokomy, & R. Williams (Eds.), *Phenomenology and treatment of alcoholism* (pp. 1–19). New York: Spectrum.

Feigelman, W., Kleinman, P., Lesieur, H. R., Millman, R., & Lesser, M. (1995). Pathological gambling among methadone patients. *Drug and Alcohol Dependence, 39*, 75–81.

Fenichel, O. (1945). *The psychoanalytic theory of neurosis*. New York, NY: W. W. Norton.

Ferentzy, P. (2001). From sin to disease: Differences and similarities between past and current conceptions of chronic drunkenness. *Contemporary Drug Problems, 28*, 363–390.

Ferentzy, P., & Skinner W. (2003). Gamblers anonymous: A critical review of the literature. *Electronic Journal of Gambling Issues*, *9*.

Ferentzy, P., Skinner, W., & Antze, P. (2007). *Approaches to recovery in gamblers anonymous.* Final Report Submitted to the Ontario Problem Gambling Research Centre.

Ferentzy, P., Skinner, W., & Antze, P. (2009). Gamblers anonymous and the twelve steps: How an informal society has altered a recovery process in accordance with the special needs of problem gamblers. *Journal of Gambling Issues*, *23.*

Ferentzy, P., Skinner, W., & Antze, P. (2010). Changing spousal roles and their effect on recovery in Gamblers Anonymous: GamAnon, social support, wives and husbands. *Journal of Gambling Studies, 26*(3), 487–501.

Ferris, J., Wynne, H., & Single, E. (1999). *Measuring problem gambling in Canada. Final Report – Phase 1. Inter-provincial task force on problem gambling*. Submitted for the Canadian Centre on Substance Abuse.

Fingarette, H. (1988). *Heavy drinking: The myth of alcoholism as a disease*. Berkely: University of California Press.

Flavin, D., & Morse, R. (1991). What is alcoholism? Current definitions and diagnostic criteria and their implications for treatment. *Alcohol Health and Research World, 15*, 266–272.

Focal Research Consultants Ltd. (Schrans, T., Schellinck, T., & Walsh, G.). (2001). *Technical report: 2000 regular VL players follow up*. Halifax, NS: Nova Scotia Department of Health. Available at http://www.gov.ns.ca/health/downloads/VLPlayers_TechnicalReport.pdf.

Franks, C., & Campbell, T. (1992). Social relationships and health: The relative roles of family functioning and social support. *34*, 779–788.

Freimuth, M. (2005). *Hidden addictions*. New York, NY: Jason Aronson.

Gamblers Anonymous International Service Office (GAISO). (1984). *Sharing recovery through gamblers anonymous*. Los Angeles: GAISO.

Gillespie, M. A. M., Derevensky, J., & Gupta, R. (2007). I. Adolescent problem gambling: Developing a gambling expectancy instrument. *Journal of Gambling Issues*, *19*. Available at http://www.camh.net/egambling/issue19/pdfs/gillespie1.pdf.

Giugliano, J. (2009). Sexual addiction: Diagnostic problems. *International Journal of Mental Health and Addiction, 7*(2), 283–294. http://www.springer.com/public+health/journal/11469.

Glass, L. (2002). *Gambling education: Some strategies for South Australian schools*. Adelaide, Australia: South Australia Department of Human Services. Available at: http://www.library.health.sa.gov.au/Portals/0/gambling-education-some-strategies-for-south-australian-schools.pdf.

Grant, J., & Steinberg, M. (2005). Compulsive sexual behavior and pathological gambling. *Sexual Addiction and Compulsivity, 12*, 235–244.

Griffiths, M. (1994). An exploratory study of gambling cross addictions. *Journal of Gambling Studies, 10*, 371–384.

Griffiths, M. (1996). Behavioural addiction: An issue for everybody? Employee counselling today. *The Journal of Workplace Learning, 8*, 19–25.

Griffiths, M. (2004). Sex addiction on the Internet. *Janus Head, 7*, 188–217.

Griffiths, M. (2005). A 'components' model of addiction within a biopsychosocial framework. *Journal of Substance Use, 10*, 191–197.

Griffiths, M. (2008a). Videogame addiction: Fact or fiction? In T. Willoughby & E. Wood (Eds.), *Children's learning in a digital world* (pp. 85–103). Oxford: Blackwell Publishing.

Griffiths, M. (2008b). Diagnosis and management of video game addiction. *New Directions in Addiction Treatment and Prevention, 12*, 27–41.

Griffiths, M., & Barnes, A. (2008). Internet gambling: An online empirical study among student gamblers. *International Journal of Mental Health and Addiction, 6*, 194–204.

Griffiths, M., & Delfabbro, P. (2001). The biopsychosocial approach to gambling: Contextual factors in research and clinical interventions. *The Electronic Journal of Gambling*, *5*.

Griffiths, M., Parke, J., & Wood, R. (2002). Excessive gambling and substance abuse: Is there a relationship? *Journal of Substance Abuse, 7*, 187–190.

Griffiths, M., Szabo, A., & Terry, A. (2005). The exercise addiction inventory: A quick and easy screening tool for health practitioners. *British Journal of Sports Medicine, 39*, 30–31.

Grodsky, P., & Kogan, L. (1985). Does the client have a gambling problem? *Journal of Gambling Behavior, 1*, 51–58.

Gruenewald, P. J., Treno, A. J., Taff, G., & Klitzner, M. (1997). *Measuring community indicators: A systems approach to drug and alcohol problems. Applied social research methods services* (Vol. 45). Thousand Oaks, CA: Sage.

Gupta, R., & Derevenski, J. (2000). Adolescents with gambling problems: From research to treatment. *Journal of Gambling Studies, 16*, 315–342.
Hall, G., Carriero, N., Takushi, R., Montoya, I., Preston, K., & Gorelick, D. (2000). Pathological gambling among cocaine-dependent outpatients. *The American Journal of Psychiatry, 157*, 1127–1133.
Halliday, J., & Fuller, P. (1974). *The psychology of gambling*. London: Harper & Row.
Hardoon, K., & Derevensky, J. (2001). Social influences involved in children's gambling behavior. *Journal of Gambling Studies, 17*, 191–215.
Hardoon, K., & Derevensky, J. (2002). Child and adolescent gambling behavior: Current knowledge. *Clinical Child Psychology and Psychiatry, 7*, 263–281.
Hardoon, K., Gupta, R., & Derevensky, J. (2004). Psychosocial variables associated with adolescent gambling. *Psychology of Addictive Behaviors, 18*, 170–179.
Hodge, J. (1991). Addiction to crime. In M. McMurran, & C. McDougall (Eds.), *Proceedings of the first DCLP Annual Conference – Issues in criminological and legal psychology*, *17*(2). Leicester: The British Psychological Society
House, J., & Kahn, R. (1985). Measures and concepts of social support. In S. Cohen & S. Syme (Eds.), *Social support and health* (pp. 83–108). Academic Press: Orlando.
Ibanez, A., Blanco, C., Donahue, E., Lesieur, H., de Castro, I., Fernandez-Piqueras, J., et al. (2001). Psychiatric comorbidity in pathological gamblers seeking treatment. *American Journal of Psychiatry, 158*, 1733–1735.
Ibanez, A., Blanco, C., & Saiz-Ruiz, J. (2002). Neurobiology and genetics of pathological gambling. *Psychiatric Annals, 32*, 181–185.
Iowa Department of Public Health. (2008). *1-800-Bets-off*. http://www.1800betsoff.org/.
Jacobs, D. (1986). A general theory of addiction: A new theoretical model". *Journal of Gambling Behavior, 2*, 15–31.
Jellinek, E. (1960). *The disease concept of alcoholism*. New Haven: Hillhouse.
Joukhador, J., Blaszczynski, A., & Maccallum, F. (2004). Superstitious beliefs in gambling among problem and non-problem gamblers: Preliminary data. *Journal of Gambling Studies, 20*, 171–180.
Justice, B. (1976). *The abusing family*. New York, NY: Human Sciences Press.
Kausch, O. (2003). Patterns of substance abuse among treatment-seeking pathological gamblers. *Journal of Substance Abuse Treatment, 25*, 263–270.
Khantzian, E. (1985). The self-medication hypothesis of addictive disorders: Focus on heroin and cocaine dependence. *American Journal of Psychiatry, 142*, 1259–1264.
Khantzian, E., Mack, J., & Schatzberg, A. F. (1974). Heroin us as an attempt to cope: Clinical observation. *American Journal of Psychiatry, 131*, 160–164.
Knowles, G. (1999). Gambling, drugs, and sex: New drug trends and addictions in Honolulu, Hawaii, 1988. *Sociological Practice, 1*, 45–69.
Korn, D. (2005). A public health perspective. *Journal of Gambling Issues*, *15*, http://www.camh.net/egambling/issue15/jgi_15_korn.html.
Korn, D., Gibbins, R., & Azmier, J. (2003). Framing a public policy towards a public health paradigm for gambling. *Journal of Gambling Studies, 19*, 235–256.
Korn, D., & Shaffer, H. (1999). Gambling and the health of the public: Adopting a public health perspective. *Journal of Gambling Studies, 15*, 289–365.
Ladd, G., & Petry, N. (2003). A comparison of pathological gamblers with and without substance abuse treatment histories. *Experimental and Clinical Psychopharmacology, 11*, 202–209.
Langenbucher, J., Bavly, L., Labouvie, E., Sanjuan, P., & Martin, C. (2001). Clinical features of pathological gambling in an addictions treatment cohort. *Psychology of Addictive Behaviors, 15*, 77–79.
Larimer, M. E., Palmer, R. S., & Marlatt, G. A. (1999). Relapse prevention: An overview of Marlatt's cognitive-behavioral model. *Alcohol Research and Health, 23*(2), 151–160.
Larkin, M., Wood, R., & Griffiths, M. (2006). Towards addiction as relationship. *Addiction Research and Theory, 14*, 207–215.

Ledgerwood, D., & Downey, K. (2002). Relationship between problem gambling and substance use in a methadone maintenance population. *Addictive Behaviors, 27*, 483–491.
Lemkau, P. (1955). *Mental hygiene and the public health* (2nd ed.). New York, NY: McGraw-Hill.
Lesieur, H., & Blume, S. (1991). Evaluation of patients treated for pathological gambling in a combined alcohol, substance abuse and pathological gambling treatment unit using the Addiction Severity Index. *British Journal of Addiction, 86*, 1017–1028.
Lesieur, H., & Blume, S. (1993). Pathological gambling, eating disorders, and the psychoactive substance use disorders. *Journal of Addictive Diseases, 12*, 89–102.
Lesieur, H. R., Blume, S. B., & Zoppa, R. M. (1986). Alcoholism, drug abuse, and gambling. *Alcoholism, Clinical and Experimental Research, 10*, 33–38.
Lesieur, H., & Custer, R. (1984). Pathological gambling: Roots, phases, and treatment. *The Annals of the Academy of Political and Social Science, 474*, 46–156.
Lesieur, H., & Rosenthal, R. (1991). Pathological gambling: A review of the literature. *Journal of Gambling Studies, 7*, 5–39.
Lester, D. (1980). The treatment of compulsive gambling. *International Journal of the Addictions, 15*, 201–206.
Levine, H. (1978). The discovery of addiction: Changing conceptions of habitual drunkenness in America. *Journal of Studies on Alcohol, 39*, 143–174.
Littman-Sharp, N. (2004). Introduction to the treatment of problem gambling. In S. Harrison & V. Carver (Eds.), *Alcohol & drug problems: A practical guide for counselors* (pp. 675–707). Toronto: Centre for Addiction and Mental Health.
Liu, T., Maciejewski, P., & Potenza, M. (2009). The relationship between recreational gambling and substance abuse/dependence: Data from a nationally representative sample. *Drug and Alcohol Dependence, 100*, 164–168.
Lopez-Moreno, J., Gonzales-Cueva, G., Moreno, G., & Navarro, M. (2008). The pharmacology of the endocannabinoid system: Functional and structural interactions with other neurotransmitter systems and their repercussions in behavioral addiction. *Addiction Biology, 13*, 160–187.
Malat, J., Collins, J., Dhayanandhan, B., Carullo, F., & Turner, N. E. (2010). Addictive behaviors in comorbid addiction and mental illness: Preliminary results from a self-report questionnaire. *Journal of Addiction Medicine, 4*, 38–46.
Marlatt, G. A. (1979). A cognitive-behavioral model of the relapse process. In N. A. Krasnegor (Ed.), *Behavioral analysis and treatment of substance abuse (Vol. Research Monograph, 25)* (pp. 191–200). Rockville, MD: National Institute on Drug Abuse.
Marlatt, G. A. (1985). Situation determinants of relapse and skill-training interventions. In G. A. Marlatt & J. R. Gordon (Eds.), *Relapse prevention: Maintenance strategies in the treatment of addictive behaviours* (pp. 71–126). New York, NY: Guilford Press.
Marlatt, G., Baer, J., Donovan, D., & Kivlahan, D. (1988). Addictive behaviors: Etiology and treatment. *Annual Review of Psychology, 39*, 223–252. doi:10.1146/annurev.ps.39.020188.001255.
Marotta, J., & Hynes, J. (2003). *Problem gambling prevention resource guide for prevention professionals*. Salem, OR: Oregon Department of Human Services. Available at: http://www.gamblingaddiction.org/Prevent/PreventGuide.pdf.
Martell, B., Mitchell, E., Poling, J., Gonsai, K., & Kosten, T. (2005). Vaccine pharmacotherapy for the treatment of cocaine dependence. *Biological Psychiatry, 58*(2), 158–164.
McLellan, A., Woody, G., Luborsky, L., O'Brien, C., & Druley, K. (1983). Increased effectiveness of substance abuse treatment: A prospective study of patient- treatment "matching". *Journal of Nervous and Mental Disease, 171*, 597–605.
McMurran, M., Hodge, J., & Hollin, C. (1997). Introduction: Current issues in the treatment of addictions and crime. In J. Hodge, M. McMurran, & C. Hollin (Eds.), *Addicted to crime?* (pp. 1–9). Chichester: Wiley.
Messerlian, C., Derevensky, J., & Gupta, R. (2004). A public health perspective for youth gambling. *International Gambling Studies, 4*, 147–160.
Meyer, R. (1972). *Guide to drug rehabilitation: A public health approach*. Boston: Beacon.

Moeller, F., Barratt, E., Dougherty, D., Schmitz, J., & Swann, A. (2001). Psychiatric aspects of impulsivity. *American Journal of Psychiatry, 158*, 1783–1793.

New Zealand Ministry of Health. (2004). *Preventing and minimising gambling harm: Strategic plan 2004–2010, needs assessment, proposed three-year funding plan, proposed problem gambling levy rates. New Zealand*: Author. http://www.moh.govt.nz/moh.nsf/0/CA598932BB52A37DCC256E610016B0AE/$File/ProblemGamblingConsultation.pdf.

Nightingale, E., & Fischhoff, B. (2001). Adolescent risk and vulnerability: Overview. In B. Fischhoff, E. Nightigale, & J. Iannotta (Eds.), *Adolescent risk and vulnerability: Concepts and measurement* (pp. 1–14). Washington, DC: National Academy Press.

O'Dea, J. (1989). The link between social support and health. *Journal of the Home Economics Association of Australia, 21*, 13–14.

Ocean, G., & Smith, G. J. (1993). Social reward, conflict, and commitment: A theoretical model of gambling behaviour. *Journal of Gambling Studies, 9*(4), 321–339.

Ogborne, A. C. (1978). *Patient characteristics as predictors of treatment outcomes for alcohol and drug abusers*. Toronto: Evaluation Studies Department, Addiction Research Foundation.

Orford, J. (2001). Addiction as excessive appetite. *Addiction, 96*, 15–31.

Orford, J., Wardle, H., Griffiths, M., Sproston, K., & Erens, B. (2009). *The role of social factors in gambling: Evidence from the 2007 British Gambling Prevalence Survey*. Report prepared for the UK Gambling Commission: info@gamblingcommission.gov.uk

Oritt, E., Paul, S., & Behrman, J. (1985). The perceived social network inventory. *American Journal of Community Psychology, 13*, 565–582.

Orson, F. M., Kinsey, B. M., Singh, R. A., Wu, Y., Gardner, T., & Kosten, T. R. (2008). Substance abuse vaccines. *Annals of the New York Academy of Sciences, 1141*, 257–269.

Peele, S. (1989). *Diseasing of America: Addiction treatment out of control*. Massachusetts: Lexington.

Peele, S. (2003). Is gambling an addiction like drug and alcohol addiction? Developing realistic and useful conceptions of compulsive gambling. In G. Reith (Ed.), *Gambling: Who wins? Who loses?* (pp. 208–220). Amherst, NY: Prometheus Books.

Petry, N. (2001). Substance abuse, pathological gambling, and impulsiveness. *Drug and Alcohol Dependence, 63*, 29–38.

Petry, N. (2006). Should the scope of addictive behaviors be broadened to include pathological gambling? *Addiction, 101*(Suppl. 1), 152–160.

Petry, N., Stinson, F., & Grant, B. (2005). Comorbidity of DSM-IV pathological gambling and other psychiatric disorders: Results from the National Epidemiologic Survey on alcohol and related conditions. *Journal of Clinical Psychiatry, 66*, 564–574.

Petry, N., & Tawfic, Z. (2001). Comparison of problem-gambling and non-problem-gambling youths seeking treatment for marijuana abuse. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 1324–1331.

Potenza, M. (2006). Should addictive disorders include non-substance related conditions? *Addiction, 101*(suppl. 1), 142–151.

Potenza, M., Fiellin, D., & Heninger, G. (2002). Gambling—An addictive behavior with health and primary care implications. *Journal of General Internal Medicine, 17*, 721–732.

Rado, S. (1957). Narcotic bondage: A general theory of the dependence on narcotic drugs. *American Journal of Psychiatry, 114*, 165–170.

Raeburn, J. (2004). An international charter for gambling: The Auckland Conference and beyond. *Journal of Gambling Issues*, *12*. Available at: http://www.camh.net/egambling/issue12/jgi_12_raeburn.html.

Raylu, N., & Oei, T. (2004). Role of culture in gambling and problem gambling. *Clinical Psychology Review, 23*, 1087–1114.

Reid, R. (2007). Assessing readiness to change among clients seeking help for hypersexual behavior. *Sexual Addiction and Compulsivity, 14*, 167–186.

Reinarman, C. (2005). Addiction as accomplishment: The discursive construction of disease. *Addiction Research and Theory, 13*, 307–320.

Rodgers, W., Hall, C., Blanchard, C., & Munroe, K. (2001). Prediction of obligatory exercise by exercise-related imagery. *Psychology of Addictive Behaviors, 15*, 152–154.
Roizen, R. (1987). The great controlled-drinking controversy. In M. Galanter (Ed.), *Recent developments in alcoholism* (Memory deficits, sociology of treatment, ion channels, early problem drinking, Vol. 5, pp. 245–279). New York, NY: Plenum Press.
Rosecrance, J. (1985). Compulsive gambling and the medicalization of deviance. *Social Problems, 32*, 275–284.
Rosenberg, C. (1979). The therapeutic revolution. In V. Vogel & C. Rosenberg (Eds.), *The therapeutic revolution* (pp. 3–25). Philadelphia: University of Pennsylvania.
Rosenfeld, E. (1997). *Social support and health status: A literature review*. Report Submitted to the South Australian Community Health Research Unit.
Rosenthal, R. (1992). Pathological gambling. *Psychiatric Annals, 22*, 72–78.
Rosenthal, R. (2005). The categorization of pathological gambling and the impulse-control disorders not elsewhere classified. *Journal of Gambling Issues*, *15*.
Rosenthal, R. J., & Rugle, L. J. (1994). A psychodynamic approach to the treatment of pathological gambling: Part I. Achieving abstinence. *Journal of Gambling Studies, 10*(1), l21–l42.
Rugle, L., & Rosenthal, R. (1994). Transference and countertransference reactions in the psychotherapy of pathological gamblers. *Journal of Gambling Studies, 10*, 43–65.
Saint-Charles, J., Mongeau, P., & Jean-Franccedilois, B. (2008). Communication perspective on video lottery terminals. *International Gambling Studies, 8*, 233–247.
Sanju, G., & Murali, V. (2005). Pathological Gambling: an Overview of Assessment and Treatment. *Advances in Psychiatric Treatment, 2*, 450–456.
Schmidt, L., & Room, R. (1999). Cross-cultural applicability in international classifications and research on alcohol dependence. *Journal of Studies on Alcohol, 60*, 448–462.
Schneider, J., Sealy, J., Montgomery, J., & Irons, R. (2005). Ritualization and reinforcement: Keys to understanding mixed addictions involving sex and drugs. *Sexual Addiction and Compulsivity, 12*, 121–148.
Scodel, A. (1964). Inspirational group therapy: A study of gamblers anonymous. *American Journal of Psychotherapy, 18*, 115–125.
Sevigny, S., Ladouceur, R., Jacques, C., & Cantinotti, M. (2008). Links between casino proximity and gambling participation, expenditure, and pathology. *Psychology of Addictive Behaviors, 22*, 295–301.
Shaffer, H. (2003). *A public health perspective on gambling: The four principles*. AGA Responsible Gaming Lecture Series, #2, 1–27. Available at: http://www.americangaming.org/assets/files/LectureSHAFFERfnl.pdf.
Shaffer, H., Freed, C., & Healea, D. (2002). Gambling disorders among homeless persons with substance use disorders seeking treatment at a community center. *Psychiatric Services, 53*, 1112–1117.
Shaffer, H., Hall, M., & Vander Bilt, J. (1999). Estimating the prevalence of disordered gambling behavior in the United States and Canada: A research synthesis. *American Journal of Public Health, 89*, 1369–1376. doi:10.2105/AJPH.89.9.1369.
Shaffer, H., & Korn, D. (2002). Gambling and related mental disorders: A public health analysis. *Annual Review of Public Health, 23*, 171–212.
Shaffer, H., LaBrie, R., & LaPlante, D. (2004). Laying the foundation for quantifying regional exposure to social phenomena: Considering the case of legalized gambling as a public health toxin. *Psychology of Addictive Behaviors, 18*, 40–48.
Shaffer, H., LaBrie, R., LaPlante, D., Nelson, S., & Stanton, M. (2004). The road less travelled: Moving from distribution to determinants in the study of gambling epidemiology. *Canadian Journal of Psychiatry, 49*, 504–516.
Shaffer, H., LaPlante, D., LaBrie, R., Kidman, R., Donato, A., & Stanton, M. (2004). Toward a syndrome model of addiction: Multiple expressions, common etiology. *Harvard Review of Psychiatry, 12*, 367–374.

Shepherd, R. (1996). Clinical obstacles in administering the South Oaks Gambling Screen in a methadone and alcohol clinic. *Journal of Gambling Studies, 12*, 21–32.
Skinner, B. F. (1953). *Science and human behavior*. New York, NY: Free Press.
Slutske, W., Eisen, S., True, W., Lyons, M., Goldberg, J., & Tsuang, M. (2000). Common genetic vulnerability for pathological gambling and alcohol dependence in men. *Archives of General Psychiatry, 57*, 666–673.
Spunt, B. (2002). Pathological gambling and substance misuse. *Substance Use and Misuse, 37*, 1299–1304.
Spunt, B., Dupont, I., Lesieur, H., Liberty, H., & Hunt, D. (1998). Pathological gambling and substance misuse: A review of the literature. *Substance Use and Misuse, 33*, 2535–2560.
Spunt, B., Lesieur, H., Liberty, H., & Hunt, D. (1996). Pathological gamblers in methadone treatment: A comparison between men and women. *Journal of Gambling Studies, 12*, 431–449.
STASH. (2008). Let's try something new: Vaccines to treat addiction. *STASH, 4*(10).
Stein, S. (1993). The role of support in recovery from compulsive gambling. In W. Eadington & J. Cornelius (Eds.), *Gambling behavior and problem gambling* (pp. 627–637). Reno, NV: University of Nevada.
Steinberg, M., Kosten, T., & Rounsaville, B. (1992). Cocaine abuse and pathological gambling. *The American Journal on Addictions, 1*, 121–132.
Strong, D., Breen, R., Lesieur, H., & LeJuez, C. (2003). Using the Rasch model to evaluate the South Oaks gambling screen for use with nonpathological gamblers. *Addictive Behaviors, 28*, 1465–1472.
Strong, D., & Kahler, C. (2007). Evaluating the continuum of gambling problems using the DSM-IV. *Addiction, 102*, 713–721.
Svetieva, E., & Walker, M. (2008). Inconsistency between concept and measurement: The Canadian Problem Gambling Index (CPGI). *Journal of Gambling Issues*, *22*. http://www.camh.net/egambling/onlinefirst/01svetieva-walker.html-73k.
Szabo, A., & Griffiths, M. (2007). Exercise addiction in British sport science students. *International Journal of Mental Health & Addiction, 5*, 25–28.
Szalavitz, M. (2002). Love is the drug. *New Scientist, 176*(2370), 38–40.
Taylor, L., Taske, N., Swann, C., & Waller, S. (2007). *Public health interventions to promote positive mental health and prevent mental health disorders among adults. Evidence briefing*. London: NICE.
Toneatto, T. (2008). A cognitive behavioral analysis of Gamblers Anonymous. *Journal of Gambling Issues*, *21*. http://www.camh.net/egambling/issue21/05toneatto.htm.
Toneatto, T., & Brennan, J. (2002). Pathological gambling in treatment-seeking substance abusers. *Addictive Behaviors, 27*, 465–469.
Toneatto, T., & Kosky, B. (2006). Problem gambling treatment research: An annotated bibliography. *Journal of Gambling Issues*, *17*. http://jgi.camh.net/doi/full/10.4309/jgi.2006.17.16.
Triandis, H., & Draguns, J. (Eds.). (1980). *Handbook of cross-cultural psychology, Vol. 6, Psychopathology*. Newton, MA: Allyn & Bacon.
Tse, S., Wong, J., & Kim, H. (2004). A public health approach for Asian people with problem gambling in foreign countries. *Journal of Gambling Issues, 12*. Available at: http://www.camh.net/egambling/issue12/jgi_12_tse.html.
Turner, N. E., Annis, H. M., & Sklar, S. M. (1997). Measurement of antecedents of drug use and drinking: Psychometric properties of the Inventory of Drug Taking Situations (IDTS). *Behaviour Research and Therapy, 35*, 465–483.
Turner, N. E., Jain, U., Spence, W., & Zangeneh, M. (2008). Pathways to pathological gambling: Component analysis of variables related to pathological gambling. *International Gambling Studies, 8*(3), 281–298.
Turner, N., Littman-Sharp, N., & Zangeneh, M. (2006). The experience of gambling and its role in problem gambling. *International Gambling Studies, 6*, 237–266.
University of Wisconsin – Milwaukee. (2007, November 22). Rogue bacteria involved in both heart disease and infertility. *ScienceDaily*.

Vinten-Johansen, P., Brody, H., Paneth, N., Rachman, S., & Rip, M. (2003).*Cholera, chloroform, and the science of medicine: A life of John Snow*. New York, NY: Oxford University Press.

Vitaro, F., Brendgen, M., Ladouceur, R., & Tremblay, R. (2001). Gambling, delinquency, and drug use during adolescence: Mutual influences and common risk factors. *Journal of Gambling Studies, 17*, 171–190.

Warner, J. (1994). Resolv'd to drink no more: Addiction as a preindustrial construct. *Journal of Studies on Alcohol, 55*, 685–691.

Welte, J., Barnes, G., Wieczorek, W., Tidwell, M., & Parker, J. (2004). Risk factors for pathological gambling. *Addictive Behaviors, 29*, 323–335.

Widyanto, L., & Griffiths, M. (2006). Internet addiction: A critical review. *International Journal of Mental Health and Addiction, 4*, 31–51.

Winters, K., & Anderson, N. (2000). Gambling involvement and drug use among adolescents. *Journal of Gambling Studies, 16*, 175–198.

World Service Office, Inc (WSO). (1982). *Narcotics Anonymous*. World Service Office, Inc., Van Nuys, CA.

Chapter 8
Concluding Discussion

Abstract In this final chapter, we summarize the main themes of the book. Topics covered include (but are not limited to) the history of gambling, technological and scientific innovations that facilitated both problem gambling and chronic drunkenness, and the long-standing similarities between our understandings of problem gambling and substance addiction. We remind the reader that only in the wake of an unprecedented focus on substance abuse, emerging in the nineteenth and twentieth centuries, would the idea that struggles with temptation can be just as difficult with behavioral disorders be controversial at all. In short, what may pass for a discovery today was common knowledge in the eighteenth century. We also invoke our inquiries into the role of metaphor, suggesting that the competing public health and mainstream disease conceptions could be unified into a more comprehensive vision—just as physicists have managed to merge the formerly competing wave and particle theories of light. The chapter ends with a reminder of how many current ideas are rooted in prejudices born in the early twentieth century, a time when eugenics and Nazi dogma could often pass for science, and that it was in this climate that a stereotypical "addict" was invented. Our point is that we should be aware of our history, retaining the best and discarding the worst.

Keywords Epidemiology • Scientific innovations • Metaphors • Integration • History

In this study, we have attempted to trace the origins of ideas as they pertain to what now is called problem or pathological gambling. From the start, we have emphasized that ideas and attitudes towards substance abuse have largely guided these endeavors. It is worth noting once more that scientific developments have often kept step with politics—and historically a thread has been drawn from drunkenness to illicit drug abuse to PG. In Appendix, we list a number of the important events and changes that have happened during the past 6,000 years.

In the second chapter, we presented a brief history of gambling. The appendix provides a timeline highlighting some of the events and milestones that have shaped

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the fields of addiction and gambling studies. There are several important connections between the history of ideas about problem gambling and the history of gambling itself. Little—perhaps nothing—was written about problem gambling as a medical issue until the nineteenth century. Prior to the sixteenth century, gambling normally took place in the form of private bets between individuals. The development of probability theory—motivated to a large degree by a desire to understand games of chance in the sixteenth century—made it possible to run gambling as a business enterprise that kept the house edge low but guaranteed a profit. In the eighteenth century, the mathematics of probability was well developed, and casinos and lotteries were common in many parts of the world. By the beginning of the nineteenth century, lotteries were often used to fund the construction of universities and libraries. Despite other forces at work, advances in technology surely helped to trigger advances in the medical literature on problem gambling (motivated in part by "advances" in PG rates). A similar situation occurred with alcohol. The invention of distillation led to the creation of inexpensive, highly potent gin and a sharp change in social attitudes towards alcohol and alcoholism (Warner, 2002). While the medicalization of assorted behaviors has been beholden to many causes and while a preoccupation with self-control was also emerging for other reasons, it is important to keep in mind the effects of innovations such as distilling and probability theory. As discussed in Chap. 2, by 2010, in areas where gambling machines were available, such machines account for the majority of those seeking treatment for gambling problems (Counter & Davey, 2006; Dorion & Nicki, 2001; Urbanoski & Rush, 2006).

Theoretical developments from other fields have also had important influences on PG theory. Skinner's (1953) work on the development of operant learning theory for the first time suggested an explanation of how an otherwise normal organism could be very strongly conditioned as a result of positive or negative reinforcement. An organism could be so strongly conditioned to press a lever that it would starve to death pressing that lever. There are a number of similarities between the modern slot machine and the operant conditioning chamber (or the Skinner box) used by Skinner to develop his learning theory. This similarity may not be entirely coincidental, and it should be noted that the slot machine does predate the Skinner box. The importance of Skinner's work is that it provided psychology with a mechanism of learning that could theoretically turn any individual into an addict under the right circumstances (e.g., initial frequent rewards followed by intermittent rewards). Skinner's ideas lead to the development of a cognitive-behaviorist approach to the study and treatment of addictions (Marlatt, 1985; Peele, 2003) that have produced some of the most effective treatment methods in the addiction field. This model also helped bolster the view that addictions were at least to some extent a result of environmental conditions rather than simply character flaws.

The past 40 years have witnessed a virtual revolution in gambling. In the 1970s, most casino revenues came from well-off gamblers playing table games (e.g., blackjack, craps, baccarat, roulette). Yet a series of technological innovations have helped to move gambling machines from a relatively small niche market to the main source of casino revenue (Ernkvist, 2009). Meanwhile, politicians and corporations have

rediscovered the age-old value of legal "gaming" as a source of revenue. Gambling fever is now exploited at an unprecedented level by governments around the world. What is particularly remarkable is that only a few years ago, many of these same governments were trying to prohibit the behavior.

During this same time period, another major change occurred: academics recognized pathological gambling as a medical concern and began to research the topic, propose diagnostic criteria, and develop treatment approaches largely borrowed from substance addictions. Since the mid-1990s, the sophistication of gambling machine technology has progressed rapidly following a profitability feedback loop (survival of the most profitable). As a result, the machines have become more and more successful at developing what Ernkvist (2009) calls *player appeal.* This same time period witnessed the emergence of the public health model as a major competitor to the mainstream chronic disease model of addictions. The public health model draws upon metaphors of infectious diseases (or toxins) and directs attention at issues such as availability, exposure, poverty, and stress that could increase an individual's vulnerability. Given recent developments in technology and availability, one strength of the public health model is that an analogy with infectious disease is more likely to bolster a focus on availability. Its competitor, the chronic disease model, is probably less suited to such a tack.

All the while, though, some trends in PG and addiction science seem to be returning to much older conceptions of moral and medical wisdom. For one, the idea that many behaviors are potentially just as conducive to excess as drinking or opium smoking was, until the late eighteenth or early nineteenth centuries, taken for granted. From our perspective—that of addiction historians—the alleged discovery of behavioral addictions is a funny idea. In the nineteenth century, such afflictions were sometimes referred to as "monomania." Before that, preachers might discuss unhealthy behaviors in terms comparable to their discussions of drunkenness (Ferentzy, 2001). Then as now, the struggle with temptations could be similar regardless of whether a substance was involved.

As well, a major theme in the literature involves debates over whether PG should be viewed in strict pathological terms or along the lines of a continuum of harm (Derevensky, Gupta, Dickson, & Deguire, 2001; New Zealand Ministry of Health, 2004; Strong & Kahler, 2007). This, and other arguments, can often be viewed as a challenge to a disease conception put forward by scholars (Lesieur & Custer, 1984); Gamblers Anonymous (GAISO, 1984), and even DSM (American Psychiatric Association, 1980, 1994). This is reminiscent of medical debates from centuries back when, as discussed in Chap. 4, there was controversy over the very existence of individual diseases. Throughout most of Western history, even biological diseases were not seen as specific entities the way they are today. As mentioned, Szasz (1973, 1974) has been a prominent advocate of the idea that mental illness, and by extension addiction, is a misnomer founded upon the uncritical application of metaphor from biology to behavior. So while granting (obviously) the existence of specific biological diseases, Szasz, like many others, has questioned the veracity of psycho-behavioral disease constructs. Peele (1989) has popularized this line of thought in the addiction field and has also applied it to PG (Peele, 2003). With

Table 8.1 Features revealed and hidden by the disease model

Metaphor/origin	Source/origin	Reveals/emphasizes	Hides/ignores
Chronic disease model: Allergy Diabetes	AA medical research	Patient not blamed for illness Avoidance is necessary Chronic Lifelong avoidance is the only solution Individual responsibility for recovery View problem and nonproblem gamblers as different	Addiction is primary and other causes are ignored Actual recovery is viewed as not possible Ignores role of the games Rejects the potential for controlled, or less harmful, drinking or gambling

respect to psycho-behavioral disorders, the discipline called "nosology," and with it the very existence of disease entities, remains as controversial as it was centuries ago in the biological realm.

Despite an eclectic mix of approaches and concepts, currently, two competing conceptions stand out as seeming candidates for supremacy. The so-called disease model—which we have also called the GA model and the individual disease model—has been likened to an allergy, and in the fifth chapter we discussed the ways in which immunology helped to shape some of the ideas about addiction in the early twentieth century. The public health model involves the application of control of infectious disease and makes even more explicit its debt to ideas about immunology. In its application of metaphor—terms and concepts borrowed from other disciplines—each model actually reveals (or emphasizes) and hides (or downplays) certain aspects of the issue. Put another way, each of these models targets different features of the disorder. In Tables 8.1 and 8.2, we have outlined some of the features of gambling that are revealed and hidden by these two models.

Conceptions in the tradition of an allergy model can inform us that the patient is not to blame for the having contracted the illness and that avoidance of the substance or behavior (e.g., alcohol, gambling) is essential and must be lifelong. It places responsibility for recovery in the hands of the individual but provides them with resources to help them along this pathway. It also hides some important aspects of the disorder in that it focuses on substances or gambling in such a way that other issues (e.g., economic, sociological) are ignored. It views long-term remission (meaning normal use or gambling) as simply not possible, and in the case of gambling, the role of specific games in creating the problem is ignored.

Conversely, the epidemiological public health model reveals the importance of social determinants and policy changes (see Babor et al., 2005) that might minimize the impact of the epidemic. It emphasizes prevention and depicts everyone as potentially vulnerable to contracting the disease. In addition, the idea that an addiction results from a toxin or is an infection focuses attention on aspects of exposure

Table 8.2 Features revealed and hidden by the public health model

Metaphor/origin	Source/origin	Reveals/emphasizes	Hides/ignores
Public health model: Infectious disease Toxin	Epidemiology and disease control	Importance of involvement of society Toxic or infectious aspects of exposure Emphasizes prevention (hygiene) Emphasizes social responsibility Anyone can catch the disease Exposure puts a person at risk Features of the games may make some more toxic than others	Does not account for nonproblem gamblers Assumes that it harms recreational gamblers Confuses current play with being at risk

(availability) so that people who are, for example, near a casino are viewed as more susceptible or people who play more often are viewed as being at risk. Just as some diseases are more problematic than others, specific features of the game may be viewed as important because they may explain the difference in the relative risk from exposure to one form of gambling compared to another. One aspect typical of an epidemic is that children, the elderly, and the infirm are often seen as especially vulnerable to a new virus. This may help to explain the disproportionate focus on problem gambling among youth and the elderly rather than on middle-aged men (who typically populate treatment programs). The public health model also hides or de-emphasizes some aspects of gambling. The most obvious of these is the existence of nonproblem gamblers. While GA members typically understand that recreational gamblers may simply not be vulnerable to problem gambling, the public health model can lead to the suggestion that any exposure is potentially harmful. This is certainly the public health approach to tobacco (Siegel et al., 1997) and to a lesser extent also true for alcohol (Babor et al., 2005): though not always, sometimes the emphasis is placed on restricting availability of alcohol rather than on educating the consumers. In this vein, nonproblem gamblers are not seen as healthy individuals but rather as mild cases on the continuum of harm who still suffer to some degree. There is a real danger of unduly pathologizing broad segments of the population. Some researchers have tried to show that recreational gamblers have more health problems than non-gamblers (Potenza, Fiellin, & Heninger, 2002). One particular model within the public health approach, the Distribution of Consumption Model (Chipman, Govoni, & Roerecke, 2006), has proposed that because alcohol problems are log-linearly related to consumption, the best way to reduce problems would be to reduce average consumption by shifting the entire distribution downwards. That is, rather than targeting problem drinkers, the Distribution of Consumption Model targets both problem and nonproblem drinkers in a similar

fashion through restrictions in accessibility (Chipman et al., 2006). Chipman et al. (2006) have argued that the loglinear model also fits gambling consumption and have advocated exploring the application of this and other findings from alcohol research into problem gambling research. An epidemic model has difficulty accounting for healthy nonproblem gamblers or for the enjoyment that people gain from a little flutter (Flavin, 2003). Although the disease or "medical" model is often criticized for being too focused on abstinence, the infectious disease or toxin model promotes policies restricting access and could be called neoprohibitionist. If one takes the idea that gambling is a communicable disease or a toxin to its logical extreme, the PH model could be used in support of outright prohibition.

Despite generalizations and omissions, the sweeping claim still stands: overall, two perspectives seem to be vying for contention. In the field of addictions, we are left with a curious riddle of a medical model that was not derived from medical science pitted against a public health model derived from medical science, whose advocates explicitly reject the "medicalized model." In our view, both the chronic disease model and public health disease model are useful metaphors for some aspects of problem gambling. Yet each is incomplete because it fails to take into account the interactive nature of the disorder. The disorder is neither entirely in the person nor in the exposure to the game. It is the result of an interaction between personal characteristics of the gamblers (e.g., unhappiness, poor coping skills, genetically based vulnerability) with experiences such as pleasure (e.g., wins, being part of the excitement, being part of the crowd) and relief from stress (e.g., dreams of winning, forgetting about all of your problems). So neither public health nor chronic disease models deal with the disorder in a comprehensive fashion.

As stated in Chap. 2, a similar situation occurred in physics during the nineteenth century. Two metaphors, Maxwell's wave theory of light and Newton's particle theory, competed for dominance (see Coren & Ward, 1989, p. 58). Today it is accepted that both wave and participle metaphors are useful analogies for the behavior of different aspects of light. Metaphors can facilitate the understanding of complex or unfamiliar topics, but they can also limit one's thinking to those aspects of the topic that are similar to the metaphoric vehicle. The two competing models of light reveal different aspects of light, and each one compensates for the limitations of the other. As such, physicists now accept the dual nature of light. It would be ideal if instead of viewing the chronic disease model and the epidemiological disease model as necessarily antagonistic, they could each be seen as useful but imperfect metaphors. We suggest that rather than siding with either the PH approach or the so-called "medical" (GA, disease) approach, PG scholars might consider how the two could be merged into a broader conception that might truly enhance our efforts.

Discussions surrounding chronicity may serve as an example. Although addictions need not be chronic, it is often difficult to break free, and for many of the afflicted, lifelong abstinence is a good idea. While absolute deterministic chronicity is clearly an illusion, there is an undeniable measure of chronicity to many psychobehavioral disorders, including PG. If nothing else, prior engagement is probably the strongest risk factor—someone who ever gambled excessively for many years is

at higher risk than someone who has not—indicating a measure of chronicity even after long-term remission. So the challenge is not to determine in absolutist terms whether or not such afflictions are chronic but to develop conceptions of chronicity that are flexible enough to address this complex, and at times baffling, reality we call *addiction*.

While there are obviously too many pertinent historical strands to revisit in a concluding discussion, a few may be said to stand out. Since their inception, the sciences of addiction have made much use (and at times very creative use) of the notion of latency. Crothers (1893) represents a line of thinking that still reverberates to this day: one might be an inebriate without ever having taken a drink. According to this view, alcoholism may be inactive, latent, yet still exist. The person has the bug, even if it has never been triggered. This view also survives in current conceptions of problem gambling—held by many in the PG field and many GA members themselves (Ferentzy, Skinner, & Antze, 2007)—that gamblers are born with a defect making them vulnerable to the addiction. With thinkers such as Crothers, an affiliation with eugenics is apparent, as is Crothers' sense of self-importance: "Marriage should be under control of law, and from the judgment of the family physician" (Crothers, 1893, p. 155, see also pp. 151–152). The early twentieth century saw things such as forced sterilization and Nazi dogma—all of which was in the air when "addiction" as we have come to know it was constructed in the first half of the twentieth century. It is incumbent upon PG scholars, and all addiction scholars, to take seriously the possibility that current conceptions are still beholden to such developments. Again, our intention is not to point fingers but to state the obvious: all researchers, ourselves included, are influenced by history, society, and politics. While questionable origins and associations need not invalidate current ideas and practices, sifting through it all cannot help but make for better science as well as better ethics. Neither the public health model nor the chronic disease model is inherently humane towards the addict. In addition, both are related to earlier moralistic views of addiction. As shown above, the attitude towards an addict is a product of many historical and moralistic trends. If nothing else, it is hoped that his book has revealed the metaphoric and historical roots of these models and how these may either enhance or constrain our thinking about addictions.

Lastly, and this is perhaps the most important lesson our history can offer, there is an entire ideology of *hitting bottom* clearly rooted in misconceptions, prejudices, and even hostility towards targeted groups (Ferentzy, 2011). While there is certainly no denying that pain is a necessary motivator for seeking recovery, the supposition that whenever recovery fails to materialize only more pain and more degradation will work—this supposition is one unpleasant legacy from the twentieth century that we can certainly do without. Yet moving beyond it will be no cinch. The fifth and sixth chapters also discussed the many ways in which addicts themselves, for assorted self-serving reasons, have helped to promote ideas that feed into their own degradation. Again, we wish to point no fingers at addicts or researchers. Our goal is to generate clarity—that is all. We must demystify all addictions, PG included. The fifth chapter showed portrayals of cunning and devious addicts, some of which would suit an under average B grade movie, put forward by all concerned parties

including addicts themselves. Addicts played along, and in some ways still do, out of vanity, to garner sympathy, to say what therapists or mutual aid peers wish to hear, or even because they have come to believe it. While phenomenological accounts ought to be treated with respect, they need to be no more inviolable than the assumptions of researchers like ourselves. In searching for destructive myths and prejudices, the identification of guilty parties (real or imagined) is irrelevant. A challenge for this new century will involve coming to grips with the last one, retaining the good and losing the bad.

References

American Psychiatric Association [APA]. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author

American Psychiatric Association [APA]. (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.). Washington, DC: Author

Babor, T. F., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Graham, K., et al. (2005). *Alcohol: No ordinary commodity. Research and public policy*. Oxford: Oxford University Press.

Chipman, M., Govoni, R., & Roerecke, M. (2006). *The distribution of consumption model: An evaluation of its applicability to gambling behaviour. Final report prepared for the Ontario Problem Gambling Centre*. http://www.gamblingresearch.org/download.sz/2305%20Final%20Report%20Posted%20Version.pdf?docid=8201.

Coren, S., & Ward, L. M. (1989). *Sensation and perception* (3rd ed.). San Diego, CA: Harcourt Brace Jovanovich.

Counter, A., & Davey, B. (2006). *What is the Ontario Problem Gambling Helpline (OPGH)?* Paper presented at the 2006 conference of the Responsible Gambling Council (Ontario), Toronto. Retrieved July 16, 2008, from http://www.rgco.org/articles/anne_counter_brad_davey_discovery_2006.pdf.

Crothers, T. (1893). *The disease of inebriety from alcohol, opium and other narcotic drugs* (New York: E. B. Treat, 1893), in New York: Arno Press edition (1981).

Derevensky, J., Gupta, R., Dickson, L., & Deguire, A. (2001). *Prevention efforts toward minimizing gambling problems*. Report prepared for the National Council for Problem Gambling, Center for Mental Health Services (CMHS) and the Substance Abuse and Mental Health Services Administration (SAMHSA), Washington, DC

Dorion, J. P., & Nicki, R. M. (2001). Epidemiology of problem gambling in Prince Edward Island: A Canadian microcosm. *Canadian Journal of Psychiatry, 46*, 413–417.

Ernkvist, M. (2009). *Creating player appeal*. Göteborg, Sweden: University of Gothenburg.

Ferentzy, P. (2001). From sin to disease: Differences and similarities between past and current conceptions of chronic drunkenness. *Contemporary Drug Problems, 28*, 363–390.

Ferentzy, P. (2011). *Dealing with addiction – Why the 20th century was wrong*. Morrisville, NC: Lulu. http://www.peterferentzy.com.

Ferentzy, P., Skinner, W., & Antze, P. (2007). *Approaches to recovery in gamblers anonymous*. Final report submitted to the Ontario Problem Gambling Research Centre

Flavin, M. (2003). *Gambling in the nineteenth-century english novel: A leprosy is o'er the land*. Brighton: Sussex Academic Press.

Gamblers Anonymous International Service Office (GAISO). (1984). *Sharing recovery through gamblers anonymous*. Los Angeles, CA: GAISO.

Lesieur, H., & Custer, R. (1984). Pathological gambling: Roots, phases, and treatment. *The Annals of the Academy of Political and Social Science, 474*, 46–156.

Marlatt, G. A. (1985). Situation determinants of relapse and skill-training interventions. In G. A. Marlatt & J. R. Gordon (Eds.), *Relapse prevention: Maintenance strategies in the treatment of addictive behaviours* (pp. 71–126). New York, NY: Guilford.

New Zealand Ministry of Health. (2004). *Preventing and minimising gambling harm: Strategic plan 2004–2010, needs assessment, proposed three-year funding plan, proposed problem gambling levy rates.* New Zealand: Author. http://www.moh.govt.nz/moh.nsf/0/CA598932BB52A37DCC256E610016B0AE/$File/ProblemGamblingConsultation.pdf.

Peele, S. (1989). *Diseasing of America: Addiction treatment out of control*. Massachusetts: Lexington.

Peele, S. (2003). Is gambling an addiction like drug and alcohol addiction? Developing realistic and useful conceptions of compulsive gambling. In G. Reith (Ed.), *Gambling: Who wins? Who loses?* (pp. 208–220). Amherst, NY: Prometheus Books.

Potenza, M., Fiellin, D., & Heninger, G. (2002). Gambling—An addictive behavior with health and primary care implications. *Journal of General Internal Medicine, 17*, 721–732.

Siegel, M., Carol, J., Jordan, J., Hobart, R., Schoenmarklin, S., DuMelle, F., et al. (1997). Preemption in tobacco control. Review of an emerging public health problem. *JAMA, 278*(10), 858–863.

Skinner, B. F. (1953). *Science and human behavior*. New York, NY: Free Press.

Strong, D., & Kahler, C. (2007). Evaluating the continuum of gambling problems using the DSM-IV. *Addiction, 102*, 713–721.

Szasz, T. (1973). Mental illness as a metaphor. *Nature, 242*, 305–307.

Szasz, T. (1974). *Ceremonial chemistry: The ritual persecution of drugs, addicts, and pushers*. Garden City: Anchor Press.

Urbanoski, K., & Rush, B. R. (2006). Characteristics of people seeking treatment for problem gambling in Ontario: trends from 1998–2002. *Journal of Gambling Issues, 16*. Available: http://www.camh.net/egambling/issue16/index.html.

Warner, J. (2002). *Craze: Gin and debauchery in the age of reason*. New York, NY: Random House.

Appendix: Historical Timeline

Major Events in the History of Gambling and Problem Gambling

4000BCE	Huckle bones are used as an early form of dice called astragali.
3500BCE	Board games ("race games") use astragali (early dice) to determine the motion around the board.
3000BCE	The earliest six-sided dice yet discovered.
3000BCE	Gaming boards placed in royal tombs in the city of UR.
2000BCE	Gambling games such as senet, the Palm Tree Game, Hounds and Jackals, Mehen, and Tau have been found in Egyptian archeology sites (e.g., tombs).
1700BCE	Chinese held random events in high regard and consulted oracles for guidance in making major decisions.
1300BCE	Modern form of dice was developed with square sides, dots to indicate the value, and opposite pips equaling 7.
700BCE	The invention of the Hindu-Arabic number system.
400BCE	Mahabharata includes a description of a problem gambler.
217BCE	Saturnalia first observed during which gambling was permitted.
168 to 165BCE	Maccabean Revolt which is still commemorated with the use of a dreidel.
100 to 43BCE	Cicero speculates on the concept of luck.
49BCE	Caesar uses a dice metaphor when crossing the Rubicon and starting a civil war.
30CE	Roman soldiers play dice over Christ's belonging at the Crucifixion.
37 to 41CE	Caligula gambles to win at all costs, always cheating and lying.
41CE	Claudius becomes emperor. Claudius was an avid gambler who wrote a book on how to win at dice.

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1 to 500CE	The word addictus is used in Roman law to refer to debt slaves that were known among German people.
700CE	Mohammed founded the Muslim faith. The religion includes a strong condemnation of gambling.
1100CE	Playing cards were being used in China.
1230CE	Poems are written about the wheel of fortune that later are used in Orf's Carmina Burana.
1300CE	Playing cards are in use in Europe.
1444CE	First recorded organized lottery in L'Écluce to raise money to repair the city wall.
1400CE	Chaucer's Canterbury Tales includes the Pardoner's Tale which warned that alcohol, swearing, and gambling are certain paths to death.
1500CE	Lotteries become the first institutionalized form of mercantile gambling.
1567CE	Legislation attempting to ban gambling mentioned ridottos (casinos).
1560CE	Girolamo Cardano is the first to combine both empirical and theoretical exploration of the bounds of probability theory.
1613CE	Galileo Galilei systematically expounded the rules of probability for a fair 6-sided dice in a 3-dice game.
1638CE	First legally sanctioned public gaming house, San Moise Palace, is opened in Venice.
1654CE	In a series of correspondences, Blaise Pascal and Pierre de Fermat develop the probability theory. Pascal uses a triangle to determine opportunities.
1688CE	Gin introduced into England.
1691CE	Faro is prohibited in France by Royal decree.
1708CE	John Law arrives in France and reintroduces faro.
1720CE	Rampant speculation, stimulated by John Law, causes one of the first known stock market crashes—the Mississippi bubble.
1729CE	The first of several tax measures is passed to try and stop the poor from drinking so much gin.
1732 to 1733CE	The Rake's Progress sequence of paintings is painted.
1733CE	Lotteries suppressed in legislation in Rhode Island.
1746CE	A lottery is authorized in New York for the founding of Columbia University.
1774CE	First Baptist Church of Providence RI financed by lottery.
1772 to 1794CE	Lotteries run to support university construction in Massachusetts.
1774CE	Rush, Benjamin: Sermons to Gentlemen upon Temperance.

1804CE	Kentucky bans banked games.
1811 to 1820CE	Regency period known for the excessive spending on the part of the Prince Regent. Gambling was particularly popular during this period.
1813CE	The Connecticut Society for the Reformation of Morals and Massachusetts Society for the Suppression of Intemperance were founded.
1817CE	Esquirol publishes Mental Maladies: A Treatise on Insanity which proposes the concept of monomania.
1833CE	Pushkin writes the Queen of Spades about a man obsessed with faro.
1835CE	Gamblers lynched in Vicksburg; Antigambling societies formed in Lexington, Mobile, Natchez, and Cincinnati.
1840CE	Most US states had banned lotteries.
1840CE	Washingtonian movement founded.
1840sCE	Many racetracks, especially in the northern states, were closed by antigambling activists.
1845CE	Britain passes a law banning "common" gaming houses.
1854CE	British physician John Snow identifies polluted water as a source of cholera. This is an important milestone in the development of the idea of public health.
1856CE	All banked games are banned in California.
1861 to 1865CE	American civil war during which poker flourished. Rose (1991) has labeled it the second wave of gambling.
1866CE	Dostoyevsky writes The Gambler.
1868CE	Louisiana lottery chartered. It was for a while the only legal lottery in the USA.
1869CE	Gambling decriminalized in Nevada.
1874CE	Woman's Christian Temperance Union Founded in Ohio.
1877CE	Nevada passes a law against winning money from people "with no right to gamble it away."
1885CE	Gambling itself is criminalized in California.
1888CE	Chinese Exclusion Act.
1888CE	Canfield opens casino in New York City.
1890CE	Tchaikovsky's writes the opera The Queen of Spades based on Pushkin's novel.
1891CE	First automatic poker machine is invented.
1890CE	A federal statute prohibits the interstate transportation of lottery tickets.
1893CE	The Louisiana lottery finally has to close (and move its official office to Honduras).
1898CE	Charles Fey invents the first slot machine to pay out in coins.

1900CE	Reform-minded judge, W.T. Jerome, harasses gambling operations in New York.
1901CE	Jerome elected District Attorney on pledge to clean up New York City.
1902CE	Crothers' Morphinism is published. Crothers estimates there are 100,000 opiate addicts in the USA.
1904CE	Jerome finally forces Canfield out of the gambling business.
1905CE	Slot machines are legal in Nevada as long as they are not visible from the street.
1906CE	Pure Food and Drug Act forbids the manufacture and sale of adulterated food and poisonous patent medication, including labeling requirements for medicines containing alcohol, opiates, or cocaine.
1909CE	Antigambling activists triumph in Nevada and ban gambling.
1909CE	Slot machines banned in California.
1912CE	Charles Terry opens a clinic to treat opiate addicts. He concludes that addiction is a disease and that addicts deserve humane treatment.
1913CE	Nevada partially repeals the ban on gambling by allowing nickel slot machines and social games.
1914CE	The Harrison Act made all nonmedical use of cocaine, heroin, and related products illegal in the USA.
1915CE	Nevada legalizes pari-mutuel gambling but only at the track.
1917CE	Under substantial pressure from the temperance movement, the United States Senate proposes the Eighteenth Amendment.
1920CE	Eighteenth Amendment or Volstead Act is enacted banning the sale, manufacture, and transportation of alcohol nationally in the USA.
1920CE	Organized smuggling of alcohol provides a huge revenue source for organized crime and Canadian distilleries.
1928CE	Freud publishes his analysis of disordered gambling based on the life and work of Dostoyevsky.
1929CE	Rampant speculation on the stock market causes the largest financial meltdown in modern history.
1931CE	Nevada legalizes casino gambling in part to take advantage of people working on the Hoover Dam (a depression public works project).
1933CE	The Cullen-Harrison Act repeals the ban on beer.
1935CE	Alcoholics Anonymous founded by Bill Wilson and Dr. Bob Smith (Bill W. and Dr. Bob) in Akron, Ohio.
1937CE	Silkworth publishes his ideas on alcoholism as a manifestation of allergy.

1941CE	Federal gaming tax enacted on all gaming machines.
1949CE	69,786 venues with an estimated 208,000 gaming machines in the USA, a figure not surpassed again until the 1990s.
1951CE	Johnson Act makes it illegal to transport gambling devices to a state where they were illegal.
1953CE	B.F. Skinner publishes Science and Human Behavior. He describes gambling as a result of operant conditioning.
1957CE	Gamblers Anonymous founded in Los Angeles.
1961CE	Interstate Wire Act bans the use of telephone and other communication related to gambling.
1963CE	First attempt to create video gambling using rear projection.
1964CE	New Hampshire introduces the first legal lottery.
1967CE	First Canadian lottery runs to fund the Montreal Expo.
1974CE	The film The Gambler staring James Caan is released.
1974CE	First stepper motor introduced, allowing precise digital control over slot outcomes.
1975CE	International Gaming Technology comes into existence with a focus on specialized niche technology such as video poker.
1975CE	Video poker is the first successful form of gambling based on a video screen.
1978CE	Vermont is the 14th state to legalize lotteries.
1978CE	Atlantic City opens its first casino.
1979CE	Marlatt publishes a paper on describing a cognitive-behavioral model of relapse process for addictions.
1979CE	The invention of the virtual reel allows for lower probabilities of wins and larger prizes.
1980CE	Gambling first introduced into the DSM-IV guidelines for psychiatric assessment.
1985CE	Universal invents digital games that exploit the concept of the near miss.
1985CE	Wide area progressive game for electronic gambling machines is invented.
1989CE	Universal's type of near-miss manipulation on slot machines is banned, but virtual reels are permitted.
1987CE	DSM-III-R revises the assessment criteria for pathological gambling and brings the criteria more similar to substance abuse (4 of 9 criteria).
1987CE	Development and publication of the first scientific screening tool for pathological gambling—the SOGS.
1988CE	The Indian Gaming Regulatory Act establishes the jurisdictional framework that governs Indian gaming and leads to a rapid expansion of gambling operated by natives in the USA.

1989CE	Casino gambling is legalized in South Dakota and Iowa followed rapidly by six more states from 1989 to 1993.
1992CE	Touch screen technology developed.
1993CE	Bill acceptors introduced on US slot machines.
1994CE	Lotteries are legal in 38 states in the USA.
1994CE	DSM-IV sets the criteria for pathological gambling as 5 of 10 criteria and places the disorder in the impulse control disorder category.
1997CE	Multiline video slot machines with bonus games were available.
1999CE	The US government commissions a report on the impact of gambling.
1999CE	The public health model for pathological gambling is proposed.
2000CE	Reward deficiency syndrome is proposed.
2001CE	Development of the Canadian Problem Gambling Index and its assessment measures the problem gambling severity index (PSGI).
2002CE	Pathways model proposed.
2007CE	APA names DSM-V Task Force Members.
2008CE	Speculation on house prices in the USA causes a spike in house prices financed with subprime mortgages. These risky loans are packaged into "safe" mortgage-backed securities. The subsequent collapse in the housing market brings about a severe worldwide recession.
2013CE	DSM-V is due to be released. It is proposed that PG will be reclassified and moved from Impulse-Control Disorders Not Elsewhere Classified category to a new category, Addiction and Related Disorders.

Note: That rounded off dates are approximations. These events were taken from a variety of sources cited in the book. The most important sources were Asbury (1938), Courtwright (1982), Berridge (2004), David (1962), Ernkvist (2009), Flavin (2003), Ferentzy (2001), Foucault (1978), Korn & Shaffer (1999), Levine (1978), Mlodinow (2008), Musto (1973), Schwartz (2006), and Turner, Fritz, & Zangeneh (2007).

References

American Psychiatric Association. (2012). *R 37 gambling disorder.* Retrieved July 30, 2012, from http://www.dsm5.org/proposedrevision/pages/proposedrevision.aspx?rid=210

Asbury, H. (1938). *Sucker's progress: An informal history of gambling in America from the Colonies to Canfield*. New York: Thunder Mouth Press.

Courtwright, D. (1982). *Dark paradise: Opiate addiction in America before 1940*. Cambridge: Cambridge University Press.

Berridge, V. (2004). Why alcohol is legal and other drugs are not. *History Today, 54*(5), 18–20.

David, F. N. (1962). *Games, gods, and gambling: A history of probability and statistical ideas*. New York: Hafner Publishing.

Ernkvist, M. (2009). *Creating player appeal*. Göteborg, Sweden: University of Gothenburg.

Ferentzy, P. (2001). From sin to disease: Differences and similarities between past and current conceptions of chronic drunkenness. *Contemporary Drug Problems, 28*, 363–390.

Flavin, M. (2003). *Gambling in the nineteenth-century english novel: A Leprosy is o'er the Land*. Brighton: Sussex Academic Press.

Foucault, M. (1978). *The history of sexuality, Vol. 1. An introduction*. New York: Vintage.

Korn, D., & Shaffer, H. (1999). Gambling and the health of the public: Adopting a public health perspective. *Journal of Gambling Studies, 15*, 289–365.

Levine, H. (1978). The discovery of addiction: Changing conceptions of habitual drunkenness in America. *Journal of Studies on Alcohol, 39*, 143–174.

Mlodinow, L. (2008). *The drunkard's walk: How randomness rules our lives*. New York: Vintage Books.

Musto, D. (1973). *The American disease: Origins of narcotic control*. New Haven: Yale University Press.

Schwartz, D. (2006). *Roll the bones*. New York: Gotham Books.

Turner, N. E., Fritz, B., & Zangeneh, M. (2007). Images of gambling in film. *Journal of Gambling Issues, 20*, 117–144.

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