

PRAEGER PERSPECTIVES

Edited by Angela Browne-Miller

The Praeger International Collection on Addictions

Behavioral Addictions from Concept to Compulsion

Volume
4



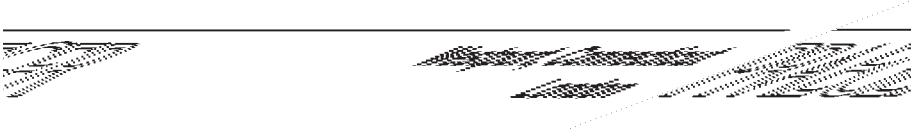
**The Praeger International
Collection on Addictions**

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INTERNATIONAL
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**Volume 4
Behavioral Addictions from
Concept to Compulsion**

Edited by Angela Browne-Miller

Praeger Perspectives
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Thomas G. Plante, Series Editor



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Series Foreword

Tragically, most people across the globe have either struggled with a health- and relationship-damaging addiction or know someone who has. Addictions, broadly defined, have touched the lives of the majority of people in multiple cultures and locations. For centuries, numerous people have suffered with their addictions to alcohol and drugs as well as with other addictions, with often devastating outcomes. Sadly, important relationships, jobs and careers, and many lives have been lost due to the destructive power of addiction. These tragedies not only occur for those who suffer from addiction, but for their loved ones, coworkers, and community members, and for innocent victims who are perhaps in the wrong place at the wrong time when an addiction-related accident, crime, or violence occurs. The enormous cost of addiction in health care, traffic accidents, crime, violence, loss of workplace productivity, and broken families is too large to quantify. The global spread and success of organizations such as Alcoholics Anonymous (as well as related organizations such as Narcotics Anonymous, Sexoholics Anonymous, and Overeaters Anonymous) is a testament to the numerous people trying to recover from their addictions. Sadly, for every person seeking help for his addiction problem, there are likely to be many more people who never do. Clearly we need help to better understand, evaluate, treat, and cope with those who suffer from addictions.

In this remarkable four-volume set, *The Praeger International Collection on Addictions*, Angela Browne-Miller, PhD, DSW, MPH, has assembled an all-star and diverse team of leading experts from across the globe to provide a state-of-the-art understanding of the various facets of addiction. Each chapter

is written in a manner that is suitable for professionals working in the field as well as educated lay readers and those who either struggle with addictions or live or work with someone who does. What is especially remarkable about the four-volume set is its emphasis on addiction from around the globe, examining multicultural and international issues in addiction, as well as its coverage of so many multifaceted aspects of diverse addictions. For example, it certainly makes sense to cover fully addiction topics such as alcohol abuse and illegal drug use of, say, cocaine and heroin, yet chapters are also offered that examine addictions to caffeine, Internet pornography, work, television, intimate relationship abuse, and shopping. The chapters highlight biological, psychological, social, spiritual, and public health perspectives, with chapter authors who are psychologists, psychiatrists, other physicians, nurses, social workers, counselors, clergy, and other professionals. Dr. Browne-Miller is uniquely qualified to assemble this project as she is someone who has worked in the field of addiction for many years and has training in a unique blend of both the policy and the clinical sides of psychology, social work, education and public health.

The set is complete, state of the art, and highly informative and engaging. There is something for everyone interested in the field of addiction for professional or personal reasons. It is hoped that professionals and lay readers will greatly benefit from this important work and, in doing so, will find a way to improve the lives of those touched by addiction. It is my hope that both research and practice in the field of addiction will be greatly improved thanks to this set. The lives of those who either struggle with addiction or live with those who do will ultimately be improved thanks in part to this critical series. I am grateful to Dr. Browne-Miller and her assembled contributors for providing us all with such important and high-quality volumes that are now available to the public and professional communities. If only one life is saved or improved thanks to this set, it will be a great success in my view; yet I expect that many lives will ultimately be saved or greatly improved thanks to *The Praeger International Collection on Addictions*.

Thomas G. Plante, PhD, ABPP
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Preface

Angela Browne-Miller, PhD, DSW, MPH

Welcome to *The Praeger International Collection on Addictions*, addressing the insidious, pervasive, worldwide problem of human addiction. Addiction is clearly a global issue, touching every population, every nation, and every age group, people from all walks of life everywhere, directly or indirectly. Indeed, we are talking about an affliction of epic and epidemic proportions. We cannot look away. This is the health of the human species we are talking about.

The World Health Organization (WHO, 2008, p. 1) reports that “psychoactive substance use poses a significant threat to the health, social and economic fabric of families, communities and nations. The extent of worldwide psychoactive substance use is estimated at 2 billion alcohol users, 1.3 billion smokers and 185 million drug users” (p. 1). The WHO has estimated there to be at least 76.3 million persons with alcohol use disorders worldwide, and at least 15.3 million persons with drug use disorders worldwide. Alcohol use and abuse as well as the use and abuse of other psychoactive substances contributes to substantial individual and public health costs. Alcohol is but one substance playing a major role in this global addiction epidemic, but clearly there are many others, despite efforts to prevent new addictions and addicts, and to contain world drug markets (UN, 2008, p. 7).

For example, cocaine shares the stage with other abused drugs. Its prevalence is estimated to be up to 3 percent of the population in developing countries, with severe medical, psychological, social, and economic consequences including, but not limited to, the spread of infectious diseases (e.g., AIDS, hepatitis, and tuberculosis), plus crime, violence, and neonatal drug exposure.

Amphetamine-type stimulant (ATP) abuse is more widespread than cocaine abuse in at least 20 countries. Methamphetamine is presumed to lead in ATP addiction rates, with massive meth epidemics affecting several whole countries and entire regions of others. Social and public health costs of methamphetamine production and use via smoking, sniffing, inhaling, and injecting are staggering and growing in many regions. Additionally, there has been a global increase in the production, transportation, and use of opioids, especially heroin, with worldwide heroin production doubling or even tripling since the mid-1980s. Global estimates are that 13.5 million persons consume opioids, with 9.5 million of these being heroin users who face health risks including hepatitis, HIV, and death. And cocaine, meth, and heroin are just one piece of the picture.

The hotly debated drug cannabis—or the *Cannabis* family of drugs with the euphoric tetrahydrocannabinols, or THC_s, including marijuana and hashish preparations—is said to be the most widely abused drug. Research is now suggesting the risk for acute health effects of long-term, chronic cannabis use, including potential impairment of cognitive development, learning, memory, recall, attention, and coordination. (Certainly the presence and extent of long-term effects of casual, of regular and of chronic use are as yet not entirely ascertained.) Both casual use of marijuana and medical use of forms of what is termed medical marijuana (e.g., dronabinol sold as Marinol, the cannabidiols, or CBD_s) are subsets of all forms of cannabis use. There are legitimate therapeutic uses of this substance, and these uses make it all the more difficult to regulate marijuana drugs fairly and effectively.

We have here, and in the use of any psychoactive medication for therapeutic purposes, a gray area in which illicit and licit use overlap and can confuse many adult and youth consumers, researchers, and policy makers, among others. In the emergence (or reemergence in history, some will argue) of cannabis as medicine, we have a model for asking which, if any, abused substances may, and perhaps should, be repurposed for medicinal or treatment purposes, and how this is best done against the backdrop of the global addiction epidemic.

Regarding marijuana, we are confronted with the age-at-first-use issue, which suggests that early onset of regular cannabis use may affect not only the academic and social performance of children and teens, but also their future susceptibility to addictions. It was in the 1960s that the hotly debated label “gateway drug” was applied to marijuana, perhaps to scare off its use, and only in the decades since have we understood better what this might actually mean to us. It may not be that marijuana provides the training wheels for drug addiction, but rather that it may serve as an indicator of future use of the same or other drugs. Of course, today, with so many young people having access, and taking advantage of their access, to the whole range of psychoactive substances,

the question of which drug might be a gateway to which other drug dissolves into the fury of the countless addiction conundrums of our constantly changing times.

There is always a new, or rediscovery of an old, addiction on the horizon. There is also always a new (or rediscovered) psychoactive substance for exploratory, research, and perhaps even treatment purposes emerging (or re-emerging). Labeling all of these substances as addictive right out the gate may or may not serve science or even humanity itself. How can we be certain the approach we take will be a constructive one? With new legal (where licensed for development and experimentation) and illegal (where not being utilized under protection of law) so-called designer drugs emerging at a staggering rate, we must admit that we cannot know what is coming, nor whether the new compound will be addictive, or popular, or of medicinal value, or even accessible. We can only imagine what the brave new world of chemistry will continue to bring and whether any benefits can be made available without accompanying risks and detriments.

Moreover, the desire to explore and achieve various altered states of consciousness in religious, spiritual, ritual, and perhaps even treatment settings, is unfolding into debates about rights (Browne-Miller, 1989, pp. 258–260). When there is no demonstrated risk to self or others, we have to ask ourselves whether this right should be protected, especially in circumstances of traditional uses for religious purposes. Again, this dilemma arises against the backdrop of the global and runaway epidemic of substance addiction. How do we balance pressures from opposite directions (freedom protecting the right to use versus control to stop injury and costs of using), when these pressures are not balancing themselves?

Also against the backdrop of global addiction levels, is the massive level of addiction to legal drugs, many of which are heavily marketed to consumers. The legal drug tobacco is said to be the substance causing the most damage globally, with at least one-third of the global population smoking. While smoking rates may be dropping in some countries, the reverse is true globally. As just one of its effects, smoking accounts for some 90 percent of all lung cancer in men and 70 percent of all lung cancer in women. And yet tobacco use is overwhelmingly viewed as being “the single most avoidable cause of disease, disability and death” in the United States (CDC, 2008, p. 2).

And perhaps nothing here has touched so many lives as the regularly consumed, legal drug caffeine, perhaps because coffee drinking is considered so very normal and acceptable, even necessary, in everyday life. However, we must ask whether there is a level of caffeine use that is abuse—or perhaps self-abuse. Surely we do not want to throw caffeine use onto this list of substance abuses

and addictions. Still, a collection on addiction would not be complete without at least touching on this matter, and therefore we do address caffeine herein.

And then there are also the addictions to prescription drugs (such as Vicodin, Percocet, OxyContin, and Darvon), which we find increasing rapidly and already a worldwide phenomenon, with the most commonly abused prescription drugs being opiates. The U.S. National Institute of Mental Health characterizes prescription drug addiction as the second most common illegal use of drugs in the United States, second only to marijuana.

We must also note that unusual, virtually invisible psychoactive substances are working their way into our everyday lives. Household and workplace products contain many volatile substances, exposure to which can be not only damaging, but also intoxicating, and perhaps addicting. Although this domain of substance use and abuse is not specifically addressed herein, we must acknowledge the severe and perhaps largely unmeasured effects of this domain of even routine, legal substance use as well as unintentional and intentional abuse.

So as not to exclude nonsubstance addictions in this overview of addiction today, the fourth volume in this collection on addiction reminds us that work, television, shopping, food (with its particularly difficult-to-call-addiction nature), intimate partner relationship, gambling, Internet, and even pornography addictions make their marks in our lives, either indirectly or directly. These behavioral, nondrug addictions, which occur alone and co-occur with each other, also do co-occur with substance uses, abuses, and addictions. Every human being is in some way affected by the prevalence of behavioral addictions, either directly or indirectly. The study of behavioral addictions teaches us a great deal about addiction itself.

All this suggests the picture of an addiction-prone and largely chemically dependent human species. And this is just the tip of the iceberg. With this truly incomplete laundry list of human fallibilities—or better stated, perhaps, human *vulnerabilities*—this four-volume collection on addiction is truly that: a collection of perspectives, approaches, and findings. Each chapter is a snapshot of the work and thinking taking place in many fields of addiction. Contributors to this collection work with addiction on the various social, philosophical, psychological, spiritual, policy, political, economic, biological, and even cellular levels, all places where this thing we call “addiction” lives. Certainly this collection would have to comprise hundreds of volumes, rather than the four that it does, to address addiction in all its iterations.

Here we give voice to a diverse cross section of perspectives on addiction. This is in no way an exhaustive cross section (of either perspectives or addictions); rather, this collection suggests the diversity of perspectives, theories, practices, and types of addiction in the field—or better stated, *fields*—of addiction. The four volumes of this collection represent the voices of those who have

graciously and even bravely stepped forward from their numerous countries and arenas of work to contribute their ideas, research, and experiences. Certainly there are many others out there, many other aspects of addiction, and many other drugs and objects of addiction not addressed in these volumes.

This work is divided into four volumes, with the first three addressing addictions to substances and the fourth addressing behaviors that show characteristics of addiction. Volume 1, *Faces of Addiction, Then and Now*, offers a sampling of the depth and breadth of addiction today and in the past; volume 2, *Psychobiological Profiles*, surveys some of the interlinked psychological and biological aspects of addiction; volume 3, *Characteristics and Treatment Perspectives*, samples the range of addiction treatment perspectives and approaches; and volume 4, *Behavioral Addictions from Concept to Compulsion*, gives the reader a glimpse of behavioral addictions other than substance addictions.

Readers will observe that the content of these volumes is indeed diverse and in no way represents any one view or theory of addiction. There are many other voices out there who must also be heard, and only in the interest of time and space are we stopping here, at these volumes. The content of these volumes in no way expresses the opinion of this editor, nor of this publisher, regarding what is right, best proven, or even most en vogue in the addiction world; rather, this *International Collection on Addictions* seeks a display of, a sampling of, the diversity of effort to quell the detrimental effects of addiction on individuals, families, communities, societies, economies, and international relations; on ecologies; and in fact, on the human population of planet Earth.

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Introduction to Volume 4: Behavioral Addictions from Concept to Compulsion

Angela Browne-Miller, PhD, DSW, MPH

This is volume 4, *Behavioral Addictions from Concept to Compulsion*, of *The Praeger International Collection on Addictions*, where we see among the many faces of addiction the nonsubstance addictions. Here we move into the tangled territory of evolving and expanding definition. We can ask whether nondrug addictions are actually addictions. If so, why? If not, why not? We can argue all sides of this matter. Yet, where there is continued engagement, excessive engagement, in the face of harm to self or others, in an activity generating temporary and too often lasting shifts, changes, adaptations, even damages—on social, psychological, biological, even biochemical levels—we encounter *addiction-like* behavior that, for all intents and purposes, is indeed addiction. Certainly we may label these as *nonsubstance* addictions, yet we are in so many ways talking about drug-like effects where there is *excessive engagement* in working, television viewing, shopping, intimate partner abusing, food consuming, as well as in pornography, Internet, and gaming and gambling activities. As our contributors will show, engagement in these activities to excess shows symptoms of addiction such as trigger-response, urge-craving, reinforcement, tolerance, and withdrawal.

Part I, “Compulsions,” opens with a penetrating look at something to which we may all be vulnerable, that is, work addiction. Ronald J. Burke, PhD, of the Schulich School of Business, York University, in Toronto, Ontario, Canada, contributes chapter 1, “Work Addiction: Causes, Consequences, and Choices.” Working hard and working long hours are highly respected activities signifying (at least to onlookers) dedication and commitment. Yet, working hard—

excessive working—may be an addiction to working or workaholism. While employers may even reward workaholism, workaholics may or may not be productive. Symptoms of workaholism have been seen as parallel to those of other addictions, with workaholics often being unhappy, obsessed, exhibiting a reluctance to disengage from work (e.g., a tendency to work, to think about work, and to talk about work far more than others do), with willingness to work anytime and anywhere, to choose work over leisure, to lose sight of boundaries between work and the rest of life. Burke reviews definitions of workaholism, the term itself first being used in 1971, when a workaholic was defined as “a person whose need for work has become so excessive that it creates noticeable disturbance or interference with his bodily health, personal happiness, and interpersonal relationships, and with his smooth social functioning.” The workaholic gradually becomes “emotionally crippled and addicted” as this “progressive, potentially fatal disorder” consumes him or her. Burke encourages employers to assist in the development of workplace values and to promote healthy lifestyles among employees, which will support the “workaholism types” in addressing their addiction. However, intervention in a workaholic pattern may be quite challenging because “work addicts almost always are in denial.” We might add that their employers may be as well.

Chapter 2, “Addiction to Television: With Commentary on Dependence on Video Games and the Internet,” by Robert W. Kubey, PhD, of the Center For Media Studies at Rutgers University in New Brunswick, New Jersey, United States, adds another face to behavioral addiction. Kubey notes that “The time people spend viewing is nearly astonishing. People throughout the industrialized world, from the United States and Latin America to Europe and parts of Asia, the Middle East, and Africa, typically devote about three hours a day to watching television. In many societies, this easily constitutes half of all a person’s leisure time or, calculated another way, 9 full years of a 75-year lifespan.” Kubey adds that “the three hour figure *is* an average. . . . ‘addicted’ or so-called ‘heavy viewers’ . . . might watch five or six hours a day . . . about 30% to perhaps 38% of their waking time watching TV, or as many as 20 years of the 50 years they will be awake if they live to 75.” That television viewing can indeed be self-perpetuating, and can indeed produce a dependency, is of grave concern. Addiction to television can produce effects such as aggression, obesity, poorer academic performance, and impaired imagination. Kubey does not decry all television viewing, as there are significant cultural, educational, and entertaining programs. “Television also surely provides much needed distraction and escape. Still, “viewing begets more viewing” and “one must generally keep watching in order to keep feeling relaxed.” Note that where television is used for relaxation,

the “quick onset of relaxation is particularly telling when compared to that produced by certain drugs that are known to be habit forming or ‘addictive.’”

Chapter 3, “Excessive Buying as a Genuine Addictive Behavior” by Paul Rose, PhD, and Dan J. Segrist, PhD, of Southern Illinois University, Edwardsville, Illinois, United States, turns to “hyperconsumption.” Here the case for “classifying excessive buying as a genuine behavioral addiction” is presented. The benefit of such a classification is a better understanding of, and therefore treatment of, this condition as an addiction. Rose and Segrist define excessive buying through a review of the literatures on compulsive, impulsive, and nonfrugal purchasing. Only in the past few decades has research begun to establish a demographic of this worldwide problem—shopping addiction. Excessive buyers are more likely to experience feelings of depression after shopping, rather than pleasure after a new purchase. The emotional pathway is mapped something like this: the individual may be driven to shop for any of a variety of reasons, then shop excessively, and then feel out of control, then afterward experience guilt and shame, negative self-views, and depression. Shopping exposes the excessive buyer to numerous mental health problems. The sensation of “diminished impulse control” is seen as parallel to that found in other addictions. Preceding excessive buying is any number of states of mind including low self-esteem and narcissism—likely serving as classical triggers.

Offering another look at compulsive buying, we shift in chapter 4 to perspectives from another part of the globe, exemplifying the universality of the conditions we read about in this collection on addictions. “Compulsive Buying Disorder” is contributed by Mamta Sood, MD, and Meera Vaswani, PhD, both of the All India Institute of Medical Sciences in New Delhi, Delhi, India. Sood and Vaswani accept that buying is a “universal, everyday human experience and has been practiced since ancient times.” As we have progressed through history, our awareness of, and labeling of, a buying disorder—the *compulsive* buying disorder—have emerged. As long ago as the early twentieth century, terms such as *oniomania* (for sale—mania) have focused on impulsiveness in shopping. Compulsive buying has been conceptualized as various disorders including impulse, obsessive-compulsive, mood, and substance abuse disorders. Sood and Vaswani describe the “increasing sense of arousal or tension prior to the act and an experience of pleasure, gratification, or release of tension at the time of committing the act.” Sood and Vaswani also note that, while they find no formal guidelines being emphasized, there are psychotherapeutic, pharmacological, and other treatments available. Long-term outcome studies and the establishment of the reliability and validity of diagnostic criteria are called for.

At this point, we pause to consider which of the compulsive and addictive behaviors are indeed criminal and which of these are mistaken for criminal behaviors. To this end, chapter 5, “Association with Criminality of Habit and Impulse-Control Disorders,” is contributed by Ian H. Treasaden, MB, LRCP, MRCS, FRCPsych, LLM, of the Three Bridges Medium Secure Unit, West London Mental Health NHS Trust, Middlesex, England, and Basant K. Puri, MA, PhD, MB, MRCPsych, MMath, of the Medical Research Council (MRC) Clinical Sciences Centre, Hammersmith Hospital and Imperial College, London, England. Treasaden and Puri emphasize that “Impulse-control disorders are a disparate group of conditions with different characteristics and epidemiologies.” The authors establish the parameters of the debate, or better stated, perhaps, of the confusion, surrounding impulse control disorders: “whether the urges and impulses and resulting criminality are irresistible is open to question. Perhaps no impulse is irresistible, if an individual is motivated to try hard enough to resist.” If an impulse is generally controlled and then not controlled in an instance of “momentary excitement,” or heightened stimulation (triggering), the question may be as follows: is this a “disordered function” or merely an “irresistible impulse?” Treasaden and Puri note that the psychopathologies of the many conditions included in habit and impulse-control disorders are not identical. “Pathological gambling is a more complex condition, requiring attention to the whole person, than an impulse-control disorder such as tricotillomania. A pathological gambler shows features akin to substance addiction, with characteristic histories of escalation from use, abuse, and then addiction with tolerance and withdrawal symptoms, with gambling becoming the center of a sufferer’s life, unlike . . . pyromania or tricotillomania.”

Surely at this point numerous other detrimental habitual behaviors come to mind. The next chapter, chapter 6, “Troubled IPR Addiction: Habitual Attraction, Abuse, and Violence in Intimate Partner Relationships,” which I, Angela Browne-Miller, PhD, DSW, MPH, contribute here, addresses an addiction-like behavior that may be seen for political, philosophical, and perhaps even emotional reasons as being in the “gray zone” of unproven and debated addictions. The existence of some degree of intimate partner relationship (what I call IPR) addiction is virtually a given, in that even emotional and sexual attractions can, and do, in their extremes bear habitual, even compulsive and disturbingly addictive, components. After all, if excessive working, television viewing, and shopping can be described as addictions or addiction-like behaviors, we must look at other excesses in which large portions of our species might engage. These might be emotional, sexual, or otherwise violent, cruel, or excessive extremes. Most troubling perhaps is the reality that interpersonal violence, when between two intimate partners, may exhibit addiction-like

characteristics. As I note in chapter 6, “In fact, the intimate partner relationship (IPR) itself—or its dynamics—can become habitual, can under certain circumstances turn not only sour but detrimental to one or both partners, the family around them including child witnesses, the surrounding community including the workplace, and beyond to the economy, in the form of not only lost productivity and lost work days but also ongoing . . . mental and physical health care costs. And, at its extreme, one possible outcome of a troubled IPR is that of intimate partner violence (IPV), which can be quite dangerous, even lethal.” That the various emotional and physical abuses and violences found under the umbrella of intimate partner violence can be addictive is perhaps obvious and at the same time controversial. I emphasize that this is in no way what is called a “blame the victim” approach to intimate partner violence. Still, we are best able to assist persons (persons being abused and persons doing the abusing) at risk for being caught in, or stuck in, or returning to, detrimental and even dangerous patterns when we can tell it like it is: these are patterns that one might be at risk of “getting hooked on.” Add in any form of co-occurring addiction (such as substance abuse), and both IPR and IPV addiction can be magnified exponentially.

Part II, “Eating as a Special Issue,” is set apart from the other chapters in this volume, as eating “disorders,” “compulsions,” and “habits” are so variable in etiology and in interpretation when it comes to “addiction” itself. For what is and is not a medical and or psychological condition, while often the central question in the fields of addictions, is key to deciphering eating extremes, whatever these may be. Thus, we have chapter 7, “Craving Pizza? This Is Your Brain on Drugs: Eating Disorders as Addiction,” written by Amanda Ruiz, MD, of the University of San Francisco, San Francisco, California, United States; Hugo Barrera, MD, and Norman Jackson, MS, both of the Center for Criminality and Addiction Research, Training and Application (CCARTA) in San Diego, California, United States. Ruiz, Barrera, and Jackson look at the areas of the brain that are “involved in this addictive process,” to better establish eating disorders as addictions. Opening with a review of the various types of eating disorders, the authors demonstrate that “Multiple similarities exist between the neurotransmitters that regulate eating disorders and addiction.” Eating disorders are bio-psycho-social conditions. Where the genetic explanation with regard to the human obesity gene appears to account for some 20 percent of variation in the basal metabolic index (BMI) in young women (for example), this may leave 80 percent not explained by this gene.

We then turn to what Cynthia Kalodner, PhD, at Towson University in Baltimore, Maryland, United States, has to say on this matter of eating disorders and addictions in chapter 8, “Eating Disorders and Disturbances: The

Continuum of Eating Disturbances.” Kalodner discusses eating “disturbances” as a *continuum of eating behavior*, with normal eating at one end, eating disturbances in the middle, and eating disorders at the far end. Dieting, binge eating, and forms of purging can occur in the middle of this continuum and of course at the disorder end. Certainly, not every behavior taking place along this continuum is habitual, compulsive, or addictive; and Kalodner does not make the case that any or all of these are. Yet, within the context of the chapters in this and the other volumes of this collection on addiction, we cannot help but see that there are parallel patterns.

From here, we move into Part III of this volume, “Pornography, Internet, Gaming, and Gambling,” which opens with chapter 9, “Addiction to Pornography and Its Psychological and Behavioral Implications,” contributed by Robert Kubey, PhD, who, as noted earlier, is at the Center for Media Studies, Rutgers University, New Brunswick, New Jersey, United States. Pornography is, Kubey tells us, a phenomenon often said to be addictive, both in its print media forms and in its video and newer “interactive erotic” forms. Pornography is virtually all around us and is worldwide. Adults and children everywhere are exposed to pornography either directly or indirectly. Certainly, not all uses of pornography are excessive. However, sexual media can be addicting; they can be used excessively and in the face of harm to self or others. Yet, the “harm” quotient is perhaps most hotly debated. Note that when pornography addiction co-occurs with Internet addiction, the harm can be magnified exponentially.

Chapter 10, “Assessment and Treatment of Internet Addiction,” is contributed by Kimberly S. Young, PhD, of St. Bonaventure University’s Center for Internet Addiction Recovery, in St. Bonaventure, New York, United States. Young delineates the troubled category of Internet addiction: “In contrast to chemical dependency, the Internet offers several direct benefits as a technological advancement in our society . . .” The Internet differs from chemical dependence as “chemical dependence is not an integral part of our professional lives, nor does it offer any direct benefit.” The tug of war over the true meaning of addiction surfaces again here: “many researchers argue that the term *addiction* should be applied only to cases involving the ingestion of a drug.” However, “pathological Internet use” is continued use in the face of harm. It can cause addicts to hurt or lose significant real-life relationships, to feel worthless and unlovable; plus it can occur with depression, obsessive-compulsion, and likely even substance abuse. Cyberpsychology has its work cut out for it.

Next we move to chapter 11, “Gambling Addictions,” by Mark Griffiths, PhD, of the International Gaming Research Unit, Nottingham Trent University, Nottingham, England. Griffiths tells us that “the majority of people have gambled at some time in their life” and that “The introduction of national lotteries

and new casinos, the proliferation of electronic gaming machines, and the introduction of remote gambling (e.g., Internet gambling, mobile phone gambling, interactive television gambling), has greatly increased the accessibility and popularity of gambling all over the world." And certainly impulses to gamble are up as a result of growing opportunities to gamble. Gambling behavior and "maladaptive gambling" are complex, "a multifaceted rather than a unitary phenomenon." Excessive gambling is harmful to self or others. These symptoms manifest (in some mix) as follows: being chronically and progressively unable to resist impulses (to gamble); compromising and disrupting one's life and the lives of those around one to support gambling; being arrested for any number of crimes including forgery and fraud to obtain money for gambling; disrupting family and significant other relationships due to gambling; borrowing money from illegal sources; and more.

Adding to this investigation of gambling and Internet addictions, is chapter 12, "Youth Gambling Problems: An International Perspective," by Isabelle D. Lussier, MA, Jeffrey L. Derevensky, PhD, and Rina Gupta, PhD, all at the International Centre for Youth Gambling Problems and High-Risk Behaviors, McGill University, Montreal, Quebec, Canada. "Recent reviews suggest that upwards of two-thirds of underage North American youth have gambled in regulated and licensed gambling venues . . . with adolescents having been reported to have pathological gambling prevalence rates two to four times those of adults." The problem of gambling too often begins in the latency age. Moreover, "excessive gambling among adolescents has been shown to be positively correlated with participation in increased delinquency and criminal behaviors, substance use, and antisocial behaviors. The serious nature of gambling problems is especially disconcerting considering that gambling is perceived to be a highly socially acceptable activity among adults and adolescents, with little recognition of the inherent risks."

The four volumes of this *Praeger International Collection on Addictions* has looked at the many faces of addiction. The authors have considered addiction as a moral problem, a social problem, a medical problem—akin to an allergy, a brain disease, and more. We have also discussed the marketing of alcohol and other drugs as an example of great business interest in addicting consumers. Here, in this part of volume 4, we are looking at addiction not only as a business but as a huge *industry*—the gambling industry. Gambling is so internationally pervasive that we have dedicated a significant portion of this volume to it. The above chapter is therefore followed by three chapters, providing examples of the global gambling invasion, written by Richard A. McGowan, MA, MDiv, ThM, DBA, associate professor at the Carroll School of Management at Boston College and Research Associate at Harvard Medical, Division on Addictions in

Boston, Massachusetts, United States. These chapters, as discussed below, are chapter 13, "Macau: China's Entry into the World Of Gambling;" chapter 14, "Native American Gambling: Economic Development or Dependence?" and chapter 15, "The Current Climate of Gambling in the United States."

In chapter 13, McGowan reports on what we will call the "addiction industry" in Macau. Gambling is not a new phenomenon, as it can be traced back at least hundreds of years, if not as far back as recorded history. Virtually no nation remains untouched. "Recently, Macau has been dubbed the 'Monte Carlo of the Orient.' This nickname is becoming well deserved." With the marked growth in the Macau gambling industry, the economy affected by it is booming. "This increase in casinos and hotels has resulted in a similarly strong increase in visitors to the island. In 2005, Macau welcomed 10.5 million visitors from China, 2.5 times as many as it had seen in 2002. Chinese visitors accounted for 56 percent of all visitors in 2005, up from 37 percent in the same time frame. . . . [At the same time], local authorities have been citing a sharp increase in casino-related crimes, such as money laundering. . . . Many companies are vying for a strong foothold in Macau, and some have a set strategy already."

In chapter 14, McGowan then turns to what we are calling the "addiction industry" in "Native America": "Tribal gaming is a \$19.6 billion per year industry, and it is getting larger. . . . The number of tribes with gaming facilities grew about 3 percent in 2004 (from 221 to 228), and the number of Indian gaming facilities saw growth at about 5 percent in 2004 (from 385 to 405). Although they are highly correlated with the development of new gaming facilities, the numbers of gaming tables and gaming machines have seen tremendous growth as well. . . . Therefore, in coming years, we can only hope that the size and power of the Indian gaming industry influences public and private parties to engage in further studies of the effects that Indian gaming has had on the Native American population as well as the American population at large."

And third, in chapter 15, McGowan discusses this "addiction industry" in the United States: "A look at how gambling revenues stack up against revenues from other recreational/leisure time activity sectors reveals not only that the gambling revenues outweigh both music sales and movies combined, but also that the gambling industry is the only one of the industries in this study to have shown consistent growth in each of the last three years." Moreover, "The rise of Internet gambling has been the primary driver of the intensifying levels of competition within the industry. No longer is consumers' ability to place wagers limited by their geographic proximity to gambling operators. . . . Internet gambling operators can serve a truly global customer base, and with the financial barriers to entry relatively low in comparison with the huge profits

being reaped through Internet gambling, new entrants can enter at will and attempt to compete with the market leaders.”

From McGowan’s overview of this addiction-based industry, we move to chapter 16, contributed by Kimberly S. Young, PhD, as noted earlier of the Center for Internet Addiction Recovery, St. Bonaventure University in St. Bonaventure, New York, United States. Young discusses “Online Gaming Addiction: Symptoms, Risk Factors, and Treatment.” Note the ongoing use of the broader term, “gaming,” which can include gambling but is not limited to gambling. Young presents her definition for purposes of her chapter: “Online gaming addiction is an addiction to online video games, role-playing games, or any interactive gaming environment available through the Internet. Online games such EverQuest, the Dark Age of Camelot, or Diablo II—dubbed ‘hero-inware’ by some players—can pose much more complex problems. Extensive chat features give such games a social aspect missing from offline activities, and the collaborative/competitive nature of working with or against other players can make these games a hard habit to break.” Interactive gaming addiction, like so many of the other global addictions, is pervasive. Its consequences are increasingly apparent. Interactive gaming can lead to divorce, job loss, and health problems. Not yet as prevalent as addictions to cyberporn and online chatting, interactive online gaming is already reaching millions of users. “Globally, recent reports have indicated that interactive online gaming has reached addictive proportions in China, Korea, and Taiwan. About 10 percent of China’s more than 30 million Internet gamers are said to be addicted.” The global picture is bleak; however, efforts are being made to stem the tide. “To battle what has been called an epidemic in some reports, Chinese authorities regularly shut down Internet cafes, many illegally operated, in crackdowns that also include huge fines for their operators. The Chinese Government . . . in 2005 opened the first treatment center for Internet addiction in Beijing. Online gaming addiction continues to raise such serious concerns that the first detox center for video game addiction has opened in Amsterdam, and . . . the American Medical Association, at its annual policy meeting, has considered calling video game overuse an addiction.”

We complete this volume with chapter 17, “Youth Gambling Prevention and Resilience Education: A Harm Reduction Approach,” by Isabelle D. Lussier, MA, Jeffrey L. Derevensky, PhD, and Rina Gupta, PhD, all of the International Centre for Youth Gambling Problems and High-Risk Behaviors, McGill University, Montreal, Quebec, Canada. Lussier, Derevensky, and Gupta remind us that “Gambling, in its many forms, has permeated every society and culture all the way back to ancient times. While gambling has been a source of entertainment for countless people, a minority of people exhibit compulsive

gambling behaviors that lead to personal harm and suffering.” Young people are reported to be at greatest risk from gambling behavior and addiction. Programs and initiatives seeking to quell this mounting predicament recognize the “significant overlap in risk and protective factors for youth with respect to problem gambling and other problem behaviors.” This “has led to the creation of prevention initiatives that target multiple risk behaviors.” The authors call for “resilience research regarding youth gambling behaviors,” as “resiliency skills have long been incorporated into prevention programs for a wide variety of risky behaviors.” However, the authors note, “resilience researchers have become increasingly cautious in using the term resilience, opting instead for more specific terms such as *educational resilience*, *emotional resilience*, and *behavioral resilience*.”

We hear the hope in the work of these authors and the other contributors to the four volumes in this *International Collection on Addictions*. It is in their work, their solutions, and the work and solutions of their colleagues around the world, that we can envision an ever more, rather than an ever less, resilient human species, one that faces, understands, and overcomes detrimental addictions of all forms everywhere. In the face of daunting addictions data from around the globe, this may seem an impossible dream. However, with the talent and vision of the cadre of persons fighting this war on addictions internationally, the paths to healing and cures for people everywhere can become realities.

Part I

COMPULSIONS

Work Addiction: Causes, Consequences, and Choices

Ronald J. Burke, PhD

Workaholism and long working hours have positive connotations such as dedication, commitment, and organizational citizenship behavior as well as negative connotations such as ill health and damaged family relationships (Killinger, 1991). The number of hours worked per week, while obviously an element of workaholism, does not capture one's degree of work involvement, psychological state, or attitude. Hours worked per week, however, are a behavioral manifestation of workaholism (Ng, Sorensen, & Feldman, 2007). Although the popular press has paid considerable attention to workaholism, very little research has been undertaken to further our understanding of it (McMillan, O'Driscoll, & Burke, 2003). It should come as no surprise, then, that opinions, observations, and conclusions about workaholism are both varied and conflicting (McMillan, O'Driscoll, Marsh, & Brady 2001). Some writers view workaholism positively from an organizational perspective. Machlowitz (1980) conducted a qualitative interview study of 100 workaholics and found them to be very satisfied and productive. Others view workaholism negatively (Fassel, 1990; Killinger, 1991; Oates, 1971). These writers equate workaholism with other addictions and depict workaholics as unhappy, obsessive, tragic figures who are not performing their jobs well and are creating difficulties for their co-workers (Porter, 1996). The former would advocate the encouragement of workaholism; the latter would discourage it.

McMillan and O'Driscoll (2006) see workaholism as a value system regarding the importance of working and achieving that typically does not meet the scientific criteria for addiction. They propose an integrated model of workaholism that includes antecedents, behaviors, and consequences. Antecedents

include a reluctance to disengage from work, an obsessive style, and a strong enjoyment of work, driven by internal positive reasons. Behaviors include working more than others, thinking about work more than others, talking about work more than others, and stability in these areas over time. Consequences include working anytime and anywhere, choosing work/chores over leisure, and unclear work/relationship boundaries. Workaholism, to McMillan and O'Driscoll may in fact represent an approach to work (with intensity) rather than a frequency captured only by hours.

DEFINITIONS OF WORKAHOLISM

Oates (1971), generally acknowledged as the first person to use the word *workaholic*, defined a workaholic as “a person whose need for work has become so excessive that it creates noticeable disturbance or interference with his bodily health, personal happiness, and interpersonal relationships, and with his smooth social functioning” (Oates, 1971, p. 4). Killinger (1991, p. 61) defines a workaholic as “a person who gradually becomes emotionally crippled and addicted to control and power in a compulsive drive to gain approval and success.” Robinson (1998, p. 81) defines workaholism “as a progressive, potentially fatal disorder, characterized by self imposed demands, compulsive overworking, [and an] inability to regulate work to the exclusion of most other life activities.” Porter (1996, p. 70) defines workaholism as “an excessive involvement with work evidenced by neglect in other areas of life and based on internal motives of behavior maintenance rather than requirements of the job or organization.” Most writers use the terms *excessive work*, *workaholism*, and *work addiction* interchangeably.

Spence and Robbins (1992, p. 162) define the workaholic as a person who “is highly work involved, feels compelled or driven to work because of inner pressures, and is low in enjoyment at work.” Most writers view workaholism as a stable individual characteristic (Scott, Moore, & Miceli, 1997; Spence & Robbins, 1992). Most definitions of workaholism portray it in negative terms.

TYPES OF WORKAHOLICS

Some researchers have proposed the existence of different types of workaholic behavior patterns, each having potentially different antecedents and associations with job performance, work outcomes, and life outcomes (Burke, 1999b; Naughton 1987; Scott et al., 1997; Spence & Robbins, 1992). The existence of different types of workaholics might reconcile conflicting views as to whether workaholics are productive and satisfied or tragic and unfulfilled.

Scott et al. (1997) suggest three types of workaholic behavior patterns: compulsive-dependent, perfectionist, and achievement oriented. They hypothesize that compulsive-dependent workaholism will be positively related to job performance and job and life satisfaction. Perfectionist workaholism will be positively related to levels of stress, physical and psychological problems, hostile interpersonal relationships, low job satisfaction and performance, and voluntary turnover and absenteeism. Finally, achievement-oriented workaholism will be positively related to physical and psychological health, job and life satisfaction, job performance, low voluntary turnover, and pro-social behaviors.

Spence and Robbins (1992) propose three workaholic patterns based on their workaholic triad notion. The workaholic triad consists of three concepts: work involvement, feeling driven to work because of inner pressures, and work enjoyment. Data were collected in Spence and Robbins's study from 368 social workers holding academic appointments. Profile analysis resulted in the same six profiles for women and men—three workaholic types and three nonworkaholic types. These profiles were as follows. Work addicts (WAs) score high on work involvement, high on feeling driven to work, and low on work enjoyment. Work enthusiasts (WEs) score high on work involvement, low on feeling driven to work, and high on work enjoyment. Enthusiastic addicts (EAs) score high on all three workaholism components. Unengaged workers (UWs) score low on all three workaholism components. Relaxed workers (RWs) score low on feeling driven to work and work involvement and high on work enjoyment. Disenchanted workers (DWs) score high on feeling driven to work and low on work involvement and work enjoyment.

RESEARCH FINDINGS

The following sections of this chapter will review research findings that compare the personal demographics, job behaviors, work outcomes, extrawork outcomes, and psychological health of the three types of workaholics proposed by Spence and Robbins (1992).

Personal Demographic and Work Situational Characteristics

A critical question involves potential differences between the three workaholism types on both personal demographic and work situation characteristics including hours worked per week. If the workaholism types were found to differ on these (e.g., organizational level, marital status, hours worked per week), these differences would account for any differences found in work and health outcomes.

A number of studies (Bonebright, Clay, & Ankenmann, 2000; Burke, 1999d; Burke, Burgess, & Oberklaid, 2002; Spence & Robbins, 1992) have reported essentially no differences between the three workaholism types on a variety of personal and work situation characteristics. The workaholism types work the same number of hours and extra hours per week; the workaholism types work significantly more hours per week and more extra hours per week than the nonworkaholism types.

Job Behaviors

There has been considerable speculation regarding the work behaviors likely to be exhibited by workaholics (see Mudrack, 2007). This list includes hours worked per week, extra hours worked per week, job involvement, job stress, nondelegation of job responsibilities to others, high (or low) levels of job performance, and high levels of interpersonal conflict and lack of trust. There is empirical research that examines some of these hypothesized relationships.

Burke (1999d) considered these relationships in a large sample of Canadian MBA graduates. Comparisons of the three workaholism types on a number of behavioral manifestations provided considerable support for the hypothesized relationships. First, there were no differences between WAs, EAs, and WEs on hours worked per week or extra hours worked per week; workaholism types worked significantly more hours and extra hours per week than did the three nonworkaholism types. Second, EAs devoted more time to their jobs in a psychological sense than did both WEs and WAs. Third, WAs reported greater job stress than did EAs, both reporting greater job stress than did WEs. Fourth, both EAs and WEs reported greater job involvement than did WAs. Fifth, WAs exhibited greater inability and unwillingness to delegate than both WEs and EAs. Sixth, EAs were more perfectionistic than were WEs.

Spence and Robbins (1992) found that WAs reported higher levels of job stress, perfectionism, and unwillingness to delegate job duties to others than did WEs. Kanai, Wakabayashi, and Fling (1996), using the Spence and Robbins measures, reported that WAs and EAs scored higher than WEs on measures of job stress, perfectionism, nondelegation, and time committed to job.

In summary, WAs reported higher levels of work stress, more perfectionism, and greater unwillingness or difficulty in delegating than one or both of the other workaholism types.

ANTECEDENTS OF WORKAHOLISM

Four potential antecedents of workaholism have received some conceptual and research attention. Three of these, family of origin, Type A behavior, and

personal beliefs and fears, are the result of socialization practices within families and society at large. The fourth, organizational support for work–personal life imbalance, represents organizational values and priorities.

Family of origin. Robinson (1998) has written about work addiction as a symptom of a diseased family system. Work addiction, like other addictive behaviors, is intergenerational and passed on to future generations through family processes and dynamics. In this view, work addiction is seen as a learned addictive response to a dysfunctional family of origin system.

Personal beliefs and fears. Burke (1999g) examined the relationship between personal beliefs and fears and workaholism. Beliefs and fears are a reflection of values, thoughts, and interpersonal styles. Three measures of beliefs and fears developed by Lee, Jamieson, and Early (1996) were used: “Striving against others,” “No moral principles,” and “Prove yourself.” Burke compared the three workaholism types on these measures of beliefs and fears. WAs scored significantly higher than WEs and EAs on the measures of striving against others and no moral principles, as well as on the composite measure. In addition, WAs scored higher on the need to prove self than did WEs. Workaholism thus emerges as work behaviors in response to feelings of insecurity and low self-worth. This is best reflected in managers’ feelings of being driven to work. Paradoxically, these beliefs and fears were also found to be associated with lower levels of work enjoyment.

Kaiser and Kaplan (2006) offer some observations on the wellsprings of “overdoing it” at work, based on their coaching and consulting work with executives. They emphasize intrapersonal issues, describing how psychological wounds sensitize managers to be anxious about being hurt again. When managers feel threatened, their behavior frequently goes to the extreme, either overdoing or underdoing. Kaiser and Kaplan propose the following sequence: first one’s sensitivity becomes activated; this influences (or distorts) one’s perceptions of resources and demands in the environment, precipitating feelings of threat that in turn promote compulsion—overdoing, leading to working extreme hours, striving to prove oneself, impatience with the performance of others, overcontrolling, nondelegating and micromanaging. This list reads like a template for the work addict.

Type A Behavior

Zhdanova, Allison, Pui, and Clark (2006), using meta-analysis, provided support for Type A behavior as an antecedent of workaholism. Type A behavior has been shown to be associated with levels of job stress, psychological distress, and coronary heart disease. Pred, Helmreich, and Spence (1987) factor analyzed the Jenkins Activity Survey, a self-report measure of Type A behav-

ior, producing two independent factors: Achievement Striving (AS), which they found to be predictive of positive work attitudes and performances, and Impatience-Irritation (II), found to be predictive of psychological distress.

Burke, Richardsen, and Martinussen (2004), in a study of 171 Norwegian owners and senior managers of construction companies, found that WAs scored higher than WEs on Impatience-Irritation; EAs scored higher than WEs on Achievement Striving, both being dimensions of Type A behavior. Impatience-Irritation has been shown to be predictive of psychological distress.

Organizational values. Burke (1999f) compared perceptions of organization culture values supporting work–personal life imbalance across the three workaholism types. Organizational values encouraging work–family imbalance were measured by scales developed by Kofodimos (1993). Organizational values encouraging balance were measured by nine items (e.g., “Setting limits on hours spent at work”). Organizational values supporting imbalance were measured by eight items (e.g., “Traveling to and from work destinations on weekends”). A total imbalance score was obtained by combining both scales, reversing the balance scores. WAs reported higher imbalance values than both WEs and EAs. Thus, WAs see their workplaces as less supportive of work–personal life balance than do the two other workaholism types.

Johnstone and Johnston (2005), using two of the three Spence and Robbins workaholism components (work enjoyment, feeling driven to work because of inner pressures), examined the relationship of these to four aspects of organizational climate: work pressures, involvement, supervisor support, and co-worker cohesion. Data were collected in two occupation groups: business services (law firms, management consulting, accounting firms) and social services (schools, social workers in government agencies, workers in a hospice). Involvement, supervisor support, and co-worker cohesion were positively related to work enjoyment while work pressures were negatively related to work enjoyment. Only work pressures were significantly related (positively) to feeling driven.

Regression analyses including age, occupation type, and hours worked along with the four organizational climate measures showed that only co-worker cohesion and supervisor support predicted work enjoyment. Age, work pressures, and occupational type were significant predictors of feeling driven. Those in business services had higher levels of feeling driven and lower levels of work enjoyment.

Work Outcomes

The relationship between workaholism and indicators of job and career satisfaction and success is difficult to specify. It is likely that different types

of workaholics will report varying work and career satisfactions (Scott et al., 1997).

Burke (1999a) compared levels of work and career satisfaction and success among the workaholism profiles observed by Spence and Robbins (1992). Four work outcomes, all significantly intercorrelated, were used. Intent to quit was measured by two items (e.g., "Are you currently looking for a different job in a different organization?"). Work satisfaction was measured by a seven-item scale developed by Kofodimos (1993). One item was "I feel challenged by my work." Career satisfaction was measured by a five-item scale developed by Greenhaus, Parasuraman, and Wormley (1990). One item was "I am satisfied with the success I have achieved in my career." Future career prospects were measured by a three-item scale developed by Greenhaus et al. (1990). One item was "I expect to advance in my career to senior levels of management."

WAs scored lower than WEs and EAs on job satisfaction, career satisfaction, and future career prospects, and higher than WEs on intent to quit. It should be noted that all three workaholic profiles (WAs, EWs, WEs) worked the same number of hours per week and had the same job and organizational tenure.

WORKAHOLISM TYPES AND FLOW AT WORK

Csikszentmihalyi (1990) uses the term *optimal experience* to refer to times when individuals feel in control of their actions and masters of their own destinies. Optimal experiences commonly result from hard work and meeting challenges head on. Would the workaholism types differ in the experience of flow? In a study of 211 Norwegian journalists, Burke and Matthiesen (2004) found that journalists scoring higher on work enjoyment and lower on feeling driven to work because of internal needs indicated higher levels of flow or optimal experience at work. In this same study, Burke and Matthiesen found that WEs and EAs indicated higher levels of flow than did WAs.

PSYCHOLOGICAL WELL-BEING

There is considerable consensus in the workaholism literature on the association between workaholism and poorer psychological and physical well-being. In fact, some definitions of workaholism incorporate aspects of diminished health as central elements. It is not surprising that this relationship has received research attention.

Burke (1999e) compared the three workaholism types identified by Spence and Robbins (1992) on three indicators of psychological and physical well-being

in a sample of 530 employed women and men MBA graduates. Psychosomatic symptoms were measured by 19 items developed by Quinn and Shepard (1974). Respondents indicated how often they experienced each physical condition (e.g., "headaches") in the past year. Lifestyle behaviors were measured by five items developed by Kofodimos (1993). One item was "I participate in a regular exercise program." Emotional well-being was measured by six items developed by Kofodimos (1993). One item was "I actively seek to understand and improve my emotional well-being."

Once again, the comparisons of the workaholism types on the three measures of psychological and physical well-being provided considerable support for the hypothesized relationships. WAs had more psychosomatic symptoms than both WEs and EAs and poorer physical and emotional well-being than WEs.

In a study of 171 Norwegian construction company owners and senior managers, Burke et al. (2004) found that WAs reported higher levels of emotional exhaustion than both WEs and EAs; the three workaholism types were similar on levels of cynicism and personal efficacy.

EXTRA-WORK SATISFACTIONS AND FAMILY FUNCTIONING

A number of writers have hypothesized that workaholism is likely to impact negatively on family functioning (Killinger, 1991, Porter 1996; Robinson, 1998). Burke (1999c) considered the relationship of the three workaholism types identified by Spence and Robbins (1992) with extrawork satisfactions. Three aspects of life or extrawork satisfaction were included, using measures developed by Kofodimos (1993). These aspects were family satisfaction, relationship satisfaction, and relationship satisfaction and community satisfaction. The comparisons of the workaholism types on the three measures of life or extrawork satisfactions provided moderate support for the hypothesized relationships. WAs reported less satisfaction on all three extrawork satisfaction measures than did WEs and less satisfaction on one (family) than did EAs.

"GOOD" AND "BAD" WORKAHOLICS

Schaufeli, Taris, and Bakker (2007) make a distinction between "bad" workaholics, exhibiting a negative psychological state, and "good" workaholics, characterized by high levels of work engagement. They differentiate between work addiction and work engagement. Engaged workers work hard because it is fun; work addicts work hard because they are compulsively driven. They conducted a study in the Netherlands, involving 2164 employees in a wide variety

of jobs who participated in an Internet survey. They developed a measure of workaholism having two components: working excessively, and working compulsively (also see Taris, Schaufeli & Verhoeven, 2005). Scores on these two components were related to measures of overwork, employee well-being, and job performance. Both measures of workaholism were significantly and positively correlated with indicators of overwork, Working excessively correlated with these at a slightly higher level. Both workaholism components were also significantly and negatively correlated with psychological health and happiness. Work engagement was positively correlated with indicators of overwork and psychological health and happiness, and negatively correlated with absenteeism. And somewhat surprisingly, both work addiction components and work engagement were positively related to indicators of job performance.

Schaufeli, Taris, and Bakker (2008), again using their two-component measure of work addiction (working excessively and working compulsively), report the results of two further studies. In the first study, involving 7594 Dutch workers, hours worked were correlated with both work addiction scales, and different occupational groups differed on the two work addiction scales. Managers and entrepreneurs scored higher on both, as did men when compared to women.

In the second study, data were collected from 2115 medical residents. Although there were a few differences in the predictors of working excessively and working compulsively, the majority of relationships between these two components and other variables (e.g., job demands, job resources, burn-out recovery, life satisfaction) were statistically significant. Schaufeli and his colleagues conclude that both working excessively and working compulsively formed a syndrome —two characteristics that occur together and are associated with potential predictors in the same way.

They also divided their sample into four groups based on either high or low scores on the two workaholism scales. These groups were labeled workaholics, hard working, compulsively working, and relaxed. These four groups were then compared on 22 variables with significant group differences found on all but one. Workaholics (those residents scoring high on both components) had the poorest scores on 16 of the 21 variables on which significant group differences were found.

The work of Schaufeli and his colleagues has highlighted the distinction between work engagement and work addiction, between good and bad workaholics, and put the spotlight on different motivational systems. Workaholics are motivated by performance goals; engaged workers are motivated by mastery goals. The former are external; the latter internal. Workaholics work hard to prevent themselves from feeling bad—an avoidance motivation; engaged workers work hard for learning and development—an approach motivation.

PASSION VERSUS ADDICTION

Why do people work hard, and does their motivation for working long hours matter in terms of their satisfaction and well-being? Several streams of research bear on these questions. First, a growing body of research on workaholism has shown that different types of workaholics exist (Scott et al., 1997; Spence & Robbins, 1992) and that some types seem to be work satisfied and psychologically healthy while other types are dissatisfied with their jobs and careers, are dissatisfied with their family relationships, and are in psychological distress (Buelens & Poelmans, 2004; Burke, 2007; Kanai et al., 1996; Machlowitz, 1980; Robinson, 1998; Spence & Robbins, 1992).

Second, extensive research on sources of motivation (e.g., the effects of intrinsic versus extrinsic goals) and different processes or motivations for realizing these goals (e.g., internal versus external motivations)—the “what” and “why” of goal pursuits—has shown that individuals motivated by extrinsic goals and external sources of motivation report lower levels of satisfaction and psychological health (Deci, Koestner, & Ryan, 1999; Deci & Ryan, 1985, 2000; Ryan & Deci, 2000; Srivastava, Locke, & Bartol, 2001). Burke (2006) has shown that different types of workaholics are motivated by different beliefs and fears about people and their larger social and work environment.

Third, although working long hours has generally been associated with more negative work and health outcomes, dramatic exceptions to this trend have also been observed. Hewlett and Luce (2006) reported some work and family experiences of men and women working in “extreme jobs,” jobs in which they worked 70 or more hours per week and under high work intensity (e.g., an unpredictable flow of work, responsibility for clients 24/7, and a fast-paced flow of work). Respondents were senior level managers and executives in large U.S. and international based corporations earning huge salaries and working in prestigious jobs having lots of perks. Their respondents indicated great work satisfaction resulting in part from the challenge, meaning, and rewards from their jobs. They were passionate about their work and their jobs. Respondents did indicate, however, that they hoped to work a few fewer hours in the future, and some were concerned about potential negative effects of their work hours on personal and family lives. Brett and Stroh (2003), in a sample of alumni of a prestigious U.S. business school, also reported positive reasons among both men and women for working over 61 hours per week.

Fourth, it is only recently that passion in the workplace has begun to be explored. Vallerand and his colleagues (Vallerand et al., 2003; Vallerand et al., 2007) have proposed a dualistic approach to passion. Passion is defined as a strong inclination toward an activity (e.g., work in our case) that is important,

liked, and involves investing considerable time in its pursuit. They distinguish between a harmonious passion (HP) that is well integrated into one's identity and undertaken freely and willingly and an obsessive passion or addiction (OP) that is not well integrated into one's identity and is the result of internal pressure (e.g., to increase one's self-esteem in the eyes of others). The activity controls the person under OP; the person controls the activity under HP. Vallerand and colleagues hypothesized and found that HP leads to more positive affect, less negative affect, and higher levels of flow, while OP produces the opposite effects. Because the activity is freely chosen under HP, the individual is engaged in the activity more fully and flexibly, leading to greater concentration, absorption, flow, and positive affect. Vallerand and colleagues developed measures of both types of passion and found they were significantly and positively correlated with each other, and similarly and positively correlated with evaluations of and liking for a self-chosen activity. They also found that levels of HP were higher than levels of OP for the chosen activity. They further suggest that HP would likely be correlated with psychological health and OP with psychological distress. Thus, passion can create motivation, increase well-being, and provide meaning in one's life, but it can also lead to negative emotions, rigid persistence, and an unbalanced life.

Fifth, two of the three workaholism components in the most widely used measure of workaholism developed by Spence and Robbins (1992), feeling driven to work because of inner pressure (D) and work enjoyment (WE), have been found to relate in different directions and to different outcomes (see Burke, 2006, for a review). WE, not surprisingly, was shown to be positively related to various work outcomes whereas D was shown to be negatively related to many of these work outcomes. On the other hand, D was found to be negatively related to measures of psychological health, while WE was unrelated to these health indicators. In addition, WE and D related differently to potential antecedents of workaholism, such as perceptions of organizational climate supporting work–personal life balance and perceptions of people and their motives and how to succeed in the world. Other researchers have also reported different relations between WE and D and a number of different work and well-being outcomes (e.g., Graves, Ruderman, & Ohlott, 2006; Johnstone & Johnston, 2005; Schaufeli et al., 2007; Virick & Baruch, 2007).

These studies indicate different patterns of correlations, both antecedents and consequences, of WE and D. WE and D represent different underlying motivations or orientations to work and therefore have different effects in terms of both work and well-being outcomes. D is likely to hamper performance. WE is likely to facilitate performance (Vallerand et. al., 2003, 2007). D is likely to be associated with persistence, rigidity, perfectionism, and heightened levels

of job stress. D is likely associated with working harder, not smarter. D may also be associated with the setting of unrealistic performance expectations and deadlines. The positive emotions of WE are likely to spur higher levels of performance through increasing social resources and creativity, building trust with colleagues, and reducing levels of debilitating stress.

Vallerand and his colleagues (Vallerand et al., 2003; Vallerand & Houliort, 2003; Vallerand et al., 2007) suggest four hypotheses relating to their two types of motivation, passion and addiction. First, passion and addiction are likely to be positively correlated. Second, respondents will generally score higher on passion than on addiction. Third, passion is likely to be related to positive work outcomes and psychological health. And fourth, addiction is likely to be associated with negative work outcomes and psychological distress.

Burke and his colleagues conducted three exploratory studies involving different occupational groups and conducted in different countries that examine the four hypotheses suggested by Vallerand and his colleagues (Vallerand et al., 2003, 2007)

Study 1—Managers and Professionals in Canada

Mail questionnaires were sent to about 1,000 male and 1,000 female MBA graduates of a single university in Canada. Responses were received from 591 individuals, a response rate of about 35 percent, with elimination of questionnaires returned because the person had moved. The sample decreased to 530 when individuals who indicated they were no longer working full-time were excluded. A fairly wide range of response was present on most personal demographic items.

Measures included single-item measures of personal and work situation characteristics; the measures of passion and addiction (Spence & Robbins, 1992); potential antecedents of passion and addiction including beliefs and fears (Lee et al., 1996) and organizational values supporting work–personal life imbalance (Kofodimos, 1993); four indicators of work investment including hours worked; extra hours worked; job involvement (Spence & Robbins, 1992), and one's psychological sense of *time committed to the job* (Spence & Robbins, 1992), two job behaviors—perfectionism and nondelegation—both measured by scales developed by Spence and Robbins (1992), four work outcomes including measures of job satisfaction (Kofodimos, 1993); career satisfaction (Greenhaus et al., 1990); future career prospects (Greenhaus et al., 1990); and job stress (Spence & Robbins, 1992), three extra work satisfactions—family, friends, and community—using measures developed by Kofodimos (1993); and three indicators of psychological well-being including

emotional and physical health (Kofodimos, 1993) and psychosomatic symptoms (Quinn & Shepard, 1974).

The following results were obtained. First, passion and addiction were significantly and positively correlated ($r = .25, p < .001, N = 524$). Second, respondents indicated similar levels of passion and addiction, the mean scale values being 2.5 and 2.7, respectively, contrary to predictions. Third, the correlations between the measures of both passion and addiction with four indicators of investment were positive and significantly different from zero ($p < .001$). As hypothesized, managers and professionals scoring higher on passion, and on addiction, were more involved with their jobs and work (e.g., worked more hours, more extra hours, more job involved). Fourth, both passion and addiction were significantly correlated with the two potential antecedents. Managers scoring higher on passion scored lower on the measure of beliefs and fears and lower on the measure of organizational support for work–personal life imbalance; managers scoring higher on addiction also scored higher on the measure of beliefs and fears and higher on the measure of organizational support for work–personal life imbalance. As hypothesized, the pattern of correlations was the direct opposite. Fifth, let us now consider the correlations between passion and addiction and the two job behaviors. All correlations were significantly different from zero ($p < .001$). Managers scoring higher on passion and managers scoring higher on addiction also scored higher on perfectionism; however, managers scoring higher on passion scored lower on nondelegation, whereas managers scoring higher on addiction scored higher on nondelegation. These findings provide partial support for our hypotheses. Sixth, let us turn to the correlations between passion and addiction and the four work outcomes. Most correlations were significantly different from zero. Managers scoring higher on passion also indicated more favorable work outcomes across the board (more satisfaction, lower levels of stress); managers scoring higher on addiction also indicated less job and career satisfaction and higher levels of stress. Scores on addiction were not correlated with perceptions of future career prospects. Once again, as hypothesized, the pattern of correlations was in the opposite direction. Seventh, let us consider the correlations of scores on passion and addiction with three indicators of extrawork satisfaction. All correlations were significantly different from zero ($p < .05$). Managers scoring higher on passion were also more satisfied in all three extrawork areas; managers scoring higher on addiction were less satisfied in all three areas of extrawork satisfaction. As hypothesized, the pattern of correlations was in the opposite direction, but weak. Finally, let us consider the relationship of passion and addiction with three indicators of psychological health. All correlations between passion and addiction were significantly different from zero ($p < .001$). Managers

scoring higher on passion reported higher levels of psychological health, whereas managers scoring higher on addiction reported lower levels of psychological health.

In summary, the pattern of findings shown provides strong support for the proposed hypotheses. In almost all instances, passion and addiction showed opposite relationships with the antecedent and outcome variables under investigation.

Study 2—Female Psychologists in Australia

Mail questionnaires were sent to 35,61 members of the Australian Psychological Society in the state of Victoria. A total of 658 completed surveys were returned, a 19 percent response rate. Respondents were similar to the total membership of the Australian Psychological society on some dimensions (age, sex) for which data were available. Only female respondents were chosen for this analysis. A wide range of response was again present on most demographic items.

The measures used were identical to those employed in the study of Canadian managers and professionals discussed above. Let us now consider the results. First, passion and addiction were significantly and positively correlated ($r = .25, p < .001$). Second, levels of passion and addiction were similar, mean values being 2.7 and 2.5, respectively. Third, scores on both passion and addiction were significantly and positively correlated with each of the four measures of work investment (e.g., work hours, job involvement). Fourth, scores on passion were significantly negatively correlated with beliefs and fears and organizational values supporting work–personal life imbalance, whereas scores on addiction were significantly positively correlated with scores on these two measures. Fifth, correlations of passion and addiction with the two job behaviors (perfectionism, nondelegation) were significant but in opposite directions, passion being negative and addiction being positive. Sixth, almost all the correlations of passion and addiction with the four work outcomes were significantly different from zero. Female psychologists scoring higher on passion also indicated more favorable work outcomes across the board (more satisfaction, lower levels of stress); female psychologists scoring higher on addiction indicated less job satisfaction and higher levels of stress. However, scores on both passion and addiction were positively correlated with perceptions of future career prospects. Once again, as hypothesized, the pattern of correlations was generally in opposite directions. Seventh, most of the correlations of passion and addiction with the three measures of extrawork satisfaction were significantly different from zero ($p < .05$). Female psychologists scoring higher on passion were also

more satisfied in two extrawork areas; female psychologists scoring higher on addiction were less satisfied in all three areas of extrawork satisfaction. Finally, almost all the correlations of passion and addiction and the three indicators of psychological health reached statistical significance. Female psychologists scoring higher on passion reported higher levels of psychological health, whereas female psychologists scoring higher on addiction reported lower levels of psychological health.

In summary, these findings were generally consistent with our hypotheses and almost identical to those obtained in a large Canadian sample of female and male managers and professionals.

Study 3—Journalists in Norway

Data were collected from 211 journalists working in the city of Bergen, Norway, using anonymously completed questionnaires, representing a response rate of 43 percent. Five hundred questionnaires were sent out by the journalists' union, and completed questionnaires were returned to a university address. Measures originally appearing in English were translated into Norwegian by members of the research team using the back-translation method; other measures (e.g., the Maslach Burnout Inventory) had already been translated into Norwegian from English and used by others in their research projects.

Measures included a number of personal and work situation characteristics. The same measures of passion and addiction used in the two previous studies, two measures of work investment (hours worked, work-family conflict; Lindstrom et al., 1997), four work outcomes including intrinsic motivation (Lindstrom et al., 1997), intrinsic motivation (Lindstrom et al., 1997); organizational commitment (Lindstrom, et al., 1997) and flow (Jackson & Marsh, 1996), and psychological health including three scales from the Maslach Burnout Inventory (Schaufeli, Maslach, Leiter, & Jackson, 1996), and measures of positive and negative affect—the PANAS scales (Watson, Clark, & Tellegen, 1988).

Let us now consider the findings. First, passion and addiction were significantly and positively correlated ($r = .29, p < .001$). Second, levels of both passion and addiction were generally similar, mean values being 2.8 and 2.6, respectively. Third, passion tended to be positively correlated with hours worked ($p < .10$) and with work-conflict; addiction was significantly correlated with both hours worked and levels of work-family conflict. Thus, as predicted, both passion and addiction were significantly related to level of work investment. Fourth, six of the eight resulting correlations between passion and addiction and the four work outcomes were significantly different from zero ($p < .05$), and the

direction of these correlations was opposite in the two work motivation sources. Journalists scoring higher on passion also scored higher on flow, organizational commitment, and intrinsic motivation; passion was uncorrelated with levels of extrinsic motivation (but negative in sign). Addiction was negatively correlated with flow and organizational commitment and positively correlated with level of intrinsic motivation, and tended to be positively correlated with level of extrinsic motivation. Thus, passion and addiction were differentially correlated with flow, organizational commitment, and extrinsic motivation (but in the latter case, only one correlation approached statistical significance) and similarly correlated with levels of intrinsic motivation. Finally, 7 of the 10 correlations between passion and addiction and the five indicators of psychological health reached statistical significance ($p < .01$). Journalists scoring higher on passion also scored lower on exhaustion, cynicism, and negative affect and scored higher on positive affect. Journalists scoring higher on addiction also scored higher on exhaustion and cynicism and lower on positive affect. Neither passion nor addiction was correlated with levels of efficacy; addiction was also uncorrelated with levels of self-reported negative affect.

In summary, the pattern of findings reported here were both consistent with our hypotheses and very similar to those obtained in two other studies employing different samples obtained in different countries. In almost all instances, passion and addiction showed opposite relationships with the outcome variables under investigation. These findings show rather convincingly that different sources of work motivation—passion and addiction—had dramatically different relationships with a range of job satisfactions, work outcomes, and indicators of psychological health. Though themselves moderately and positively correlated, passion and addiction had opposite relationships with these outcomes.

As predicted, both passion and addiction were significantly correlated with job and work investment (e.g., hours worked, job involvement).

There were also widespread differences in the direction of correlation of passion and addiction with antecedents, job behaviors, work and extrawork satisfactions, and indicators of psychological well-being. Passion was always correlated with favorable work, extrawork, and psychological well-being outcomes and less obsessive job behaviors. These findings were consistent with an emerging view that positive emotions are likely to be associated with favorable outcomes (Fredrickson, 1998, 2001; Lyubormirsky, King, & Diener, 2005; Pressman & Cohen, 2005). Addiction was almost always correlated with less favorable work, extrawork, and psychological well-being indicators, and with less constructive job behaviors (e.g., more difficulty delegating). In summary, our results suggest significant differences in the effects of a healthy commit-

ment to one's work versus a harmful, psychologically and physically damaging compulsion to work.

ADDRESSING WORKAHOLISM

There is a large speculative literature suggesting ways to reduce levels of workaholism. One part of this work focuses on individual and family therapy (Killinger, 1991, Robinson, 1998); a second part emphasizes organizational and managerial interventions.

Individual counseling. Workaholics Anonymous chapters have sprung up in some North American cities. These groups, patterned after Alcoholics Anonymous self-help groups, endorse the 12-step approach common to the treatment of a variety of addictions. Killinger (1991) and Robinson (1998) include chapters outlining actions an individual might pursue to reduce levels of workaholism; Seybold and Salomone (1994) offer suggestions on counseling approaches. Chen (2006) shows how the use of rational emotive behavior therapy (REBT) can be effective in lessening work-life balance concerns and ameliorating the effects of workaholism.

Chen (2006) applied rational emotive behavior therapy (REBT) to the treatment of work addiction. Several factors likely cause work addiction. However a negative self-concept and related self-perceptions (e.g., lack of self-confidence, low self-worth) are the essential sources. An external environment that supports and reinforces work addiction interacts with these intrapersonal factors to produce the addiction to work (see Killinger, 1991). REBT addresses this distorted sense of self, irrational beliefs and emotions concerning self-worth and self-image; REBT seeks to build a confident and positive inner self. Work addicts are informed of the hazards of work addiction and ways of coping with it. Cognitive intervention lies at the heart of REBT: irrational beliefs are examined—the musts and shoulds that spur and sustain work addiction; individuals are also taught to use different language—there are other ways to think and behave. Individuals explore the emotional imagery of being less work addicted (i.e., working fewer hours); role playing is used to further examine feelings and thoughts.

Behavioral strategies are also part of REBT applied to work addiction. Individuals learn how to relax, to slowly desensitize the exhibition of particular behaviors (engaging in more or less), to improve self-management, to reorganize their workloads, to set clear boundaries, and to spend time in valued non-work activities.

Burwell and Chen (2008), in more recent writing, position their approach to treating work addiction within the broader field of positive psychotherapy

(PPT). Then they discuss therapeutic approaches stemming from quality of life therapy (QOLT).

Work addiction has its roots in the individual, the family, organizations, and the broader society. Work addicts are almost always in denial. The typical interventions for addressing work addiction are individual treatment (Fassel, 1990; Killinger, 1991; Robinson, 1998) and workplace changes (Fassel, 1990; Munck, 2001).

PPT encourages work addicts to increase positive emotions, engagement, and meaning in their lives. QOLT encourages individuals to identify, pursue, and fulfill their most valued needs and aspirations in important areas of their lives. Relationships and play are typically addressed as goals for change in QOLT.

Family therapy. Robinson and his colleagues, consistent with their clinical and consulting perspective, focus on treatment, both individual and family. This is not surprising given the central role they give to both family of origin and current family functioning in the development, maintenance, and inter-generational transmission of workaholism. The treatment recommendations Robinson offers (1998) are similar to those offered to alcoholic families.

Thus, denial is common among workaholics and their family members. Family members are reluctant to complain. Workaholics define their behavior and symptoms in a favorable light (Killinger, 1991; Porter, 1996). Parental expectations of children, often unrealistic, must be addressed. Family structures need to be identified. How do family members collude with the workaholic parent? Family members need help in expressing their negative feelings to the workaholic. Families need to learn to set boundaries around the amount of time they spend working together and talking about work. Family members can set goals to improve family dynamics (e.g., communication, roles, expression of feelings).

Workplace interventions. How can employers help workaholics and workaholics help themselves? Schaefer and Fassel (1988) offer the following ideas. Employers should pay attention to the performance and work habits of employees and be alert to warning signs of workaholism. They should ensure that employees take vacation time away from work. Finally, job insecurity, work overload, limited career opportunities, and lack of control can make employees feel compelled to work longer. If these factors exist, employers should try to minimize their impact on the atmosphere within the organization.

Haas (1991) also highlights the role that managers can play in assisting their workaholic employees to change. Workaholic employees should be referred to an employee assistance program or a recovery program to start treatment processes. Managers should help prioritize projects for employees as long-term and

short-term assignments (Cartwright, 2000). Workaholics must be encouraged and helped to delegate their work. At the end of each day, the manager should meet with the employee to discuss what has been accomplished during that day and to plan (down to short intervals) for the following day. The employee should be given specific times to take breaks and to leave work. It may also be possible to reduce the negative effects of workaholism, particularly the well-being and health consequences, through stress-management training.

The development of workplace values that promote new, more balanced priorities and healthier lifestyles will support those workaholism types that want to change their behaviors (Austin Knight, 1995; Messenger, 2006; Munck, 2001). More people today want a life beyond work. Employees can work more effectively if they can integrate their work, families, and personal lives in more satisfying ways—they want “just enough success” (Nash & Stevenson, 2004a, 2004b). This becomes a win-win situation for all involved (Friedman, Christensen, & DeGroot, 1998).

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Addiction to Television: With Commentary on Dependence on Video Games and the Internet

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When a person becomes chronically dependent on a stimulus that is enjoyable but that in the long run is harmful, people often speak of addiction. This is not a precise scientific term, because what we think about certain activities is relative and depends on value judgments.

For this and other reasons, the official manual used by psychotherapists throughout North America, the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (1994; *DSM-IV*) and fourth edition text revision (2000; *DSM-IV-TR*),¹ no longer uses the term *addiction*. Instead, the committees that wrote the *DSM* use the term *substance dependence*. This does not resolve the problem, because of course we are all dependent on substances like oxygen, water, and dietary protein without being considered addicts.

For years, the addiction term has been extended to a whole host of behaviors from gambling and sexuality to video gaming and Internet use. My aim here is to bring some clarity to the question of how people develop the television viewing habits that now absorb so many hours of daily life in nearly all developed societies.

The time people spend viewing is nearly astonishing. People throughout the industrialized world, from the United States and Latin America to Europe and parts of Asia, the Middle East, and Africa, typically devote about three hours a day to watching television. In many societies, this easily constitutes half of all a person's leisure time or, calculated another way, 9 full years of a 75-year life span. Unless one does something else during commercials, two of those nine

years will be devoted to viewing advertisements; this viewing constitutes about 20 percent of all commercial television viewing time.

And of course, the three-hour figure *is* an average after all. For the “addicted” or so-called heavy viewers who may watch five or six hours a day, we may well be talking about 30 percent to perhaps 38 percent of their waking time watching TV, or as many as 20 years of the 50 years they will be awake if they live to 75.

If television viewing is indeed self-perpetuating, as will be suggested in the pages ahead, and if it indeed *can* produce a dependency, this is a matter of considerable significance, because this effect may be seen as perhaps the most powerful link in a chain of other effects. Indeed, many effects of television—from aggression and obesity to poorer academic performance and the impairment of imagination—are presumed to be effects of heavy or prolonged viewing.

Most people believe television viewing can be addictive. In North American surveys, roughly 10 percent of adults believed that *they* were addicted, but 65 to 70 percent reported believing that *others* were addicted. And many millions experience misgivings about how much they view. In a 1990 Gallup Poll (Gallup & Newport, 1990), 42 percent (up from 31 percent in the late 1970s) of adult Americans reported believing that they spent too much time watching television.

It needs to be stated at the outset that television viewing needn't be seen as purely problematic, or necessarily problematic at all. There are fine entertainment and information programs on television. One can learn and derive enjoyment from television. The author personally watches some escapist programs, and a fair amount of news, historical and scientific documentaries, HBO dramas, and bio-dramas that he thinks quite worthy.

The new television environment of 300 channels and DVD and downloadable films and other programs has made for a viewing world that is extraordinarily rich for adults and children alike and quite different from the one in which some of the data were collected, data that will be cited in this chapter and that date back to the television world of 1975, before most homes even had a VCR and when most homes only had the usual 8–15 channels. Readers should keep in mind that in citations to some of my work, or my work with Csikszentmihalyi, the research being drawn on was collected in that media environment, though not all of the research was conducted in the United States, as will be seen.

Furthermore, my book, *Creating Television* (Kubey, 2004), examines the personal creativity of many television artists involved in the creation of many programs that I consider very good or great and classic programs over the first 50 years of the medium's history. Moreover, I am something of a film buff. I regularly expose my sons to everything from early Buster Keaton and *One Flew*

Over the Cuckoo's Nest to Hitchcock and foreign works such as *Blow-Up* and Ingmar Bergman. Not to go on too long about this—and these are *films* after all—but they are viewed on a television monitor, and though I watch them commercial free, many people watch them over cable or broadcast television complete with commercial interruptions. These offerings, too, can be seen as television and some of them were available when my earliest data were collected in 1974–75.

Television also surely provides much-needed distraction and escape. Still, there is little doubt that a great many millions of people around the world have developed very significant viewing habits that might be deemed problematic and even a risk to mental and physical health.

So, first, what accounts for such a devotion to television, a devotion greater than to any other activity, save sleep and work?

HOW THE VIEWING HABIT IS FORMED

One of the first things to know is that television viewing typically involves less concentration and alertness—and is experienced more passively—than most other daily activities. This is known from my own studies and others using the same methodology with children, adolescents, adults, and the aged in the United States (see Kubey, 1984; Kubey & Csikszentmihalyi, 1990). Other researchers have confirmed these findings using the same method in other countries.

The findings are based on people's responses to a random signaling method, the Experience Sampling Method (ESM), that permits researchers to study human behavior and emotions as they occur naturally in the normal course of everyday life

The ESM involves having research subjects report what they are doing, and how they are feeling, each time they are signaled with a radio controlled, or preprogrammed, signaling device, or beeper. In most studies, each respondent is signaled six to eight times each day, from morning till night, for a week. The timing of the signals is predetermined by the research team to occur at random intervals, and participants do not know when to expect a signal.

The method has proved very useful in studying the contours of everyday life in a wide variety of populations around the world. Studies have focused on everything from worker satisfaction and the ways in which one spouse's mood affects the other spouse to student performance in school, eating disorders, and drug and alcohol abuse.

Along with the beepers, participants also carry a small booklet of self-report forms. After each signal, the individual stops to fill out a short report form

telling researchers how she felt on a number of standard psychological measures of mood and mental activity.

When people report how they are feeling and thinking when watching television, they report feeling relaxed and, as noted, exerting little mental effort or concentration. It is these related aspects of the experience, while perhaps obvious, that are key among the reasons why so many people watch for so many hours a day, why their habits are so well established, and why it is generally hard for people to reduce their viewing.

The ease with which viewing is accomplished is especially pronounced when compared with reading. And while it is not as dramatic as popular press accounts would have us believe, others' studies with the EEG show that reading *does* produce more beta activity ("fast waves" associated with increased mental activity and attention) than does television viewing, which causes somewhat more alpha activity ("slow waves" associated with relaxation and less mental arousal). Unlike reading, with its constant provision of moving images and sound, television can be thought of as doing the work of attention for us. Research also indicates that lower cortical arousal coincides with prolonged viewing.

Part of what holds our attention to television is the *orienting response*. First described by Pavlov in 1927, the orienting response is our instinctive, visual (or auditory) reaction to any sudden or novel stimulus in the environment. A well-functioning orienting response is necessary to the survival of almost every species.

Once stimulated, organisms orient their sensory receptors toward the stimulus that caused the response. The typical response set includes vasodilation of the blood vessels to the brain, decrease (or blocking) of the EEG alpha frequency, slowing of the heart, and vasoconstriction of blood vessels to major muscle groups. In other words, the attentional capacities of the organism are put on high alert, with stimulus intake rapidly becoming the first priority while the rest of the body quiets.

Byron Reeves of Stanford University and Esther Thorson of the University of Missouri and their colleagues (1986) first used the EEG in 1985 to test whether the simple *formal features* of television (cuts, edits, zooms, pans, sudden noises, and so on) might activate the orienting response, thereby causing attention to be drawn to the screen. While an increase in alpha frequency coincides generally with viewing, *alpha blocking* is associated with orienting responses. Reeves and Thorson and their team concluded that the formal features of cuts, edits, and movement did indeed command involuntary responses that may well "derive their attentional value through the evolutionary significance of detecting movement." "It is the form, not the content, of television that is unique."

Since 1985, various teams of researchers have delved deeper into how and when television's formal features affect encoding, storage, and message retrieval. The work has been extended to look at lighting levels, slow motion, animation, graphics, music, and narrative structure, and there is a growing literature on the formal features of Web sites as well. Researchers don't use the EEG as much now, preferring observation of the drop in heart rate that comes immediately after the orienting-eliciting stimulus and that continues for 4–6 seconds. Annie Lang's research teams at Indiana University have been among the most active (see Lang, 2000). Lang and her colleagues repeatedly show heart rate decelerations in response to cuts, edits, and video graphics. Recently the list has expanded to voice changes and special effects in radio messages.

The use of formal features to sustain attention isn't all bad. Many involved in the production of educational television for children have done research on the formal features of the medium so they know how edits, movement, slow versus fast zooms, or changes in volume can help hold attention on the screen for the purpose of learning. (Edits and slow zooms, for example, help.) The problem lies in how often such techniques are used (too often, in the opinion of some, in a program such as *Sesame Street*) to merely hold viewers so they don't channel surf or miss the next ad.

Lang shows improved recognition memory with increasing edits (changes from one camera to another in the same visual scene, i.e., giving different views of the same phenomenon). Increases in cuts (changes from one scene to a new visual scene) also improve recognition, but only to a point. A sharp drop-off in recognition occurs if the number of cuts exceeds 10 in 2 minutes. Lang concludes that the increase in resources allocated to encoding new information can't keep up with the increase in processing load, and, as a result, memory decreases.

Music videos and other forms of advertising that frequently use rapid intercutting of generally unrelated scenes are thus particularly well designed to hold attention, but they also overload the system, resulting in a decrease in overall memory for specific elements, despite the fact that more attentional resources have been activated by the scores of unrelated scene changes and jump cuts. Still, the name of the product may be well remembered, but the detail of the ad or video itself may be less well remembered.

The cost appears to be an overworked orienting response, one that continues to work, with the result that we still attend to the screen, but there is also an accompanying tired and worn-out feeling with little attendant psychological reward. Yale psychologist Jerome Singer expresses his concern about the exploitation of the orienting response in this way: "The TV set, and particularly commercial television with its clever use of constantly changing short sequences,

holds our attention by a constant sensory bombardment that maximizes orienting responses. . . . We are constantly drawn back to the set and to processing each new sequence of information as it is presented. . . . The set trains us to watch it" (1980, pp, 50–51).

It is the orienting response that may best explain typical viewer reports such as the following: "If a television is on, I just can't keep my eyes off it"; "I don't want to watch as much as I do but I can't help it. It makes me watch it"; and "I feel hypnotized when I watch television."

No one should think this is only a problem for those who are not well educated. Research psychologists such as Milton Rosenberg (1978) of the University of Chicago and Percy Tannenbaum (1980) of the University of California at Berkeley have reported on the strong attraction and hold of the small screen. Says Rosenberg, "When I've got television on in my home and I have to get up for one of the conventional reasons . . . I feel temporarily unfulfilled. Some part of the total sensory experience has suddenly been subtracted and I'm left in some slight state of tension until I can turn my gaze back to the screen" (1978).

Tannenbaum writes: "Among life's most embarrassing moments have been countless occasions when I am engaged in conversation in a room while a TV set is on, and I cannot for the life of me stop from periodically glancing over to the screen. This occurs not only during dull conversations but during reasonably interesting ones just as well. Judging from the behavior of the people with whom I was talking at the time and from reports of friends and colleagues, I am far from alone in this behavior and its accompanying chagrin" (1980, p. 112).

The embarrassment and chagrin, however, *may* be something of a class phenomenon. Indeed, research going back nearly four decades in the United States, England, and Japan has shown that TV viewing passivity often is associated with mild feelings of guilt and self-contempt (Bower, 1973; Furu, 1971; Himmelweit & Swift, 1976; Steiner, 1963)—especially among more affluent and educated viewers. The feelings of guilt in each study were associated with self-recrimination about the passivity of viewing and appear to be part of a sense among middle class individuals that they ought to use their time more productively.

Along with the overworked orienting response, I have also found evidence that the longer people view in a given period, the less satisfaction they report deriving from television (concentration also becomes more difficult) (Kubey, 1984). Perhaps like drug users who don't quite get the same response from the same dose as time goes on, in my studies, heavier viewers also report enjoying viewing less, on average, than do light viewers. And if viewers are middle class, a slight twinge of unease or guilt may also accompany prolonged viewing.

The natural attraction to television's sound and bright, colorful, and changing images starts very early. Israeli researcher Dafna Lemish (1987) documents neonates at six to eight weeks of age attending to television. I've observed slightly older infants, when lying on their backs on the floor, turning their necks around nearly 180 degrees to catch the light from a TV screen.

Of course, the ability of the television medium to attract and hold our attention is by no means purely a function of biology. Television provides ready opportunities to vicariously visit exotic places and experience high drama and suspense, view the most beautiful people in the world, and enjoy myriad forms of entertainment. Just as importantly, television producers are masters at finding clever ways to get people to view longer than they had originally intended. Cliffhangers are as common as ever, and some one-hour and most two-hour television dramas are written in seven acts with a rise in the action before each of the commercial breaks to hold viewers for advertising.

The set of programs that will follow those at present being viewed are also routinely "teased" with titillating suggestions that spike viewer interest and increase the possibility that we will view beyond the single program that we may have planned to watch. While the blame cannot all be laid at the feet of television producers, viewers do frequently report that they will sit down to watch one program, say, from 9 to 10 p.m., but then find themselves still watching beyond midnight.

Furthermore, there is a whole host of psychosocial variables to consider. Those who live alone and who feel lonely are especially vulnerable to developing dependence on the quasi-social experience the medium affords. Heavy viewers report having more time on their hands generally, and they also spend more time alone than do light viewers. Not surprisingly, among the demographic groups with higher proportions of heavy viewers in their ranks are the old, the unemployed, and those with more free time

One of the primary positive experiences people report while viewing is "relaxation," and associated with relaxation are consistent reports of passive bodily and mental states. But the benefit of relaxation appears to occur only while viewing, not afterward, whereas the feelings of passivity and lowered alertness associated with viewing seem to continue, spilling over into how people report feeling after they stop viewing—what I have called the "passive spillover effect" (Kubey, 1984). In this same research, I also found that people reporting more difficulty concentrating after viewing. In contrast, they appear to concentrate easily after reading.

These findings raise concerns about whether the quality of thinking after viewing is affected and whether viewing reduces the likelihood of engagement in more active cognitive and behavioral activities after viewing. Indeed, it is not

uncommon for people to report that television somehow absorbs or sucks out their energy. Author Marie Winn (1977) quotes this recollection from a college English teacher: "I find television almost irresistible. When the set is on, I cannot ignore it. I can't turn it off. I feel sapped, will-less, enervated. . . . So I sit there for hours and hours. . . . I remember that feeling of tiredness and anxiety that always followed those orgies, a sense of time terribly wasted. It was like eating cotton candy; television promised so much richness, I couldn't wait for it, and then it just evaporated into air. I remember feeling terribly drained after watching for a long time" (pp. 21–22).

People regularly use television to escape and distract themselves from negative and unpleasant moods, normal stress, and mild tension. In one study, the distraction function of TV was found to effectively reduce patients' reports of pain during dental procedures.

Dependence on the medium appears to develop for many as a result of a need to escape negative feelings or to help fill an emotional vacuum. In repeated studies by Robert McIlwraith (1991, 1998) of the Department of Psychiatry at the University of Manitoba, the 10 percent of university students and adults who call themselves "TV addicts" on surveys are shown to be significantly more likely than the 90 percent of self-reported "nonaddicted" viewers to report using television to cope with negative moods such as loneliness, sadness, anxiety, and anger. McIlwraith also reports finding self-proclaimed addicted viewers to be significantly more neurotic and introverted. On a measure called the Short Imaginal Processes Inventory (SIPI), McIlwraith finds the TV addicts to be more easily bored and distractible, and to have poorer attentional control than the nonaddicted. The addicted also often report using TV to distract themselves from unpleasant thoughts and to fill time. Interestingly, self-proclaimed addicts are significantly more likely to eat junk food but are significantly less likely than nonaddicts to drink alcohol (McIlwraith, Jacobvitz, Kubey, & Alexander, 1991).

My research using the ESM finds much the same thing. By comparison with light viewers in my research who watch less than two hours a day, heavy viewers (more than four hours) reported feeling significantly worse when they are alone, in unstructured situations such as waiting in line, or between activities. Heavier viewers appear to be particularly prone to fill up unstructured time or escape loneliness with a flick of the switch.

Using the American Psychiatric Association's (APA's) *Diagnostic and Statistical Manual (DSM-IV-TR; 2000, <http://psych.org/MainMenu/Research/DSMIV.aspx>)*, I have suggested that were television a substance (and it may be—light is both particular and wavelike and *something* is taken into the body when people view), many people could be given a diagnosis of

dependence. Indeed, Allen J. Frances (as quoted in Goleman, 1990, p. C8), who oversaw the most recent revision of the manual, concluded that “Under the broader definition, many kinds of compulsive behavior could be considered addictive, including obsessive sex or compulsive television viewing.”

APPLYING *DSM-IV* AND *DSM-IV-TR* SUBSTANCE DEPENDENCE CRITERIA

Though it is tempting to use the term addiction when referring to individuals who report upwards of 60 hours of viewing each week, the term connotes different things to different people. It seems likely that less confusion will result if we are more careful in the words we choose.

Indeed, the prime diagnostic manuals used by psychotherapists throughout North America, the American Psychiatric Association’s *DSM-IV* and *DSM-IV-TR*, do not use the term addiction, nor did the previous edition published in 1987. Instead, the committees that wrote the *DSM* prefer the term substance dependence to conceptualize what others might call addiction. Still, there remain researchers and clinicians who use the term addiction, especially with regard to pornography. As a result, in some of these pages I have used the addiction term from time to time.

Using the *DSM* as a guide for making a diagnosis of television dependence is instructive. It is noteworthy that in the most recently revised edition of 2000, the word *drug* is explicitly used in the preface, perhaps to discourage those who have applied the diagnostic criteria to think about or conceptualize dependence on things that are not drugs, as have I since 1990.

DSM-IV lists seven possible criteria for making a diagnosis of substance dependence. Three of the seven must apply in order to make a diagnosis of dependence. Diagnosis also involves a time dimension wherein three (or more) criteria occur at any time in the same 12-month period.

In considering these criteria and the relevant literature on television viewing, it seems to me that perhaps all seven diagnostic criteria could be seen as applicable to television viewing habits in some people, along with their concomitant behaviors and effects. Each criterion is followed by observations regarding the way in which known television behaviors are related to it.

Criterion #1 in the DSM: “Tolerance is defined by either of the following: (a) a need for markedly increased amounts of the substance to achieve intoxication or desired effect” or “(b) markedly diminished effect with continued use of the same amount of the substance” (p. 181).

Notably, viewers appear to obtain the benefit of relaxation only when they are viewing. It is for this reason, among others, that viewing often continues for

as long as it does. Heavier viewers also *enjoy* their viewing less on average than do light viewers (Kubey, 1984).

Criterion #2: Withdrawal is “manifested by either of the following: (a) the characteristic withdrawal syndrome for the substance” or “(b) the same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms.” Withdrawal includes “a maladaptive behavioral change” and it is noted that “withdrawal symptoms vary greatly” (p. 178).

This criterion is a bit more difficult to apply to television viewing behaviors because we are largely limited to anecdotal reports and a small number of social science studies of withdrawal-like symptoms. Still, such reports are not hard to find.

Reports of withdrawal. Steiner (1963), for example, presented individuals’ reports of a variety of behaviors of psychological interest that occurred following the loss of a television set. He was quite clever in his research approach, going to television repair shops in the early 1960s when many households still had only one TV set. Then he would interview those families who were without TV for a week or so while their TV set was in the shop.

Here are three examples: “The family walked around like a chicken without a head”; “It was terrible. We did nothing—my husband and I talked”; “Screamed constantly. Children bothered me and my nerves were on edge. Tried to interest them in games, but impossible. TV is part of them” (p. 99).

In her informal interviews, Winn has presented many similar anecdotes (1977, pp. 21–22). Today, such reports are less frequent, in part because most homes have more than one set. To be completely without a television set today is unusual, which is perhaps still another sign of how entrenched television viewing has become. So difficult is this sort of research to conduct that in the early 1970s, Tannis MacBeth Williams (1986) went to great lengths to study a small town in Canada that had been blocked by the Rocky Mountains before it was wired for cable. She was able to study the town before, during, and after the introduction of television in what I consider the most ambitious and convincing research on television’s effects ever conducted—and all in a natural environment. Furthermore, Williams compared the small town, “No-Tel,” to two other demographically matched towns of similar size that had television. Her book-length treatment is a classic in the field.

Like Steiner, Winick (1988) also offers a valuable review of studies of families whose television sets were being repaired:

The first 3 or 4 days for most persons were the worst, even in many homes where viewing was minimal and where there were other ongoing activities. In over half of all the households, during these first few days of loss, the regular routines were disrupted, family members had difficulties in dealing with the newly avail-

able time, anxiety and aggressions were expressed, and established expectations for the behavior of other household members were not met. People living alone tended to be bored and irritated. Over four-fifths of the respondents reported moderate to severe dislocations during this period. . . . The fifth to eighth day represented, in many cases, some form of readjustment to the new situation. By the second week, a move toward adaptation to the situation was common. (pp. 221–222)

Daley (1978) offers a similar account of his family's difficulties when they stopped viewing, also showing how easily the habit reformed itself after six months of abstinence. A number of newspapers, in the United States and elsewhere, have offered money as an incentive to get individuals or families to stop viewing television for some limited period of time, often a week or a month (reviewed in Condry, 1989; Kubey, 1984; Winick, 1988). Increased tension among family members has been described, and many families could not complete the period of abstinence agreed upon (Ryan, 1974). In a German study, it was reported that there was increased verbal and physical fighting after viewing stopped.

If a family has been spending the lion's share of its free time together over a period of years watching television—as is the case for many families today—it may take some days or weeks, or longer, for the family to reconfigure itself around a new set of activities. Particularly because watching television is so easy to do, family members may have become less imaginative about other ways to spend their time together.

Anecdotal reports from families that have tried the annual TV-turnoff week in the United States tell much the same story, with the early days being most difficult and some accommodation reached after a week, accompanied by a sense that it was a good experience for the family to have lived without TV if only for a week and that they had learned from the experience. Some families change their habits for good, but most don't, typically returning to their former levels of viewing very quickly. The habit of viewing is readily formed, and socially sanctioned and supported within the context of the home and family, and thus the habit can be very difficult to break (see tips for reducing viewing, below).

A Television reduction program that worked. Perhaps the most successful group attempt to help get a number of children to successfully reduce their viewing was recently developed by Barbara Brock and described in her book, *Living outside the Box: TV-Free Families Share Their Secrets* (2007)

Brock, a teacher in eastern Washington State, worked with 130 fourth-, fifth- and sixth- graders from six different classrooms in 2003 and 2005. The experiment in giving up television for a full month worked better than Brock

or anyone, in advance, would have dreamed possible. There was a tremendously high compliance rate—keep in mind how hard, historically, it has been to get people, adults or children, even to try to give up the box for a week.

Hardly any of the children quit after a full month, and some continued on afterward and reported great benefits, all recounted in Brock's book. And it is clear to me, at least, that the group camaraderie and the knowledge of being part of the project are what made the difference. Had just one or two children tried to do it, they might not have succeeded and it wouldn't have been so easy to accomplish as it turned out to be.

Barbara Brock is to be given great credit for conducting this experiment and taking measurements before, during, and after the TV-free month. The most important finding, however, is that it was the group morale that made her experiment work. That hadn't really been a big part of her expectations, but now that the results are clear and to my knowledge unprecedented, in my opinion, the message can go forth that there *is* a way for children and families, since siblings and parents also participated to greater or lesser extents, to learn what it is like to go without television for an extended period of time.

I'm not a Luddite and I've never advocated that people stop viewing; after all, I love many television programs (see, e.g., Kubey, 2004). I just believe that we need to be more discriminating in how we use television and all other media. But families and children can rediscover strengths, activities, and hobbies that they didn't know they had or had forgotten about when they try a TV-turnoff week, or even a few days, and see how life changes in comparison with life when viewing four to five hours a day every day.

In sum, although there is not a great deal of hard empirical evidence, it does seem likely that some individuals—and perhaps entire families—go through something akin to withdrawal if television suddenly disappears. Furthermore, in congruence with section “b” of this criterion, other enjoyable leisure and media activities are typically used to replace TV viewing for those trying to give it up. It is also interesting to note that television is sometimes used by individuals seeking to withdraw from drugs such as heroin, cocaine, and alcohol as a less harmful means of escape and distraction (personal communication from Dyznskiy, October 20, 1994; Kubey & Csikszentmihalyi, 1990, pp. 184–185).

Criterion #3: “The substance is often taken in larger amounts or over a longer period than was intended” (p. 181).

It is common for viewers of all ages to report sitting down to watch just one program but ending up watching much more than was planned. Thus, this diagnostic criterion may fit many viewers.

In a Gallup Poll, 42 percent of the 1,241 U.S. adults who were surveyed reported that they spent too much time watching television (Gallup & Newport, 1990). Mander (1978) reported that some of the typical viewers he interviewed said things such as, "If a television is on, I just can't keep my eyes off it" and "I don't want to watch as much as I do but I can't help it. It makes me watch it" (p. 158).

Indeed, the viewing habit is so entrenched in many people that the choice to view is made almost automatically (Kubey, 1990a). Once dinner is done—or the dishes washed—many individuals sit down to watch television regardless of what programs are on.

Criterion #4: "There is a persistent desire or unsuccessful efforts to cut down or control substance use" (p. 181).

As noted above, it is common for people to report that they believe they spend too much time viewing. This belief itself appears to be on the rise. The percentage of adults in the United States who felt that they watched too much television in the late 1970s was 31 percent, 11 points lower than the 1990 figure of 42 percent (Gallup & Newport, 1990).

It is also relatively common for people to report that they feel powerless to stop viewing on their own, without abandoning the set altogether or interfering with it electronically (Daley, 1977). Some people have told me that they have given up their cable subscriptions precisely so that they have less choice and will thereby watch less. And as stated in *DSM-IV*, *technically* one need only have a "persistent desire . . . to cut down or control substance use" for the criterion to apply. Presumably, some of the Gallup Poll respondents would qualify.

Criterion #5: "A great deal of time is spent in activities necessary to obtain the substance . . . [or] . . . use the substance (e.g., chain smoking), or recover from its effects" (p. 181).

Clearly, with the vast majority of Americans spending two to four hours daily with television, or over half of all their leisure time, a great deal of time is spent using television.

Criterion #6: "Important social, occupational, or recreational activities are given up or reduced because of substance use." "The individual may withdraw from family activities and hobbies in order to use the substance in private" (p. 178).

There is a good deal of research showing that television can bring family members together, but also that it can reduce familial contact (Bronfenbrenner, 1973; Kubey, 1990b, 1990c; Maccoby, 1951; National Institute of Mental Health [NIMH], 1982). Not a few adults (e.g., so-called football widows) feel neglected by their partners who use television heavily. People have reported to

me that they feel that they must regularly compete with television personalities for the attention of family members (Kubey, 1994).

Many people also use television (not to mention other media) purposely to avoid contact with their family. Particularly disturbing is the suggestion that some children may be emotionally, and perhaps even physically, neglected because their caregivers are too engaged in television programs to attend to their needs (Desmond, Singer, & Singer, 1989; Shanahan & Morgan, 1989).

With regard to recreation, some viewers will necessarily engage less in other activities if they are spending three, four, or more hours each day watching television. For example, Williams (1986) found that adolescents and adults participated much less in community activities and sports when TV was available than when it was not.

As for occupational activities, there are undoubtedly people who bring work home from the office but do not do as much as they might (or perhaps do a lower-quality job) because of a television habit that is not under control.

Criterion #7: "The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance" (p. 181).

As will be noted below, there may be a small percentage of people to whom this criterion could be applied, but the reference in the criterion to "knowledge" demands *awareness*, and awareness of having a significant physical or psychological problem due to TV use is probably rare. Still, it is almost certainly the case that *some* individuals recognize that their television viewing habit interferes with their social relations, level of physical exercise, or work habits. In these instances, television could be seen as exacerbating physical or psychological problems.

There is evidence that children and adolescents who view a great deal of television tend to be more obese than those who view less (Dietz & Gortmaker, 1985; Taras, Sallis, Patterson, Nader, & Nelson, 1989). And there is growing evidence now that a child's metabolism slows down when watching television. Furthermore, consumption of junk food by adult self-labeled TV addicts is higher than for nonaddicts (McIlwraith, 1991). Some people also report feeling more passive after viewing than before, and this passivity may decrease the likelihood that viewers will become involved in more active and potentially rewarding activities (Kubey, 1984; Kubey, 1990a; Kubey & Csikszentmihalyi, 1990).

There is also very strong evidence that children and adolescents who view a great deal of television tend to be more obese than those who view less. A study by researchers at Harvard, Tufts, and the New England Medical Center shows perhaps the strongest statistical relationships known among the thousands of studies on television viewing (Dietz & Gortmaker, 1985). This research dem-

onstrates a strong dose-response relationship between television viewing and weight. Even when controlling for a myriad of critical demographic variables, children ages 10–15 who watch over five hours each day were shown to be over five times more likely to be overweight than those who watch less than two hours. Put another way, 60 percent of this population's excess weight is attributed to viewing. Reduced exercise and more consumption of junk food (often advertised on TV) are implicated, as is the finding that a child's metabolism slows down when watching television.

SUMMING UP

As can be seen, when *DSM-IV* or the identical *DSM-IV-TR*'s diagnostic criteria are applied to television viewing habits, a diagnosis of substance dependence can be made for many people. The key missing feature, it would seem, is that we are not accustomed to thinking of television as a substance: it is neither a liquid (alcohol) nor a solid (a pill). Not to go too far, but technically, the viewing of television does, in some way, involve taking *something* into the body, even if that something is only light and sound, and even if no residue of the substance can later be found in the body. Though TV may not be a substance, millions of people nonetheless believe that they, or people they know, need to gain better control of their use of the medium. It is to that end that we next turn our attention. And it is the case that physicists believe that light is both wave-like and *particular*, that is, that it has particles.

One important caveat. Robert McIlwraith (1998) an experienced clinician, is dubious about actually including television dependence in the *DSM*, pointing out that there has yet to be a demonstration of a significant clinical impairment due directly to so-called television dependence. For McIlwraith, while a person not engaging in certain other activities due to their television habit may be socially significant, it may well fall short of needing diagnosis. McIlwraith also points out that the establishment of a new diagnosis requires that we rule out more parsimonious explanations for the observed phenomenon in terms of already existing diagnoses such as depression, social phobia, agoraphobia, or avoidant personality disorder.

But the evidence that television is itself causative with regard to some behavioral or psychological phenomena cannot be denied. The comprehensive inventory of three Canadian communities in the early 1970s, two that had television and one that was just beginning to receive it, led Tannis MacBeth Williams and her colleagues to conclude that the use of television "seems unlikely to encourage the ability to tolerate aloneness with one's thoughts and ideas" (1986, p. 125). Williams's team also found that adolescents and adults participated

much less in community activities and sports when TV was available than when it was not. Again there is the indication of viewing leading to isolation and less activity and of viewing perpetuating itself.

In short, television viewing habits are often self-perpetuating. Viewing may lead to more viewing and may also elicit what has been described as *attentional inertia*, that is, the longer people look at television, the greater is the probability that they will continue to look.

Viewing begets more viewing, because one must generally keep watching in order to keep feeling relaxed (Kubey, 1984; Kubey & Csikszentmihalyi, 1990). A kind of psychological and physical inertia may develop. Although paying the bills might not have seemed difficult immediately after dinner, after two or three hours spent with TV, viewers become accustomed to having their experience effortlessly and passively structured. Getting up and taking on a more demanding task may begin to seem more formidable.

Within moments of sitting or lying down and pushing a TV set's power button, many viewers will report feeling more relaxed than they did before. And because relaxation occurs quickly, people readily learn to associate viewing with relaxation. The association is positively reinforced through simple operant conditioning because viewers remain relaxed throughout viewing, and it is negatively reinforced via the stress and dysphoric rumination that occurs during idle time or once the set is turned off.

The quick onset of relaxation is particularly telling when compared to that produced by certain drugs that are known to be habit forming or addictive. As Alvin Swonger and Larry Constantine (1976) have written: "The attribute of a drug that most contributes to its abuse liability is not its ability to produce tolerance or physical dependence but rather its ability to reinforce the drug-taking behaviors" (p. 235). This is why both the speed of a drug's effect and the speed with which it leaves the body are often critical factors in whether or not dependence develops. And, of course, reinforcement needn't be consciously experienced at all for it to occur or to be a powerful motivator of behavior.

Some tranquilizers, for example, whose half-lives are very short—half the drug leaves the body more rapidly compared to other drugs—are much more likely to cause dependence precisely because the user is more prone to become aware that the drug's effects are wearing off. In decades past, some attentive physicians were inclined to prescribe a less well-known tranquilizer, a benzodiazepine called Tranxene (clorazepate) because it was so slow-acting and much less likely than faster-acting benzodiazepines like Valium (diazepam), and especially Ativan (lorazepam), to be habit forming.

When a person starts to feel anxious more quickly while a tranquilizer with a short half-life's effect is on the wane, the tendency to turn to the drug again for relief will be that much greater than if its effects wear off more slowly.

Returning to the use of television, the change in mood that one experiences from the time of viewing to the time when one suddenly stops viewing may be key. The vague experiential knowledge on the part of viewers that one will feel less relaxed if one stops viewing may be a significant factor in not turning the set off.

And relative to other means available to bring about distraction and relaxation, television is perhaps the quickest, most readily available, and least expensive ever invented. Unlike conversation or games, one does not need anyone else to watch TV. And viewing provides more immediate and cheaper relaxation than that involving drugs or alcohol.

As with any activity, too much of the same thing may not always be best, especially for children. If other activities and experiences are not occurring with the frequency that a caregiver or parent deems to be appropriate because of a television, video game, or Internet habit, then, in my opinion, it is surely the right and responsibility of the caregiver to limit such activities. We must also encourage children to develop their own internal self-monitoring abilities so that they can increasingly make these determinations for themselves.

And we should encourage media education, which has been required in schools nationwide across Canada and Australia for two decades now. We need to encourage children's ability to critically analyze the media and to make them more mindful the use of all media (Kubey, 1991; Macedo & Steinberg, 2007).

Is viewing addictive? If we only mean by the term that one can easily develop dependence on the activity, the answer would be "yes." But to be more properly classified as a true dependence or addiction, an activity must also be harmful, interfering with the quality of the rest of one's life. And so, on this score, the answer is "it depends." Most people can benefit from viewing without the activity interfering with the rest of their lives. In its easy provision of relaxation and escape, in small doses it can be beneficial. For lonely people without other resources, it may be wonderful; I have heard this from many older individuals or people stricken with an illness that makes it hard or impossible for them to read.

But when the viewing habit interferes with the ability to grow, to learn new things, to lead an active life, then viewing indeed becomes an obstacle in life.

VIDEO GAMES, COMPUTER GAMES, AND THE INTERNET

Parents are often concerned about their children's heavy use of computers, video games, and the Internet. We can readily apply many of the same explanations offered earlier, as to how television dependence develops, to help explain the attraction of these games, and in some instances the attraction of the Internet. As with television, they offer escape and distraction, and as with

television, players quickly learn that they feel better when playing, hence a kind of reinforcement loop develops.

But computer and video games also pose challenges and the opportunity to overcome them—something largely or entirely missing from much television viewing—and most importantly, many games are designed to minutely increase in difficulty along with the increasing ability of the player.

In being programmed to constantly challenge a player's current ability, video and computer games offer a nearly perfect level of difficulty for the player who enjoys such challenges. And psychic pleasure—what Csikszentmihalyi (1990) has called flow—does accompany the improvement of one's skills and increased mastery of almost any human endeavor (the application of flow to video game play was first discussed by Kubey & Csikszentmihalyi (1990, pp. 143–144).

Before the introduction of video and computer games, one could search for months to find another tennis or chess player of comparable ability, but many programmed games immediately provide a near perfect matching of the challenges with one's skills. Thus, computerized games make extended play extraordinarily common because one is feeling neither bored by too easy an opponent nor too frustrated by an inability to match the level of competition. Plus, players are highly motivated to keep playing to achieve a new personal best score and are being psychologically rewarded throughout the game as they see themselves succeeding.

In computer play, as with sports, musical performance, and other activities that induce flow, the feedback is quick and clear, and insofar as it often occurs at the height of one's own personal level of performance, it is little wonder that the games are extremely engaging and, hence, for some they feel addictive.

The latest media addiction to emerge is so-called Internet addiction. As with video and computer games, the Internet is also interactive *and*, importantly, it can be readily used to sustain or form social relationships.

Being connected with others when one is alone, any time of day, and so inexpensively is very attractive, and there can be little doubt that some individuals have grown dependent on the Internet for social contact. A small minority of new college students—perhaps 5 percent—are using the Internet so much that it appears to interfere with their social adaptation to college life, and for some, with their academic performance (Kubey, Lavin, & Barrows, 2001). New students can readily use the Internet to stay in touch with their old high school friends, and in maintaining these safe and familiar social links, or engaging in other parasocial activities on the Internet, a handful of students may be avoiding making new friends on campus.

Indeed, for growing numbers of us, the life we lead online may seem more important, more immediate, and more intense than the life we lead face-to-face.

We're not prepared to draw the conventional conclusion that being with people in real time is absolutely better than being with people on the Internet, but as with other activities, Internet activity can begin to eclipse the rest of life for some, and wisdom suggests that we at least raise the possibility that some of us have developed a habit of some significance that might be interfering with the quality of our relationships with those immediately around us.

CONTROLLING VIEWING AND OTHER MEDIA HABITS

There are ways in which individuals and families can achieve better control of their viewing habits, if that is their goal.

Raising awareness. As with other habits and dependencies, an early critical step is to become aware of how entrenched the viewing habit has become, how much time it absorbs, and the limited rewards of viewing. One way to do this is to keep a diary for a few days of all programs viewed. Some people may be assisted by also rating the quality of their experience with TV, noting how much they enjoyed or learned from various programs. Adding up the hours at the end of the week can be quite sobering. Multiplying by 365 can be even more so.

Promoting alternative activities. All too many individuals and families view automatically: that is, as soon as dinner is done, they watch television. To help break the repetitive, habitual, and self-perpetuating nature of the habit, people need to replace television viewing with other activities. Generating a list of enjoyable and/or constructive activities that can be done in or around the home may prove particularly helpful. The list might be posted on the refrigerator. (Not on the television if using a magnet, lest you harm the cathode ray tube.) Using such a list of enjoyable leisure activities has proved effective for patients suffering from mild depressive episodes. Instead of reflexively going to the television as soon as dinner is done, those interested in reducing their viewing can go to the list. (See the section above on a viewing reduction program for children that worked.)

Exerting willpower. Viewers often know that a particular program or movie is not to their liking within the first few minutes, but instead of switching off the set, they view for the full two hours. It can be helpful to consider that just five or ten minutes after turning off an only somewhat interesting mystery story, most viewers will rarely care what was going to happen next.

Enforcing limits. In addition to setting overall limits on viewing for one's self or one's children, one tip that works particularly well with younger children's video game or computer play is to tell a child, and his or her friends, that they may only play for some specific period. This might be 20 to 40 minutes. It

can be very effective to use a kitchen timer to set the time deemed appropriate. When it rings, the kids know to stop. For some parents, this works much better than announcing the deadline themselves. The kids may actually take the bell more seriously than the parent's words. For an extended discussion of parental responsibility for children's viewing habits, please see the section below.

Blocking channels/v-chip. Viewers can block particular channels or content. Nowadays, television sets come equipped with microchips that can be used to program the set to avoid violence. There are also electronic devices that can be attached to a television set and can be set to count how many hours each family member has viewed and not to permit access beyond a particular level.

Viewing selectively. Using a television guide can be helpful in cutting down on TV viewing. One chooses specific programs to watch ahead of time and then watches only those programs that have been preselected.

Using the VCR or recording device. A VCR, DVD-R, or Tivo can be very effective in time shifting and reducing time spent viewing. Many viewers never return to much of the material they've recorded.

Making television less available or going cold turkey. Many families have succeeded in substantially reducing viewing by limiting the household to one TV set and placing it in a remote room, often one with less than ideal seating. Others keep a set in a closet and bring it out only a few times a year for a particular event. Others end their cable subscription or disconnect the set from an antenna, only using the set to watch videotapes. And thousands of people jettison the set altogether. A group called TV-Free America will send a kit of free information about how to encourage complete abstinence or organize one's school or community for a TV-turnoff week.

Parental Responsibility for Children, with Regard to Dependent and Heavy Viewing

In making decisions and judgments about what is in the best interests of a child, and especially about children and media, it is critical to remember that every child is simultaneously unique and changing—often rapidly. Furthermore, every medium is different, and TV shows, video games, movies, and books offer an enormous range of content, form, and style. Still, there are some similarities among most children at different ages and across media and programs, games, and stories. So while idiosyncratic judgments with regard to each child are critical, there are also some general observations that can be made.

Today, we probably have more children at risk for developing a dependency on television than ever before. I have observed, as have others (personal com-

munication from James Hutchinson, M.D., April 1994), that a substantial number of parents do not believe that they can, or should, control their children's viewing. Some believe that there is no potential harm in anything that a child might watch. They believe that children can negotiate the television text on their own.

Many parents have reported to me that it is beyond their ability to limit their children's viewing. None of us wants to be a dictator, but in my opinion parents should not back off making decisions with regard to what their children may view on television. If parents are not in reasonable control of their households, and their children and their activities, we might conclude that the socialization process is, at best, undergoing change. At worst, we might expect all manner of social problems to ensue (Kubey, 1994, 1996).

Parental monitoring of children's viewing is important because there are many programs and materials that are unsuitable for some children, young children in particular. I am especially concerned about reality programming and news programs that often engender unnecessary and substantial fear. Indeed, I am as concerned about the fear-induction effects of violence as I am about the potential modeling effects (Kubey, 1987).

Children sometimes need to be supervised in their use of television, video games, computers, and other media, just as they sometimes need supervision when carving a pumpkin, walking downstairs, or riding a bicycle on the street. The idea that a great many different children's activities need to be monitored from time to time but somehow only media activities can be completely unsupervised is thoroughly illogical to me, yet some hold to such a position.

What I have just written will strike most readers as obvious. I have made these points for two reasons. The first is that some media scholars and researchers, most often those allied with the cultural studies approach to media studies—an approach that has made many important contributions to our understanding of how audiences experience and understand the media—believe that parents ought never to censor a child's media experience or prohibit a child from partaking in any medium that she might wish to experience. Some believe it is a presumptuous and arrogant act for a parent to intrude on or censor the media experience of a child.

For theoretical, political, and pedagogical reasons, some theorists have concluded that the media are a different kind of stimulus or phenomenon from things such as fire, dangerous strangers, candy, and unguarded cliffs and stairs. Television shows, books, and video games are all cultural products and can be actively negotiated by audience members, it is argued. Notably, much of the research on such negotiations, or readings, of media texts has been done with adolescents and adults, not children.

Indeed, some developmental psychologists have been criticized by some cultural studies advocates for being too proscriptive in their views about appropriate media content for children. There are leading cultural studies scholars who seem to suggest that the only media effect with which we need to concern ourselves is what these theorists see as the negative effect of developmental psychologists and other authorities pontificating to the culture at large through the media and causing moral panic about the potential harmfulness of media (Buckingham & Sefton-Green, 2001).

My second reason for emphasizing the need for caregivers to supervise children's media use is that many parents report that they were not restricted in their own viewing when they were young and yet they often watched a lot of violence on television. Insofar as they believe *they* were not psychologically harmed in any way, they now believe that they can safely permit their children to watch whatever they like.

Regardless of this belief, one only has to go to a movie rated PG-13 or R to observe parents or other caregivers with three- and four-year-old children on their laps or in the seat beside them witnessing material that is by most measures incredibly violent, frightening, and horrific. There is material that I myself turn away from on a large-screen film and I am in my mid-50s. I am doubtlessly being judgmental here in the view of some readers, but it is my view that young children should not be exposed to horrific violence or graphic sex when they are highly impressionable.

With regard to the idiosyncrasies of different children and the differences among media, let me relate a final story. My older son, now 23, was six when he first watched *The Wizard of Oz* on TV, a favorite movie of mine that his mother and I concluded was now appropriate for his viewing, even though it contains frightening scenes of flying monkeys and melting witches. But with another child we might have been wrong. During one commercial break, at around 7:30 p.m. CBS promoted a story to be shown a few days hence on its popular program *60 Minutes*. The ad included both a voiceover and words on screen promoting a story entitled "Kids Killing Kids?" The promotion was dominated by news footage of a child being rushed into a hospital emergency room on a stretcher, wrapped in gauze and bleeding. My son was frightened by what he saw and heard, and no wonder. He wanted to know whether or not kids really killed kids. We talked about it for a while, though it meant missing Dorothy's initial meeting with the cowardly lion.

I am not recommending that children be constantly supervised, only that for many children, today's media offerings—from television to video games and the Internet—demand more vigilance on the part of parents than was the case 30, 40, or 50 years ago.

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NOTE

1. Page numbers cited here for the *DSM* refer to the 1994 edition but it is important to note that the wording has gone unchanged in the 2000 edition. It can be obtained online.

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Excessive Buying as a Genuine Addictive Behavior

Paul Rose, PhD, and Dan J. Segrist, PhD

Addiction scientists have not always agreed on what is and is not an addictive behavior. Although there has been some longstanding consensus that particular substances can be addictive (e.g., alcohol, cocaine, heroin), cultural and technological evolution has forced us to reconsider whether the concept of addiction can also apply to certain behaviors. Can work be addictive? What about viewing soap operas, gambling, or playing video games? Anecdotal evidence suggests that these behaviors might sometimes reach “out of control” levels that produce clinically significant dysfunction or distress, but if the list of addictive behaviors is not carefully limited, the most dangerous addictive behaviors risk being trivialized by their association with less serious self-control problems.

The primary purpose of this chapter is to present the case for classifying excessive buying as an addictive behavior. While presenting this case, we wish neither to understate nor to overstate the gravity of the problem. In fact, we recognize that there may be several addictive behaviors that have worse consequences than excessive buying. But the primary issue with which we are concerned is whether the existing literature warrants the grouping of excessive buying with other behaviors that are widely accepted as addictive. To present the case for classifying excessive buying in this way, we first describe the nature of excessive buying and the general characteristics of people who are prone to it. We then present well-accepted definitions of addiction and demonstrate “goodness of fit” between existing definitions of addiction and excessive buying as it is presently understood. Following this, we emphasize that classifying excessive buying as a genuine behavioral addiction may stimulate considerable progress

in our understanding by facilitating knowledge transfer between the study of other addictive behaviors and the study of excessive buying.

WHAT IS EXCESSIVE BUYING?

Excessive buying is an enduring purchasing pattern that has reached a level so high that it is deemed problematic by either the consumer or people close to the consumer (such as family and friends). There are many reasons why such behavior might be experienced as problematic. Excessive buying can undermine a consumer's financial security (which has the potential to erode well-being; Drentea, 2000; Drentea & Lavrakas, 2000; Hatcher, 1994) but may also have harmful effects on relationships (Andersen, 2005; see also Dean, Carroll, & Yang, 2007) and mental health (Christenson et al., 1994). This behavior also has obvious negative consequences for the earth's ecosystem and may have indirect effects on other, international-scale problems, but in this chapter our focus is on excessive buying as an individual and interpersonal problem. We use the term *excessive buying* because this term is relatively free of unnecessary assumptions about the essence of the behavior (cf. Dittmar, 2004a; Swan-Kremeier, Mitchell, & Faber, 2005).

In empirical studies, excessive buying is most often operationalized with measures of "compulsive buying" (e.g., Edwards, 1993; Faber & O'Guinn, 1992; Valence, d'Astous, & Fortier, 1988). However, questionnaires labeled as indices of "impulse buying" (Mick, 1996; Rook & Fisher, 1995), "addictive buying" (Scherhorn, Reisch, & Raab, 1990), and (low levels of) "frugality" (Lastovicka, Bettencourt, Hughner, & Kuntze, 1999) appear to capture the same construct. Indeed, although each of these measures has been labeled differently, all of them measure the propensity to buy at high levels in spite of negative consequences. For example, the Valence et al. compulsive buying measure contains the item "When I have money, I cannot help but spend part or the whole of it"; the Rook and Fisher (1995) impulsive buying measure contains the item "Sometimes I am a bit reckless about what I buy"; and the Lastovicka et al. (1999) frugality measure contains the item "I believe in being careful in how I spend my money." As this sample of items suggests, the differing names of these scales belie the possibility that the scales assess a common latent construct.

Although no formal assessment of whether these various measures are actually measuring different constructs has been conducted, the evidence of which we are aware is consistent with a common-construct view. In unpublished data (Rose & Segrist, 2008), we have observed (with data obtained from a sample of 183 undergraduates) that scores on measures of impulse buying (Mick, 1996), compulsive buying (Faber & O'Guinn, 1992), and frugality (Lastovicka et al.,

1999) substantially intercorrelate (all r 's $> |.42|$; see also Troisi, Christopher, & Marek, 2006). (Frugality correlated negatively with impulse and compulsive buying, which correlated positively with each other.) All three measures also produced correlations of magnitude (r 's ranging from $|.37|$ to $|.43|$) similar to those of scores from Eysenck, Pearson, Easting, and Allsopp's (1985) Impulsiveness Questionnaire. At this point, therefore, it seems justified to assume that measures labeled as indices of compulsive buying, impulse buying, addictive buying, and frugality are at least approximately assessing the same construct.

Having stated this, an appreciation of the equifinality principle should compel us to recognize that there may be several very different routes by which consumers arrive at an excessive level of buying (cf. DeSarbo & Edwards, 1996). For instance, it has been repeatedly observed that compulsive buying is related to low self-esteem (e.g., d'Astous, 1990; Faber & O'Guinn, 1992; Scherhorn et al., 1990; cf. Valence et al., 1988), but it has also been observed that compulsive buying is related to narcissism (Rose, 2007). These findings may seem somewhat surprising in light of ample evidence that trait narcissism and trait self-esteem are positively related (Campbell, Rudich, & Sedikides, 2002; Rhodewalt & Morf, 1995; Rose, 2002). (Initial evidence, based on clinical speculations, that people with narcissistic personalities might dislike themselves "deep down" [i.e., beyond the reach of the questionnaires; Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003] has recently been contradicted by additional evidence [Campbell, Bosson, Goheen, Lakey, & Kernis, 2007].) These and other findings suggest that excessive buying, like many other addictive behaviors, may arise from a variety of different traits.

WHO BUYS EXCESSIVELY?

Until recently, little was known about the demographic and personality characteristics of excessive buyers. But primarily within the last two decades, numerous studies have provided a clearer picture of the background characteristics of these consumers.

Gender. In a recent review of compulsive buying research, Dittmar (2004b) noted that many studies suggest that compulsive buying is far more common among women than among men (e.g., d'Astous, 1990; Faber & O'Guinn, 1992; Scherhorn et al., 1990). However, she also acknowledged that the gender difference that has emerged in some studies may be exaggerated because of the sampling techniques that some researchers have used. Many researchers have recruited participants who self-identified as having buying problems, and because participants often volunteer for such studies with the hope of receiving

some help with their problem, women may have been especially likely to volunteer. After all, research has consistently demonstrated that women hold more favorable attitudes toward seeking help, including help for their psychological problems (see Mosher, 2002). For example, with regard to gambling problems, Ladd and Petry (2002) found that, among first-time treatment seekers, women sought treatment significantly sooner than men did. In addition, with regard to alcohol problems, Thom (1986) found that women were less likely than men to report that the belief that one should be able to resolve one's own problems was a barrier to seeking treatment (a finding that further attests to women's greater willingness to seek help for their problems).

Given that women generally seem more prone to seeking treatment than men do, and given that many research participants volunteer for studies with the hope of eventually getting help with their problems, it seems likely that earlier studies may have overestimated the degree to which excessive buying is more common among women than among men. Indeed, a recent phone survey conducted with a random sample of Americans indicated that 6.00 percent of women and 5.50 percent of men could be classified as compulsive buyers using Faber and O'Guinn's (1992) screening instrument (Koran, Faber, Aboujaoude, Large, & Serpe, 2006). Furthermore, in two nationally representative surveys conducted in Germany, women scored only moderately higher (i.e., .31 of a standard deviation higher) than men on Scherhorn et al.'s (1990) addictive buying scale (Neuner, Raab, & Reisch, 2005). The most reasonable conclusion at this point is that women are somewhat more prone to excessive buying, but the difference is not nearly as dramatic as some small-sample studies previously suggested. The magnitude of the gender difference may also vary across cultures.

Age. Existing data support the commonly held idea that young adults and teenagers experience more buying problems than older adults. In Neuner et al.'s (2005) surveys, Germans between 14 and 32 years of age scored higher in addictive buying than Germans between 33 and 49 years of age, and this middle-aged group scored higher than Germans older than 49. Using a sample of 190 Canadians (ranging in age from under 20 to over 74), d'Astous (1990) observed a negative association between age and compulsive buying. Similarly, in two surveys of British adults (with a few adolescents included in the first survey), Dittmar (2005) also found negative associations between age and compulsive buying. Negative correlations have also emerged in U.S. samples (Koran et al., 2006; Troisi et al., 2006). Dittmar (2005) uncovered evidence that materialistic values mediate the age-compulsive buying relationship, which suggests that teenagers and younger adults are the most susceptible to excessive buying because they are more materialistic than older adults.

Socioeconomic status (SES). In the United States, Canada, and Germany, it appears that excessive buying is negatively related to SES. In Koran et al.'s (2006) American survey, compulsive buyers were more likely to have incomes lower than \$50,000 per year than to have incomes above that amount. In a study of 135 adult (nonstudent) Americans, Rindfleisch, Burroughs, and Denton (1997) observed a small negative relationship between socioeconomic status and compulsive buying. In d'Astous's (1990) Canadian survey, a negative relationship also emerged between socioeconomic status and compulsive buying, although the very lowest SES group scored no higher than the second-lowest group. In addition, Scherhorn et al. (1990) reported a negative correlation between addictive buying and SES in their sample of German participants (who were not preselected for having buying problems).

Values. Values guide behavior toward desired ends (Rokeach, 1973) and may play an important, and perhaps underappreciated, role in the development of addiction problems (see Rose, 2007). Materialistic values are the most obvious values connected to excessive buying, and research confirms that measures of compulsive buying (Dittmar, 2005; Yurchisin & Johnson, 2004), impulsive buying (Rose, 2008), and frugality (Lastovicka et al., 1999) are all predictably correlated with materialism. Further insight into the values of excessive buyers comes from research on the broader values of materialistic consumers. Materialism is negatively correlated with the valuation of family, community, religion, universalism (care for all living things), and benevolence (concern for the welfare of close others); it is also positively correlated with the valuation of power, pleasure, achievement, and work (Burroughs & Rindfleisch, 2002). In addition, fame and image values (i.e., the valuation of popularity and looking good) are also positively correlated with materialism (Grouzet et al., 2005). These associations have been observed with *materialism*, however, so additional research is needed to determine whether excessive buying itself yields a similar pattern of correlations.

Personality. Because excessive buying is relatively stable over time, researchers have devoted substantial attention toward identifying how it is related to enduring aspects of personality. Excessive buying may be related to all of the big five personality traits (the basic traits thought to underlie all major dimensions of personality; Wiggins & Trapnell, 1997) except openness to experience (Mowen & Spears, 1999; Troisi et al., 2006). Several studies indicate that neuroticism, the tendency to consistently experience a variety of negative emotions, is positively related to excessive buying (Mowen & Spears, 1999; Stone, 2002), although the relationship is sometimes weak (e.g., Verplanken & Herabadi, 2001). As previously mentioned, excessive buying is also negatively related to self-esteem (d'Astous, 1990; Faber & O'Guinn, 1992; Scherhorn et al., 1990;

cf. Valence et al., 1988), and self-esteem is strongly negatively related to neuroticism (Robins, Tracy, Trzesniewski, Potter, & Gosling, 2001). Impulsivity, which is considered a component of neuroticism (Jang, Livesly, & Vernon, 1996), may be the personality trait to which excessive buying is most strongly related (Rose, 2007; see also Eysenck et al., 1985). The association between neuroticism (and its components) and excessive buying is consistent with the hypothesis that, in the absence of strong inhibitions, buying is sometimes used as a means of escaping distress (cf. Kyrios, Frost, & Steketee, 2004; Valence et al., 1988;).

Evidence of a relationship between extraversion and excessive buying is mixed. Although some studies indicate a positive relationship (e.g., Stone, 2002; Verplanken & Herabadi, 2001), others suggest no relationship (Mowen & Spears, 1999). This mixed evidence may be reasonably attributed to researchers' use of different extraversion measures in different studies. Sensation seeking, which is a component of extraversion (Jang et al., 1996; Olino, Klein, Durbin, Hayden, & Buckley, 2005) but is not captured to the same degree by all extraversion measures, correlates positively with impulse buying (Troisi et al., 2006). In contrast, extraversion measures that primarily emphasize sociability tend to yield near-zero correlations with compulsive buying (Mowen & Spears, 1999). In short, whether there is a significant association between extraversion and excessive buying may depend on how extraversion is measured and defined.

Although the relationship is weak and does not emerge in all studies (cf. Verplanken & Herabadi, 2001), there appears to be a positive relationship between agreeableness (i.e., kindness) and excessive buying (Mowen & Spears, 1999; Stone, 2002). Strange as this association may initially seem, it is understandable in light of evidence that excessive buyers are highly susceptible to others' influence (d'Astous, 1990; see also Yurchisin & Johnson, 2004). The desire to gain others' approval is a characteristic of materialistic consumers in general (Rose & DeJesus, 2007), and an orientation toward pleasing others may make resisting marketing messages particularly challenging.

Of all of the big five personality traits, conscientiousness appears to be the only one that is negatively related to excessive buying (Mowen & Spears, 1999; Verplanken & Herabadi, 2001). Conscientious people probably tend to plan their purchases carefully, and considering established plans when confronted with a buying impulse may be an effective strategy for resisting the temptation to buy (cf. Dholakia, 2000). Consistent with this possibility, Bearden, Money, and Nevins (2006) have demonstrated that their measure of planning tendencies is positively related to frugality and negatively related to compulsive buying.

Beyond the big five, recent research has established that trait narcissism is positively related to compulsive buying (Rose, 2007), apparently because narcissists tend to be both materialistic and impulsive. Several motivational variables have also been linked to excessive buying. Mowen and Spears (1999) have established that the need for arousal (similar to sensation seeking) is positively related to compulsive buying, possibly because people with a strong desire to experience excitement tend to be more materialistic (Troisi et al., 2006). Furthermore, Verplanken and Herabadi (2001) have observed that the need for structure (i.e., the motive to simplify and reduce ambiguity) and the need to evaluate (i.e., the motive to assess things positively and/or negatively) are both inversely related to the cognitive aspects of impulsive buying, such as buying with little forethought. A cogent account of the reasons behind these associations will require additional research.

In summary, although people who buy excessively vary widely in their characteristics, it seems that women, adolescents and young adults, and people of lower socioeconomic status are somewhat more prone than others to excessive buying. However, personality traits and values may be more important risk factors than any of these demographic variables. All of the big five personality traits (except openness to experience) seem to be related to excessive buying, with neuroticism (and especially the more specific neuroticism facet, impulsivity) being the most consistent trait predictor that researchers have uncovered thus far. Among values, materialism clearly stands out as the value most closely related to excessive buying, and numerous research studies confirm that these two variables are positively associated.

WHAT IS AN ADDICTIVE BEHAVIOR?

To fairly assess whether excessive buying should be categorized as an addictive behavior, it is necessary to carefully consider how addiction should be defined. Shaffer (1996) noted that the addictions field is marked by “conceptual chaos” and that “clinicians, researchers, and policy makers are without a shared definition of addiction” (p. 463). Similarly, Doweiko (2002) observed that “there is no single definition of addiction and a universally accepted, comprehensive theory of addiction has yet to be developed” (p. 21, cited in Coombs & Howatt, 2005). Traditionally, however, addiction has been conceptualized as a phenomenon reserved only for psychoactive substances (Coombs, 2004; Holden, 2001; Orford, 2001; Shaffer & Freed, 2005), whereby an individual demonstrates tolerance and withdrawal as well as a variety of negative consequences subsequent to the increased use of a drug. Consequently, similarly problematic behaviors that are now known as behavioral or process addictions

(such as compulsive gambling) were excluded from the traditional framework of addictive behaviors. M. B. Walker (1989), for example, argued that gambling should not be considered an addictive behavior because, he contended, there is insufficient evidence of dependency or withdrawal, and dissimilar biochemical mechanisms are at work.

Peele (1995) pointed out that even the traditional conceptualization of addiction is a relatively recent phenomenon: “addiction was not applied especially to narcotics or alcohol until well into this century. Until the twentieth century, *addiction* simply meant liking to engage in a habit” (p. 22). Furthermore, Shaffer (1996) has argued that physical dependence is not a requisite indicator of addiction, and Smith and Seymour (2004) assert that physical dependence is “no longer our sole definition of addiction” (p. 26). In fact, while the current editions of the *International Classification for Diseases (ICD-10; World Health Organization, 1990)* and the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association, 2000)* include tolerance and withdrawal as potential symptoms, neither is required for the diagnosis of substance dependence.

Unfortunately, the traditional view of addiction precludes many behaviors—behaviors that manifest dynamics quite similar to substance abuse and dependence—from fitting under the addiction umbrella. Orford (2001) asserts that because of the exclusive focus on drugs within the addictions field, “other forms of excessive appetite have been marginalized” (p. 2). Arguing against the narrow, traditional view of addiction, many authors have advocated that the concept of addiction can be generalized to other problem behaviors (e.g., Internet use; Young, 1996). For example, Peele (1995), a staunch critic of the disease model of addiction, suggests that in comparison with narcotics, activities such as gambling are more likely to be associated with a loss of control. Whelan, Steenbergh, and Meyers (2007) have also argued that gambling can be genuinely addictive. They noted that “Like other addictions, problem gambling includes loss of control, preoccupation, tolerance, withdrawal, escape, cravings, and other concomitant biopsychosocial problems” (p. 20).

Grant and Potenza (2005) point out that “mounting evidence supports phenomenological, clinical, epidemiological, and biological links between behavioral and drug addictions” (p. 303). Although M. B. Walker (1989) argued that the biochemistry underlying drug addiction is dissimilar to that of behavioral addictions such as gambling, the differences may be diminishing, as increasing evidence points to similarities between the neurological mechanisms implicated in substance-based addictions and behavioral addictions (Coombs & Howatt, 2005). For example, gambling has been shown to increase dopamine activity (Shizgal & Arvanitogiannis, 2003) and activate the brain’s pleasure center (Coombs & Howatt, 2005). Within the area of eating disorders, MARRAZZI and

Luby (1986) detail an “auto-addiction” model of anorexia implicating increases in endogenous opioids associated with starvation behaviors. They argue that this process contributes to the intractable nature of the disorder by creating an addictive cycle.

Other researchers have also pushed for a broader conceptualization of addictive behavior. Shaffer (1996) has asserted that “It is the relationship of the addicted person with the object of their excessive behavior that defines addiction” (p. 465), and Orford (2001) has argued that behaviors such as gambling, sex, and eating should be considered addictive behaviors because they “can get sufficiently out of hand” and “spoil the lives of many people” (p. 3). Coombs and Howatt (2005) have also conceptualized addictive behaviors broadly; they describe these behaviors as actions characterized by compulsive use, loss of control, and continued use in the face of harmful consequences. Consistent with these broader views, Grant and Potenza (2005) have outlined several similarities between drug and behavioral addictions: “(1) repetitive or compulsive engagement in the behavior despite adverse consequences; (2) diminished control over the problematic behavior; (3) an appetitive urge or craving state prior to engagement in the problematic behavior; and (4) a hedonic quality during the performance of the problematic behavior” (p. 304). With these perspectives in mind, we believe that one of the most reasonable definitions of addiction has been offered by Goodman (1990), who wrote that addiction is “a process whereby a behavior, that can function both to produce pleasure and to provide relief from internal discomfort, is employed in a pattern characterized by (1) recurrent failure to control the behavior (powerlessness) and (2) continuation of the behavior despite significant negative consequences (unmanageability)” (p. 1404).

A perusal of several major addiction journals attests to the fact that the zeitgeist within the addictions field is changing, leading to a more flexible characterization of what constitutes an addictive behavior. It is noteworthy that *Psychology of Addictive Behaviors*, a peer-reviewed journal of the American Psychological Association, reviews and publishes “articles on the full range of addictive behaviors, including alcohol use and addiction, drug use and misuse, eating disorders, tobacco and nicotine addiction, and *gambling and other excessive behavior patterns*” (emphasis added). Similarly, the leading journal *Addiction* “publishes peer-reviewed research on alcohol, illicit drugs, tobacco and *behavioural addictions*” (emphasis added).

DOES EXCESSIVE BUYING FIT WITHIN CURRENT CONCEPTUALIZATIONS OF ADDICTIVE BEHAVIOR?

Given the ways in which addictive behavior is now defined by many leading addiction scientists, we suggest that a behavioral pattern can be fairly classified

as addictive to the extent that the behavioral pattern (a) can produce pleasure (i.e., a “high”) at least some of the time; (b) has reached an “out of control” level; and (c) persists in the face of harmful consequences (cf. Goodman, 1990). In this section, we demonstrate that excessive buying meets these criteria.

People who buy excessively experience buying as pleasurable. Many people seem to believe that buying can be a pleasurable experience, and both theory (Holbrook & Hirschman, 1982) and research (e.g., Cox, Cox, & Anderson, 2005) confirm that it can be a pleasurable experience in some circumstances. Some purchasing activities can even evoke excitement (Wakefield & Baker, 1998) and elation (Mano & Oliver, 1993). Indeed, the mere perception of a preferred product is associated with activation of the nucleus accumbens (Knutson, Rick, Wimmer, Prelec, & Loewenstein, 2007), a conglomeration of neurons in the forebrain that are involved in the experience of pleasure.

Consumers who buy excessively, however, seem especially prone to experiencing a rush of pleasure while purchasing. Faber and O’Guinn (1988) have demonstrated that compulsive buyers are much more likely than other consumers to report feeling high while shopping, and Lejoyeux, Mathieu, Embouazza, Huet, and Lequen (2007) have similarly shown that compulsive buyers find purchasing more gratifying than other consumers do. The strong high experienced by excessive buyers seems to stem from the purchasing act itself; both Valence et al. (1988) and Faber and O’Guinn (1988) have demonstrated that excessive buyers derive little satisfaction from owning the things they purchase.

People who buy excessively experience their buying as “out of control.” A feeling of diminished volitional control is a cardinal feature of excessive buying. Qualitative studies have repeatedly documented that consumers who buy excessively feel as if their consumption is out of control (e.g., Dittmar, 2004b; Rook, 1987), and several measures of excessive buying include items that assess this experience. To provide a few examples (with italics added), Valence et al.’s (1988) compulsive buying measure includes the item “When I have money I *cannot help* but spend part or all of it”; Verplanken and Herabadi’s (2001) impulsive buying measure contains the item “I sometimes *cannot suppress* the feeling of wanting to buy something”; and Lastovicka et al.’s (1999) frugality scale contains the item “There are things I *resist* buying today so I can save for tomorrow.” Also, Faber and O’Guinn (1988) have demonstrated that, much more than other consumers, compulsive buyers report going on buying binges and feeling unable to stop.

The diminished sense of control experienced by excessive buyers seems very similar to that of people who experience other addictions. A substantial body of research suggests that diminished impulse control is associated with a wide variety of addictive behaviors (e.g., Acton, 2002; Miller & Brown,

1991), including excessive buying (Rose, 2007; Spinella, Yang, & Lester, 2007). Impulse control is partly heritable (Jang et al., 1996) and seems to be associated with prefrontal cortical functioning and the functioning of the orbitofrontal circuit in particular (Grace, Stout, & Malloy, 1999; Spinella, 2004). Indeed, O'Doherty, Kringelbach, Rolls, Hornak, and Andrews (2001) have demonstrated that experiencing hypothetical financial rewards and losses activates the orbitofrontal cortex. Given the existing research, therefore, we may hypothesize that suboptimal orbitofrontal functioning predisposes people to excessive buying and other impulse-control problems.

People who buy excessively persist in their purchasing in spite of adverse consequences. A third way in which excessive buying fits within current conceptualizations of addictive behavior is that it persists even when the consumer experiences harmful consequences from his or her buying. To provide evidence of this, in the section that follows, we document some of the negative consequences of excessive buying that research has uncovered thus far. Thereafter we demonstrate that excessive buyers persist in their extreme buying habits in spite of these negative consequences.

WHAT ARE THE ADVERSE CONSEQUENCES OF EXCESSIVE BUYING?

Financial stress and its sequelae. The most obvious negative consequence of excessive buying is that it undermines financial security (Faber, 2004). Financial problems may seem trivial in comparison to the negative effects of some other addictive behaviors, but in fact, such problems are likely antecedents of a wide range of health-, family-, and work-related problems. Financial strain is associated with general psychological distress (Whelan, 1992) and depressive symptoms in particular (Mills, Grasmick, Morgan, & Wenk, 1992). It has also been linked to smoking (Siahpush, Borland, & Scollo, 2003) and increases in alcohol consumption over time (when financial support from others is low; Peirce, Frone, Russell, & Cooper, 1996; see also Moos, Fenn, Billings, & Moos, 1989). Peirce et al.'s (1996) longitudinal study is an especially important contribution to our knowledge about the consequences of financial stress, because it rules out the possibility that financial problems are linked to alcohol use merely because purchasing large quantities of alcohol strains people's budgets. Peirce et al.'s (1996) study demonstrates increased drinking *following* financial strain (among people who have little financial support from others), suggesting that in some circumstances money problems may cause greater substance abuse.

Several studies also link financial difficulties with family problems. Financial strain among married people is associated with lower marital satisfaction,

both for the person reporting financial problems and for that person's spouse (Dean et al., 2007). Parents experiencing financial strain report higher levels of depression, as do their adolescent children (Clark-Lempers, Lempers, & Netusil, 1990). Moreover, children of parents with high levels of financial stress also experience more impulsive and antisocial behavioral problems (Takeuchi, Williams, & Adair, 1991).

Financial stress also seems to affect a variety of health problems. In O'Neill, Sorhaindo, Xiao, and Garman's (2005) survey of consumers participating in a debt management program, self-reported improvements in participants' financial situations were associated with reports of improved overall health. Although this finding (like all of the correlational findings in this section) raises questions about which way the causal arrow might point (because health problems might cause financial problems and vice versa), there are reasons to believe that financial stress might cause poorer health. For instance, Rosengren et al. (2004) found that compared to control patients, patients who had experienced a heart attack were more likely to report severe financial stress in the 12 months *prior* to their hospital admission.

Financial stress may also affect people's work lives, because employees experiencing greater financial stress exhibit lower job satisfaction (Bailey, Woodiel, Turner, & Young, 1998), lower organizational commitment (i.e., sense of attachment to the organization), and higher absenteeism (Kim & Garman, 2003). In short, financial stress seems to produce many of the same detrimental effects that other types of stress do, and these consequences are far from trivial. Because excessive buying has an obvious negative effect on many consumers' financial security, it may have an indirect effect on a wide variety of occupational, familial, and personal problems.

Affective distress. Excessive buyers seem to be highly prone to guilt and shame (Edwards, 1993; O'Guinn & Faber, 1989; Valence et al., 1988), emotions that are often classed with other "self-conscious" emotions (Tangney & Fischer, 1995). Studies suggest that guilt and shame are both related to hostility, anxiety, and depression as well as psychotic, paranoid, and obsessive-compulsive symptoms (Tangney, Wagner, & Gramzow, 1992). Shame in particular has been linked to posttraumatic stress symptoms and somatization symptoms, although guilt may also be indirectly related to these symptoms through shame (Pineles, Street, & Koenen, 2006). These findings are consistent with research on both substance-based addictive behaviors (see Marlatt & Witkiewitz, 2005) and other behavioral addictions such as gambling (see Shaffer & LaPlante, 2005), in which people with addiction problems have elevated rates of mood disorders. It is important to note that among people with substance use prob-

lems, negative emotional states are strongly linked to relapse (see Marlatt & Witkiewitz, 2005). In future research, it would be helpful to examine whether this link between negative states and relapse might also exist for people who are in treatment for excessive buying.

One reason why excessive buyers may be prone to aversive self-conscious emotions is that they have some awareness that their buying is a serious personal problem (cf. Scherhorn et al., 1990). Self-report measures of excessive buying, and the many studies that employ them, clearly suggest that many compulsive buyers recognize that their buying habits are problematic. For example, the Rook and Fisher (1995) impulsive buying scale includes the item "Sometimes I am a bit reckless about what I buy"; and the Valence et al. (1988) compulsive buying scale includes the item "There are some things I buy that I do not show to anybody for fear of being perceived as irrational in my buying behavior ('a foolish expense')". These and similar items require the respondent to admit that he or she may have a buying problem, and suggest that excessive buyers are prone to feeling guilty about their purchases and ashamed of themselves. As suggested above, these feelings may predispose people to a wide variety of mental health problems.

Consistent with evidence that excessive buying is linked to affective distress (see also Scherhorn et al., 1990), Faber and O'Guinn (1988) have demonstrated that excessive buyers are more likely than other consumers to feel depressed after shopping. (It may seem that these consumers should be especially happy with their new purchases, but as previously mentioned, several studies suggest that compulsive buyers gain little satisfaction from the objects they buy. It is the buying act itself that thrills them; Faber & O'Guinn, 1988; O'Guinn & Faber, 1989; Scherhorn et al., 1990.) Although no research has clearly delineated the reasons for a link between excessive buying and depression, existing studies lead us to tentatively propose a model of how excessive buying might contribute to such distressing feelings. First, when a consumer buys something he believes should not have been bought, he should experience guilt (as people often do when they act contrary to their personal standards). Once guilty feelings arise, the bad act (buying when one shouldn't have bought) may be interpreted as evidence of a bad self; thus, guilt may give rise to shame (cf. Tangney et al., 1992). When shame arises, depressive thoughts and feelings may naturally follow, because negative self-views are central to the experience of depression. Although we provide this as a possible (and as yet untested) explanation for how excessive buying might contribute to depression, we recognize that depression might also engender excessive buying (especially among consumers who believe that buying can make them feel better).

DO PEOPLE WHO BUY EXCESSIVELY PERSIST IN SPITE OF ADVERSE CONSEQUENCES?

By definition, excessive buying is an enduring pattern of buying, and as we have shown above, adverse consequences follow from this enduring pattern. The question posed in the heading of this section is thus easily answered by reflecting on the definition of excessive buying and why it is considered a problem. If excessive buyers persist in their extreme buying habits even after they experience harmful repercussions, it seems clear that excessive buying, like other addictive behaviors, is characterized by maladaptive persistence. Indeed, items commonly used to measure excessive buying suggest that excessive buyers frequently fail to factor adverse consequences into their buying choices. “How often have you bought things even though you knew you couldn’t afford them?” (from Faber and O’Guinn’s [1992] compulsive buying measure) captures a tendency to keep spending at high levels in spite of negative outcomes. Other items that suggest a disregard for adverse consequences include “I have often bought a product that I did not need, while knowing that I have very little money left” (from Valence et al.’s [1988] compulsive buying measure) and “When I see something that really interests me, I buy it without considering the consequences” (from Weun, Jones, and Beatty’s [1997] impulsive buying measure). The failure to consider the deleterious consequences of purchasing decisions is clearly central to the experience of persistent buying in the face of harmful consequences.

Qualitative data also reveal a pattern of maladaptive persistence among people who buy excessively. Excessive buyers interviewed by Dittmar (2004b) mentioned an awareness of having a problem, but a perceived inability to stay below the limit on a credit card, to cut up a credit card, or to pass by a store without buying anything. Similarly, O’Guinn and Faber (1989) interviewed an excessive buyer who said she could not stop even though (she believed) her husband and children hated her for her problem. Given the desperate tone of some of these statements, it seems that many excessive buyers do have a goal of reducing their buying, but the temptation to buy overpowers this goal.

FUTURE DIRECTIONS IN THE STUDY OF EXCESSIVE BUYING

One of the substantial benefits of recognizing that excessive buying should be classed among other behavioral addictions is that it may facilitate knowledge transfer between our currently rudimentary understanding of excessive buying and our more mature understanding of some other addictive behaviors. As fur-

ther research identifies similarities between excessive buying and other addictive behaviors, clinicians should have better knowledge to draw upon as they seek to help people who experience excessive buying problems. Toward this end, we suggest that researchers investigating excessive buying would do well to model lines of research that have already produced valuable insights into substance abuse and dependence. In the paragraphs that follow, we highlight just a few constructs from substance use research—several of which draw from Marlatt and Gordon's relapse prevention model (see Larimer, Palmer, & Marlatt, 1999; Marlatt & Donovan, 2005; Marlatt & Gordon, 1985)—that might be profitably applied to research on excessive buying. We stress that the concepts that follow are only a limited sample of the ideas from substance abuse research that could be used to build a better understanding of excessive buying.

Outcome expectancies. Research on alcohol consumption has demonstrated that outcome expectancies—"anticipated effects that an individual expects will occur as a result of alcohol or drug consumption" (Marlatt & Witkiewitz, 2005, p. 10)—are predictive of use (e.g., Brown, 1985; Smith & Goldman, 1994), beverage selection (Corcoran & Segrist, 1993), and consequences related to use (e.g., Blume, Lostutter, Schmaling, & Marlatt, 2003). Goldman, Del Boca, and Darkes (1999) note that since the late 1980s there has been "an explosion of research applying the expectancy concept to alcohol use" (p. 205). An important aspect of expectancies, as pointed out by Walters and Baer (2006), is that "Whether accurate or not, these beliefs are related to drinking" (p. 38). For example, despite the fact that alcohol can impair sexual desire and performance (e.g., Miller & Gold, 1988), individuals may *believe* that alcohol can increase their sexual prowess and behave accordingly.

Measures of alcohol expectancies typically include anticipated physiological, psychological, and social outcomes that serve as potential predictors of use. Some of the alcohol expectancies that have been researched are positive (e.g., those assessed by the Alcohol Expectancy Questionnaire; Brown, Goldman, Inn, & Anderson, 1980), whereas others are negative (such as those assessed by the Negative Alcohol Expectancy Questionnaire; Jones & McMahon, 1994). Some studies, such as those employing the Comprehensive Effects of Alcohol Scale (CEOA; Fromme, Stroot, & Kaplan, 1993) have examined alcohol expectancies that are both positive (e.g., tension reduction: *I would feel calm*) and negative (e.g., self-perception: *I would feel guilty; my problems would seem worse*). The expectancy concept has been applied to other substance behaviors, including expectations and motivations for smoking (e.g., Copeland, Brandon, & Quinn, 1995; Gilbert, Sharpe, Ramanaiah, Detwiler, & Anderson, 2000), as well as expectations about marijuana (Gaher & Simmons, 2007) and cocaine use (Schafer & Brown, 1991).

Recently, the expectancy concept has been used to build knowledge of non-substance addictive behaviors such as eating disorders (see Collins, 2005; Collins & Ricciardelli, 2005) and gambling (e.g., Raylu & Oei, 2004). Nevertheless, to our knowledge, the study of outcome expectancies associated with buying has been relatively neglected. One relevant study (Babin, Darden, & Griffin, 1994) involved the development of a scale to assess what participants expected to gain from their shopping. Results indicated that the measure assessed two factors: hedonic value (e.g., "While shopping I was able to forget my problems.") and utilitarian value (e.g., "I accomplished just what I wanted on this shopping trip."). Although the hedonic factor correlated with compulsive buying, it is important to note that the scale developed in this study assessed participants' experience of a *specific* shopping occasion, not the experience of shopping in general. Furthermore, there are undoubtedly many other outcome expectancies that predict excessive buying. Given the contribution that the expectancies construct has made to the assessment and treatment of other addictive behaviors, further exploration of buying-related outcome expectancies would seem a particularly fruitful avenue for future research.

High-risk situations. In summarizing Marlatt and Gordon's (1985) relapse prevention model, Larimer, Palmer, and Marlatt (1999) describe situations that "pose a threat to the person's sense of control and, consequently, precipitate a relapse crisis" (p. 153). These high-risk situations are typically characterized by any or all of the following components: negative affect, interpersonal conflict, pressure from others to engage in the problem behavior, and positive mood states (Larimer et al., 1999). The identification of high-risk situations, as well as the development of strategies for navigating them, is an important focus of treatment within the relapse prevention model.

How might applying the concept of high-risk situations to excessive buying be useful? At least some (if not all) of the high-risk situations described by Larimer et al. (1999) may precipitate buying binges, but none of these situations (other than negative affect) have been investigated as antecedents of excessive buying. Knowledge about such high-risk situations would be extremely valuable, as clinicians might need to help clients recognize and respond appropriately to situations that are high risk. If a client with an excessive buying problem is to successfully overcome a buying addiction, it seems crucial that he develop a repertoire of strategies for handling such high-risk situations.

Seemingly unimportant decisions. An element of Marlatt and Gordon's (1985) relapse prevention model centers around the decisions an individual makes that place her in a high-risk situation. Some of these decisions are referred to as seemingly unimportant decisions (SUDs; e.g., Wheeler, George, & Stephens, 2005) or apparently irrelevant decisions (AIDs)—"a series of covert decisions or choices, each of them seemingly inconsequential, which in combination set

the person up for situations with overwhelmingly high risk” (Larimer et al., 1999, p. 154). For example, at first glance, Cindy’s seemingly unimportant decision to take a different route from work to her home may appear unrelated to her ultimately buying \$900 worth of new clothes. But Cindy’s choice of a different route actually led Cindy to drive by the mall, the sight of which gave her an overwhelming urge to buy, which ultimately led her to make several unplanned and unneeded purchases at considerable expense.

Individuals with excessive buying problems face a multitude of opportunities for SUDs (e.g., deciding to go to a Wal-Mart supercenter, instead of a grocery store, for a gallon of milk). In future research, it may be insightful to focus on the role of such decisions in triggering or sustaining excessive buying, with the ultimate goal of helping clients identify and appropriately respond to the subtle but powerful precursors to high-risk situations that lead to buying binges. Such research may eventually enable clinicians to help clients prone to excessive buying reconceptualize “impulse purchases” as acts preceded by a series of decisions that only *seemed* unimportant.

Stages of change. Prochaska, DiClemente, and Norcross (1992) proposed that individuals pursuing treatment for addictive behaviors progress through a series of stages: precontemplation, contemplation, preparation, action, and maintenance (also see Prochaska & Norcross, 2007). At the precontemplation stage, an individual has no interest in changing her behavior or is not aware of the potential consequences of the behavior (Dimeff, Baer, Kivlahan, & Marlatt, 1999). The contemplation stage entails the recognition of a problem, but no consistent dedication to change. The preparation stage is characterized by an intention to make changes soon. During the action stage, a client makes changes in his behavior or environment. Finally, a client in the maintenance stage works to sustain positive changes he has previously made and prevent relapse.

The stages of change model has been applied to several addictive behaviors including gambling (Petry, 2005; Shaffer & LaPlante, 2005), marijuana use (Walker, Roffman, Stephens, Berghuis, & Kim, 2006), eating disorders (Collins, 2005), smoking (Schuman et al., 2005), and others (Prochaska et al., 1994). However, we are not aware of any research on stages of change for people pursuing treatment for buying problems. Such research might be extremely useful to therapists, because as Blume (2004) has noted, “by establishing at what state of change a person might be, therapists can determine what might be the best therapeutic strategies to use with the patient” (pp. 89–90). Global measures to assess stages of change have been developed (e.g., University of Rhode Island Change Assessment: Long Form; McConaughy, Prochaska, & Velicer, 1983) and so have specific measures designed to assess stages of change across a variety of behaviors (see *Cancer Prevention Research Center Measures*), including those of alcohol use (Alcohol Stages of Change: Short Form; Laforge,

Maddock, & Rossi, 1998), smoking (Smoking: Stage of Change, Short Form; DiClemente et al., 1991; Velicer et al., 1995), and health activities (General Health Survey; Nigg et al., 1999). Because understanding a client's motivation level has implications for treatment, creating measures to assess and further our understanding of stages of change in the context of excessive buying makes sense from both a research and treatment standpoint.

Social norm perceptions. The social norms framework has become an important approach for understanding substance use, particularly alcohol use (see Perkins 2003). Substance use research has consistently demonstrated a tendency among adolescents and young adults to believe that others use psychoactive substances more frequently and in greater quantities than oneself (e.g., Perkins, Meilman, Leichliter, Cashin, & Presley, 1999; Segrist, Corcoran, Jordan-Fleming, & Rose, 2007). These perceived norms, even though they are often inaccurate, are predictive of greater consumption (Perkins, Haines, & Rice, 2005). Consequently, social norms interventions seek to correct misperceptions of peer drinking behaviors (Perkins, 2003). Given the extremely high level of exposure people usually have to marketing messages that promote buying, it would not be surprising if many consumers similarly hold an inflated perception of how much buying is actually occurring among their peers. Furthermore, previous research on the association between perceived norms and substance use suggests that perceptions of high peer consumption may lead to greater personal consumption. From a treatment standpoint, an understanding of the role of norm perceptions in sustaining excessive buying may be particularly valuable, because these beliefs may need to be addressed and corrected before a client is ready to make significant changes in her buying.

In summary, a considerable benefit of recognizing that excessive buying is a genuine addictive behavior is that hypotheses that have already proven useful in the study of other addictive behaviors might be fruitfully applied to increasing our understanding, recognition, and treatment of excessive buying. The brief list of potentially applicable concepts that we have reviewed above could provide much-needed direction in the excessive buying literature, as could many other concepts in the addictions literature that researchers of excessive buying have yet to exploit. Ultimately, an extensive analysis of the ways in which excessive buying is similar to and different from other addictive behaviors should be helpful as therapists seek to develop effective and specific treatments for excessive buying.

CONCLUSION

Our primary objective in this chapter has been to demonstrate that excessive buying should be classed with other addictive behaviors. Toward this end, we

have briefly reviewed some of the characteristics of people who buy excessively, considered how addictive behaviors should be defined, and established that excessive buying fits within contemporary definitions of addictive behavior. To illustrate one potential benefit of classifying excessive buying as an addictive behavior, we have emphasized that considerable progress in theory construction and treatment might be made by applying concepts developed in the study of other addictive behaviors to research on excessive buying.

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Compulsive Buying Disorder

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Buying is a universal, everyday human experience and has been practiced since ancient times. Besides being recognized for its primary function of acquiring an essential item, it is also recognized as a leisure activity. The ability to buy saw the emergence of monetary power as a significant determinant of social status. Excessive buying is sometimes not uncommon, especially in situations such as those of holidays, festivals, marriage, and so on. However, such occasional buying sprees are not recognized as a problem. In some individuals, indulgence in buying behavior is excessive and extreme, so much so that it results in significant psychological, interpersonal, financial, and legal difficulties. Since the beginning of the twentieth century, a clinically significant problem of buying behavior has been recognized. Kraepelin (1915) referred to it as *oniomania*, a term that is derived from the Greek words *onios*—for sale, and *mania*—insanity. Kraepelin based this on Esquirol's concept of monomania (Esquirol, 1838). Bleuler (1924) recognized impulsiveness as its core feature and classified it with pyromania and kleptomania. Subsequently, interest in this disorder remained limited to psychoanalysts and consumer behaviorists. The situation changed in the early 1990s, when independent research workers published three case series and interest in this condition was rekindled. Data on the demographics and phenomenology of 24 compulsive buyers in comparison to normal buyers was reported (Christenson, Faber, & de Zwann, 1994). For the first time, diagnostic criteria for compulsive buying disorder (CBD) were proposed, and data on 20 consecutive diagnosed patients with problematic buying behavior were published (McElroy, Keck, Pope, Smith, & Strakowski, 1994). In

addition to clinical features, overall lifestyle, comorbidity, and other problems in 46 compulsive buyers were studied (Schlosser, Black, Repertinger, & Freet, 1994). Since then, reports of compulsive buying have started to emerge from all parts of the world. "Uncontrolled problematic buying behavior has been referred to as uncontrolled buying, compulsive buying, compulsive shopping, addictive buying, excessive buying, and spendaholism" (Koran, Faber, Aboujaoude, Large, & Serpe, 2006, p. 1806).

Research in this field in the last decade and a half has witnessed progress from descriptions of compulsive buying behavior to the proposal of diagnostic criteria for compulsive buying disorder. Robins and Guze (1970) proposed five phases for establishing the diagnostic reliability and validity of a psychiatric disorder: clinical description, exclusion of other disorders, follow-up, family studies, and laboratory study. The focus of research has been on identifying and delineating these phases so as to establish the reliability and validity of diagnosis of CBD. Based on all this, there is a proposal to include compulsive buying disorder as a diagnostic category in future revisions of classificatory systems. Currently, it is not included in the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition, text revision (*DSM-IV-TR*; American Psychiatric Association, 2004) or the *International Classification of Diseases*, 10th edition (*ICD-10*; World Health Organization [WHO], 1992) as a separate diagnostic category.

The researchers in the field have conceptualized compulsive buying disorder as being linked to impulse control disorders, obsessive-compulsive spectrum disorders, mood disorders, and substance and behavioral addiction disorders. It is linked to impulse control disorders (Black, 2007), based on similar clinical features like failure to resist an impulse to perform an act of buying, an increasing sense of arousal or tension prior to the act, and an experience of pleasure, gratification, or release of tension at the time of committing the act. It is also considered close to the obsessive-compulsive disorders (Hollander et al., 1996). The repeated idea of buying is conceptualized as an obsession. When this idea is resisted, it results in anxiety, which is relieved by a compulsive act in the form of buying. In fact, some researchers consider it to be a compulsive-impulsive disorder (Dell'Osso, Altamura, Allen, Marazziti, & Hollander, 2006), as it is proposed that impulsive features initiate the behaviors, and the compulsive drive causes the behaviors to persist over time. Its relationship to mood disorders, mainly depression (Lejoyeux, Ades, Tassain, & Solomon, 1996), is suggested by elevated scores on depression rating scales. Also, the concept of behavioral addiction (Krych, 1989) is applied to compulsive buying disorder because buying produces the same sequence of events as those produced by addictive substances. Buying behavior gains increasing significance despite

adverse consequences. Attempts to cut down the behavior result in restlessness. The conceptualized link to one of these disorders has an important role in deciding under which section of classificatory systems compulsive buying disorder will be included. Conversely, attempts to categorize compulsive buying as an illness are seen as a part of a trend to medicalize behavioral problems that may be better understood within the wider social context of the consumption-driven economy (Lee & Mysyk, 2004).

This chapter aims to present an overview of compulsive buying disorder based on research carried out in the last 15 years, in epidemiology, etiology, clinical features, diagnosis, comorbidity, and treatment.

EPIDEMIOLOGY

Prevalence

Faber and O'Guinn (1992) estimated the prevalence of CBD to be 2–8 percent in the adult general population by administering Compulsive Buying Scale (CBS) to 292 respondents in Illinois. Recently, in a nationwide random telephone survey in the United States, (using a large general population sample), CBS embedded in a computer assisted telephone interview was administered to 2,513 adult respondents. The point prevalence was calculated by using scores on CBS as two standard deviations below the mean and was found to be 5.8 percent. Using a stricter criterion, (three standard deviations below the mean), 1.4 percent of individuals were reported to have this disorder (Koran et al., 2006).

A hospital-based study examined the frequency of co-occurring impulse control disorders including CBD in 204 consecutively admitted psychiatric inpatients. Using the Minnesota Impulsive Disorders Interview, it was found that 30.9 percent had at least one current impulse control disorder. A total of 9.3 percent of patients with impulse control disorders had CBD, which was also the commonest diagnosis (Grant, Levine, Kim, & Potenza, 2005).

An interesting study (Lejoyeux, Mathieu, Embouazza, Huet, & Lequen, 2007) on women consumers in a famous department store found that 32.5 percent exhibited compulsive buying. Further analysis revealed that in comparison to controls, they considered purchases as opportunities not to be missed, used purchased items less often, made purchases to impress others, considered purchases as personally gratifying, and stayed connected to online shopping sites longer.

Gender

Compulsive buying is seen mostly in women and it is ascribed to the appeal of risky and exciting situations by some of them (Bleuler, 1924; Kraepelin,

1915). In the clinical case series referred to above, 80–94 percent of compulsive buyers are reported to be women (Christenson et al., 1994; McElroy et al., 1994; Schlosser et al., 1994). However, the nationwide community survey (Koran et al., 2006) found that point prevalence is almost equal in both sexes; 6.0 percent for women and 5.5 percent for men, thereby refuting the notion that it is more common in women. The difference in clinical and community settings is probably due to the willingness of women to seek treatment. It is also possible that the recruitment strategies, for example, daytime television ads or contact with self-help groups, might have resulted in a larger number of women in the clinical cases.

Age of Onset

The onset of compulsive buying is reported to be in the late teens or early twenties, which correlates with the time when the individual is establishing separation from the nuclear family. Also, this is the age when a person can first establish credit. By the time the behavior is recognized as problematic, individuals are in their thirties (Black, 2007a). Compulsive buying in adolescents is likely to be associated with several risky behaviors like cigarette smoking, alcohol use, drug use, and early sex (Roberts & Tanner, 2000), as seen in a survey conducted among 111 adolescents between the ages of 12 and 19 years.

ETIOLOGY

There is no single cause of compulsive buying disorder. However, psychological, sociocultural, neurobiological, and genetic factors may contribute toward its causation.

Psychological and Sociocultural Perspective

From a psychodynamic perspective, compulsive buying forms a specific complex with common developmental precursors of pathological narcissism (Kruger, 1988). Positive associations emerge between narcissism, materialism, and compulsive buying in young graduates. Personal values and impulse control are important correlates of addictive buying. Relatively narcissistic persons are poor self-regulators and may be at risk of developing a variety of addictive behaviors (Rose, 2007).

Dittmar (2005) found endorsement of materialistic values to be the strongest predictor of individuals' compulsive buying; such endorsement significantly mediated the observed age differences. In-depth interviews with persons

exhibiting compulsive buying suggest that the behavior serves a variety of functions for them; it improves their mood and increases their ability to match their perceptions of socially desirable appearances. This behavior is located in the context of postmodern fragmentation, where personal identity is manifested in a reliance on emotionally charged experiences (Elliott, 1994).

Black (2007) hypothesized that sociocultural mechanisms are necessary for the development of CBD, as evidenced by the fact that the disorder largely occurs in developed countries. A market-based economy, the availability of a wide variety of goods, a disposable income, and significant leisure time are necessary for the development of compulsive buying.

Neurobiological Perspective

Disturbed neurotransmission, specifically of the serotonergic, dopaminergic, and opioid systems has been hypothesized to have a role in the causation of CBD. This causation is presumed because the drugs used in the treatment of CBD act on these neurotransmitter systems. However, there are no studies that have directly examined these hypotheses. The serotonergic system is implicated because selective serotonin reuptake inhibitors (SSRIs) have been used in its treatment based on its closeness to obsessive-compulsive disorder (Ninan et al., 2000). In behavioral addictions like CBD and pathological gambling, the changes in dopaminergic pathways have been implicated. Reward-seeking such as buying in CBD, triggers the release of dopamine and produces feelings of pleasure (Grant, 2003).

Limited research on genetics suggests that compulsive buying may run in families. McElroy et al. (1994) studied family history data on 18 compulsive buyers; 17 had one or more first-degree relatives with a mood disorder, 11 had alcohol or substance abuse, three had an anxiety disorder and three exhibited compulsive buying. In a larger study (Black, Repertinger, Gaffney, & Gabel, 1998), 137 first-degree relatives of 31 compulsive buyers were interviewed; 9.5 percent of them had CBD. In comparison with controls, first-degree relatives of compulsive buyers reported significantly more depression, alcoholism, and drug abuse. However, relatively small sample sizes remain an important limitation of these studies.

Two genetic studies have also been reported. Significant correlation between a polymorphism in the promoter region of the D1 receptor gene and the association of Tourette's disorder with compulsive buying disorder have been reported. However, no association was reported with the serotonin transporter gene promoter polymorphisms (Comings et al., 1997). In another study, 21 patients diagnosed with compulsive buying were compared with 38 normal

controls with regard to two DNA sequence polymorphisms in the gene that encodes the serotonin transport (5-HTT); no significant difference was seen (Devor, Magee, Dill-Devor, Gabel, & Black, 1999).

CLINICAL FEATURES

The onset of compulsive buying disorder is mostly in the teens. By the time the behavior is recognized as problematic, individuals are in their twenties or thirties (see Box 1).

BOX 1

Clinical Features

- Onset is in teens.
 - Seen more commonly in women.
 - Preoccupation with thoughts about shopping.
 - Rising levels of anxiety and tension followed by act of shopping, which leads to tension relief.
 - Clothing, shoes, jewelry, makeup, and compact discs are usual items purchased.
 - Leads to significant psychological, interpersonal, financial, and legal difficulties.
 - Course is either chronic or recurrent.
-

Compulsive buyers are preoccupied with repetitive and intrusive thoughts like shopping and spending, which they try to resist, usually without much success (Bernik, Akerman, Amaral, & Braun, 1996; Christenson et al., 1994). Compulsive buyers are supposed to have high urge combined with low control (Natarajan & Goff, 1991). Typically they engage in compulsive buying behaviors by spending many hours in a week buying, year round or in binges.

There is an increasing level of anxiety and tension. The actual shopping experience is intense. The act is completed with the purchase, which leads to tension relief. Attempts to resist urges to buy are present in the majority of subjects with compulsive buying disorder, but invariably they are unsuccessful, as is illustrated by the fact that, most often, 1–5 hours pass between the urge to buy and the purchase (Christenson et al., 1994; Schlosser et al., 1994).

Black (2007) described four phases of compulsive buying disorder: anticipation, preparation, shopping, and spending. In the first phase, a person with compulsive buying disorder is preoccupied with the thought of a specific item

and the act of shopping. Then the preparation for shopping and spending starts. This involves deciding on the time and venue for shopping, the outfit to be worn, and so on. This phase is followed by the actual shopping experience. Negative emotions (Miltenberger et al., 2003) such as anger, anxiety, boredom, and self-critical thoughts are the most common antecedents to shopping binges in individuals, while euphoria or relief from the negative emotions is the most common consequence.

Shopping is generally done alone; it may be in upscale department stores, consignment shops, a garage sales. Internet and catalog shopping are also used. Generally, clothing, shoes, jewelry, makeup, and compact discs are purchased. These items seem to address personal and social identity needs. Shopping provides a sense of recognition and acceptance for people with low self-esteem. Once a purchase is made, its outcome varies; the item may be returned or sold, given away, or not even removed from the package (Schlosser et al., 1994).

Income does not seem to be a factor in developing CBD. A person with low income preoccupied with shopping and spending will tend to shop at a smaller store. However, the presence of CBD may result in interpersonal problems in both groups (Black, 2007).

Adverse consequences include guilt or remorse, excessive debt, bankruptcy, family conflict, divorce, illegal activities, such as writing bad checks and embezzlement, and even suicide attempts.

Compulsive buying occurs along a spectrum of severity. Greater severity is seen in low the income group; they tend to purchase nonsale items, spend a lower percentage of income on sale items (Black, Monahan, Schlosser, & Repertinger, 2001), and give maladaptive responses regarding their consumer behavior (Koran et al., 2006).

In a transnational study, treatment-seeking female compulsive buyers were compared (38 Germans from Bavaria and 39 Americans from North Dakota) by using CBS and the Yale-Brown Obsessive Compulsive Scale-Shopping Version (YBOCS-SV). However, with regard to age and scores on the above scales, the researchers did not find statistically significant differences (Mueller et al., 2007).

Although, there are no long-term follow-up studies, the disorder is either chronic or recurrent (Schlosser et al., 1994; Christenson et al., 1994). In one study, treatment with citalopram in CBD was followed up for a year, which resulted in a good response in 71 percent of subjects. However, an acute response predicted a greater likelihood of continued remission (Aboujaoude, Gamel, & Koran, 2003). This study highlights the impact of treatment on the course of CBD in terms of initial and maintained improvement.

DIAGNOSIS AND ASSESSMENT

Diagnosis

While making a diagnosis, questions regarding individuals' attitudes toward shopping and their specific shopping behaviors and patterns are generally asked. Preoccupation with buying, time spent in desires, urges, fantasies, or behaviors related to buying should be looked into. To judge the dysfunction, feelings of distress and guilt, and financial, legal or interpersonal problems need to be looked into. A history of past psychiatric and medical illness, surgical procedures, and past treatment needs to be incorporated. However, bipolar disorder should be ruled out as a cause of excessive buying.

The diagnostic criteria for CBD proposed by McElroy et al (1994) have been used for research (see Box 2). These include (1) uncontrollable problematic buying behavior characterized as being frequently preoccupied with buying or subject to irresistible, intrusive, and/or senseless impulses to buy; (2) shopping for periods longer than intended; (3) experiencing adverse consequences such as markedly distressing, time consuming, and/or resulting in family, social, vocational, and/or financial difficulties; and (4) not occurring only in the context of hypomanic or manic symptoms.

BOX 2

Diagnostic Criteria for Compulsive Buying Disorder (McElroy et al., 1994)

1. Uncontrollable problematic buying behavior
2. Shopping for periods longer than intended
3. Experiencing adverse consequences
4. Not occurring in the context of hypomanic or manic symptoms

Assessment Instruments

1. Compulsive Buying Scale
 2. Yale Brown Obsessive-Compulsive Scale—Shopping Version
 3. Minnesota Impulsive Disorders Interview
-

Differential Diagnosis

CBD needs to be distinguished from normal buying behavior. Frequent shopping in itself does not warrant a diagnosis of compulsive buying disorder. Normal buying can also sometimes be compulsive and episodic, specifi-

cally around special holidays or birthdays. The distinction is not made on the grounds of the amount of money spent or the income level, but on the extent of the preoccupation with buying behavior, the level of personal distress, and the presence of adverse consequences. Typically, excessive buying in a manic patient arises out of euphoric and cheerful mood, grandiosity, and unrealistic plans, and the duration of the shopping invariably corresponds to the duration of the manic episode. Although a preoccupation with buying behavior is present most of the time in compulsive buying disorder, it lacks the periodicity seen in bipolar disorder.

Assessment Instruments

Several rating instruments have been used for identifying as well as for rating the severity of CBD (see Box 2).

The Compulsive Behavior Scale (CBS) consists of seven items representing specific behaviors, motivations, and feelings associated with compulsive buying disorder. The seven scale items assess the need to spend money, awareness that spending behavior is aberrant, loss of control, and buying things to improve mood and financial problems (Faber & O'Guinn, 1989). Studies have established that subjects meeting the two standard deviation criterion on this scale always meet the clinical diagnostic criteria (Black et al., 1998; Christensen et al., 1994).

The Yale Brown Obsessive-Compulsive Scale has been modified to form the Yale Brown Obsessive-Compulsive Scale-Shopping Version (YBOCS-SV). The 10-item scale rates time spent, interference, distress, resistance, degree of control for cognitions, and behaviors typical of compulsive buying disorder, yielding scores ranging from 0 to 40 (Monahan, Black, & Gabel, 1995).

The Minnesota Impulsive Disorders Interview is a semistructured interview to assess the presence of compulsive buying disorder, kleptomania, trichotillomania, intermittent explosive disorder, compulsive sexual behavior, pathological gambling, and compulsive exercising. However, an 82-item module has been developed specifically for those screening positive for compulsive buying disorder (Christenson et al., 1994).

COMORBIDITY

The presence of comorbid disorders has far-ranging implications for the understanding of CBD. The initial presentation may be changed or may be more severe. There may be shared underlying etiological factors, treatment may need modification, and the future course may be altered. High rates of psychi-

atric comorbidity have been reported in persons having CBD. Various studies have reported higher lifetime prevalence of mood disorders, obsessive-compulsive disorders, anxiety disorders, alcohol abuse, eating disorders, and impulse control disorders on Axis I, and obsessive-compulsive, borderline, avoidant, antisocial, and narcissistic personality disorders on Axis II (Black, 2007).

In Christenson's case series, compulsive buyers had a higher lifetime prevalence of anxiety disorders, substance use disorders, and eating disorders as compared to controls. It was found that buying behavior resembled obsessive compulsive disorder in 66.7 percent of subjects, whereas impulse control disorder was seen in 95.8 percent. In McElroy's case series, 95 percent of the compulsive buyers had lifetime diagnoses of major mood disorders, 80 percent had anxiety disorders, 40 percent had impulse control disorders, and 35 percent had eating disorders. In Schlosser's case series, more than two-thirds met lifetime criteria for Axis I psychiatric disorder, anxiety disorders, substance abuse, and mood disorders were common. Nearly 60 percent met the criteria for personality disorder on Axis II, most commonly the obsessive-compulsive, borderline, and avoidant types. Lejoyeux, Haberman, Solomon, and Ades (1999) studied the effect of the concomitant presence of compulsive buying disorder in depressed subjects. Their results indicated that these patients had significantly more recurrent depression, bipolar disorder, kleptomania, bulimia, suicide attempts, and benzodiazepine abuse as compared to control subjects with depression only.

It is reported (Mueller et al., 2007) that many compulsive buyers also suffer from compulsive hoarding. Hoarding compulsive buyers report severe buying symptoms and obsessive-compulsive symptoms with a higher psychiatric comorbidity, especially with regard to affective, anxiety, and eating disorders. The prevalence of compulsive buying among patients presenting with obsessive-compulsive disorder was 23 percent. Subjects having both disorders also showed more depression and drank more alcohol (Lejoyeux, Bailly, Moula, Loi, & Ades, 2005).

In the transnational study comparing German and American female compulsive buyers, nearly all participants met the criteria for at least one lifetime Axis I disorder. However, the German compulsive buyers showed higher rates of affective disorder, anxiety disorder, and somatoform disorder. In addition, the German compulsive buyers were more likely to have more than one Axis I disorder (Mueller et al., 2007).

TREATMENT

There are no guidelines for treatment; multiple modalities of therapies have been tried in clinical settings. Pharmacotherapy, psychotherapies, and some other treatments are also available (see Box 3).

BOX 3**Treatment**

- No treatment guidelines
 - Selective serotonin reuptake inhibitors and partial opiate antagonists
 - Cognitive-behavioral techniques of cue exposure and response prevention
 - Group cognitive-behavioral intervention
 - Self-help books
 - Debtors Anonymous
 - Marital and financial counseling
-

Pharmacotherapy

Selective serotonin reuptake inhibitors (SSRIs) and partial opiate antagonists have been tried in the treatment of CBD on the basis of its conceptualized closeness to obsessive-compulsive spectrum disorder, mood disorders, and addictive disorders.

The results of open label studies using SSRIs are promising. In McElroy's cases, almost 50 percent experienced full or partial remission to SSRIs or in combination with a mood stabilizer. In most cases, the observation period was limited to a few weeks or months. Treatment with fluvoxamine showed benefit, suggesting that improvement is independent of the treatment of mood symptoms in 9 out of 10 nondepressed subjects with CBD (Black, Monahan, & Gabel, 1997). In an open-label trial with citalopram, it was reported that 17/24 subjects improved in specific measures of buying behavior and global functioning (Koran, Chuang, Bullock, & Smith, 2003). However, treatment with escitalopram showed little effect in an identically designed trial carried out by the same group.

Two randomized-controlled trials using fluvoxamine have been conducted. The results have not been promising. A 12-week trial with 37 subjects found no difference between fluvoxamine and placebo in an intent-to-treat analysis (Ninan et al., 2000). A nine-week trial of 23 nondepressed subjects with compulsive buying disorder reported 50 percent of subjects in the fluvoxamine group and 64 percent in the placebo group being rated as improved (Black, Gabel, Hansen, & Schlosser, 2000). However, in these studies, subjects kept a log of their shopping. Keeping logs is a therapeutic intervention in itself, which may have led to these findings (Dell'Osso et al., 2006). Grant (2003) described cases in which persons with CBD improved with naltrexone, suggesting that opiate antagonists might play a role in the treatment.

Psychotherapy

Psychoanalytic treatment based on early experiences has been used (Kruger, 1988). Recently, Cognitive-behavioral models using techniques of cue exposure and response prevention have been found to be effective in treatment (Bernik et al., 1996; Lejoyeux et al., 1996). The efficacy of a group cognitive-behavioral intervention designed for the treatment of 28 subjects with compulsive buying was compared with 11 subjects on waiting list control. At the end of treatment, the results indicated significant advantages for cognitive-behavioral therapy over the waiting list in terms of reductions in the number of compulsive buying episodes and time spent in buying, as well as in scores on YBOCS-SV and the CBS. Improvement was well maintained at six-month follow-up (Mitchell, Burgard, Faber, Crosby, & de Zwaan, 2006).

Other Therapies

Self-help books are available and have been reported to be beneficial. Debtors Anonymous is patterned after Alcoholics Anonymous. It is a voluntary group that provides mutual support and encouragement for those with substantial debts. Simplicity circles are available in some U.S. cities; voluntary groups encourage people to adopt a simple lifestyle. Marital counseling may be helpful in cases where interpersonal relations are strained. Persons with financial difficulties may benefit from financial counseling (Black, 2007).

CONCLUSION

In the past decade, the focus of research in the field of compulsive buying disorder has been on identifying and delineating its characteristic features. This has resulted in a better understanding of its epidemiology, phenomenology, family history, and treatment. The disorder is not uncommon and is associated with important comorbid psychiatric disorders. Proposals to include this as a diagnostic subcategory in *DSM-V* are the subject of debate. Various researchers have argued for its inclusion under impulse control disorders, substance use disorders, mood disorders, and obsessive compulsive disorders in *DSM-V*. At present, opinion favors its inclusion under impulse control disorders. Its inclusion in classificatory systems will help in routine screening for compulsive buying disorder by mental health professionals and in community-based incidence prevalence studies. It will also help in the identification of vulnerability, precipitating and perpetuating factors, and in the development of effective psychosocial and pharmacological therapies.

At present, there are conflicting reports regarding gender-related differences. Different underlying diatheses have been proposed in the etiology of compulsive buying disorder. Neurobiological studies employing brain imaging and other techniques need to be conducted to clarify these issues. Cognitive-behavioral strategies and medications have been used for treatment with partial success.

Future research needs to focus on establishing the reliability and validity of diagnostic criteria. So, there is a need for large-scale community studies in order to understand the epidemiology. Studies need to be planned for identifying efficacious treatments, type of treatment, short- and long-term outcome, and duration of treatment. Long-term follow-up studies are needed for charting the course of the disorder, identifying various prognostic factors, and identifying their relationship to other psychiatric disorders.

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Association with Criminality of Habit and Impulse-Control Disorders

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Impulse-control disorders are disorders in which a person acts on an impulse that is potentially harmful and which he or she fails to resist. The impulses are usually perceived as pleasurable (egsyntonic). There is an increasing sense of wishing to commit the act with a sense of pleasure occurring once the act has been committed. These disorders have also been conceptualized as non-substance-related addictions. They do not represent personality disorders. They are described in the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (fourth edition, text revision, 2000; *DSM-IV-TR*) as impulse-control disorders, and in the World Health Organization's *International Classification of Diseases and Related Health Problems* (1992; *ICD-10*) as habit and impulse disorders.

In *DSM-IV-TR*, their essential features include the following:

- The failure to resist an impulse, drive, or temptation to perform an act that is harmful to the person or to others.
- For most disorders, the individual feels an increasing sense of tension or arousal before committing the act and then experiences pleasure, gratification, or relief at the time of committing the act.
- Following the act there may or may not be regret, self-reproach, or guilt.

Included are the conditions of pathological gambling, pyromania, kleptomania, and tricotillomania.

ICD-10 (World Health Organization, 1992) has a similar definition for this group of disorders, which it terms "Habit and Impulse Disorders," but also includes intermittent explosive (behavior) disorder. *ICD-10* points out that these disorders have no clear rational motivation.

Pathological gambling, pyromania, and intermittent explosive (behavior) disorder are more common in men, while kleptomania and tricotillomania are more common in women. There is an absence of epidemiological studies of the prevalence of these disorders, but rates among psychiatric inpatients may be higher than in the general population. Using the Minnesota Impulsive Disorders Interview (Christenson et al., 1994), Grant, Levine, Kim, and Potenza (2005) found the following rates, mainly comorbid with depression, among inpatients:

- Kleptomania 8 percent
- Pathological gambling 7 percent
- Intermittent explosive (behavior) disorder 6.4 percent
- Tricotillomania 3.4 percent.

Overall, such impulse control disorders are probably underdiagnosed.

Other disorders, such as pathological buying (oniomania or shopaholism), characterized by buying items that are not needed and often storing them unopened, and workaholism, have also been considered to be impulse-control disorders, but are not classified as such in *DSM-IV-TR* or *ICD-10*. Such behaviors may be motivated by a need for compensation or as a substitute for something missing in life or as a depressive equivalent.

Crime is law-breaking behavior. Impulse-control disorders may lead to offending either directly, for instance, in pyromania, or indirectly, for instance, for financial gain in a pathological gambler. Individuals who commit crimes due to such a disorder have, however, usually been deemed legally culpable for their actions, even though their propensity is psychiatrically considered to be irresistible. It has been argued, however, that this may be a legal injustice, as such individuals clinically apparently have little or no control over their actions.

The interface between impulse-control disorders and offending raises philosophical questions, including questions about the nature of free will and whether all behaviors are determined by the effects of genes, environment, and background. Are those with impulse-control disorders less responsible for their behavior and should they therefore be punished less than those of normal responsibility? Even if impulse-control disorders have a biological basis, in clinical practice the aim is, however, to encourage the sufferer to take responsibility for his or her actions.

HISTORY

During the eighteenth century, the concept of “monomania with propensity” developed, referring to the fact that apparently insane, incomprehensible

actions did not always appear to be the result of delusional thinking. This and subsequent historical developments have been discussed by Gibbens and Prins (1962), who cite the following historical landmarks:

- Philippe Pinel (1745–1826), in the eighteenth century, refer to “mania without delirium” as being a disease of the willpower.
- Esquirol referred in 1885 to instinctive monomanias, including homicide, fire-setting and alcoholism, that is, respectively, homicidal monomania, pyromania, and dipsomania, where the individual acts “without passion or motive but only under involuntary instinctive impulse.”
- Referring to some cases of theft and homicide, Rush in 1810 described them as an illness of the moral willpower and equated this illness with the involuntary movements of convulsions.
- Mathey coined the term kleptomania (theft) to add to the list of other manias including dipsomania and pyromania.

As noted by Topp (1973), it was the Frenchman Marc in 1833 who first used the term kleptomania when describing a number of wealthy individuals who carried out bizarre, worthless thefts in which they had little intrinsic interest and to which they confessed spontaneously when challenged.

Subsequently it has been considered that instinctive monomanias such as kleptomania are very rare and, indeed, it has been questioned whether they, in fact, exist. Terms such as pyromania and kleptomania have indeed tended to be increasingly discarded. Neustatter (1953) doubted whether kleptomania existed as an entity, but, if it did, he suggested that it was part of a psychopathic personality that gives way to impulses.

Differentiation from Obsessive-Compulsive Disorder

An important differentiation in this area is between compulsions and impulses. Compulsions, as seen in obsessive-compulsive disorder, are characterized by nonsituational preoccupation with subjective compulsion despite conscious resistance, such preoccupations being thoughts (ruminations or obsessions) or acts (rituals or compulsions). Where there is poor impulse control, impulses are poorly resisted, and this is much more common than compulsions. In the case of obsessive-compulsive disorder, sufferers in general do not act on their ruminations, unlike those with poor impulse control. The key difference between impulse-control disorders and obsessive-compulsive disorder is that while both may lead to relief of anxiety and tension, in obsessive-compulsive disorder the thought of carrying out the act must not in itself be pleasurable, that is the thought must be egodystonic.

PATHOLOGICAL GAMBLING

This is defined in *ICD-10* as persistently repeated gambling that continues and often increases despite social consequences. Gambling involves risking something of value, not necessarily money, in a game or other uncertain event, with the aim of achieving greater value. There is a range of gambling behaviors from the culturally normal to hazardous, professional, problematic, and pathological gambling. In contrast to professional gamblers, who may carefully plan their gambling and base it on information to decrease the risk, pathological gamblers will myopically gamble despite repeated and heavy losses resulting in adverse family and social consequences and financial ruin, to which they appear hyposensitive. Four phases may be distinguished: winning, losing, desperation, and eventual giving up. Problems do not arise from the gambling itself but from the consequences, as seen in alcoholism. Indeed, pathological gambling shows features characteristic of an addiction, with loss of control, extremes of emotions reflecting autonomic nervous system changes, and withdrawal phenomena when not gambling.

DSM-IV-TR defines the essential feature of pathological gambling as a chronic and progressive failure to resist impulses to gamble, with behavior leading to much damage to personal and family life. Evidence suggests this to be a valid and reliable diagnosis (Stinchfield, 2003). Efforts to control, resist, or stop gambling generally fail, and the behavior has been equated to an addiction, with withdrawal symptoms of irritability and restlessness if the person is unable to gamble and an escalation in the size and frequency of bets or other stakes to achieve a desired level of excitement. Such individuals will tend to respond to repeated losses by gambling further to “chase” their losses, in spite of increasing debts, marital breakdown, and law involvement. They anticipate losses as shown in fMRI studies (reduced activity in the ventromedial prefrontal cortex), even while their appetite for gambling and their impulsivity increase, and they will continue gambling until they have lost their available resources. Psychodynamically, they appear unconsciously to aim to lose their money. They tend to focus on their winnings, disavow or deny their losses, lack the courage to own up to losses, and gamble more to break even. This is a pattern also seen in stock market “rogue” traders.

Pathological gambling may also lead to disturbances in eating and sleeping and in sexual relationships, as well as to difficulties in sustaining employment. Lying to and relying financially on friends is also characteristic. Some gamblers steal to finance their habit, and pathological gambling may only come to light following a court case regarding an acquisitive offense such as theft, fraud, or embezzlement.

Some individuals present following an overdose or self-harm, which occurs in 10 percent of pathological gamblers, or with depression. Suicide occurs in 2 percent of attendants of Gamblers Anonymous. Legg-England and Gotestam (1991) and Raylu and Oei (2002) have reviewed pathological gambling in detail.

Epidemiology

Gambling itself is common, with estimates of prevalence around 40 percent of the British population and 60 percent of the United States population (Moran, 1983). Even these figures may now be underestimates, given the current availability of national television and other lotteries. Wardle et al. (2007) found the prevalence of gambling in the United Kingdom (UK) to be 68 percent, but 48 percent when the UK National Lottery was excluded. It is said to be more common among Chinese and less common among Scandinavians. It is more common in men, those with a past history of psychiatric disorder, and criminals. Problem gamblers cause themselves or others to suffer. It is of course possible to lose control and bankrupt oneself through gambling in just one day. Pathological gambling is associated with tolerance and withdrawal phenomena and has been found to have a prevalence of 0.25 percent in Australia (Dickerson, 1988) and 0.77 percent in the United States. Shaffer and Korn (2002) reviewed 120 studies and suggested a lifetime rate of 1.6 percent, a figure not dissimilar to that for schizophrenia. Wardle et al. (2007) in the UK estimated that 0.5–0.6 percent of the population were problem gamblers. The Royal College of Psychiatrists in the UK in 1977 described around 10 percent of prisoners as suffering from pathological gambling.

Pathological gambling is certainly more obvious but probably also more common among those, especially men, who indulge in horse and dog racing, in which losses soon become apparent. Women pathological gamblers, on the other hand, have been reported to be more likely to make use of specialized helplines (Potenza, et al., 2001). In the UK, it is said that women prefer bingo, which may lead to less pathological gambling and in which losses tend to be smaller.

Etiology

The predominant motivation for pathological gambling is the sense of thrill and pleasure at the risk taking, as reflected in changes of heart rate demonstrated during gambling. Winning produces euphoria, said to be comparable to the effects of amphetamines, and helps individuals switch from negative inter-

nal mood states, including despondency and loneliness. Dostoyevsky, in his autobiographical novel *The Gambler*, described the reward of a sense of power obtained from gambling. Freud (1928), commenting on this, considered that Dostoyevsky did his best writing after a big loss from gambling as he was then freed from unconscious guilt feelings concerning patricidal urges that inhibited his creativity. Gambling has also been described as serving to gratify oedipal wishes, for example, wishing to defeat a tyrannical father or woo a mother (Frosch, Frosch, & Frosch, 1985; Greenson, 1947). Moran (1983) cited social pressures, early exposure to gambling, and a father who gambled or drank alcohol as etiological factors among male gamblers, while having an alcoholic spouse who was often absent was characteristic more of women who gamble. Gambling increases with the number of gamblers in one's social network, being initially a social activity, but when pathological, it is usually undertaken alone.

Learning theory has suggested that the pattern of intermittent (variable ratio) reinforcement, the most potent schedule for conditioning, particularly applies to gambling, where repeated losses with frequent near misses are combined with occasional random wins with immediate payouts. The prospect of small but immediate rewards is preferred to higher but delayed rewards. Evidence of psychological dependence may become manifest by the appearance of what can be considered withdrawal symptoms and craving following the stopping of such activity.

Biological factors may also be important (Sharpe, 2002). The orbitofrontal cortex and anterior cingulate gyrus are involved in reward mechanisms. Potenza et al. (2003) undertook an fMRI study of pathological gamblers that showed, compared with controls, decreased activation of the orbitofrontal cortex, basal ganglia, and thalamus, which have been linked to impulsivity and disinhibition.

Pathological gambling has been suggested to be associated with low central serotonin levels, as seen in other impulse-control disorders, and low central dopamine activity, as seen in other addiction disorders. Serotonin is involved in mood and impulse control and dopamine in reward, pleasure, and motivation. Of note is the increasingly recognized phenomenon of individuals with Parkinson's disease, who have low levels of the neurotransmitter dopamine, presenting for treatment of gambling after having been treated with pro-dopaminergic agents such as L-dopa (Driver-Dunkley, Samanta, & Stacy, 2008). Norepinephrine (noradrenalin), which is involved in arousal and excitement, and opioids, involved in urges and pleasure, may also be important.

Comorbidity

While pathological gambling often arises in the absence of other psychiatric disorders, personality disorder, especially antisocial, narcissistic, and borderline

types, and depression may also be present. The presence of personality disorder will, however, only explain part of the excess of impulsivity. Hypomanic or manic episodes of bipolar disorder, which may be associated with general over-spending and grandiose beliefs about one's wealth and ability to make money, including the ability to counter losses, may also lead to excessive gambling. Problem gambling is associated with attention deficit hyperactivity disorder (ADHD), delinquency, and recidivist offenders, and is especially high among young offenders.

Risk Factors

These include being male, over 45 years of age, cigarette smoking, alcohol abuse, low income, having debts, being a foreign national, depressive disorder, flat affect, having the metabolic syndrome, and sleep difficulties in females. A history of previous treatment for gambling is self-evidently an important risk factor.

Assessment

This should include eliciting when gambling started and when it became regular, who introduced the individual to gambling or encouraged the individual to gamble, the circle of gambling friends, and the history of escalation in patterns of gambling. Is gambling increased when the individual is despondent and/or by alcohol consumption?

The onset and presence of symptoms of pathological gambling should be noted, for example, inability to stop despite debts, withdrawal symptoms such as restlessness and irritability when not gambling, chasing losses, and raising stakes for the thrill.

The motivation to change should also be assessed. Stages of change include the following:

- + Precontemplation, when the need to change is recognized
- + Contemplation, when the problem is acknowledged and the individual is willing to change
- + Action taken to change
- + Maintenance to sustain control of or abstinence from gambling.

Screening instruments such as the South Oaks Gambling Screen (SOGS; Lesieur & Blume, 1987) can be useful, especially in screening populations at risk (a score of 3 to 5 out of 10 indicates problem gambling, while a score of over 5 indicates pathological gambling). The SOGS may produce excessive false-positives compared with the National Opinion Research Center DSM Screen

for Gambling Problems (NODS; Gerstein et al. 1999) which was developed as a population-based telephone screening tool to identify gambling problems according to *DSM-IV* criteria (Hodgins, 2004). Stinchfield (2002) found that the SOGS demonstrated good to excellent classification accuracy in his large gambling treatment sample, but had poorer accuracy in the general population sample with a 50 percent false positive rate; the SOGS overestimated the number of pathological gamblers in the general population, compared with *DSM-IV* diagnostic criteria.

A further tool is the Canadian Problem Gambling Severity Index (Ferris & Wynne, 2001), which contains 9 items of the 30-item Canadian Problem Gambling Inventory (CPGI).

Management

Health promotion to populations at risk as identified by screening to counter excessive gambling before problems develop is, of course, ideal. However, pathological gambling may not always follow a chronic and persisting course. Slutske (2006) reported that among individuals with a lifetime history of pathological gambling, 36 to 39 percent did not experience any gambling-related problems in the past year, even though only 7 to 12 percent had ever sought either formal treatment or attended meetings of Gamblers Anonymous. About one-third of the individuals with pathological gambling disorder in her study of two nationally representative U.S. samples were characterized by natural recovery.

Comorbid psychiatric disorders should be excluded or treated, for example, depression. As with other addictive behaviors, selective serotonin reuptake inhibitor (SSRI) antidepressants at high doses have been recommended (Grant & Kim, 2002), and the opioid antagonist naltrexone has been recommended. The selective norepinephric (noradrenergic) reuptake inhibitor (SNRI) venlafaxine, the 5-HT_{1A} partial agonist buspirone, the stimulant cognitive enhancer modafinil, and the psychostimulant methylphenidate have all been used.

Cognitive-behavioral therapy, which concentrates on reducing the preoccupation with gambling and can involve motivational interviewing and risk/harm reduction strategies, has been successfully used and has also been combined with a 12-step group program (Petry & Roll, 2001). There is no real evidence for the efficacy of psychodynamic psychotherapy or aversive behavioral therapy in this disorder. Dickerson (1989) described 22 uncontrolled studies offering a variety of management approaches, including most forms of psychotherapy. Support and counseling for the family, which can include brief focal marital counseling, may also be required.

Help is often only sought as a result of the consequences of gambling, such as debt, deteriorating marital and other relationships, and law involvement, rather than as a result of a primary desire to stop gambling itself. Most gamblers cannot contemplate complete abstinence, though some may consider as a reasonable goal stopping gambling for a number of months with a view to continuing controlled gambling thereafter.

One approach is for the family income to be paid into an account over which only the spouse has control (Moran, 1983). Gamblers Anonymous adopts the approach used by Alcoholics Anonymous and may be more helpful than standard traditional psychiatric approaches. For relatives, Gam-Anon is available for mutual support, akin to Al-Anon for relatives of those suffering from alcoholism. Local citizens advice bureaus and money advisory services may assist with resulting financial difficulties.

Few pathological gamblers will consider a goal of total abstinence. In spite of management approaches, the prognosis is generally considered poor, although 10 percent stop spontaneously and progression and chronicity are not inevitable. Relapse rates after treatment vary from two-thirds to 70 percent. Duration of the disorder and neurocognitive measures of disinhibition and decision-making are powerful predictors of relapse in pathological gambling (Goudriaan, et al., 2008).

Clearly, as the ease of availability of gambling increases, so does the risk of developing pathological gambling. Legislation, for example, controlling casinos and society's hedonistic attitudes, for instance, to national lotteries and so on, may be important in prevention, although a study by Bondolfi, Jermann, Ferroero, Zullino, and Oseic (2008) in Switzerland showed no increase in pathological gambling following an increase in the opening of casinos.

PATHOLOGICAL FIRE-SETTING (PYROMANIA)

ICD-10 defines this as repeated fire setting without any obvious motive. There is an intense interest in watching fires burn and feelings of increasing tension before the act and intense excitement immediately after it.

In *DSM-IV-TR*, it is also classified as an impulse disorder. There is deliberate and purposeful fire-setting on more than one occasion. Tension or affective arousal is present before the act. There is intense pleasure, gratification, and/or relief when setting fires or when witnessing or participating in their aftermath. Such individuals, also referred to as fire bugs, are fascinated with, curious about, and attracted to fire.

This group of fire-setters includes those who are described as having an irresistible impulse and a repeated urge to set fires, which they do not fully

understand and about which they are often inarticulate. They are often isolated and inadequate people who set a number of fires impulsively and who may escalate the seriousness of their fire-setting. This group also overlaps with those who set fires for tension or depression reduction, that is, as an anxiolytic or an antidepressive act. Such individuals discover that fire-setting relieves feelings of despondency or tension. An analogy can be made with the calming effect normal individuals report when observing and sitting in front of a glowing coal fire.

In the past, fire-setting by men was considered to be frequently associated with direct sexual arousal by such an act, that is, the use of fire as a fetish, and there was considerable psychodynamic interest in the symbolism of fire, for example, flames of passion, burning desire, blazing rows, and so on. Freud (1932) described the glow of fires as reflecting sexual excitement and the motion of flames as symbolic of the phallus in action. However, while a number of fire-setters may indeed obtain a sense of excitement from their actions, those who are specifically sexually aroused and who may even masturbate after setting fires are rare.

Pathological fire-setters are a subset of those who tend to set more fires and to whom the fire is a thing of interest in itself. Individuals have a fascination with fire and hence the arson appears outwardly motiveless. There may also be an associated fascination with fire engines and calling out the fire service. The making of false telephone calls to the emergency services can result in a charge of "wasting electricity" in the UK.

Other clinical features include evidence of advanced preparation and indifference to the consequences of fire-setting to property or life.

It is rare in children, but more common in male adolescents, particularly those with poor social skills and learning difficulties.

The Offense of Arson

Arson is the offense associated with fire-setting and is the unlawful and malicious (willful) destruction of or damage to property by setting a fire. Legally, the more serious charge is arson with intent to endanger life or being reckless as to whether life was endangered. Owing to problems of detection, only 5 percent of cases of arson end in successful prosecution in the UK. In the UK, one school in eight is subject to arson each year.

If an individual is charged with arson, it is important to reconstruct in detail what happened at the time of the offense, for example, reading witness statements related to the case, and not just depending on the actual legal offense category. For instance, arson may be the setting fire to a waste paper bin in a busy

hospital ward in front of observing staff and fellow patients, or an impulsive or planned serious fire, in circumstances unlikely to be detected, with intent to kill. Of psychodynamic note is the fact that fire almost uniquely can make things disappear, including evidence. Historically, one reason individuals were burnt at the stake was to avoid spilling blood.

Epidemiology of Arson

Approximately 40 percent of all serious fires are started deliberately. Six percent of fires in the UK are recorded as arson. Arson is responsible for 1 percent of all serious crimes in the UK. However, as the evidence is often burnt, only about a quarter of arson offenses result in conviction. The peak age for arson is 17 years for men and 45 years for women. Eighty percent of those convicted are men. There is increased incidence of arson among those with learning disabilities and those who suffer from alcohol dependence syndrome. Fifty percent of cases of arson follow alcohol abuse, especially binge drinking of alcohol.

Clinical Classification of Arson

Numerous attempts have been made to classify arson clinically, for example, by Puri, Baxter, and Cordess (1995).

There is no typical arsonist. Psychiatric difficulties are common, but the most common diagnoses are personality disorder and substance abuse, in up to two-thirds of cases, with about 8 percent suffering from a psychosis. Pure pyromania appears rare (1 percent) among convicted arsonists (Ritchie & Huff, 1999).

A classification based on these studies is as follows:

1. Fire as a means to an end (motivated). This includes the following:
 - (a) Those who set few fires:
 - ♦ *Psychosis*, such as schizophrenia. Such individuals may set fires, for instance, to burn out the devil or evil, or in response to hallucinatory voices.
 - ♦ *Displaced revenge, anger, or jealousy*. Rather than overt direct aggression against an individual, aggression may be displaced into setting fire to that individual's property. For instance, an employee of a warehouse or supermarket is told off by his boss, but rather than retaliate directly, physically, aggressively, the employee returns after business hours to set fire to his boss's property. This is the commonest reason (in almost 50 percent cases) found by psychiatrists among arsonists referred to them.

- ✦ *Cover-up of other crimes*, for example homicide. Modern forensic science, however, usually overcomes such attempts at a cover-up.
- ✦ *For insurance*. This has become increasingly common in recent years; for instance, french-fry fires to finance the redecoration of a kitchen.
- ✦ *Political motivation*. For example, to further their rise to power, Nazi storm troopers set fire to the Reichstag in 1932 in Berlin.
- ✦ *Adolescent gangs*. Individuals are generally more likely to be disinhibited and behave antisocially in a group than when alone. This group is associated with a low rate of recidivism, except among gang leaders.

(b) Those who set more fires:

- ✦ *Desire to be powerful or a hero*. Members of this group often have inadequate personalities. Their low self-esteem is bolstered by the sense of power they feel at the results of their having set fires, for example, the panic and the emergency services with flashing lights rushing to the scene. Sometimes this is combined with a desire to be a hero, so that after setting a fire the individual may rush into the premises and rescue pets or the elderly or infirm. On occasions they are caught owing to being seen repeatedly or even photographed, for instance, seen in a local newspaper at the scenes of the fires.
- ✦ *To earn money*. This occurs when part-time firemen on call-out rates set a fire. It is a particular problem in rural areas and in some countries such as France. Some individuals may be drawn to the fire service because of their fascination with fire, and psychodynamic associations have been made regarding the phallic symbolism of hoses. Anthropologists and evolutionists have suggested that females may have been impressed by the ability of males to put fires out by urinating.
- ✦ *As a cry for help*. To bring attention to a distressed emotional state.

2. Fire as a thing of interest

This includes the following:

- ✦ Pathological fire-setting (pyromania).

Differential Diagnosis of Pyromania

This includes conduct, adjustment, affective, and psychotic disorders.

Comorbidity of Pyromania

This may include substance misuse, past history of sexual or physical abuse, and personality disorder, especially antisocial personality disorder. High rates

of previous sexual abuse in women who set fires have been frequently described in clinical practice.

Assessment of Arsonists

This depends not only on a careful, detailed history and mental state examination but also on the gathering and study of objective information such as witness statements related to a case. It is important to determine the presence or absence of psychiatric abnormality, especially at the time of the offense, and its relationship with the offense itself. It is clearly important to determine whether there is a history of previous fire-setting and to examine precipitants.

It should be noted that suicide by fire is particularly associated with schizophrenia, perhaps explaining the choice of this most painful means of suicide. Historically, it has been described in the early nineteenth century among Hindu widows in India (suttee) and among monks protesting in Vietnam during the mid-twentieth-century war.

Management

This should clearly address any underlying or comorbid psychiatric disorders. Psychological intervention, for example, with cognitive-behavioral therapy, may be helpful.

The potential dangers of fire-raising must always be borne in mind. The fire service view is that a large fire is merely a small fire not brought under control.

In cases where an individual is charged with arson, the courts will be particularly concerned with the protection of the public and it is likely to be unwilling in serious cases of arson to consider outpatient care or placement in an open psychiatric ward. Ordinary psychiatric hospitals are also inevitably reluctant to admit those who have set fires, so if hospital treatment is required it is frequently undertaken under conditions of medium or maximum security. In the absence of a psychiatric disposal, the courts usually impose a custodial sentence. In England and Wales, under the Criminal Damage Act 1971, a maximum sentence of life imprisonment can be imposed for arson (Section 1) or arson endangering life (Section 2).

Prognosis

Further offenses of arson are increasingly likely if there has been a history of previous arson and if the offender continues to have an irresistible impulse to set fires or to relieve tension or obtain pleasure or sexual excitement from such fire-setting. Increased risk of further fire-setting is seen in individuals who

suffer from psychosis, learning disability, or dementia. However, in an individual case, it may be difficult to tell whether that individual will reoffend. The risk of further serious offending after a period in prison or hospital is low; however, the risk of reoffending may not be apparent in the short term but only on longer follow-up. For example, Soothill and Pope (1973) found a 4 percent recidivism rate over a 20-year period, and Sapsford, Banks and Smith (1978) reported a range over time of 2 to 20 percent.

PATHOLOGICAL STEALING (KLEPTOMANIA)

In *ICD-10*, this is defined as repeated failure to resist impulses to steal objects that are not required for personal use or monetary gain. Objects may be discarded, given away, or hoarded. The person may even later offer to pay for items stolen. An increasing sense of tension before and a sense of gratification during and immediately after the act are seen.

Epidemiology

This is usually seen in women of a mean age of 36 years with a mean duration of illness of 16 years (often after an onset in childhood) (McElroy, Pope, & Hudson, 1991).

The term kleptomania comes from the Greek for stealing madness. The disorder is generally said to be rare, with fewer than 5 percent, according to *DSM-IV-TR*, of arrested shoplifters giving a history consistent with kleptomania. However, such individuals rarely seek psychiatric help and often avoid detection, so that estimates of kleptomania's prevalence have been variable, even up to a quarter of all shoplifters. Up to a quarter of those suffering from bulimia nervosa are said also to meet the diagnostic criteria for kleptomania. This condition is certainly more prevalent in females than males, unlike other impulse-control disorders such as intermittent explosive disorder and pyromania, where males predominate. Onset is around 20 years of age. However, diagnosis is usually made one or two decades later. The individuals concerned are typically married. Males may be underrepresented because they are more likely to receive custodial sentences precluding reoffending in the community during periods of imprisonment.

Clinical Features

Stealing is perpetrated without much planning and without the assistance of others. The objects taken are not needed for personal use or for their monetary

value and may be given away, discarded, or returned surreptitiously, or kept and hidden. The individual invariably has enough money to pay for the stolen objects, but the theft is not committed to express anger or vengeance. Typically, when diagnosed, such individuals have appeared in court several times, feel guilt or remorse, but have not sought psychiatric treatment. There is often a history of a number of years of chronic dysphoric mood, and of the display of signs of depression and anxiety. Individuals' relationships and marriages are often unhappy. There is frequently a history of sexual difficulties and dysfunction and a past history of a turbulent childhood. Individuals often show poor impulse control generally and evidence of personality disorder, but the stealing is not primarily the result of conduct disorder or antisocial personality disorder. They share similarities, therefore, with those who have a past history of childhood sexual abuse.

Differential Diagnosis of Kleptomania

In ordinary shoplifting the act is usually well planned, although it may be impulsive, but it is motivated by need or monetary gain and the objects taken are for individuals' use or monetary gain. Some individuals who shoplift may attempt upon arrest to simulate kleptomania; they are then referred to as malingering.

Shoplifting may also occur in conduct disorder, antisocial personality disorder, depression, manic episodes, schizophrenia, or organic mental disorders, but in such circumstances the act is related to the primary diagnosis.

Comorbidity of Kleptomania

This includes eating disorders or substance abuse disorders. Kleptomania may be precipitated by major stressors such as life events. Depression is common and bipolar disorder may not be infrequent (Lejoyeux, Arbarataz, McLoughlin, and Adès, 2002).

Etiology

There is no definite evidence of a specific genetic or inherited predisposition, although a biological basis has been suspected; for example, Grant, Correia, & Brennan-Krohn (2006) found decreased white matter integrity in the inferior frontal brain regions in women with kleptomania.

Kleptomania has been viewed as a variant of depressive disorder. Those suffering from kleptomania often have depressive symptoms, and the thieving

itself may produce a stimulating excitement that has an antidepressive effect. It has also been viewed as a variant of obsessive-compulsive disorder, but only about half of cases experience with stealing the relief or tension characteristic of that disorder, and in obsessive-compulsive disorder there is not typically the sense of gratification seen in kleptomania.

Psychodynamic Theories

These have included the following:

- *Loss substitution*, in which kleptomania provides symbolic compensation for threatened or actual loss (Cupchik & Atcheson, 1983).
- *Drive theory*, which considers kleptomania in terms of a forbidden activity, engaged in secret and thus having a sexual basis.
- *A perversion*, in which stolen objects represent fetishes as defined by Fenichel.
- *A defensive strategy*. used by females, for example, to acquire a symbolic penis to counter castration fears.
- *Self-psychological theory*, in which kleptomania is seen as a response to narcissistic injuries and a means to counter fragmentation of self.

Management

In keeping with a view that kleptomania may be an equivalent of depressive or obsessive-compulsive disorder, kleptomaniac individuals often respond well to antidepressant medication, especially SSRIs such as fluoxetine. Cognitive-behavioral therapy has also been found to be effective (Gudjonsson, 1990). Psychotherapeutic approaches, including family therapy, have also been reported. A self-imposed ban on shopping may, however, be required where treatment fails.

Prognosis

The condition tends to be chronic but waxes and wanes.

The Offense of Shoplifting

The technical offense is theft, that is, from shops, an offense that, as with all offenses of theft, requires the intent permanently to deprive, as well as the act, for the offense to be proved in court. Intent would clearly be indicated if an individual were seen to be hiding an object in his coat and to be looking around

to make sure he was not being observed. In absent-minded shop-lifting, there would theoretically be no intention to deprive.

Epidemiology

In the UK, about 5 percent of all shoppers shoplift (Buckle & Farrington, 1984). However, up to 50 percent of goods taken from shops may be taken by the staff of those shops, as is the case with many thefts from businesses. Sociologists have viewed shoplifting as a social disorder created by a consumer society and precipitated by the visual provocation of shop displays. Open shelves increase sales and reduce the requirement for staff, as in supermarkets, but they are associated with increased shoplifting, with such businesses having to take this into account in their business planning. Some items are left near the checkout till for impulse buying and, in addition, provide easy but inexpensive objects to be shoplifted. Objects are often taken suddenly on impulse and are of trivial value or useless. Some individuals appear to regard shoplifting as an accepted perk of shopping and may pay for other items.

Up to the early 1970s, most shoplifters in the UK were women, who then undertook more of the shopping than now, and 50 percent showed evidence of psychiatric disorder. Ninety percent did not reoffend after conviction (Gibbens & Prins, 1962). However, the majority of shoplifters in the UK are now male and between the ages of 10 and 18 years, as reflected in signs on shops limiting the number of children allowed in at one time. Males are now more likely than females to have previous convictions. The incidence of psychiatric disorder has been reduced to about 5 percent, and it is questionable now whether shoplifting deserves more psychiatric attention than other thefts (90 percent of all offenses are acquisitive). The previous predominance of female offenders coincided with the view that female offenders tended to be psychiatrically disordered, which may explain the courts' requests for psychiatric reports more often in shoplifting offenses than in other, male-dominated, offenses.

Classification of Shoplifters

Shoplifters have been subject to lay and legal stereotyping as needy, greedy, or seedy. Bluglass (1990) distinguished three groups of shoplifters: professional, amateur, and associated with psychiatric disorder. Building on Bluglass' work, a more detailed classification is as follows:

1. Shoplifting for simple gain, plus excitement with or without associated marked antisocial attitudes:

The principal motivation is excitement, and such individuals are responsible for a significant proportion of shoplifting in large cities. Individuals often feel less constrained by another country's laws when abroad. This category also includes organized gangs and those with chaotic lives who steal impulsively and commit other offenses. They may come from antisocial families and be subject to relative poverty. Such shoplifting may be associated with resentment and feelings of bitterness associated with individuals' lifestyles.

2. Shoplifting associated with psychiatric disturbance:

The commonest association in this group is with depression in people of previous law-abiding personality. These may include isolated younger women with children, but they may also include middle-aged women isolated from their families, who have lost children, who have experienced the loss of a husband (including loss owing to his career), and who also may have significant physical complaints or ill-health and/or be chronically depressed. Shoplifting may be an early symptom of depression. The depression may also be associated with acute losses. Law involvement, including court appearances and associated publicity, can precipitate self-harm or suicide where offenders are depressed.

In cases of shoplifting and depression, the motivation may arise from feelings of guilt, a desire to be caught and punished, a cry for help, or represent an act of self-comfort or a treat. Other dynamics include secondary gain, in the newly poor to keep up appearances and to steal something for oneself that is not purchased with money from parents or a husband. In married female offenders, there may particularly be sexual difficulties or rejection and marital problems. Shoplifting may be an act of revenge on a husband or a partner to induce shame or punishment. For instance, it may result in the female having to be accompanied by her husband when shopping in future or alternatively in the husband having to undertake the shopping from which the wife can then opt out. For such individuals, a prison sentence may at one level be a relief from their marital or family situation.

Other psychiatric disorders associated with shoplifting include anorexia and bulimia nervosa, which may reflect both hunger for food and impulsivity, and early dementia, which is associated with disinhibited behavior, lower resistance to temptation, poor judgment, and late onset offending. Shoplifting may also occur on occasion in association with other psychotic mental illnesses, alcoholism, and learning disability.

3. Absent-minded shoplifting:

This implies no intent permanently to deprive and, if successfully argued in court, a not guilty verdict will result. Such shoplifting may result from undue preoccupation, distractions or harassment, for example, caused by the shopper's own accompanying children. Other causes cited include

claustrophobia in shops and various medical or psychiatric drugs that impair concentration or cause confusion. It is the prescribing doctor's responsibility to warn of such side effects from medication. Although a defense based on medication side effects, including the effects of benzodiazepines, is not infrequently put forward in court by shoplifters, in reality it is rarely a primary cause.

4. Shoplifting in children:

This peaks around 14 to 15 years, with boys being predominant. Boys steal candy and books. Girls tend to steal cosmetics and clothes. The items stolen are usually of little value. The commonest group is in fact that of "normal" children stealing for excitement. However, child shoplifting may occur owing to subcultural standards or as an expression of emotional disturbance, for example, as an act of defiance against parents, as a cry for help, or in association with feelings of depression, worthlessness, and a sense of guilt.

Assessment of Shoplifters

An examination of the history and mental state of the individual should elucidate motives and detect any evidence of formal psychiatric disorder. The motive may often initially appear obscure, with useless objects or objects of trivial value taken suddenly on impulse, sometimes as a treat or arising from concealed resentment. Alcohol or drug abuse is often associated with shoplifting. Additional information should be obtained if possible, for example, from the arresting police officer. It is often useful to discuss the case with the probation officer if one has been requested by the court to prepare a social enquiry report, which should also be read. It is essential to establish whether there is a history of previous convictions for shoplifting and any past psychiatric history and its relationship to offending.

Management

If it is argued on psychiatric grounds that there was no intent to shoplift and the patient pleads this successfully, a finding of not guilty will result. However, individuals are often deterred from such a defense, for example, a defense involving absent-minded shoplifting, as it will often require a number of court appearances and considerable legal expense, including payments to lawyers, to plead this successfully, and it may well involve local publicity.

Where the court accepts that intent permanently to deprive was present, the individual is legally convicted of theft. If the individual does suffer from a psychiatric disorder, including kleptomania, requiring treatment, psychiatric

evidence may be used in mitigation with a view to altering the sentence: for example, a psychiatric recommendation of outpatient psychiatric treatment may be made as part of a probation order.

TRICOTILLOMANIA

This is a habit and impulse disorder characterized by noticeable hair loss resulting from recurrent failure to resist impulses to pull out the hair. Hair-pulling is usually preceded by mounting tension and followed by a sense of relief or gratification. It is not itself directly associated with criminality, although it can be associated with personality disorder, which in turn may be associated with offending. It has been well reviewed by Walsh and McDougall (2001).

INTERMITTENT EXPLOSIVE (BEHAVIOR) DISORDER OR EPISODIC DYSCONTROL SYNDROME

This is included in *ICD-10* under habit and impulse disorders, but not in *DSM-IV-TR*, and is characterized by episodes of sudden unprovoked violence. Onset is in adolescence, and males outnumber females in a ratio of 4:1. It was originally conceptualized as a form of limbic epilepsy, but this has not been borne out. The syndrome may, however, be associated with soft neurological signs and temporal lobe electroencephalogram (EEG) abnormalities, and may be helped by anticonvulsants such as carbamazepine and sodium valproate. Mood stabilizers may also be used, and lithium and SSRI antidepressants may also help, suggesting a link to mood (affective) disorder. This disorder, in fact, usually occurs in those with a severe, often explosive, personality disorder with a propensity under stress to intemperate outbursts of anger and impulsive violence when frustrated, which equates to the emotionally unstable impulsive-type personality disorder of *ICD-10* and falls within the antisocial personality disorder of *DSM-IV-TR*. It is of note that half of persistently aggressive offenders in general are said to have an abnormal EEG record, often an immature record (persistence of excess posterior slow-wave activity), characteristic of those with psychopathic disorder and not diagnostic of epilepsy.

NONPARAPHILIC SEXUAL ADDICTIONS

These are culturally acceptable sexual interests and behaviors so intense or frequent that they interfere with sustained intimate relationships. They include, for example, compulsive masturbation, repetitive promiscuity (using people as sex objects and often involving prostitutes), and dependence upon anonymous

sexual outlets such as pornography or telephone sex. These have been conceptualized as addictions, compulsions, or hypersexuality, or as disorders of impulse control (hence their inclusion here).

Nonparaphilic sexual addictions may be depressive equivalents, especially in the presence of affective disorder that causes disorder of sexual regulation and that, in turn, increases nonconventional sexual interests. There are similarities to bulimia nervosa, which also shares comorbidity with depression and responds to antidepressants. Such sexual addiction has also been viewed as an obsessive-compulsive disorder variant. It has been criticized as a concept for being used too loosely and defensively and as including those merely with a high sex drive or those who are prone to marital infidelity. The concept has gained increasing public awareness through celebrities who have cited such a diagnosis and been admitted to private institutions for treatment. Successful treatment has been undertaken with the SSRI fluoxetine at 20–60 mg a day, which would be in keeping with such sexual addiction's being either a depressive equivalent or an obsessive-compulsive disorder variant.

Comparison of Nonparaphilic Sexual Addiction and Paraphilias

Nonparaphilic sexual addictions should be differentiated from paraphilias or disorders of sexual preference, in which there is a persistence of and preference for such behavior over normal adult sexual behavior, which may then lead to sexual offending, although in both there may be feelings in keeping with addiction, for example, a sexual "high" and tolerance with an escalation of the stimulus intensity needed to attain the same level of pleasure.

Those with paraphilias often feel they are addicted to such behaviors or view such behaviors as compulsions. They experience their paraphilic urges as instant, demanded, and fixated. They describe feeling in an altered state during paraphilic acts and unable to stop such behavior unless others intervene. Once caught, they may say they will never behave so again but they do, in spite of law involvement and risk to self or others. This may reflect dissociation due to high sexual arousal. Those with paraphilias often want acceptance from professionals rather than increased self-understanding or change.

The Internet

The majority of sites on the Internet are sexual in content and estimates suggest that up to 1 in 200 of such sites concern child pornography. Such sites may be used by those with nonparaphilic sexual addiction and those with paraphilias.

However, most adults are sexually curious. Among those who access the Internet for sexual reasons, some may be predisposed to use such sites, some may have lifelong paraphilias, and some may discover nonparaphilic or paraphilic interests owing to images seen on Internet sites being etched in the mind. The Internet allows easy access and apparent anonymity, and most sites are now free or affordable. It is unclear whether the Internet has increased the prevalence of paraphilias, but it has certainly led to an increase in the detection and conviction of those viewing child pornography there, in comparison with the past, when such images were viewed in private in magazines. The Internet also makes it easier omnipotently to summon at will and find rare sexual fantasies being carried out in reality, with the illusion of a real object relationship with another; this distances the individual from associated feelings of guilt.

CONCLUSIONS

Impulse-control disorders are a disparate group of conditions with different characteristics and epidemiologies. Whether the urges and impulses and resulting criminality are irresistible is open to question. Perhaps no impulse is irresistible, if an individual is motivated to try hard enough to resist. Certainly in practice, impulse-control disorders appear to be controllable at times but uncontrollable at others, when momentary excitement leading an individual to act on the impulse appears to overwhelm control. A disordered function of control may better describe the situation than an irresistible impulse. Indeed, the impulse to act is often combined with a desire not to act.

The conditions included in habit and impulse-control disorders do not real an identical psychopathology. Pathological gambling is a more complex condition, requiring attention to the whole person, than an impulse-control disorder such as tricotillomania. A pathological gambler shows features akin to substance addiction, with characteristic histories of escalation from use, abuse, and then addiction with tolerance and withdrawal symptoms, with gambling becoming the center of a sufferer's life, unlike the situation in pyromania or tricotillomania.

Impulse-control disorders are at least as prevalent as schizophrenia, but the research interest in such disorders and the evidence base for treatments are limited. Current treatments demonstrated to be effective include cognitive-behavioral therapy and SSRIs. Other treatments for impulsivity with a weaker evidence base include an SNRI, anticonvulsants, stimulants such as methylphenidate, and the cognitive enhancer modafinil. Other approaches being currently considered and researched include biofeedback, repetitive transcranial magnetic stimulation, deep-brain stimulation, and stereotactic neurosurgery.

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Troubled IPR Addiction: Habitual Attraction, Abuse, and Violence in Intimate Partner Relationships¹

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The intimate partner relationship (what I will herein call the IPR) is an intricate, wondrous system of processes and functions between people who come together largely by way of two highly “rewarding” and “reinforcing” processes—various forms of attraction and of social norm fulfillment. Sadly, a large subset of the population of IPRs is that of troubled IPRs, which are too frequently undetected, or unadmitted via denial functions—or accepted as “normal” (the norm), or worse, simply ignored. Within the domain of the troubled IPR reside habitual detrimental attractions, and various abuses and violences—potentially addictive patterns of attraction, abuse, and violence. These patterns offer insights into behavioral addiction tendencies, functioning on multiple macro and micro levels ranging from overarching species and sociocultural to micro level interpersonal and interactive psychological, psychoneurological and biochemical processes. The psychological, psychoneurological, and biochemical components of patterns of intimate partner abuse and violence parallel patterns of substance abuse and addiction.

Habitual attraction itself, founded upon attraction and/or social norm, is not in itself problematic, and may in fact be some of the glue that keeps well-functioning couples and their families together. While eventually the relationship can become almost a habit, this can be a good habit. It is when this function runs awry that patterns of troubles, risks, and dangers common to runaway addictions emerge (Henry, 2006; Sethi, Marais, Seedat, Nurse, & Butchart, 2004; Weitsman, 2000).

A substance addiction involves continued use of the substance in the face of harm to self or others. Similarly, ongoing habitual attraction-interaction can devolve into detrimental forms including but not limited to ongoing emotional abuse, obsession, masochism, sadomasochism, violence against the self or the other, and co-occurring disorders including substance addiction. (Berliner, 1947; Browne-Miller, 2007; van der Kolk, 1989; see also Dingfelder, 2007 and Gorman, 2007). Troubled habitual attraction—what we might better describe as *malattraction*—reaches past emotional and physical states of healthy love to the realm of addiction. Here, the triggering of addictive emotional and physical swings, with the wide-swinging roller coaster ride of emotional and physical highs and lows, can go runaway and spin to extremes. Or it can spin until it reaches a relatively stable destructive state where there are no further highs and lows, only increasingly lower lows. In these realms lurk the patterns of self and interpersonal abuse and violence to which too many people become addicted, and at the hands of which too many lives are damaged.

The troubled relationship is addressed by researchers and practitioners in several fields, although rarely addressed as an addiction (Family Violence Prevention Fund, 2007; Hendy, Eggen, Gustitus, McLeod, and Ng, 2003). Many intimate partners, as well as professionals treating and researchers studying them, do not choose to say that destructive relationship patterns such as intimate partner abuse and violence can exhibit habitual and addiction-like characteristics. Still, the IPR itself—or its dynamics—may be a habit that under certain circumstances can turn not only sour but immensely detrimental to one or both partners, the family around them including children, the surrounding community including the workplace, and beyond to the economy, in the form of not only lost productivity and lost work days but also ongoing, even long-term, mental and physical health care consequences and costs (Salber & Taliferro, 2006; Scaer, 2005, Tjaden & Thoennes, 2000; Tjaden & Thoennes, 2000; UNICEF, 2000; USDHHS, 1999). And, at its extreme, one possible outcome of a troubled IPR is that of extreme intimate partner violence (extreme IPV), which can be quite dangerous, even lethal (Rennison & Welchans, 2000; Rivara, Mueller, Somes, Mendoza, Rushforth, & Kellerman, 1997).

As troubled IPR addiction can be so damaging and dangerous, it is only responsible behavior for all who are, will be, or have been in and around IPRs (everyone), and for helping professionals and the researchers who guide them, to consider what positive and also what negative elements of IPR behavior may indeed be habitual, even addicting. I come to this work from a long background in several fields including but not limited to clinical aspects of substance abuse, domestic violence (working with persons abused, persons abusing, and their family members), family dynamics, trauma, family systems theory, and related social policies. This work has converged to bring me to make the following

commentary (addressed to professionals as well as to lay persons, thus written in language aimed at being accessible to a broad range of readers²) on IPR pattern addiction and what is best labeled intimate partner *abuse and violence* (IPAV) (Browne-Miller, 2007). The frequently applied acronym for intimate partner violence, IPV, is quite relevant here, although perhaps limited when discussing the full range of abuse and violence patterns, whether or not these are physical. Other terms for IPV may include domestic violence (DV) and gender-based violence (GBV), which can be but are not always subsets of IPV (or in my schema, IPAV).

ELEMENTS OF TROUBLED IPR ADDICTION

Troubled IPR patterning addiction has many faces, and it is perhaps best summarized as falling into three inextricably linked categories: deep neuropsychological elements; powerful behavioral patterning; and overarching social norms to which entire subpopulations and populations are not only committed but are themselves virtually and even actually addicted (applying the broader definition of addiction being used herein).

Deep Neuropsychological Programming.

As is true for substance addiction and other behavioral addiction, troubled IPR addiction contains a powerful biological—neuropsychological—component. Of course, even without the running awry found in an addictive pattern, a healthy love (and or sexual) relationship can parallel a drug “high,” especially in its early stages. As Louis Cozolino explains in *The Neuroscience of Human Relationships*, “Love is a drug . . . that includes endorphins and dopamine and results in similar patterns of brain activation as taking cocaine” (Cozolino, 2006, p. 316). This addictive rush of attachment chemicals brings with it the distress at their withdrawal.

Building on Cozolino’s observation, we can add that the search for, and the actual or presumed reinstatement of, this or another replacement love sensation poses the risk of the high-low roller coaster ride, of the repetition of highs and lows of love, and in runaway situations, of the extreme highs and lows of love. Desperation in, and distortion of, the search may misinterpret replacement sensations as love when these are not love. This distortion is an all too common component of the troubled IPR addiction pattern (which can even leap from relationship to relationship), and can be said to be self-sustaining, self-fueling, *auto-perpetuating*.

The risk of neuropsychological addiction to such patterns is emotional-biochemical and it is also a factor of present-time social experience. As Cozolino

points out, “we never experience a person as totally new but as some blend of our expectations, implicit schema, and who he or she really is. [Note however that reaction to this experience] . . . results from the fact that implicit memory processes are faster, automatic, and guide explicit memory and conscious experience. . . . Although it takes our brain 400–500 milliseconds to bring sensations to conscious awareness, it takes only 14 milliseconds to implicitly react to, and categorize visual information” (Cozolino, 2006, p. 133).

Again building on Cozolino’s viewpoint, we can formulate the notion of a sort of *neuropsychological investment* in a relationship pattern, even one of abuse: We respond to what our implicit memories are responding to, until we have time to reason with ourselves—to see what is happening in the now—if we get a chance at all to do this before impulsively reacting to a stimulus or trigger, as by then we may be neuropsychologically invested in the process. We may also be interpersonally committed to the process, as action has already been taken, without advance review of its outcome. Implicit memory has, in a sense, been socialized (and even traumatized) to the point where it reacts to present-day triggers as if these were harbingers of past events. *Past comfort may seem to be present comfort; past safety may seem to be present safety. Past danger may seem to be present danger; past pain may seem to be present pain.* For example, take a person who has been hit in the face many times as a child, and has grown to cower and fear these repeated assaults. Many years later, in adulthood, there is nothing like this in that person’s life. One day someone reaches to adjust the cap on that person’s head and that person flinches and raises a fist, almost hitting the hat-adjusting friend. Had the person not been so rapidly placed on automatic by the implicit memory, then the explicit memory could have warded off this behavior.

The effect of this difference in speed of access to implicit and speed of access to explicit memory is powerful, as both memory pools are being accessed almost (in real world—everyday—time) simultaneously. For my purposes here, I will call this the *reaction differential factor*, or RDF. It is in the realm of this RDF that the IPR is vulnerable to on-the-spot, immediate responses, reactions—without the benefit of conscious integration and review of the stimulus or trigger. And almost concurrently the IPR is vulnerable to the next wave of responses, somewhat more conscious responses to the actions taken on impulse.

In is in the first, brief 14-millisecond interval that hurtful and even threatening verbal and physical outbursts, actions, can be initiated. Once in process, implicit triggers work like an avalanche. Where intimate partner violence, physical IPV, takes place, this 14-millisecond response zone is loaded with physical risk. This RDF characterizes much of extreme IPAV. I add the *A* in here, as nonphysical abuses such as impulsive emotional abuse can also arise out of, be triggered by, the implicit memory (Browne-Miller, 2007; Loring, 1998).

Stretching the definition of implicit memory somewhat, we can see that implicit memory reaches back in time—into the memory of the individual, and of the IPR, as well as of the species. The latter is where instinct lives. Here is where the instinct known as the fight or flight response arises. When the individual is threatened, species-honed instinct works in the millisecond space to initiate a rapid impulse response to danger: either fight or take flight.

Powerful Behavioral Patterning

Implicit memory calling back, right into the present, responses to old events and traumas is a driving force in many troubled IPR reactions. However, we need not reach only into the far past to find powerful behavioral patterning. We can search the term, the span, of the RDF, look into the space between reaction out of implicit memory response and reaction out of explicit memory response. We can also search more recently formed implicit memory responses. A long- and even short-term IPR may repeat the same pattern often enough that its characteristics, actions-reactions and triggers-responses, move into implicit memory enough to put certain behaviors onto automatic. This process can also take place in a healthy IPR and likely does. (Do we wish our partner's and our own taking out the garbage and cleaning up in general were guaranteed implicit memory-directed automatic behaviors?) However, in a troubled IPR, troubled patterns are established, maintained, protected, and often even amplified, with repetition. Reinforcement of a problem behavior takes place (even in "the now").

Addiction to these learned patterns is common, and works on both the neuropsychological level and the level of current social interaction and expectation. All sorts of present-time reinforcements of these patterns occur, and we have the addiction scenario arising again and again. The discussion here focuses on this category, powerful behavioral patterning in the troubled IPR, not to the elimination of the other two categories (instinct-driven neuropsych and culturally-driven social norm), but as the locus of interaction between them.

Powerful Social Norms

I add this third layer to my discussion of troubled IPR addiction: the social norm. Where much of the following discussion focuses on the individual's and the couple's potential for addiction to a troubled relationship pattern, everything discussed here takes place within the larger sociocultural context. The social norm as a concept is accepted as a phenomenon found in broad, overarching social and cultural settings and their subpopulation subsets. We tend not to think of the social norm as addictive but rather as an overarching

contextual dictum under which all else takes place. Here I do refer to *addiction* to social norms, and use this reference both lightly and as profoundly as I can. My assertion here is not only that the individual can become addicted to something or some behavior but that an entire population or subpopulation can as well. While some social norms are explicit as givens, others are implicit, virtually invisible while they do their work on all levels including the neuropsychological and behavioral.

The power of the social norm is in its characteristic transferring of expectations regarding values, beliefs, behaviors and attitudes to a broad population. The weakness of the social norm is that it has evolved over a long period of time and that it does not change quickly even when such a change is needed. Where social norms are misinterpreted and resistant to change while being abused or at least misinterpreted, behaviors of individuals can be negatively affected. As an example, the condoning of, or at least the minimizing of the gravity of, violence against women, is still prevalent in many cultures and subcultures around the world. While this chapter does not focus on social-norm-supported, and even social-norm-promoted, violence against women or GBV per se (I choose to do this elsewhere), the role of powerful underlying social norms in interpersonal and relationship violence is the context in which much of the IPAV discussed herein occurs.

EXTENT OF THE PROBLEM

Data-established pieces of the puzzle are available; however, we have no measure of the extent of addiction to troubled IPR patterns or of addiction to IPV or IPAV patterns. The prevalence of such *pattern addiction* would be difficult to measure. Certainly, we cannot prove that all IPV is the result of addiction to individual and social IPAV patterns, as many instances of assault upon an intimate partner may not be the product of addiction to a pattern. The data that are available do tell us that intimate partner violence is significant in scope and impact worldwide, suggesting the relevance of all three factors: social norm, behavioral patterning, and neuropsychology. We pause here to note some basic IPV incidence-prevalence data.

In terms of what is being reported, which is truly only the tip of the iceberg, counted intimate partner violence results in well over a million injuries and a thousand deaths each year in the United States alone, and this is without adding data regarding rape and other forms of sexual molestation and assault, which are not always considered events taking place between “intimate” partners (Centers for Disease Control [CDC], 2002; see also Bugarin, 2002). Given abused persons’ general reluctance to report the abuse and violence, especially

when the context is a formal or semiformal marital or pair-bond situation, these are likely vast understatements. And, given what we know from hotlines and shelters (Campbell, Sullivan, and Davidson II, 1995; Rennison, & Welchans, 2000), these are surely vast underestimates. Note that this data just represent rates in the United States; global data echo all this and more.

The World Health Organization (WHO) “Multi-Country Study on Women’s Health and Domestic Violence against Women” (WHO, 2005) found that in 10 countries it studied, at least half of all women reported that they had been physically or sexually assaulted since the age of 15, and at least half of these assaults had been inflicted upon them by a “male intimate partner.” Of the ten countries in this WHO study (Bangladesh, Brazil, Ethiopia, Japan, Namibia, Peru, Samoa, Serbia, Montenegro, Thailand, and the United Republic of Tanzania), 10 percent of women reported *current* violence by a current intimate partner. In terms of IPV during their lifetimes, reports ranged from “15% in Japan city to 71% in Ethiopia province, with prevalence estimates in most countries ranging from 30% to 60” (WHO, 2005, WHO, 2004).

Again, these data alone say nothing about addictive *patterns*. Much of these violence events are crimes—assault, rape, homicide—that may or may not have occurred as part of a pattern (Coker, Smith, McKeown, & King, 2000; Rivara, et al., 1997; Simon, 2003). Where women are the victims of such violence, this is frequently described as the gender-based violence (GBV) referred to earlier. (Note that IPV is not always violence against women.) When this violence is embedded within overarching cultural norms, including tolerance of violence against women, this violence is not only tolerated and even accepted but in some cases expected. Here, the addiction may be that of a population or subpopulation to a general social norm of toleration (of tolerance of, and programming for, this form of violence) rather than to an individual’s addiction to a pattern. Similar social or population phenomena are seen in substance addictions. For example, a subculture or subpopulation may accept, encourage, and virtually require heavy alcohol consumption. The line between a social pressure and a social given as a population addiction blurs.

TERMINOLOGY AND CONCEPTUAL CAVEATS

A few caveats here. First and foremost, nothing about this discussion is in any way a blame the victim approach to intimate partner abuse and violence. All too often, the victim is somehow construed as the cause of the violence of which the victim is the victim—the clearly injured party, clearly at another’s hands. Without entering into any contemporary (and quite common in the United States) “who is really the victim” debate here, it is important that the

following material not be used to serve one side or the other of the debate. And where this material may indicate that both partners who are involved in ongoing IPAV are either at risk for, or already are, addicted to IPAV patterns, this in no way says that this addiction to patterning excuses the abuse and violence. Similarly, even addiction to abuse and violence itself does not excuse this abuse and violence. Persons committing the abuse and violence must be accountable for their actions, to their victims, to their families, and to their communities.

Another important note. Clearly, substance abuse (SA) and IPAV occur at an alarming rate (Saint-Jacques, Brown, Caplan, & Werk, 2006). Nevertheless, there is no definite and entirely predictable causal direction; neither one nor the other is certain to always come first:

Neither the rule, SA \rightarrow IPAV,
nor the rule, IPAV \rightarrow SA,
can be held gospel.

Instead this co-occurrence itself takes myriad forms and directions, and it never takes place in isolation from countless other factors. Nevertheless, with far too great a frequency, SA is often said to be the whole cause of IPAVs, especially domestic violence. This risks a transfer of focus entirely onto the SA element in lieu of delving into the complexities of the IPR itself and of the IPAV addiction where this is present. Calling SA the cause of IPAV also risks absolving the members of the relationship, especially the perpetrators of the abuse and violence, of direct responsibility for their actions.

The definition of the intimate partner relationship, or what here is called the IPR, has itself been debated with regard to the requisite degree of formality of the relationship. Some will say that the sanction of marriage permits sexual intimacy and therefore is the official IPR. Others will disagree, of course. However, whether or not the relationship is official or sanctioned, or long term, troubled patterns of relating and of abuse and violence can emerge. Also note that there are many forms of casual relationships that involve intimacy—thus, intimate partners. We will not differentiate here as we are looking at IPR interaction patterns wherever they may emerge.

A word here about the use of terms such as *domestic violence survivor* and *batterer* or *perpetrator*. Various terms are used for these and similar roles in this dance of pain seen in too many intimate partner relationships. In fact, different professions tend to select different labels for these roles (as in Catalano, 2006; Chu, 2006; Dahlberg & Krug, 2002; McCormick, & Sacks, 2007; NCIPC, 2006; Roberts, Hegarty, & Feder, 2006; see also Meyers, 2007; DeWolfe, & U.S. Department of Mental Health Services, 2004; Rosen, 2007; Simon, 2003). For example, law enforcement tends to respond to what are called vic-

tims of violence, while persons who work with those who have managed to triumph over being abused in their intimate partner relationships may tend to prefer other terms, such as survivor, for the same persons. And the person seen as having committed the act or acts of violence is often described as the batterer or perpetrator, in keeping with the law enforcement and judicial labels for this person. Nevertheless, simplifying the role of this individual to that of batterer is erroneously collapsing the complex role of this person in the troubled IPR or its IPAV. Labeling one party as batterer reduces the role of both parties in the pattern to the point that one is the good guy or girl victim and one is the bad guy or girl batterer. (That there is no gender preference in these labels is purposeful here. Gender is a very important overlaying factor that must be studied separately.) While in many instances, one is the victim and the other is the batterer, for the analysis of addiction to patterns of relating and abusing, these distinctions are at times secondary.

Rather than take a stand on these terms and their utility, we focus here on the likely to be seen as controversial condition and experience of being habitually “stuck” in these roles—*addicted to them*—however they may be labeled. Therefore, here, in about half the instances in which I describe the roles found in intimate partner violence, “people first language” is used, to some extent allowing us to think past labels—to take one step back from a final label. The “abuser” can be the “*person who is abusing*” and the “abusee” can be the “*person who is being abused*.” (Note that this also allows for role switching, for role matching, and also for the implicit self abuse that all too frequently attends the IPAV scenario.) Terms such as abuser and abusee are also used, and more rarely are terms such as perpetrator and victim used. Looking past these roles allows honest consideration of mutual abuse, plus self-abuse, plus dominant abuser roles in destructive addictive patterns. And this allows us to look deeply at addictive IPR patterning.

The patterns of hurt we are talking about have many complex dimensions. These dimensions include nonphysical types of abuse and violence that can be precursors to physical violence or can be extremely hurtful, miserable, and destructive even in the absence of physical violence. These nonphysical forms of violence are easily mislabeled and can be missed altogether. For example, emotional abuse can be so subtle that even the participants do not consciously realize it is taking place. And, where they do realize it, they may not recognize this as emotional abuse or emotional violence, let alone as a pattern of such, let alone addiction to such. Another form of non-violent abuse, that is, financial abuse, can seem so natural to the participants that it remains unlabeled. These and other nonphysical abuses—*hidden violences*—must be recognized and addressed to halt them. So must the patterns—all too often addictive patterns—in which these abuses and violences occur. We will return to addictive patterns of emotional abuse and of self abuse later.

Additionally, there are other dimensions of IPAV addiction and patterning that include but are not limited to the earlier mentioned co-occurring substance abuse, as well as stress, psychological and health disorders, and the partners' separate personal histories of substance, self, relationship, and child abuse prior to the marriage or coupling. These conditions, only some of which can be described as co-occurring disorders, or even causal preceding disorders, can be so intertwined with relationship addiction (including any sex addiction or obsession, any abuse and violence), that it is unrealistic to see and to treat one of these to the exclusion of the other. We return to particular elements of co-occurring IPAV and SA at the close of this discussion.

There are those who prefer to separate these conditions out, not to link them in any way. This is understandable because they want to prevent persons who are abusing from passing the buck for their abuse and violence onto conditions such as stress, mental illness, having been abused as a child, and as noted above, alcohol or drug abuse and addiction (of note where etiology of adult problems is relevant are Burgess, Hartman, & Clements Jr., 1995; ICAN, 2000; Schwartz, Hage, Bush, & Burns, 2006). This point of view is taken to help persons doing the abusing take responsibility for their actions no matter what has contributed to them. While this is a noble approach, and persons abusing should be helped to take this responsibility no matter what contributes to their violence, treating their violence without treating the co-occurring conditions is limiting the power of the work being done with and for persons who wish to stop their detrimental and abusive behaviors.

PATTERNS OF ABUSE AND VIOLENCE IN RELATIONSHIPS

That IPAV may be addicting becomes clear when its various levels are included in the delineation of its patterns. The many faces of relationship abuse and violence are frequently categorized along these lines: emotional abuse; verbal abuse; physical abuse. These types of abuse and violence can be placed along a spectrum like this, depicting the pattern found in much relationship abuse and violence, in that it flows from one end of this spectrum to the other, working its way through perceived levels of escalation from nonphysical to physical:

emotional abuse → verbal abuse → physical abuse.

We should add in threats of physical abuse. These can be threatening words or threatening gestures, or implied, hidden but very real threats, and should have their own category (as underlined here):

emotional abuse → verbal abuse
 → *threats of physical abuse* → physical abuse.

As these patterns tend to be cyclic, they are perhaps best diagrammed around a circle, or perhaps as an oscillating or roller coaster sort of line, with the extremes of no violence and then of physical violence at the highest and lowest parts of the “ride.” Many other patterns form around IPR abuse and violence, and some patterns devolve to a single ongoing flow of abuse and violence with no, even temporary, de-escalation or relief:

abuse and violence → abuse and violence → abuse and violence → etc.

A great deal of emotional and verbal abuse is very subtle, and not seen for what it is by its recipients or by its perpetrators. In some relationships, there is never physical violence but there is a great deal of other violence taking place. Sadly, these often damaging patterns can be entirely overlooked because there is no physical violence taking place.

VIOLENCE CAN BE HABITUAL, ADDICTIVE

And while there is surely growing understanding that sometimes emotional and verbal abuse are signs of physical abuse, or signs that physical abuse is coming, there is less understanding of the matter of addiction to abuse and violence. The truly addictive nature of actual patterns of attraction, abuse, and violence in relationships remains largely hidden to us, perhaps because we shy away from this understanding. Understanding could be disturbing, could call far too many behaviors into question. Bottom line: we must admit that people can become addicted to intimate partner abuse and violence in the way they can become addicted to just about anything else repeated over time—anything that has positive and negative sensations and reinforcements associated with it. Even where this pattern is experienced on a frequent basis

emotional abuse → verbal abuse
 → *threats of physical abuse* → physical abuse.

it has its built-in pleasurable sensations (such as relief of built-up tension). These built-in sensations can function as rewards—things that may seem to feel good—positive reinforcements that are typical in addictive patterning. These so-called rewards are easy to reap, in that they are natural parts of the cycle.

An example of positive reinforcement of a dangerous habit is the habit of make-up sex after a dangerous level of intimate partner violence has taken place. Some couples have even been known to engage in their habit of make-up sex after extreme physical violence instead of going to the doctor or the hospital for stitches (and then to return to the violence after the sex). How very much like the picture we have of severe drug addiction—craving the drug during withdrawals—then using and getting high and using again despite the damage and injury this is causing (even using while needing to get medical attention for a wound inflicted while high or while desperately seeking the drug). The general script reads like this: undergo suffering, feel relief and/or pleasure, undergo suffering, feel relief and or pleasure, undergo suffering, feel relief and/or pleasure, and so on.

Habitual Rewards

People go for rewards, and for cycles that include rewards, for many reasons. When it comes to intimate partner violence, the reward can tie deeply into the addiction to the pattern, even becoming central. First, there is a potentially addictive *pain—no pain—pain* cycle. As noted above, the cycle of abuse and violence often (but not always) ebbs and flows, and when it does, may bring with it the simple reward that there will at least be breaks—whether moments or hours or weeks long—from cyclic extremes such as physical violence and possibly from the physical pain it brings (although sometimes it is only after the violence stops that the physical injury and pain it causes is felt). Suddenly, the person abusing stops hurting the person being abused and there is new relief—the beating has ceased. This fleeting so-called relief is a form of reward (albeit a cheap reward), a positive reinforcement for this pattern. It is also a shift through the range of the RDF, to the somewhat slower reaction time end of the spectrum.

Let's be very clear here: there is nothing in these words that says the person being abused likes being abused. Instead, these words say, first, that even momentary relief from abuse can be looked forward to or longed for; that tolerating abuse from which there seems to be no escape is facilitated by the anticipation of even brief relief; that when this situation becomes a pattern, both the person abusing and the person being abused can become programmed to it.

Second, there is potential addiction to a specific reward. Where patterns of abuse include what has been called the hearts and flowers or make-up stage, this stage may serve as the reward, the reinforcement, and itself be craved as a drug high would be craved. During this time, no matter how long- or short-lived it may be, there can be politeness, or emotional caring, or gift giving, or

make-up sex. Each of these reinforcing reliefs brings with it not only the positive effect of the respite from the violence but also the positive experience of the make-up activity.

Third, addiction to the highs and lows themselves—to the very behavioral pattern—is quite natural. IPAV addiction’s highs and lows are experienced as something like the experience of drug addiction—a roller coaster ride. This ride itself can become addictive, as it can produce sets of biochemical shifts that in themselves produce something similar to these common cycles:

- ♦ Seeking stimulation—then relief by excitement, adrenalin rush;
- ♦ Tension building—then relief from tension in some form;
- ♦ Pain building—then relief from pain in some form;

and even

- ♦ Longing for, craving, the sense of contact with someone or something—then contact with something or someone in some form.
- ♦ Longing for, craving, relief from discomfort—then comfort in some form;
- ♦ Longing for, craving, relief from pain—then relief from pain in some form.

In an abusive relationship (abusive to the other member of the relationship and/or abusive to the self while in the relationship), addiction to a pattern of highs and lows has distinctly detrimental effects. Prolonged addiction to roller coaster rides of stress and violence increases the probability of desensitization to the danger and to the pain that the violence presents. Increasingly severe violence may not be experienced as such. Prolonged addiction to these roller coaster rides also increases the probability of more and more damage and more and more severe instances of damage and injury, with the potential of these *additional* last phases being added onto the spectrum above:

physical abuse → physically damaging abuse
 → *physically disabling abuse* → death

Checkpoints Along the Path to Violence

Somewhere along the line, usually from the very start when attraction and/or love is intensely biochemical, we may unwittingly cross checkpoints on a path that could be traveling from *interaction*, to *habitual non-physical abuse*, to *habitual physical violence*, to *addiction to the highs and lows of the pattern of relationship abuse and violence*. This is not to say that all or even a majority of relationships follow this path. This is to emphasize that everyone in a past, present, or future relationship can benefit by knowing about these paths, warning signs, and

checkpoints. To say that anyone having a relationship should not look at this issue is to say we support denial.

Tolerance Can be Dangerous

Sometimes people experiencing patterns of relationship violences—whether these be emotional or physical or both—grow numb to the pain. This numbing to pain takes place because the emotional and physical pain is too much to bear, and also as a result of developed tolerance. This numbing behavior, whether tolerance or a coping skill, is terribly dangerous. This numbing makes all involved miss protective, even life-saving cues. They may not see how serious the situation is, and/or not feel the intensity of the pain—even while in great distress or being maimed or nearly being killed (or being killed). Contrary to programmed safety instincts (pain aversion or pain avoidance), safety is compromised by numbing to the very pain that would allow the sensing of the true level of danger. The IPAV addict moves in surrender of a basic survival instinct for what is in this instance an acquired, maladapted, survival instinct: tolerance. (Again note, this discussion does not stem from a blame-the-victim approach. Rather, this is an *alert and educate* the victim, and all players in the process, stance.)

When our moral, emotional, or basic survival responses to inflicting or receiving abuse and violence diminish, we have developed a *tolerance* to the abuse and violence. This tolerance can emerge much as a person addicted to a drug may eventually take in more and more of the drug to feel or achieve the same effects, and also much as a child who has watched thousands of hours of violence on television may grow accustomed to witnessing violence and may be less and less shocked or morally taken aback by it. The former example raises another matter. We must dare to ask here whether some instances of tolerance to IPAV pain include subconsciously requiring increasingly painful and dangerous violence in order to feel by contrast the longed for relief when the seemingly safe part of the roller coaster ride, the hearts and flowers stage as it is sometimes called, comes around—if it does.

What tolerance can look like in intimate partner abuse and violence is a numbing to the experience of being abused as well as to the experience of abusing. Again, we must remember that numbing to violence does not prevent the damage it causes; rather, it can allow the violence, danger, and damage to continue and even get worse. Addiction to a neurostimulant (such as cocaine, methamphetamine, or even caffeine) offers a standard example of tolerance. A person addicted to a drug with stimulating effects will crave the stimulation and energy increase when not high on the drug. Over time, when not high,

the energy drop will become increasingly low and misery inducing. Each time the stimulant is taken to relieve the low, brain cells may open more receptor sites that fit the stimulant. Tolerance emerges. These sites eventually expect the stimulant, and during phases when there is no stimulant available, the brain cells are hungry for the stimulant, more and more of the stimulant, while the individual is very tired, more and more tired, without it. Tolerance means, in this case, that the highs get lower and the lows get lower. The brain cells require more and more of the same stimulant to feel the high. Even with more and more and more of the same drug, the highs eventually get lower.

Conflicting Experience

We might suggest that while the intensity of the violence may increase, the conscious sensation of receiving the violence (or of giving the violence) decreases over time. The word “conscious” is used here as the person being abused may turn off to conscious awareness of the pain, grow more and more numb to it, while suffering immensely but very deep inside. The suffering is taking place whether or not it is consciously recognized.

People can give themselves such conflicting messages. And this applies to both persons abusing and persons being abused, and of course to situations of mutual abuse and violence. Being either the cause of the pain or the recipient of the pain is painful. Again, this does not in any way say that an abuser who on some level suffers as much as the abusee is therefore off the hook for the damage and injury caused.

Establishing and Maintaining Healthy Patterns

With the great risk of deteriorating into troubled patterns, can an IPR avoid these? Certainly, most relationships can establish a healthy holding pattern, a way of life that stabilizes and promotes not only stability for the relationship but also safety and healthy living for its members and for the people, including the children, around them. However, some relationships stabilize in holding patterns that on the surface work but are laden with risks lingering like time bombs waiting to go off. For example, a “little bit of hitting,” or “getting mad and throwing things sometimes,” may be alright for partners and may work for quite a while. Still, if behind this there are time bombs lurking, *predispositions to detrimental patterns*, it is generally best to detect and defuse these before they become more damaging and dangerous. Members of IPRs can be assisted or assist themselves in preventing the emergence of troubled patterns. They can be encouraged or encourage themselves to do the following:

- ♦ Choose to protect the relationship from deteriorating into problem patterns that once in place are more difficult to change.
- ♦ Try to spot, in the early stages of their formation, inherited or acquired, learned, patterns that could grow into problems.
- ♦ Weigh the risks of doing nothing preventive about patterns that may eventually become problem patterns.
- ♦ See the risk of certain potentially abusive behaviors and patterns, spotting these before they exacerbate into clear abuse and violence.
- ♦ When spotting abusive behaviors, even very subtle ones, be ready to call them—admit they are—abusive.
- ♦ Recognize the importance of impulse control, even of the time out, and of counting to 10 to go off automatic before speaking or acting.
- ♦ Understand that even emotional abuse is violence.
- ♦ Direct and change patterns and behaviors in a direction away from potential and/or actual abuse and violence.
- ♦ Be highly alert to the process of numbing to pain, and of avoiding, not seeing, and not feeling pain. Pain is a signal that must be addressed.
- ♦ Do not let the relationship tolerate certain levels of abuse and violence, as there is no appropriate level.
- ♦ If consciously exiting each other's company, temporarily or permanently, have a clear plan and agreement about a clear plan for so doing.
- ♦ If a clear plan for so doing is not possible, the individual member or members of the relationship and the children, if any, whose safety is in question or peril must get away.
- ♦ Do not sacrifice personal or children's safety for the preservation of the relationship or of a relationship pattern. While ongoing harm may be part of the pattern, this harm does not justify the pattern.

PROGRESSIONS

Warding off the incursions into love of negative psycho-neuro, behavioral, and social programming requires being able to recognize any progression toward detrimental pattern addiction. Most important to see is the simple addictive progression so well recognized in the substance addiction treatment field. An addiction to a behavior frequently begins with *casual behavior*. Casual behavior is brief, occasional, a sort of emotional experiment, seemingly without deep consequences. For example, where there is stress in one's intimate partner relationship, one of the partners may on occasion get into bed with someone else outside the relationship, thinking that this is coping. Of course, this and other casual (and casual escape) behavior can become regular behavior:

Casual Behavior → Regular Behavior

Where there are detrimental present-time or future consequences of this repeated behavior, it at some point may become troubled behavior, a pattern of negative or detrimental behavior:

Regular Behavior → Troubled Behavior

People who are exhibiting troubled behavior continue to do so in the face of adverse effects to themselves (their health, their mind, their work), their families, their businesses, their communities, and/or their societies. It is easy to slip from regular behavior to troubled behavior because the early signs of troubled behavior are subtle and often go undetected.

Again, consider drug use the example. Someone who snorts lines of cocaine to experiment, and then moves into casual social use, and then moves into regular social use, then into increased regular use, likely enters addiction without recognizing this. This is a simple progression, and quite common:

Casual → Regular → Troubled → Addicted Behavior

Fortunately, not everyone who tries a behavior that might be addictive travels this tragic path. Some of these persons, these *casual behavORS*, (behavORS being the word here for the people exhibiting behavIORS), try a behavior once or a few times and then consider the experiment completed. Or they engage in the casual behavior very rarely and feel this works. But all too commonly, casual behavORS unwittingly slip into regular behavior. We hear people confidently tell themselves, “It can’t happen to me. I’m too much in control of my life to develop an addiction to any behavior.” However, some do go from casual to addicted behavior in the blink of an eye.

BLEEDING EYE STORY

In the midst of a loud verbal argument, as S yelled at J, “You stupid idiot, you know I’m right!” S raised one arm as if S would hit J if J did not agree.

J jumped back and yelled, “Don’t you dare hit me; you look so stupid doing that!”

In that moment, as J was doing and saying this, S leapt forward, right at J, S swinging an arm, this time hitting J in the face, tearing the skin of the side of the head near the eye, and leaving a red mark that would later become a black eye.

Stunned and flinching in pain, J fell to the ground, cowering, saying, “Stop! That’s the last time you’ll ever hit me!”

S grumbled back, “Oh yeah? Who’s going to stop me?”

"I'll call the police."

"No, you won't. You stupid idiot, get up and go wash your face, it's bleeding all over the carpet. And then clean this mess up."

"You clean it up; you hit me."

"This is your fault; you do it," J said, but J finally cleaned it up anyway, as was the pattern.

THE WAY IT SHOULD BE (THE NORM) PATTERN

Shifting the unit of analysis away from the patterns of the individual and the couple, the larger context in which a troubled IPR addiction occurs is highly determinative of the path of that addiction. Given that I am suggesting that entire populations and subpopulations are addicted to the particular social norms in which they are immersed, these norms are here cast as elements of IPRs including troubled IPRs. Social norms themselves, particularly those norms relating to intimate partner relationships, may not only be guiding and comforting but may also be confining and, either way, addicting. Clearly, relationship building and maintenance is not a simple undertaking. It is easier for many to just do it, to rely on the norm for just being involved, and avoid delving into what is happening while they are doing it. And there is a strong social directive to just do it, have a relationship, don't look too closely, don't question the process. There are those who will say, "That is how it is supposed to be" and "That's life." Recall the old rhyme: "[So and so], sitting in a tree, K-I-S-S-I-N-G. First comes love, then comes marriage. Then comes the baby in the baby carriage." This picture—love then marriage then baby—slips into many young minds as early as the nursery rhyme stage of life, forming a sort of directive, a norm—or "normal" pattern—that young people come to feel is most acceptable and most normal.

This basic norm is itself so complex that while it is evolved, adapted, and transmitted from generation to generation via nursery rhymes, fairy tales, spoken expectations, laws and religious codes, media of the times, and modeling done by older generations, no one can say what all goes into it. No one can say for sure that this is truly how it is supposed to be now (today if ever), or what it is that is supposed to be. No one can promise that good and wonderful experiences are normal in and can be expected of this arrangement, nor whether the abuse and violence that can take place in some of these arrangements is alright, part of the plan. However, what becomes clear is that this pattern, instilled via the K-I-S-S-I-N-G message and other traditions, can go awry. Norms work to resist this. Embedded within the nature of the norm is what sustains it, protects it, and wards off threats to its dominance over behavior. The norm reserves for itself the role of dominant, unquestioned imperative—a hypnotic,

addictive, given—*reality* so ubiquitous and self-preserving it is frequently invisible—even when flawed in its intended implementation. While social norms can and do change over time, deviation from a norm prior to its full change can bring ostracism, suffering, and harm to the deviator (Browne-Miller, 2007; Chandler, 2005).

Transaction Habits

There are many hidden trades that take place almost every day, and sometimes almost every minute of a relationship. Each time there is an interaction, a choice to do or not do something, a passage in time in which one or the other puts either the relationship first or the self first, there is a tiny transaction taking place. There is also memory of the pattern of this interaction and its rewards and reinforcements.

These transactions—what we can describe as compromises and trades—are not in themselves sources of pain; they can be wonderfully convenient. And they can be navigated with sensitivity and appreciation for the process of balancing the give-and-take required to keep a relationship functional. Many couples achieve this sort of balance without working hard to do so, and this is ultimately the goal where possible: perceived stability, safety, and sanity. At the same time, too many couples never reach this balance. Then, as time goes by, they trap themselves or at least one of their members into ongoing sacrifice of self and compromise of at least one of their senses of stability, sanity, and safety, all within the comfortable bounds of social norms or (subnorms). It is then that the vows some couples take can become troubled patterns—traps, licenses to cause pain, hurt, and damage.

Progress of Bonds

IPRs form bonds and frequently pursue preservation of these bonds. The pattern of intense bonding, even in a very new love relationship, is natural. Love can form a beautiful bond and a deep emotional engagement and commitment, a truly rich experience making life all the more meaningful. Of course, entering into and then existing as an individual while in an intimate partner relationship is a never-ending process. The relationship changes, just as its members do, as time goes by. The relationship develops a history of its own, a deeper meaning and identity of its own. It truly can take on a personality of its own—not only in the eyes of outsiders who may even come to call the partners in the relationship the “Smiths” or the “couple next door” or “those two”—but in the eyes of its members. Now the relationship is itself a pattern.

When the members of the couple both feel the evolution of their relationship is generally positive, then the progression or pattern moves something like this although not always precisely in this order: from *initial attraction*, to *deeper connection*, to *intersection of lives*, to *identification with the relationship*, to *formalization of the relationship*, to *perpetuation of the relationship*, to *preservation of the relationship*, to *ongoing deepening of the relationship and of the commitment to it*.

Some Bonds Progress Negatively

Of course, there are other less than desirable paths a bond may take. It is important for persons in intimate partner relationships to track, or at least be aware of, the progression of their relationships, the evolution of their bonds, over time. This way, the relationship and its members can maintain an awareness of the direction (or directions) their relationship is taking. They can even influence the direction, if paying close attention—relating consciously and recognizing signs such as those suggesting there may be a need for work on the relationship.

For example, a watchful eye early in a new relationship, when both love hormones and sexual passion can run very high, may help to prevent a relationship from taking the path of a negative progression, which can take many forms. The deterioration of a bond may fluctuate between periods of positive progression and periods of negative progression, as well as experience reversals.

Then, denial finds its way in through every crack in the wall, chink in the armor, of the troubled relationship. Denial creeps in and wants to stay in. Denial itself becomes the glue holding things together. The composite, the whole picture, is a façade not a relationship—an *act* covering over a lack of awareness . . . buttressed by denial upon denial . . . facilitating the *not seeing* of the steps toward participating in, allowing . . . anything needed to preserve the relationship. Frequently this transition into denial is relatively innocuous.

THE COMPLEX MATTER OF EMOTIONAL ABUSE PATTERNING

Patterns of emotional abuse are underway all around us, affecting almost everyone of us, at least in a minor form, at some time in our lives. Emotional abuse patterns are so very common that they are taken for granted, as normal and acceptable. Emotional abuse tends to take a back seat to physical abuse, as physical abuse is seen as more damaging, more dangerous, and more specific. In fact, many persons who are being abused emotionally but not physically do not recognize this abuse as there is no distinct physical sign of it. And of those

being abused physically, many do not include emotional abuse in their descriptions of the abuse they are experiencing. However, the effects of emotional abuse can be as powerful as the effects of physical abuse.

This discussion deals only with emotional abuse of adults by adults. When children experience abuse, and far too many do, a host of highly critical factors not addressed in this chapter are present and require specific attention. Here the discussion focuses on what is, or is supposed to be, behavior taking place between two adults.

Signs

Even adults experiencing emotional abuse may not see that this is taking place. Feelings of discomfort such as those listed here may not be attributed to emotional abuse, even in instances of high levels of emotional abuse; however, these are quite common responses to emotional abuse in intimate partner relationships: embarrassment; confusion; instability; identity doubts, not feeling like oneself; worthlessness, low self-esteem; no level or low level of confidence; sense of complete or extreme failure; depression; isolation; no sense of control over what happens; all-encompassing self-blame—for every problem; humiliation; and pessimism, a negative outlook on the future. And eventually, persons being emotionally abused by a partner over long periods of time can add to this list: feeling that the criticisms of oneself being made by a significant other are correct, believing (or buying into) them; and even . . . defending these criticisms to others. And sadly, sometimes these self-abusing behaviors arise: joining in on the emotional abuse of oneself, hurting oneself emotionally or physically; amplifying the abuse being experienced by working to hurt oneself even more than the abuser does; hiding the pain in substance abuse or other detrimental habitual behavior; possible tendencies to suicidality; bottling up of rage. And of course, what deserves entire volumes and is reported in depth elsewhere, is the risk that the abuse being experienced is then transferred onto others such as children.

DENIAL PRESERVES A PROBLEM RELATIONSHIP

Does denial about harmful patterns preserve a troubled relationship? Yes. Does denial about being in denial further help to preserve this troubled relationship? Yes, for a time. Sometimes too long a time. Relationships can establish an uneasy form of stability by living in denial. However, when the denial is actually camouflaging or burying ongoing suffering, the damage festers and grows. The damage may grow for years, even decades, before it reveals itself

in unusual ways—utilizes unexpected outlets—or simply becomes so extreme that it is finally addressed. Some people are even willing to take their denial to their graves! This is how very scary truth may seem to some.

Sometimes we engage in this denial out of lack of information about the signs of these patterns, sometimes out of insecurity and fear of change, sometimes out of actual fear for our safety. Recognizing and addressing the truth can be unsettling, especially in an environment where truth is repressed and punished if told. We see this scenario many times around us, where someone speaks up about abuse or other interpersonal problems that were expected to remain secret, and the person speaking up is the one who suffers and pays! The role of what we can call the truth teller, perhaps better described as truth revealer, may be a dangerous role to play in a relationship, a family, or a community where abuse and violence is not supposed to be revealed. Powerful unspoken agreements “not to let outsiders know things” are made and can even be carried from generation to generation. Rocking the boat can be risky for the boat rocker. The boat, the troubled relationship system, will fight to stay afloat, to resist change. The sea of social norms in which the boat is immersed may even keep the boat from sinking, supporting the troubled relationship itself.

In that denial serves to preserve many a relationship, even many wonderful, high-functioning relationships, perhaps denial is not in itself always so bad. If the only challenge in a relationship is that one partner wears a plaid shirt, or maybe a particular color of nail polish, that the other partner thinks is a little out of style, it may be that letting this matter go helps. However, far greater issues can be ignored in relationships. Ignoring, not seeing problems so as not to rock the boat, may feel like the only option, the only thing to do. And again, the matter of remaining in denial out of fear of the truth steps forward.

Denial can indeed have a stabilizing effect, preserving what is—the relationship and the patterns that have become the relationship. Denial can also prioritize issues and postpone, back-burner, or simply eliminate attention to problems. Again (and again), when these problems are serious and potentially damaging problems, denial itself is a problem. People can see the black eyes and bruises on their own or their partner’s faces and say nothing about these for years and years! When asked, even when looking right at these wounds, people (both persons being abused and those doing the abusing) say they do not see, or actually do not see, them! How much of this is a conscious lie and how much of this is a subconscious lie?

Rocking the boat rocks the boat. And the tendency is to avoid shaking things up, to preserve the status quo, good or bad, whatever this may be. Lies keep the boat from rocking, yes, until the boat springs a leak or sinks, and one or more of its passengers drown.

NUMB TO PAIN STORY

Having been beaten many times, eyes now closed, the burning slaps to the face and the hard knocks to the side of the head feel like more of the same; almost all the hits and slaps and kicks feel the same now. And here comes more and more of the same. And then a fist to the stomach, and a slug to the shoulder, then a hit so hard somewhere—where?

Eyes flicker open and shut. Things start to spin and get darker. Down, falling to the floor. Being kicked now, again and again and again. Each impact making every cell in the body shudder, each cell echoing the thud. Every cell takes each hit and kick, every cell takes it in.

Feeling like nothing but a slab of meat, a beaten, bruised slab of meat. But then, wait, I'm not here, I'm not in here. This doesn't hurt. Hurt is too much to take now. No pain. This isn't happening, I don't feel it. I don't feel anything but the jarring impacts through and through. . . .

Hit, hit, hit. Wait, I'm being beaten as I curl into a ball on the floor. I can make it through this, I can. Again.

HOLLOWING TO PATTERNS

Patterns abound. Patterns are normal. Patterns are a way of life. We need to establish patterns in order to live. Similarly, relationships need to establish patterns in order to live. Relationships build patterns of relating and eventually become dictated by these patterns. In fact, some relationships hollow to nothing but their patterns, losing all defining characteristics and identities outside these patterns, functioning on automatic. Some degree of patterning can work for partners, especially partners in and for life. Establishing healthy patterns can be healthy, so it is good we have this pattern-establishing instinct and capability. But there is a fine line between preserving what is good and preserving what is. Preserving something just to preserve it (no matter what it is) takes a particular mind set, especially when what is being preserved is detrimental or dangerous to the self or others. This is how much we can resist change. This is how continued participation in a troubled IPR can cross into addiction—continued behavior, excessive IPAV behavior, in the face of harm to self or others.

Conflict of Interests

We all engage in some not seeing of patterns, whether desirable or less than desirable patterns, because instinct tells us to go onto automatic. Now another conflict of instincts looms: the powerful instinct to establish and then to pre-

serve patterns may override the instinct to avoid danger! Basically, when we are receiving two conflicting messages from ourselves, we might let one override the other. Amazingly enough, we can endure exposure to a negative experience better when this negative experience is part of an ongoing pattern. When the negative experience is part of a pattern we have grown used to, we are less shocked by it.

Hollowing to Deteriorating Patterns

This function—enduring something simply because it is part of a pattern—allows us to slip unaware into deteriorating patterns, patterns that start out positive and deteriorate into destructive ones, even dangerous ones. For example, if the pattern is one of intimate partner violence in which one partner hits the other repeatedly and continues to do so over time, the intensity and danger of the violence may increase. Little by little, or maybe abruptly, the situation can become dangerous, perhaps even life threatening. Neither party sees the danger of serious injury increasing, even when the danger is there right before their very eyes.

Hollowing to Patterns of Dominance

It is similarly quite easy to slip into relationship arrangements where one partner dominates certain decisions or processes. This dominance may feel quite natural to both members of the partnership, as one may be more of a leader or more extrovert than the other, or may have more knowledge about something than the other, or perhaps be more experienced in certain decision areas than the other. There is nothing wrong with a person who has knowledge or skill in a particular area offering to take the lead there. This can be both efficient and logical.

What can take place, though, when partners are not aware of the permission being given and the power being allocated in this process, is a general transfer of overall power from two people to one of them. This is quite a subtle step, and one which is frequently not seen. A pattern of dominance can grow into an addictive pattern of dominance and control.

Unlike the situation in a town meeting, there are fewer people, usually only two, in the intimate partner relationship. Here, if the overall transfer of power becomes an overall transfer of power and control, we have a potentially dangerous situation. Of course, intimate partner relationships are run like democracies where everyone is supposed to have equal respect, voice, value, and say, right? Wrong. There are no guarantees that intimate partner relationships guarantee

anything close to equal respect, voice, value, and say to the members of this relationship. This is up to each participant in the relationship and is something that deserves conscious monitoring as patterns are being established.

DANGEROUS DENIAL STORY

High-powered advertising couple, a real alpha or power couple, Vitz and Kat, had been married 15 high-speed years. By the time Kat realized how serious their situation was, both Vitz and Kat were testing HIV-positive. Kat had been entirely monogamous, and also, by the way, drug-free all 15 years. Vitz, on the other hand, had been, for several years, exploring bisexuality —mostly on the sly when high, but not keeping this activity entirely from best friend and partner in civil marriage, Kat. Indeed, Kat knew about Vitz' activities to some extent, and felt Vitz was behaving like this as a result of a tendency to overuse certain drugs rather than out of a desire to cause pain or threaten their relationship. However, Kat just trusted that Vitz would practice safe sex extramaritally. Oh, and by the way, Kat also just assumed Vitz would use sterile needles when shooting up.

EMOTIONAL SADOMASOCHISM

A special discussion of the emotionally sadomasochistic relationship is useful at this point in this discussion of emotional and physical abuse. A sadomasochistic relationship may or may not be one that includes physical-sexual sadomasochism, but it does include elements of emotional sadism and or masochism. Emotional sadomasochism is a relationship pattern that is often hidden although existing right before our eyes, with major components of the sadomasochistic process themselves invisible, nonphysical, emotional, and even non- or pre-emotional (still buried deeply enough in the subconsciousness that they are not registering consciously with any emotional or recognizable impact). In fact, these unseen elements play powerful roles, far more powerful than we give them credit for. These hidden patterns are composed of intricate and often quite subtle energy exchange processes.

Quicksand

Immediately, we step into the quicksand of definition, a sort of now you see safe ground, now you don't, situation. There are several understandings of this concept. Among these are the special definitions of hurt and of the overlap between pleasure and pain. First, the definition of *hurt*. Many readers have heard

the phrase “but it hurts so good” used either jokingly or seriously or both. Here the shifty overlap between the sensation of pain and the sensation of pleasure is identified. Basically, for some, feeling anything, anything at all, is preferred to feeling nothing. Therefore, whether pain or pleasure, both of these experiences fall into the category of feeling something, and thus are thrown together.

Second, sexual relationships—upon and around which many intimate partner relationships are built—can generate both pleasure and pain: at the same time; and/or in such close sequence that they are felt to go together; and/or, in a sequence that places one as a threshold to the other; frequently with some degree of pain being the precursor to some degree of pleasure, and or the reverse.

This is an especially troubled area, as many find discussion of this sort of thing difficult and even offensive. Yet, whether the pain-pleasure linkage is played out physically, emotionally, or in some combination of both, it is safe to say that many emotional relationships play out these sequences in their own, varied ways.

The perpetual compromise and trade process found even in healthy intimate partner relationships can color entire experiences for each member of the couple. Even the way an individual chooses to register an experience as pleasurable or painful can be influenced or even dictated by the compromise and trade process. How frequently these internal decisions are quietly made: “That’s not so good for me, but it’s great for the other person, and that is good, so it’s great for me.” “That hurts some, and even when it doesn’t it’s not fun, even boring, but it gives my partner so much pleasure, so why not?”

What sheer irony it is that while we are compromising and trading—in-teracting in any way—with our intimate partners, we are actually living in our own worlds, experiencing our own perceptions—not anyone else’s—of what is taking place. Hence, we travel through our own personal emotional cycles all alone, even when keeping company with another who may or may not be on the same emotional ride! Take, for example, the comfort-discomfort cycle and the longing for contact cycle (referred to earlier). Clearly, an individual can be taking these cyclic rides—addicted to these patterns—virtually alone. The longing for contact and discomfort-comfort relationship experiences may not be anything like what the other member of the relationship would know or say is taking place.

Like is Too Simple a Word

Another reason why discussion of sadomasochism is touchy is that, quite rightly, there is a concern that some will say persons who are being abused by their intimate partners “like it,” and therefore stay. This is not the case. “Like”

is too simple a word here. For example, longing for contact is not liking abuse; taking any form of contact as a form of comfort is not liking abuse.

Emotional sadomasochism involves the overlapping of emotional abuse with perceived consent. "Permission to hurt me, even to break my heart, to destroy me," may seem to have been granted although it has not. Hearing that consent has been given is just thinking that it has, or pretending that it has. This confusion or distortion of reality can become quite perilous. Content and intent blur, their very meanings abused, in these patterns (Atkinson, 2005; Blackwell, 2004; Browne-Miller, 2007; Coker, Smith, McKeown, & King, 2000; Corbett, 2007; see also Asad, 1996).

When Relationships Kill

The majority of abusive, violent relationships do not end in death by accident, murder, or suicide. Yet, ultimately, there is always a risk of actual physical harm once an abusive relationship becomes physical. By degrees, some relationships become so out of control that murder is an actual risk, and where it is not, death by accident during violence is. And where severe depression and/or other psychological problems result from exposure to abuse and violence, there may be risk of suicide.

Swimming in the murky waters where intent and consent are blurred by those who are engaged in not seeing what these are, some people drown. Being repeatedly beaten over time, with the risk of serious injury increasing, involves risk of death. To deny this risk is to not see the problem. To be in a violent relationship where this risk is not acknowledged is to be in a dangerous mix of denial and physical danger. There is no guarantee of accurate prediction regarding when out of control abuse may go too far. (In the extreme, some persons who are suicidal could tend to prefer to kill themselves rather than be murdered, or rather than be wondering when they might be killed during IPV.)

Stages of Change

Models such as the Stages of Change (SOC) model have been proposed to describe the stages people experience as they recover from conditions, frequently moving quite gradually from engaging in harmful behaviors to engaging and maintaining engagement in healthy behaviors. These stages of change, most frequently focused on stages of overcoming and or recovering from addictive behaviors such as drinking, smoking and drug use, are labeled as pre-contemplation, contemplation, preparation, action, and maintenance (Dunn,

Hungerford, Field, & McCann, 2005; Prochaska, Velcier, Rossi, et. al., 1994; see also Scaer, 2005).

Although there are indeed significant differences between intimate partner abuse (for both its recipients and its perpetrators) and substance addiction, these stages of change can be useful in understanding the process of overcoming and/or recovering from this abuse and violence, especially given that abuse and violence cycles themselves tend to be habitual. This model tells clinicians and others working with those experiencing intimate partner abuse that behavior change occurs in steps, and an abrupt intervention into a habitual situation including ongoing intimate partner abuse is not necessarily effective and in fact is often countereffective. To move as quickly and effectively as possible toward behavioral change away from habitual or compulsive behaviors, we must first slow down to help people explore the why of changing before trying to impress them with the how. (Of course there are situations so severe that life-saving intervention must preempt this approach.)

Trapped in an Unfinished Experience

Ideally, there will be a deeper understanding of therapies that help recognize and release trauma in safe settings, allowing persons who have experienced the trauma to understand its ongoing impact and know the signs and triggers of this impact. Too many victims of trauma experience a deep lack of closure (which is often unseen for years) (Cozolino, 2006; Gazmararian, Spitz, Goodwin, Saltzman, & Marks, 2000; Hammer, Finkelhor, & Sedlak, 2002; NRC, 1996). Even when victims have been treated for the trauma, there can be a lingering sense of being stranded in a space that suggests closure—says that closure has taken place—but in which actual closure has never actually occurred.

Too many persons who have experienced trauma, including traumatic intimate partner abuse and violence, remain profoundly affected for life, with the effects reappearing or taking new forms sometimes years later (Asad, 1996; Bower, 2006; Briere, & Scott, 2006). Furthermore, too often, the effects of this sort of trauma surface in forms not identified with partner violence trauma. This makes the effects all the more difficult for persons experiencing them to address. A sense of free-floating anxiety, fear, disconnection from natural emotional sequences, and other lingering emotional conditions can haunt people and be triggered for no clear reason even years later. Hence, when one thinks the memories of intimate partner abuse and violence are healed, and that one is years past the problem, the dead hand of this abuse and violence may reach out and touch that person. *Traces, almost invisible traces, of patterns, can linger on.*

The sense of being trapped in an unfinished experience, stuck in a lack of closure state, troubles many persons who have experienced intimate partner vio-

lence and abuse. The sense that the trauma is not complete, that the impact of the trauma lingers and is relived—cycled back into—at the slightest reminder or trigger, must be addressed. We must see these sometimes vague but nevertheless profound effects as a serious outcome of intimate partner abuse and violence. Certainly, there is a profound posttraumatic stress component here, in this case a component with many faces. The ghosts of intimate partner violence can float through the subconscious forever, trapped in what seems to be a no-exit pattern (like this):

→ NO EXIT ←

Forgetting, Trauma, and Dissociation as Coping

Numbing while enduring abuse and violence is a coping as well as a tolerance mechanism, as is forgetting. Forgetting can indeed be coping; however, this forgetting of the experience is actually burying the experience deep in the subconscious mind. It lingers there, its pattern's sensations blocked but not erased. Forgetting serves as a barrier to remembering what has taken place, a profound form of not seeing, but, again, a not seeing.

The mind deals with traumatic experience in various ways, the processes of numbing and forgetting being two of them. The mind is skilled at internal protective camouflage, and has the ability to convince, in this case, not the outside world but itself, that the camouflaged, distorted, reality it serves up to its consciousness is real. Mental processes such as *dissociation*, in which the mind separates out normally connected mental processes from each other and from the rest of the mind, are a way of not seeing or processing these as connected experiences, as whole events. Painful memories, taken apart and served back up to ourselves fractured, are possibly less painful than when served up as a whole. This memory-fracturing process as a coping skill is then transferred to experience in the here and now, dissociating the mind from the experience of present-time reality. Memories and current experiences become incompletely perceived and reacted to.

While the person traumatized by intimate partner violence may not be formally diagnosed as dissociating, there may likely be a certain degree of dissociation in any storage of the memory of intimate partner violence trauma. When calling up and addressing these fractured memories, the expression of them as a whole is naturally going to be more reflective of fragmented memories of the experience than of whole ones. The traumatized individual, who is perhaps long over the physical pain the violence may have caused (its physical wounds and even visible trauma), may live forever with the lingering and subconscious sense of incomplete expression of something too vague to label. Being, on a

deep, hidden level, frozen in this unfinished state, the person is done with it all only on the surface.

There can be a deeply buried need for a sense of closure when living with a history of intimate partner abuse and violence, even after the visible, conscious sense of closure has been reached. Sometimes the trauma of violent experience lingers, hidden but present, and subtly affects all aspects of one's existence for years, maybe decades. Pretending this is not the case does not make it not the case; rather, it subjects some traumatized people to half-lives, never being entirely themselves. Given that we are indeed forever changed, on a very deep neurological level, by trauma, we help not only to rebuild what can be salvaged of the self, but to construct a new self, is essential.

Trauma Upon Trauma Upon Trauma

In instances of long-term relationships in which abuse and violence is ongoing, there may be trauma upon trauma upon trauma, continuously compounding the effects of trauma-induced neurological change while burying conscious realization that one is actually traumatized. Not only is violence-related trauma in the face of ongoing violence difficult to detect, but the related need for closure (for something suggesting the closing of the shattering experience of violence and its long-term effects) is buried.

Persons who are being abused may even cling to a dangerous pattern of relationship violence, not realizing that it may be the trauma itself perpetuating the pattern and the addiction to the pattern. The hunger for closure can leave the traumatized individual stuck in a pattern whose cycles may fool all those involved and feel somewhat like closure each time the cycle ends, when the individual takes a break from the violence and "enjoys" a sweet moment of relief.

PASSING ON THE PATTERN

The trauma does not reside in the victim and only the victim. Others around are also affected and may also be traumatized.

The Unaddressed Injuries

Volumes can be written about the impact of intimate partner violence on children who witness it, feel that they are to blame for it, may find role-modeling in it, and when caught in the fray are hurt emotionally as well as physically. Although this discussion is in large part not focused on children,

this is by no means a message that what happens to these child witnesses does not matter.

Carriers of Patterns

These children are the carriers into the future of our values and knowledge. They will likely (and fortunately) want to improve upon their parents' values and expression of these, and this is good. So much can be done better. These precious people, their parents' offspring, deserve a great deal of caring and intelligent assistance in identifying, and recovering from, their exposure to adults' intimate partner violence—and their parents' pain. To break the cycle of intimate partner violence—as well as its long-term health and mental health effects, pain, and trauma—we must understand that all of this can spill over from generation to generation in some form unless a conscious and visible effort to stop the violence is made. Breaking pattern addiction can be multi-generational work.

It is also important to see that, when adults repeat patterns of emotional and physical violence and abuse around children, they are including children in these patterns. Any detrimental habits, negative addictions, played out around children bring the children right into these patterns. The compulsive, destructive, abusive cycles of intimate partners include any children who are apparently on the sidelines. They cannot be unaffected. Nor can be they saved from the roller coaster rides of cycles played out by adults who are likely, in some difficult to explain (to a parent let alone a child) way, addicted to the patterns they have established. No matter how much a parent believes a child is insulated from the parent's ongoing involvement in intimate partner violence and abuse, there is little protection from this reality for the child. Children see and hear—and *feel*—even the smallest signs of this problem. They ride the emotional and physical roller coaster ride with their parents.

Teaching Denial

To pretend to children and teens that there is no abuse and violence when there is abuse and violence is not only absurd but cruel. Young people do perceive something, feel it, usually also hear and see it and the injuries. When the feeling, hearing, and seeing is not validated by the parent, this denial of an actual reality is disturbing, confusing, and distressing. Why drive a child into denial-like patterns, teaching that denial of a serious problem is normal, alright, a fine way of life? Why add lessons in denial to a child's pain and roller

coaster experience? Why fuel children's addictions to detrimental patterns such as IPAV?

Harsh and Painful Reality

The harsh and painful reality is that these children are dependent upon adults who are abusing and being abused. They have no way of ending the relationship with these adults, and they have no way of choosing not to need these adults. This dependence upon disturbed adults, coupled with the mixed messages that children in these situations typically receive (such as, it is bad to hit people even though you see this happening here at home), can be highly stressful and emotionally disturbing for these children.

Riding the roller coaster of fight, feel better, fight, feel better, fight, feel better, and so on, children absorb elements of abuse and violence cycle patterning. Moreover, they absorb the ride itself—high low high low high low—fear safety fear safety fear safety—again and again. For some children, especially those who do not know what patterning is, or what is happening to them as witnesses (which is most children in these instances), these unsettling, terrifying (potentially show-stopping in terms of developmental impact) patterns can become deeply buried inside them. These hidden time bombs tick for years, sometimes many years. Much, much later, or maybe not so much later, a trigger may fire the pattern into action, and the child is at risk of continuing the cycle. Or the child is at risk of playing out the cycle of abuse and violence in another way, such as via alcohol and drug addiction, food addiction, or other detrimental and dangerous behavioral patterns.

Adults seeking to rewrite the programming they may have instilled in their children (when they allowed their children to witness emotional and physical violence) must teach their children the same thing they themselves need to learn: how to recognize and change patterns of abuse and violence. Not to teach these things, out of concern that the material to be taught is too much for children's ears and eyes, is illogical. These children have already been exposed to intimate partner violence and abuse. Now they have a right to a recapturing of this information in a way that prepares them to avoid their parents' experiences. The material presented here, for example, is material young people can learn and many indeed have a hunger for. Young adults forming young intimate partner relationships are especially in need of this sort of information. Knowing how relationships work, knowing how to spot compromises and trades as they are being made, knowing the slippery definitions of intent and consent, is all very important. Children can be taught to recognize patterns of malattraction when they see them.

Tolerance

Of course it is not only fighting parents who teach abuse and violence as a way of life, an acceptable medium of exchange. The media and the world around children teach this as well. Yes, we live in a world where violence is virtually normal. Everything they see, and a large part of what they learn in school, tells children that violence works, that violence is part of life and part of history. The tolerance of violence is instilled so deeply in children, and yet so invisibly. Children's nervous systems react to violence and record their reactions to violence. Repeated exposure to violence dulls some of the response, and generates a mental and biochemical system of incorporating this reality, perhaps a desensitization as the brain cells open receptor sites that are hungry for the addictive roller coaster ride the adults' (and the world's) patterns take them on.

Parents can counter this trend by visibly practicing *positive conflict resolution* processes and telling their children this is what they are doing. Rising above violence can be done and can become a way of life, first in the home. No, we cannot turn back the hands of time, but we can start now, and teach our children well—or at least better than we have done so far. IPAV addiction is rampant, yet it can be halted. The stability, sanity, and safety pattern need devolve no further.

COMPOUNDING IPAV WITH SA PATTERNS

This discussion has delved into the nature of troubled IPR behaviors. Of course, little of the above occurs in isolation or free of other influences such as substance use, abuse, and addiction. Clearly there is frequent co-occurrence of domestic violence, substance abuse, and chemical dependence. Data on this co-occurrence are everywhere, with 20 percent to 80 percent of all instances of battering co-occurring with substance use/abuse. Common data find alcohol use involved in 50 percent of instances of violent behavior.

Characteristics of Co-Occurrence

Particular circumstances bring IPR troubles and SA together (Department of Peace, 2006; Lang, 1993; Leonard, 2000; Nace, 2007). These include: the desire to self-medicate to cope with physical and emotional pain; the learned (in childhood) association of IPAV and SA; the practice of disavowal in using one behavior as an excuse for the other (SA excuses IPAV and vice versa). Characteristics associated with substance abuse can fuel IPAV: disinhibition, in which alcohol and or other drugs reduce inhibition of socially unacceptable

behaviors such as violence; distortion, in which there is a blunting or disturbing of cognitive regulators resulting in misinterpretation and/or distortion of the abusee's remarks and behavior; and paranoia, in which distrust and jealousy and other emotions that can trigger abuse and violence are present.

Patterns of SA can parallel and even cross-trigger IPAV. The basic pattern

trigger → urge → response

is seen in both SA and IPAV pattern addictions. So representative of each other are these trigger-urge-response cycles that they can even be confused and that confusion can even be acted upon. Triggers for the SA pattern can be triggers for the IPAV pattern and vice versa. Cravings for a drug of "choice" can be cravings for an abusive interaction of "choice." Moreover, triggers for one pattern may be initiated with the conscious or subconscious intent to trigger the other pattern: SA might be engaged in not only as a response to an IPAV pattern but also as an excuse for it, and vice versa.

Intimate partner violence is often blamed on substance abuse. For example, the person who is abusing may blame the abuse on drugs and or alcohol; the person who is abusing may blame the abuse of the victim on the victim's substance abuse; the victim may claim that the battering is excusable because of either the victim's SA or the batterer's SA.

Persons who are being abused often tend to increase their substance use and abuse in response to IPAV, typically calling this "necessary self-medication" of physical and emotional pain. Many persons being abused are pressured into drug and or alcohol use by the persons abusing them as a mechanism of control and/or abuse. Any treatment of either the IPV or the SA must address this dual condition. As noted earlier, alcohol and drug addiction cannot be said to be the primary cause of IPAV. Once SA and IPAV are in process, then providing only substance abuse/substance addiction treatment will not stop IPV. (Nor will only IPV treatment stop SA.) Note that IPV may be likely to increase once abstinence from drugs and alcohol begins, and to increase as abstinence continues. The same is true for IPAV, as the verbal and emotional violence (threats, manipulation, etc.) are likely to increase as well. Therefore, the safety of the person who has been abused can be quite fragile and must be monitored during and after substance addiction treatment. Many victims in addiction treatment are facing forms of abuse typically unlabeled, overlooked, or downgraded in significance (e.g., the abuser preventing the victim of the IPAV abuse from attending or succeeding in substance addiction treatment—and/or using threats of or even violence itself to interfere with the victim's addiction treatment—and/or even offering the drug/alcohol of addiction to the victim. In other words,

abuse here can include working to keep the person being abused from getting better, from receiving and participating in SA treatment.

Key here is the recognition that in treating IPAV, legitimate safety and survival strategies sometimes conflict with SA recovery strategies. For example, addiction treatment professionals are naturally focused on the involvement of family and significant others in addiction treatment. Addiction treatment quite rightly discourages behaviors and attitudes such as dishonesty, resistance, and noncompliance. However, these same behaviors and attitudes may be essential to protect the person who has been emotionally and/or physically abused via IPAVs and who may still be at risk of being abused, attacked, or killed.

EXAMINATION OF IPR MALATTRACTION PATTERNS: CONCLUSION

This general discussion of addiction to IPAV patterns with and without accompanying SA identifies what is merely the tip of the iceberg. Patterns of malattraction, abuse, and violence wear many faces and mask themselves in countless ways. Revealing to ourselves the multitude of malattractions and their physical and nonphysical abuse and violence patterns—the IPAV addictions in which too many engage—may be immensely disturbing, chillingly honest, perhaps even repulsive. Yet, removing this mask to unveil and examine troubling personal and interpersonal patterns—addictions that can emerge in relationships—may be profoundly illuminating and have far-reaching benefits to the individuals involved and to the children, communities, and worlds around them.

NOTE

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2. Portions of this chapter are worded in such a way as to model for practitioners and treatment professionals rationales and explanations (and persuasions) regarding the addictive nature of IPV in such a way that, with further adaptation to the audience, clients and patients can absorb the information. All of these portions, and the vignettes provided in these portions, have been written and tested by the

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Part II

EATING AS A SPECIAL ISSUE

Craving Pizza? This Is Your Brain on Drugs: Eating Disorders as Addiction

Amanda Ruiz, MD, Hugo Barrera, MD,
and Norman Jackson, MS

The relationship between eating disorders and other more established forms of addiction (i.e., alcoholism, substance abuse) is becoming better understood as the science on the brain—specifically the reward centers—develops. In this chapter, the research on brain physiology is explored to distinguish the areas in the brain that are involved in this addictive process.

There are various forms of eating disorders. The three most common are anorexia nervosa, bulimia, and compulsive eating. Eating disorders are marked by extremes. Eating disorders are present when a person experiences severe disturbances in eating behavior, such as extreme reduction of food intake or extreme overeating, or feelings of extreme distress or concern about body weight or shape.

Anorexia nervosa (AN) is a potentially fatal condition. People with anorexia are so afraid of gaining weight or losing control over their bodies that they diet to the point of starvation. Even when they are very thin, anorexics see themselves as fat (Bulik, et al., 2008). In recent studies, the human life cost of AN is startling. Among young women with AN, the rate of suicide is eight times higher than among young women in general (Bulik et al., 2008).

Bulimia nervosa is a condition characterized by repeated episodes of binge eating followed by attempts to purge food from the system through vomiting, laxative or diuretic abuse, exercising, or fasting. *Compulsive eating* is like bulimia, except that the compulsive eater does not try to purge the food he or she has eaten. The compulsive eater will often consume large quantities of high-calorie

foods in a short period of time, often leading to feelings of shame and an increase in body weight. Eating disorders can affect people from all walks of life regardless of age, race, religion, gender, and so on. As with all addictions, the substance is never the issue; the issue is the underlying causes that people are attempting to cover up or control.

According to the National Institute on Mental Health, the prevalence of eating disorders in the United States has increased steadily over the last 30 to 40 years. Over 90 percent are adolescent girls and young women. Eating disorders has the highest mortality rate of any mental illness—up to 20 percent. Two to five percent of males and females suffer from binge eating disorder. A total of 1.1 to 4.2 percent of females from bulimia nervosa. The first year of college can be especially challenging, with both females (4.5 percent) and males (0.4 percent) reporting bulimia.

In a recent study among gay or bisexual men, the rate of eating disorders has been found to be more than 15 percent higher than among heterosexual men (Columbia University's Mailman School of Public Health, 2007). The cause for this discrepancy is unknown, according to the authors of the study. The higher rate may be attributed to more body-centered focus norms within the gay/bisexual community. Young athletes, particularly gymnasts, runners, bodybuilders, rowers, wrestlers, jockeys, dancers, and swimmers, are especially vulnerable to developing eating disorders. Unfortunately, many of these disorders go underdiagnosed because of the complexity of symptoms and the lack of forthrightness of patients giving their medical histories.

The desire of athletes to be in elite shape may cause health challenges, but that should not undermine the importance of incorporating exercise into our lives. The benefits of exercise on the human body are well understood, and numerous scientific studies support the notion that regular exercise can prolong life. This is evidenced in numerous chronic conditions (i.e., in the prevention and/or lowering of high blood pressure). Regular exercise boosts high-density lipoprotein (HDL), or "good" cholesterol, while decreasing low-density lipoprotein (LDL), or "bad" cholesterol. In addition, regular exercise can benefit type II diabetes patients and can elevate mood. This health benefit can be attained with a brisk 30-minute daily walk. These types of interventions can be difficult to adapt initially, but once adopted can lead to easier adherence.

The role of diet is very important in maintaining a healthy weight and preventing chronic illnesses. Proper nutrition has become increasingly difficult with higher-stress lifestyles and the common inclusion of readily available processed foods in the Western diet. For adolescents, being adequately nourished is essential to ensure that their growth and development progresses normally and continuously. Unfortunately, this time of our development is the time when most eating disorders develop.

Rapid physical growth and development in adolescence constitute the unique background to the development of eating disorders at this stage of life. For example, self-esteem problems intensify in many normal young women in the process of doubling their body weight, increasing the percentage of body fat, gaining about four inches in height, developing breasts, and acquiring other features of the mature female body, as well as experiencing menarche. Given that this development occurs within a six- to eight-year period, the rapidity of change contributes to the difficulty of the task of acceptance of the change.

The intensity of physical growth and development also accounts for the vulnerability of adolescents to long-term consequences if they experience semi-starvation. All organisms are subject to the greatest harm from food deprivation at periods when they are synthesizing tissue; they need nutrients to build into tissues and food the energy to fuel the process. Human teenagers are no exception to this basic biological rule.

Adapting a mental image of one's unique body—the body image—is basic to adolescent development. Body image distortion is a core characteristic of anorexia and bulimia nervosa. Thus, these disorders are commonly seen in adolescence, the period when young people are vulnerable to body image problems, and the progress of adopting a positive body image is interrupted for the teenager with an eating disorder.

THE BIOLOGY OF ADDICTION MODELS

One of the most hotly contested issues in models of addiction, no matter the type, is the notion that an addiction is a disease. Because society defines disease as a “condition of the living body that impairs normal functioning and is typically manifested by distinguishing signs and symptoms,” (Merriam Webster, 2008) many associations come tied in with the definition, including value judgments.

For example, it seems fitting that persons that are medically ill receive assistance with requisite everyday responsibilities. As such, persons in poor health are nursed back to health while they regain strength.

This argument has not held true as ubiquitously for drug addicts (or food addicts) as well as it has, for example, for poststroke patients. Yet, each of these individuals increases their potential for meaningful recovery when she/he accepts responsibility for her/his health. A poststroke patient that actively engages in physical therapy typically improves more rapidly than the patient that is unmotivated to do so. Similarly, the overweight person that exercises generally gains strength and well-being relative to those persons who do not exercise and choose food-restriction alone.

Using the example just briefly outlined, each of the persons mentioned—the drug addict, the food addict, and the stroke patient—have the following in common:

Each person has evidence of disease on fMRI.

Each person has options for medical treatment, which may be beneficial.

Each person should take responsibility for prognosis and treatment, including diet and exercise for optimal recovery.

Ethical issues aside, our argument is not one that is based on wishful thinking or the desire that everyone get a second chance; it is one that is grounded in science. This chapter hopes to explain our point.

PET/MRI AS APPLICABLE TO ADDICTION MODELS

As we launch into an examination of brain imaging, we should first explain what we are looking at and why.

Brain imaging is useful in many specific ways. For example, in individualizing treatment with newer medications or implementing new medication, a knowledge of affected circuitry can point to chemical dysfunction that may be helped by medication (Freese, 2006). The design of behavioral treatments can tell you the types and severity of deficits and dysfunctions in the brain and the possible areas of the person's general strengths and deficits (Freese, 2006). Finally, brain imaging can potentially show how much viable tissue there is to work with; it can show the response of efficacy of treatment (Freese 2006).

IMAGING BEFORE AND AFTER

The brain is a complex organ with many complex circuits running through it. The circuits that coordinate our drive or “pleasure centers” are outlined below:

The main circuits for mediating reward behaviors are as follows:

Fronto-amygdalar pathway. This pathway connects the amygdala and prefrontal cortices and the limbic circuit. It integrates the amygdala with the hypothalamus and septal nuclei. The amygdala and cortico-limbic areas have conventionally been the “anatomical substrates” of eating disorders as described in a case report (Cerrato et al., 2004).

Papez circuit. This pathway joins the hypothalamus with the hippocampus and thalamus.

Why is all this important? We explain below.

The limbic circuit is primarily concerned with unconditionally rewarding stimuli like food, water, and sex. This is supported by the fact that the limbic system is connected to ancient, hard-wired structures in the brain. Other important players within your brain include the hypothalamus. Simply speaking, it is the master control of the autonomic function of the body. Stimulation or lesions of the hypothalamus result in systemic responses, such as increased or decreased appetite, including hyperphagia or anorexia, or change in sexual functioning (Goldberg, 1994). The thalamus is a sensory relay center. It is capable of sensing pain, but not pinpointing it. The hippocampus (or hippocampi, since there are two of them) has important functions related to both memory and mood. The nucleus accumbens relates to the motivation properties of food/palatibility. The dorsal striatum regulates the caloric requirements necessary for survival.

Dopamine and Hedonism

Positron emission tomography (PET) and functional magnetic resonance imaging (fMRI) have been used in the study of brain activity related to reward processing in both animal as well as human models for years (James, Gold & Liu, 2006; Martin-Soelch, et al., 2001, pp. 139–149; Spiegel, et al., 2005; Wang, Volkow, Thanos, & Fowler, 2004). Most of these studies have indicated that dopamine has a role in reward processing and motivation.

In other words, persons of all shapes and sizes may be driven by a thought or an idea. This thought or idea is then chemically reinforced by a swell of neurotransmitters and neuromodulators, which bathe the brain, making the person feel wonderful. The “craving” is born.

In one study, rodents were used to measure their dopamine output in response to natural incentives. In comparison to basal output, food and sex generated well over 150 percent and 200 percent, respectively, of the resting output of dopamine in the system (Fiorino & Phillips, 1999, 19). This “extra-extra” is nature’s way of making sure we return for more.

NATURAL REWARDS AND THEIR IMPACT ON DOPAMINE

As we apply the same concept to substances of abuse, we see that other studies have demonstrated a correlation between the intensity of the “high” induced by various drugs and the level of dopamine that was released (Wang, et al., 2004).

For example, in another study, the various substances were administered and then the basal rate of release dopamine was measured in the nucleus

accumbens of rodents. Cocaine and methamphetamine had striking peaks, at 350 percent and 1150 percent, respectively, over the baseline dopamine level (DiChiara, Tanda, & Frau, 1993, 112). Based on these findings, it becomes easier to understand why individuals pursue the substance of their addiction despite medical, legal, economic, and other adverse consequences.

NEURO-IMAGING AND ITS APPLICATION TO FOOD

Studies demonstrating that drug abuse involves reward circuitry in the brain have led to interesting research primarily pioneered by Dr. Nora Volkow at the National Institute of Drug Addiction. She was among the first to use imaging technology to investigate neurochemical changes associated with addiction. Similarly, Dr. Volkow has been at the forefront of research that appears to demonstrate that compulsive eating involves many of the same circuits that drug abuse does (Volkow, 2007; Volkow & O'Brien, 2007; Volkow & Wise, 2005).

Further, research has indicated that compulsive eating is reinforced by fat-laden and high-sugar foods. The pizza you love and cannot get enough of, particularly when you have had a long hard day? It is hard wired, believe it or not. The truth is that high-calorie food packs a lot of energy. When viewed from a historical perspective, it likely offered an advantage in terms of survival. In other words, it was palatable, high energy, and reinforcing.

Viewed from this perspective, it should not be shocking, then, to learn that compulsive overeating appears to share many of the same characteristics as drug addiction. In fact, in one study, both methamphetamine abusers and obese subjects were found to have significantly lower measures of striatal dopamine D2 receptors available than did control subjects. Low levels of endorphins have been associated with cravings for fatty foods and chocolates. Further, serotonin, "the happy neurotransmitter," has been linked to sugar cravings; low levels of serotonin lead persons to crave sugar and gain weight as a result. Even more shocking, the newest word related to eating disorders is "drunkorexia," shorthand for a disturbing blend of "self-imposed starvation or bingeing and purging, combined with alcohol abuse." It describes a phenomenon in which persons, typically women, some even middle-aged, refrain from eating throughout the day in order to offset the calories in the alcohol they consume at after-work or college functions including a cocktail hour (CBS News, 2008).

The age of onset of eating disorders, like waistlines, has been steadily increasing, partially in response to mid-life stresses such as divorce, career changes, remarriage, blended families, the empty nest syndrome, slowing metabolisms, and the ever-present pressures of the fashion industry push against us. Two polymorphisms of the "human obesity gene" account for 20 percent of the variance in basal metabolic index (BMI), especially in young women. This finding

is also consistent with frequent binge eaters who have low dopamine metabolite concentrations in their cerebrospinal fluid. Further, a high prevalence of binge eating disorder has been reported among the morbidly obese subjects who have undergone gastric bypass, a subject that is discussed in the following segment on treatment modalities for compulsive overeaters.

KEY POINTS ON BIOLOGY OF ADDICTION MODELS

Enter again our three subject examples: the substance addict, the food addict, and the stroke victim. Each has evidence of brain dysfunction on fMRI. Each has the option of medical treatment modalities. Each is also to some degree responsible for diet and exercise, that is, for making the right choices and taking little steps, one at a time. That is what every person in recovery does.

Some points to note are as follows:

1. Multiple similarities exist between the neurotransmitters that regulate eating disorders and addiction.
2. Although further research needs to be conducted, recent imaging studies indicate that modalities that have been useful in the treatment of compulsive disorders such as substance abuse may also be useful in the treatment of compulsive eating disorders (see Table 7.1).

Table 7.1
Neurotransmitters Mediating Response to Cues/Craving

Neurotransmitter or Neuro-modulator	Effect	Evidence/Reference	Comment
Dopamine (D2) receptor antagonist	Enhances meal size Increases meal duration	Study performed on rodents (Clifton, Rusk, & Cooper, 1991, 105)	Dopamine decrease
Long-term administration D2 antagonists	Increased feeding Increased body weight	Study performed on female rats (Baptista, Parada, & Hernandez, 1987, 27)	Dopamine decrease
Patients receive D2 receptor antagonists	Increased weight gain	Human subjects (Allison & DE, 2001; 62 Supplement 7) (Wetterling, 2001, 24)	Ex. Antipsychotic medications
D2 agonists	Anorexigenic effect Weight loss	Human subjects (Scislowski, Tozzo, & Zhang Y, 1999, 23) Anecdotal reports	Dopamine increase

**Table 7.1
(continued)**

Neurotransmitter or Neuro-modulator	Effect	Evidence/Reference	Comment
Long-term drug addiction & obese persons	Reduced number D2 dopamine receptors in the striatum	Human subjects (Wang et al., 2004) Anecdotal reports	Dopamine increase
Neuropeptide Y (NPY)	Stimulates food intake	Wang et al, 2004	DA inhibits NPY in the hypothalamus
Opioid	Increases food palatability when mod-high	Animal models (Yeomans, 1996, 27) Anecdotal reports	Excessive levels of opioids result in stupor & anorexia
GABA/benzodiazepines	Increases food palatability Increases food consumption	Mammal models (Yeomans, 1996, 27)	GABA is an inhibitory neurotransmitter; the tongue and gustatory zone of the brain also have GABA receptors
Melanocortin	Regulation of food intake through hypothalamic receptors	F:\Eating as Addiction\NGFN-Science Neuroimaging of hunger and satiety and assessment of sympathetic nerve activity in carriers of a MC4-R gene mutation.mht	Increased activation of limbic/paralimbic areas in obese individuals during apperception of palatable food
Ghrelin	Increases hunger and food intake	Acts on hypothalamus, but there is increasing evidence that it also acts directly on other areas: dopamine neurons, hippocampus (Malik, 2008)	Peripheral peptide
Leptin	Modulates the synthesis & release of dopamine	Wang et al., 2004	Peripheral peptide
Serotonin	Decreases appetite when high; low levels cause sugar cravings	Case report(s)	SSRI

Compiled by Amanda Ruiz, MD.

THE PRACTICAL ASPECTS OF TREATING ADDICTIVE EATING DISORDERS: TREATMENT MODALITIES AND MEDICAL TREATMENT OPTIONS

Ah, that there were a magic bullet for the treatment of exogenous obesity. The diet industry is a multi-billion-dollar market in the United States, and indeed around the world. Medications and herbs that tout the ability to reduce fat and increase weight loss are developed or released weekly. Yet, while millions of dollars are spent annually on weight loss medications, creams, drinks, and other diet elixirs, few if any of the items marketed deliver the promised results.

The medications listed below are currently approved by the United States Food and Drug Administration for the treatment of obesity (FDA, 2008). These medications typically fall into one of two categories: they are either appetite suppressants or they are metabolic stimulants. Similar to the neurotransmitters outlined above, they effectively increase dopamine.

- ♦ Dextro amphetamine
- ♦ Phentermine
- ♦ Sibutramine

Other medications that have not received a specific indication for the treatment of exogenous obesity but have been found to be helpful in the treatment of such disorders, either in case reports or in anecdotal reports of personal experiences with the medications, include the following:

Topiramate: This has been effective in the treatment of alcohol and nicotine dependence (and possibly food abuse?).

- ♦ Possible method: decreased impulsive eating/side effect weight loss.
- ♦ Increases Gamma-aminobutyric acid (GABA) (using a mechanism different from that used by barbiturates), thereby decreasing anxiety and possibly “comfort eating.”

Rimonabant: This has been effective in the treatment of alcohol and nicotine dependence, as well as obesity. There is some evidence of efficacy for both smoking and weight loss in Europe; it is unapproved for use in the United States. Side effects including severe depression have limited its use in the United States.

Other antiepileptic medications and serotonin reuptake inhibitors, either alone or in combination, may also have potential in the treatment of exogenous obesity and other eating disorders related to addictions. However, without further study of these combinations to assess their safety in this population, it is premature to apply them here without a detailed risk-benefit analysis on a case-

by-case basis. Further, the value of medication as treatment is dwarfed when not coupled with an appropriate exercise, diet, and supportive psychotherapy program, as needed.

SURGICAL TREATMENT OPTIONS/METABOLIC SURGERY

With the advent of more efficient, inexpensive food production following World War II, the prevalence rate of obesity in the United States and the world at large began to increase. By the 1950s, surgeons began encountering obese patients with increasing frequency, stimulating, partially surreptitiously, the search for a surgical cure for this condition.

A well-known condition, the short-gut syndrome, results from a catastrophic loss of the nutritional absorptive capacity of the small intestine, usually following vascular compromise. Most patients with this condition become nutritionally impaired, but obese patients, though losing body mass, are better able to cope in the aftermath of the illness. This observation led pioneering surgeons to consider a small bowel bypass, by which a significant portion of the small intestine is functionally excluded from participating in nutritional absorption, as an operation that might result in loss of excess weight in the obese.

A jejunioileal bypass was the first operation performed for the purpose of weight loss in the morbidly obese. And not surprisingly, the operation was very successful in achieving this goal. With long-term follow-up of these patients, however, it became clear that the side effects arising from this rearrangement in the gut anatomy led to life-threatening complications, and within a generation, this resulted in the abandonment of this operation for weight loss.

The search for a surgical cure for obesity was further stimulated by these initial attempts, however. Approximately 20 different operations since have been described for weight loss. Validation and endorsement for surgical treatment for obesity arrived in the National Institutes of Health's (NIH's) Consensus Conference Statement in 1991, which found that in patients deemed morbidly obese, surgical intervention resulted in the only long-term successful treatment for weight loss and maintenance of weight. Morbid obesity, defined as a body mass index (BMI) greater than $40\text{kg}/\text{m}^2$ or a BMI of $35\text{kg}/\text{m}^2$ with associated comorbid conditions, was deemed primarily to arise out of an organic disruption. In the absence of an effective medical cure for the morbidly obese, surgery gained momentum.

From a general perspective, surgical weight loss procedures deal with weight loss from a gross or macro level, resulting in a reduction in absorptive capacity (*malabsorptive procedures*), or a reduction in caloric intake (*restrictive pro-*

cedures), or a combination of both (*restrictive-malabsorptive procedures*). Many of the metabolic effects of the anatomical rearrangements of the particular operations are slowly becoming better understood, surpassing in complexity the mechanisms originally attempted by physicians.

MALABSORPTIVE PROCEDURES

From a simplistic view, the difference between caloric intake and caloric expenditure is the formula that determines weight gain or loss. Obviously, the two terms are affected by a multitude of variables, intrinsic and extrinsic, organic and psychological, genetic and acquired. In the history of bariatric surgery, as we have seen, the initial surgical approaches were directed toward altering absorption, or more accurately, inducing malabsorption.

Absorption of nutrients in the gut occurs primarily in the small intestine, an organ that is 20 feet or more in length. Intestinal villi, finger-like projections of the mucosa or lining of the intestine, greatly expand the absorptive area. As briefly alluded to, short-gut syndrome arises from a situation, as the name implies, in which a significant amount of length and area of the small intestine is lost, usually as a result of vascular compromise or iatrogenic injury. The result is a syndrome of nutritional deterioration in an individual whose remaining intestinal area can no longer support adequate absorption of required calories in the immediate term. With time, some level of compensation can occur in the small intestine in the form of an increase in the height and number of the villi in the mucosa with a resulting increase in the absorptive area. During this transitional period, it was observed that obese individuals, with their excess stores of fat, could better adapt as they lost the excess weight. The connection between short-gut syndrome and obesity is what led to the creation of the first bariatric procedure, an operation that deliberately induced a short gut.

The jejunioileal bypass, performed first by Dr. Richard Varco in 1953 at the University of Minnesota, resulted in an anatomical change in the gut in which a significant portion of the small intestine was excluded from contact with nutrients. As the name implies, the intestine was *bypassed* but not removed, affording a certain level of safety in the form of reversibility. And after extensive study and time, reversal became necessary in the vast majority of patients, as the effects of this form of anatomic alteration became obvious. As a result of physiologic changes in the bypassed segment, including bacterial reflux, overgrowth, and translocation into portal venous flow, the liver became progressively affected in a presumed inflammatory mechanism. The consequence was hepatic failure in approximately 5 percent of patients in the first year following surgery and up to a 50 percent occurrence of cirrhosis in patients within 25 years of surgery

(O'Leary, 1992). For this reason, the jejunoileal bypass has all but been abandoned, with the added recommendation that previously performed bypasses be reversed to avoid the subsequent complications.

In the interim, other varieties of weight loss procedures were being developed, stimulated by the great success of these initial attempts. But this did not mean the end to *malabsorptive* operations. A second generation of such procedures was developed, including the biliopancreatic bypass and the biliopancreatic diversion with duodenal switch, technically more complex surgeries. These operations resulted in effective weight loss without the attendant side effects and complications inherent in the first-generation procedures. Though less common today, these operations have strong adherents who advocate these procedures in the "super morbidly obese" (BMI >60). The common thread is still that decreasing exposed surface area to nutrients leads to less absorption, and, therefore, the intake portion of the caloric formula is decreased, resulting in weight loss.

RESTRICTIVE/MALABSORPTIVE PROCEDURES

From a physiological standpoint, altering absorptive capacity is more complicated, with potentially more complex consequences, than simply decreasing the amount of calories that enter the body. It was with an eye to this concept, that of restricting the quantity of nutrients that enter the body in the first place, that the gastric bypass model of weight loss surgery came into existence. Dr. Edward Mason at the University of Iowa developed the first gastric bypass procedure in 1966, and within 10 years, following some technical modifications, it became the dominant bariatric procedure in the United States.

The initially described procedure involved partitioning the stomach into a small proximal pouch isolated from the remainder of the distal stomach and duodenum. This proximal gastric pouch was then attached to the proximal jejunum. Intake was therefore restricted by the small size of the pouch, which could handle only a certain volume of food before the patient experienced satiety. In addition, as the food exited this proximal pouch, it bypassed the distal part of the stomach and the whole of the duodenum, a situation that results in important hormonal changes that appear to play significant roles not only in weight loss but in the ameliorative effects on certain comorbidities associated with morbid obesity, such as type II diabetes mellitus. Moreover, these effects appear to occur independent of the weight that is lost.

Dr. Ward Griffin at the University of Kentucky modified the original Mason gastric bypass by converting the loop gastrojejunostomy to a Roux-en-Y gastrojejunostomy in order to eliminate bile-induced gastritis and esophagitis. He

also compared this procedure to the original small bowel bypass procedure, finding equivalent weight loss with significantly decreased complications in the gastric bypass group. With the advent of laparoscopy, the Roux-en-Y gastric bypass, performed laparoscopically, has dominated the bariatric landscape in the United States. Change, however, is continuing, and a new generation of purely restrictive procedures is gaining ground, primarily due to the ease of the newer procedures.

RESTRICTIVE PROCEDURES

The concept of a restrictive operation for weight loss arose primarily from the potential simple mechanistic alteration in the gut anatomy that would be required to achieve restriction in caloric intake. In the context of the physiological alterations that resulted from bypassing the small bowel in the first-generation jejunoileal bypass, which led to life-threatening complications, a way to restrict intake became attractive as a manner in which to achieve weight loss.

The Mason gastric bypass had a significant restrictive component but was still a hybrid procedure, with a bypass and malabsorptive component as an integral part for the subsequent weight loss and metabolic effects. But the bypass component also encompassed the creation of connections between different parts of the gut, with the attendant possibility of leaks at these connection sites. Technically, the creation of these connections can be challenging, especially laparoscopically, but also in the traditional open method. And finally, the metabolic changes resulting from bypassing the distal stomach and duodenum were not fully understood early on, but it was suspected that potentially troublesome complications could arise from such rerouting of the nutrient stream.

The purely restrictive procedures address these concerns by essentially simplifying the anatomical changes required. The gastroplasty procedure, described in 1973 by Dr. Mason, is one in which the proximal portion of the stomach was divided horizontally, leaving a narrow channel between the proximal and distal portions of the stomach, slowing the transit time of nutrients between the two areas, yet leaving the nutrient stream directionally intact. This procedure resulted in restriction of flow, but was not consistently effective due to stretching of the proximal gastric pouch or enlarging of the channel between the two areas. Weight loss with this procedure was, therefore, not consistent.

Subsequent experimentation with the concept of gastric restriction led to the development of a modification of the gastroplasty procedure, namely, the vertical banded gastroplasty, using a silastic band or mesh material to maintain the caliber of the narrowed channel. These modifications have led to more stable

weight loss results, though not quite at the levels achieved with the Roux-en-Y gastric bypass.”

The implantation of an adjustable gastric band is a relatively new procedure that is purely restrictive in function and technically easy to perform, even laparoscopically. The idea of utilizing a synthetic implant to restrict intake for weight loss arose out of a similar device, the Angelchik ring, a synthetic ring that was employed at the esophagus for prevention of esophageal reflux. Marcel Molina, MD, of the Spring Branch Medical Center in Houston, Texas, first described wrapping a polypropylene mesh around the upper stomach. Adjustability was soon found to be desirable, and obesity surgeons, L. Kusmak, MD, and G. Hellers, MD, developed an adjustable band connected to a port under the skin that could be subsequently accessed in the office with a needle and inflated or deflated as the situation dictated. This procedure is now becoming one of the fastest growing procedures for weight loss in the world and the United States. The speed of the weight loss is slower than with gastric bypass, and follow-up for continued weight loss and maintenance of lost weight is imperative. Nevertheless, the technical ease, speed of recovery, reduction in serious complications, and reversibility has spurred its growing popularity among patients and surgeons alike.

METABOLIC SURGERY

As alluded to earlier, researchers are learning that the bypass portion of the Roux-en-Y gastric bypass procedure appears to contribute to almost immediate improvement in type II diabetes mellitus through complex interactions between “fore-gut” and “hind-gut” hormonal changes. The improvement in this form of diabetes occurs with weight loss and is, therefore, associated with other forms of bariatric surgery, but it is the immediacy of this effect, independent of actual weight lost with gastric bypass, that has led to a new conceptualization of bariatric surgery, in particular gastric bypass, as a form of metabolic surgery. This concept has even been extended to the point where in the near future it may not be unheard of to consider metabolic surgery for nonobese patients suffering from type II diabetes mellitus.

SELECTION PROCESS

The surgical treatment for morbid obesity is not a panacea, and the results can be dramatically affected by the behavior of the patient postoperatively. Surgery, therefore, needs to be viewed as a tool that the patient needs to use effectively in order to achieve weight loss and maintenance of weight. This tool can easily be misused and does not work in an automatic fashion.

Examples of behaviors that negatively impact the postbariatric patient include “grazing” (eating small quantities of food throughout the day), not adhering to the high protein/low carbohydrate diet (usually prescribed for gastric bypass patients), and ingesting high-caloric drinks. It is hoped that psychological evaluation will detect issues of noncompliance or compulsive behavior so as to either address these issues with the patient before surgery or eliminate the patient as a good candidate for surgery.

Unfortunately, failures in detection of important psychological issues result in a great many of the failures of weight loss in patients who have had bariatric surgery.

THE FUTURE

Only a small proportion of the patients who are potential candidates for bariatric surgery are actually availing themselves of this option. The estimates are that 1–2 percent of morbidly obese patients undergo bariatric surgery every year. In part, this is due to availability and insurance coverage for this type of surgery, though this situation is improving as more surgeons become adept at the procedures and coverage for these surgeries is expanded. Part of the problem, however, is educational, on the part of patients as well as referring physicians. This also appears to be improving, as both patients and physicians are realizing the beneficial effects of weight loss surgery, not only in dealing with the issue of excess weight but also in dealing with associated comorbid conditions.

SUMMARY

Our brain is a complex organ that regulates much more than we realize. It seems odd to think that addiction may come in so many various forms, as indicated by the neuro-imaging studies introduced above. Addictions include the traditional vices such as addiction to cocaine and alcohol, and yet may also include compulsive overeating and, its opposite, stringent fasting. For many persons, eating pizza produces a high, just as fasting produces anorectic euphoria. Alarmingly, the idea that certain age groups were out of the typical age of onset no longer holds true: our population is growing more obese; at the same time, more women are crossing the line from being thin social drinkers to binge-alcohol anorexics, regardless of their age.

Medications and metabolic surgery may prove to be an option for many, yet even these advances must be approached with caution. Up to 20 percent of postbariatric surgery patients experience suicidal ideation after the opera-

tion, requiring strict screening beforehand. The reasons for this phenomenon have yet to be studied academically; the possible risk factors are numerous and beyond the scope of this chapter. Thus despite marvelous advances in neuroimaging, medication, surgery, rehabilitative psychotherapy, and diet/exercise, and the implications these advances hold for treatment tomorrow, the best medicine teaches us that it is through a careful coordination of these modalities that we offer our patients and ourselves optimal results on a long-term basis.

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Eating Disorders and Disturbances: The Continuum of Eating Disturbances

Cynthia R. Kalodner, PhD

I did not think of myself as having an eating disorder, yet I could intimately understand the pain of these women. I was clearly not anorexic or bulimic, yet I definitely used food to soothe myself, was uncomfortable with my body, and shared the same struggle for wholeness.

(Radcliffe, 1993, p. 138)

Anorexia nervosa and bulimia nervosa are eating disorders, well known in popular culture since the media has identified and publicized them through articles, movies, and books. However, when considering eating disorders, limiting discussion to anorexia and bulimia is inaccurate since there are other eating disorders and problems that do not fit the criteria for anorexia or bulimia. In this book, the term *eating disorders* refers to psychiatric illnesses with specific criteria; these include anorexia nervosa, bulimia nervosa, and eating disorder not otherwise specified, which is a special category used for people who have eating disorders that meet most, but not all, of the criteria for anorexia or bulimia.

Eating disorder not otherwise specified is a very heterogeneous category, with six different types. The “not otherwise specified” part of the name might be misunderstood as somehow less serious or not as important as anorexia or bulimia, however, as we will see later in this chapter, eating disorders not otherwise specified are clinically significant eating disorders that require treatment. People with an eating disorder not otherwise specified do not have less body dissatisfaction than do people with anorexia or bulimia. Furthermore, there

may be a progression from eating disorders not otherwise specified to anorexia or bulimia (Herzog & Delinsky, 2001).

In addition to the three major types of eating disorders, there is a large group of people who are dissatisfied with body image and practice unhealthy eating practices, but they may not fit the criteria for any eating disorder. They engage in disordered eating, but do not meet the criteria for an eating disorder. These people have *eating disturbances*. In fact, there are many, many people who are dissatisfied with their body, have a fear of gaining weight, and may be anxious or stressed about weight and body shape. People with eating disturbances may skip meals, restrict food choices to a few acceptable things, and avoid foods that contain fat. They may binge eat occasionally and self-induce vomiting but do not have an eating disorder.

ASYMPTOMATIC, SYMPTOMATIC, AND EATING DISORDERS

One way to think about the definition of various types of eating disorders and disturbances is to use the terms “asymptomatic,” “symptomatic,” and “eating disordered” (Mintz, O’Halloran, Mulholland, & Schneider, 1997). Those who are asymptomatic do not have any symptoms of any eating disorder. Those who are symptomatic have symptoms of eating disorders, but do not meet the criteria for anorexia, bulimia, or eating disorder not otherwise specified; in the language of this book, they have eating disturbances. Finally, those who have anorexia nervosa, bulimia nervosa, or eating disorders not otherwise specified are considered to have an eating disorder.

THE CONTINUUM OF EATING DISTURBANCES

The eating disorders continuum is a way to think about the various kinds of eating problems. The continuum of eating disorders places normal eating at one end of the spectrum (asymptomatic), eating disorders at the opposite end, and eating disturbances at intermediate points. On the normal end of the continuum, people have normal eating behaviors whereas those on the eating disordered end have significant eating and body image problems. The groups between normal and eating disordered display some eating disordered behaviors such as dieting, binge eating, and various methods of purging. The phrase “continuum” was first used in regard to eating disorders in 1971 (Nylander), and it continues to be a useful way to explain eating disturbances and eating disorders.

BRIDGE—BUILDING THE RELATIONSHIP BETWEEN BODY IMAGE AND DISORDERED EATING GRAPH AND EXPLANATION

BRIDGE (Russell & Ryder, 2001a) is a graphical presentation of the relationship between body image attitudes and disordered eating behaviors that can provide a framework for connecting attitudes (such as body satisfaction or dissatisfaction) and behaviors (such as exercise, healthy eating, binge eating) on the continuum of eating disturbances and disorders. The BRIDGE concept is consistent with the continuum concept since it does not dichotomize between normal and abnormal behaviors and attitudes, but rather presents a continuum of attitudes and behaviors (see Figure 8.1). The developers of BRIDGE highlight the need to be concerned about a wide range of disordered eating behaviors and attitudes and emphasize the importance of discussing eating disorders in the context of a continuum (Russell & Ryder, 2001).

The graph shows how an eating disorder may develop when unhealthy attitudes and behaviors meet. The horizontal axis is a continuum of body image that ranges from healthy to unhealthy. It is the axis of attitudes and feelings about bodies; the healthiest attitudes are on the left near the intersect point on the graph. As you move to the right on the horizontal line, attitudes become increasingly unhealthy. At the extreme, a person may not see himself or herself accurately, seeing the body as larger than it is. The vertical axis ranges from healthy to unhealthy in terms of different behaviors. The healthiest behaviors start at the bottom of the graph near the intersect point and become less healthy as you go up the vertical line. Anorexia and bulimia are at the extreme of this axis.

The shaded areas on the graph represent the intersection of attitudes and behaviors. The “Body Awareness and Acceptance” ellipse holds the part of the horizontal and vertical axes associated with the healthiest attitudes and behaviors. People who fall into this area have healthy attitudes about their bodies and engage in healthy behaviors. They are asymptomatic. They accept their bodies and understand that the way they look is only one part of who they are. Primary prevention programs are designed to promote these healthy attitudes and behaviors are recommended for people who fit into this ellipse (Russell & Ryder, 2001a, 2001b).

The “Body Preoccupation” ellipse is much larger, and it encompasses restrictive dieting/overeating, binge eating, compulsive exercise, and disordered eating. The people who fall into this ellipse are overly concerned about their bodies and are engaging in behavior that is not healthy. This shaded area may include

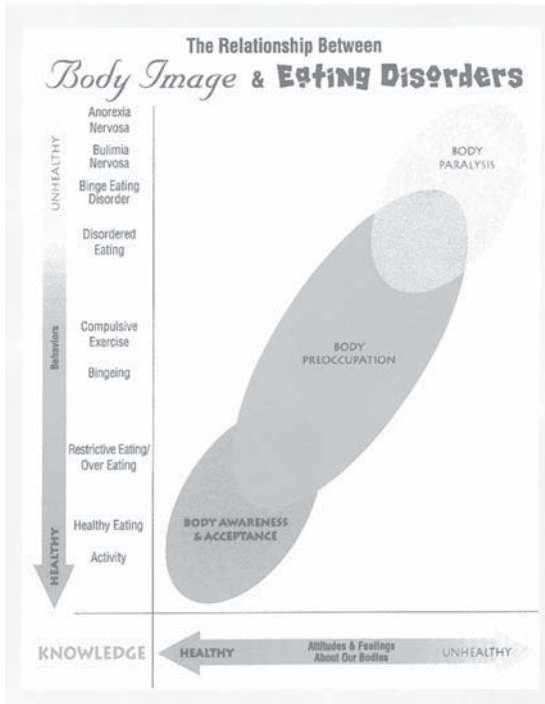


FIGURE 8.1. The Relationship between Body Image and Eating Disorders. Copyright 2001 from Shelly Russell and Sabine Ryder, “BRIDGE: A Tool for Parents and Professionals.” Reproduced by permission of Taylor & Francis, Inc., <http://www.routledge-ny.com>

people who would benefit from secondary prevention or early intervention (such as psycho-education or counseling) to help them change their unhealthy attitudes and behaviors (Russell & Ryder, 2001a, 2001b). Some people in this area have eating disturbances.

The third ellipse is called “Body Paralysis” and is characterized by extremely disordered attitudes and behaviors. People in this ellipse are obsessed with their bodies to such an extent that it becomes the most important thing in life. This ellipse includes people who have anorexia or bulimia, or eating disorders not otherwise specified. These individuals need treatment or specialized services to help them recover from their eating disorders (Russell & Ryder, 2001a, 2001b).

A CLOSER LOOK AT THE EATING DISORDERS CONTINUUM—CROSS-SECTIONAL, RETROSPECTIVE, AND LONGITUDINAL RESEARCH

The continuum conceptualization provides a background for understanding how eating disturbances and disorders may develop and change as time passes. Individuals may progress from a less serious problem to a more severe one over time. Or, it is possible that some people may move from the more severe end of the continuum toward the normal end.

There are three kinds of research that can be used to study this issue: cross-sectional, retrospective, and longitudinal studies. Cross-sectional studies compare different groups of people along the continuum on eating attitudes and behaviors and other variables of interest. Retrospective studies are based on asking people who developed an eating disorder about events that happened to them before the beginning of their eating disorder. Longitudinal studies determine if there is a progression from one point on the continuum to another in the same individual as time passes. Different types of information can be obtained from studies of these sorts.

A Survey of the Cross-Sectional Research

Most of the cross-sectional studies were published in the late 1980s and early 1990s when the field was just beginning to explore the idea of the continuum of eating disorders. The older studies (i.e., Mintz & Betz, 1988; Scarano & Kalodner-Martin, 1994) are cross-sectional studies, since they involved collecting data from a large group, assigning the individuals to a group on the continuum based on their responses to a questionnaire, and then making comparisons between the groups on the continuum. Cross-sectional studies are a way to determine if there are differences between the groups on the continuum.

In one continuum from normal eating to bulimia nervosa (anorexia was not included in this work), six groups were used (Scarano & Kalodner-Martin, 1994). These include normal eaters, weight preoccupied, chronic dieters, purgers, subthreshold bulimia, and clinically diagnosed bulimia. In this continuum, the groups were defined as follows:

- Normal eaters do not binge eat, restrict eating, or use any method of purging.
- Weight preoccupied individuals express significant concern about body weight and shape, but they do not engage in any kind of binge eating, restricting, or purging.

- Chronic dieters engage in repeated dieting behavior at least once a week, including the use of diet pills, fasting, or overexercising.
- Purgers self-induce vomiting, fast, or use diuretics at least once a month.
- Individuals with subthreshold bulimia or bulimia are characterized by both binge eating and purging behaviors, but differ in the frequency of these behaviors; bulimia nervosa is defined by binge episodes at least eight times a month, while those with subthreshold bulimia do this less than eight times a month (Scarano & Kalodner-Martin, 1994).

In several studies based on this continuum with six groups, the groups differed from each other on a variety of eating attitudes and behaviors. For example, a measure of behaviors associated with bulimia showed a linear increase from normal eaters through those with bulimia. A linear increase means that with increasing levels of eating disturbances, there is also an increase in measures of eating related problems, such as binge eating or body image dissatisfaction (Mintz & Betz, 1988; Scarano, 1991; Scarano & Kalodner-Martin, 1994). Other findings that support the linear increase are (1) individuals who meet the criteria for bulimia were more weight preoccupied than those who meet the criteria for subthreshold bulimia, (2) purgers were more weight preoccupied than normal eaters and chronic dieters, and (3) body dissatisfaction increased from normal eaters through the group with bulimia in an incremental way. Similar patterns exist for thinking about appearance and food, feeling fat, and fearing becoming fat.

In another more recent cross-sectional study of the continuum, the three groups of asymptomatic, symptomatic, and eating disordered were used (Mintz, O'Halloran, Mulholland, & Schneider, 1997). A study of college students using this three-group continuum indicated that a continuum existed for the issues most closely associated with eating disorders, such as body dissatisfaction. Scores on a measure of body dissatisfaction increased from 37.9 to 75.9 to 76.2 for asymptomatic, symptomatic, and eating disordered groups respectively (Tylka & Subich, 1999). This kind of linear increase supports the idea that a continuum exists. However, Tylka and Subich also found that some variables did not differentiate between the three groups in this way. Some measures of psychological and behavioral variables (such as extraversion, openness to experience, agreeableness, and conscientiousness) did not distinguish the three groups in any meaningful way. These variables may be less relevant to the eating disorders continuum.

A Survey of the Retrospective Research

Shisslak and Crago (2001) reviewed the studies that used a retrospective model and summarized the findings by saying that people who develop eating

disorders are more likely than other psychiatric patients to have experienced greater parental pressure, high expectations or abuse, more health problems, childhood obesity, more familial criticism about their weight, shape, or eating habits, and a more negative self-evaluation. In contrast, the death of someone close, a loss of relationship with a friend or family member, and work or school problems were not factors that were reported more often by those who developed an eating disorder than those who had another psychiatric problem.

An example of retrospective research is provided by Fairburn, Welch, Doll, Davies, & O'Connor (1997). In this study, 102 people with bulimia were compared with 204 control group participants, and 102 psychiatric patients with disorders other than eating disorders. All participants were British females between 16 and 35 years, and they were matched for age and social class. The participants with bulimia reported exposure to twenty-nine risk factors, but only 4 of the 58 were at greater levels than those who developed another psychiatric problem. This led the researchers to conclude that risk factors for bulimia are similar to those factors that lead to the development of psychiatric problems in general.

There has been no study of the groups on the continuum using a retrospective approach, thus it is unclear if asymptomatic, symptomatic, and eating disordered groups would provide different data on the factors that preceded the development of eating problems. It is also worth noting that retrospective studies are subject to the bias of recall of stressful events. For example, some events that participants may report occurred before their eating problems began, may actually have developed at the same time, or even as a result of the eating disorder. In addition, individuals vary in their perception of what is stressful; that is, what creates a great deal of stress for one person may not be as stressful to another. Even in light of these limitations, retrospective research adds to our understanding of the differences between groups of people who develop a problem and those who do not.

A Survey of the Longitudinal Research

Longitudinal studies can be used to study how individuals change from less severe to more severe eating disturbances in the same individual over time (Shisslak & Crago, 2001). This type of study is based on collecting data from a large sample of individuals and following their development to see who develops eating problems and what precedes or is associated with the development of eating disorders. According to Shisslak and Crago, twenty-six studies have been published that fit into this category; the first one was published in 1989 (Attie & Brooks-Gunn). Since longitudinal studies take much more time to

complete (because you have to wait for people to get older and see how their attitudes and behavior change), and there can be problems with attrition (participants drop out of the study or cannot be reached to provide data), they are quite expensive to conduct.

Longitudinal research suggests that low self-esteem, weight concerns, dietary restraint, body dissatisfaction, depression, negative emotionality, early maturation and being overweight are risk factors for the development of eating disorders and disturbances (Shisslak & Crago, 2001). The four factors that are associated most strongly with the development of eating disorders are weight concerns, dietary restraint, body dissatisfaction, and early maturation, while the other factors are associated with the development of other psychiatric disorders as well. This is consistent with a two-track approach to the continuum that is discussed below.

An example of a longitudinal study of 800 children and their mothers is provided by Kotler, Cohen, Davies, Pine, & Walsh (2001). The procedures involved interviewing mothers and children between the ages of 1 and 10 (childhood), then again in adolescence (mean age 13.9), late adolescence (mean age 16.3), and early adulthood (mean age 22.1). It can be expected, at childhood, there were no children who met the criteria for anorexia or bulimia. In early adolescence, 1 (.2 percent) male and no females met the criteria for anorexia, and 7 (1.4 percent) females met the criteria for eating disorder not otherwise specified Type 1 (anorexia nervosa without the criteria of amenorrhea). There were 6 (1.2 percent) females and 1 male (.2 percent) with bulimia. In late adolescence, 4 (1 percent) males and no females met the criteria for anorexia, and 4 (1.1 percent) females met the criteria for eating disorder not otherwise specified as Type 1. There were 12 (3.2 percent) females and 2 (.5 percent) males with bulimia. In early adulthood, no males or females met the criteria for anorexia, and 2 (.5 percent) females met the criteria for eating disorder not otherwise specified as Type 1. There were 4 (1.1 percent) females and 4 (1.1 percent) males with bulimia. These data fit with the data that suggest there is a low prevalence of anorexia and bulimia.

Relevant to the notion of the continuum and understanding what factors may lead to the development of these eating disorders, Kotler et al. (2001) indicated that the adolescents who scored highest on a measure of symptoms of bulimia developed bulimia at a much higher rate than those with no symptoms when they were younger (7.9 percent more likely); having severe symptoms of anorexia or bulimia in early or late adolescence predicted severe symptoms of these disorders in young adulthood. In addition, certain childhood eating problems, such as conflicts over eating, struggles with meals, and unpleasant meals (as rated by mother) increased the risk for the later diagnosis of anorexia

nervosa. Additional research of this type that includes more psychological assessments may add considerably to our understanding of the risk factors for the development of eating disorders and help understand how eating disturbances develop into eating disorders.

A longitudinal study based on twenty-one female college students who were symptomatic of eating disorders during their college years was conducted to see what happened to their eating attitudes and behaviors after they graduated from college (Hesse-Biber, Marina, & Watts-Roy, 1999). In this interview-based study, it was noted that 11 women experienced reductions in their eating problems, whereas 10 other women remained at risk of developing an eating disorder. The group that reduced eating problems reported better interpersonal relationships and more adaptive means for coping with stress, whereas the group that continued to experience eating-related difficulties described feelings of isolation and discontent with relationships with family and friends and had less satisfying relationships with men.

The results of a longitudinal study involving a ten-year long follow-up of 509 women and 206 men who completed a questionnaire about eating attitudes and behaviors when they were in college has implications for the continuum of eating disturbance and the natural progression among the continuum as people mature and become adults (Heatherton, Mahamedi, Striepe, Field, & Keel, 1997). The first questionnaire was collected in 1982, and the follow-up was in 1992. The ten years after college are ones in which people generally settle down, get married, have children, and establish careers. The researchers wanted to know how their eating attitudes and behaviors would change during that time. A large percentage of the initial respondents returned the follow-up questionnaire (82 percent of the women and 76 percent of the men). During the ten years, the women gained an average of 4 pounds, while men gained 12 pounds.

The groups on the continuum used in this research included nondieters, dieters, problem dieters, and those with subclinical eating disorders and clinical eating disorders. The percentage of women classified as having any sort of eating problem (problem dieter, subclinical, or clinical) dropped from more than 40 percent in 1982 to just over 15 percent in 1992. Thus, it was found that 46 percent of the women moved to a lower category of eating disorder, while 41 percent stayed in the same category and 14 percent moved to a more disordered category. Overall, this study found that body dissatisfaction, chronic dieting, and eating disorder symptoms declined for women in the 10 years after college. Rates of eating disorders dropped by more than half and the prevalence of binge eating and purging declined as well. Maturing into adulthood seems to help women stop dieting and abnormal eating. Some participants wrote notes

to the researchers saying that dieting was much less important to them as they gained some distance from the college experience. So even though it may be normative for women to have some degree of problem eating while in college, it may also be normative for the problems to diminish as the person moves into adulthood. Unfortunately, some of the women continued to have eating related problems after college. About 1 person in 5 who met the clinical criteria for an eating disorder in college still met the criteria ten years later.

For men, the data suggest something quite different. Men gained more than ten pounds from 1982 to 1992, and they also reported increases in body weight concerns, desire to lose weight, and dieting behavior. These changes were associated with increases in attitudes consistent with eating problems. The data suggest that it was the men who were most concerned about being thin who actually got heavier in the ten years.

DOES THE CONTINUUM REALLY EXIST?

Whether eating disorders actually exist on a continuum has been the subject of a great deal of study. Based on many studies, it appears that there is a continuum of food and body image issues, but there may not be a continuum of the psychological aspects of eating disorders (Connors, 1996). There may be meaningful differences on psychological variables between those who have eating disorders and those who do not. In other words, there may be a continuum for some aspects of eating disorders, but not for others. The eating disorders continuum holds true for variables that are more closely related to eating and body image, rather than the psychological issues that may be associated with anorexia and bulimia.

The continuum of food and body image includes body dissatisfaction and negative body image, weight preoccupation, and dieting. The food and body image issues (which include intense concern with weight, appearance, and body shape) may be common among people who diet and those who have eating disorders. The second set of concerns refers to psychological issues such as problems with affect (mood), low self-esteem, and insecure relationships with parents. The second set of issues may be deeper and more complex and may be issues that affect those with the more serious eating disorders—not those who do not have a diagnosis of any eating disorder.

A summary of the state of the art of the continuum follows:

The data suggest that the normative levels of body dissatisfaction and dieting so prevalent in the current sociocultural context may be differentiated from clinically significant eating disorders on the basis of emotional disturbance.

Body dissatisfaction and dieting behaviors could be viewed as spanning a continuum from slight to very intense. Individuals may have mild to moderate levels without other life impairment. Women with more symptoms of eating disorders seem to have high levels of body dissatisfaction and disturbed eating attitudes and behaviors in conjunction with other psychological problems, including greater levels of depression, feelings of ineffectiveness, self-criticism, impulsivity, emotional reactivity, and life impairment. (Connors, 1996, pp. 289–290)

This quote means that it may take eating and body image problems along with other psychological problems to lead to the development of eating disorders. Connors (1996) also indicates that when a person has both body dissatisfaction and certain psychological issues (such as depression or a high degree of self-criticism), an eating disorder may develop, but that when body dissatisfaction occurs without psychological issues, an outcome might be normative discontent dieting. The term normative discontent is a classic phrase because it is used so often in the literature. It was first used by Rodin, Silberstein, and Striegel-Moore in 1985 to describe the pervasiveness of women and their dissatisfaction with appearance. Authors continue to describe the problem differentiating between pathological concern associated with eating disorders and cultural norms of thinness. (Herzog & Delinsky, 2001)

THE CONTINUUM AND IMPLICATIONS FOR TREATMENT OF EATING DISTURBANCES

The two aspects of the continuum (food/body issues and psychological concerns) are consistent with a two-track approach for counseling clients who have eating disturbances and disorders (Garner, Vitousek, & Pike, 1997). The first component to treatment is concerned with weight and body image, while the second track involves the psychological and emotional disturbances. Track one issues refer to weight preoccupation, body image, and eating, including binge eating and methods of purging. Track two refers to the psychological issues such as self-esteem, anxiety, depression, and family issues.

These two tracks can be used to describe treatment for all groups on the eating disorders continuum. For example, people who fall into the category of weight preoccupied may benefit from track one interventions to target unhealthy attitudes toward weight and body image. If these attitudes are not modified, individuals are likely to begin to diet. Social pressures to be thin may be addressed in a media literacy kind of intervention for people who are in the weight-preoccupied group. The two tracks of treatment may also be applied to repeat or chronic dieters. Treatment for repeat dieters should include psychoeducation about the negative effects of chronic diets.

DO NORMAL EATERS NEED TREATMENT?

In the first article to address this topic, Polivy and Herman (1987) raised the idea that treatment may be necessary for “normal eaters”; they wrote about this in an article with the provocative title, “The Diagnosis and Treatment of Normal Eating.” This highlights the fact that what is societally normal eating may be quite abnormal, depending on the definition of normal. Does normal mean normative, in that it is what most people are doing? If that is true, then what is normal may include concern with weight and use of repeated diets. People who are of normal weight may feel as if they are overweight. Chronic dieting is normal in some groups. The important point of this article is that just because behavior is normal does not mean that it is okay; in fact, chronic dieting is not healthy. Dieting is the single most common factor in developing an eating disorder (Ghaderi, 2001). Many professionals in the eating disorders field have addressed the problems associated with dieting as a risk factor for the development of eating disorders.

Since dieting is a common eating style, it may be that this seems like normal eating, though it is quite a bit like disordered eating and therefore it may require treatment. Physiologically normal eating requires eating in response to hunger, which means that people must be able to accurately determine if they are truly hungry. Normal eating, simply put, is eating when you are hungry and stopping when you are full and satisfied. To learn (or relearn) to respond to hunger and satiety (being full), one must perceive them accurately. Dieters learn to ignore these normal cues; as part of their diets, they learn not to eat when hungry and to stop eating before they are full. Ignoring hunger and satiety cues creates a kind of distorted regulation of eating. Dieters fear that when they eat naturally the result will be uncontrollable binge eating and weight gain. However, uninhibited eating does not lead to overeating and binge eating. Sometimes dieters who stop dieting actually lose weight by stopping their diets. The reversion to physiologically (rather than cognitively) controlled eating ends obsessions with dieting and allows dieters to recognize that normal eating is not a threat to well-being. In *Full Lives*, Hutchinson (1993) said, “It was dieting, and not some intrinsic neurosis, that made me into a compulsive overeater. Therefore, it was dieting, not compulsive overeating, from which I really needed to recover” (p. 97).

Dieting behaviors are associated with a drive for thinness and body dissatisfaction. Reduction in dietary fat is one way in which people may attempt to lose weight. This is a strategy that is viewed as positive; there is an inherent assumption that fat avoidance is desirable and consistent with improved health. However, fat avoidance behaviors have also been associated with high levels

of eating pathology and psychosocial problems (Liebman, Cameron, Carson, Brown, & Meyer, 2001).

DOES DIETING LEAD TO BINGE EATING?

Polivy and Herman (1985) were among the first to study the relationship between dieting and binge eating. Their initial work provided a great deal of evidence that suggests that dieting causes binge eating. Recently, Stice (2001) summarized a great deal of research on the temporal relationship between dieting and binge eating, indicating that in prospective longitudinal studies dieting does seem to predate bulimic behaviors. This may be due to the “abstinence-violation effect,” which means that although someone may create a set of rules about eating and restrict intake of food, when these rules are broken, it may lead to overeating or binge eating. The abstinence-violation effect means going on a diet, breaking a rule of the diet, and then binge eating.

Several experiments in which subjects were put on diets and then developed binge eating behaviors provide additional support for the idea that dieting causes binge eating. The famous Keys study (of starvation in male volunteers) showed that when people are placed on a restrictive diet, they “exhibited a persistent tendency to binge, gorging at meals to the limit of their physical capacity” (Polivy & Herman, 1985, p. 195). Successful dieting demands that physiological controls, which by themselves are conducive to a “desirable” weight level, be replaced with cognitive controls designed specifically to achieve a lower weight in line with the dieter’s personal aspirations (Polivy & Herman, 1985, p. 198).

Why does dieting precede binge eating? A physiological reason is that binge eating might be the body’s attempt to restore weight to a more appropriate level. This relates to the idea of set point, which holds that a person has a range of weight that is determined for them biologically. When a person gets much lower than the set point, the body may respond by developing a binge eating style. However, there may be other reasons to explain this relationship. As indicated earlier, dieting is a cognitive (thinking) kind of activity. Cognitive factors may be more important determinants of intake on a given occasion than are physical factors. In the final comment of the article, Polivy and Herman (1985) suggest that dieting is the disorder that we should be attempting to cure.

EATING DISORDER NOT OTHERWISE SPECIFIED

Serious eating problems exist in individuals who do not meet the criteria of anorexia or bulimia. In addition to understanding anorexia and bulimia, it is important to attend to those eating disorders that are assigned to the category

eating disorder not otherwise specified. This is a poorly defined large “catch-all” category (Striegel-Moore & Smolak, 2001) with 25 percent–60 percent of people presenting for treatment fitting in the “not otherwise specified” group (Andersen, Bowers, & Watson, 2001). Individuals with an eating disorder not otherwise specified can be quite distressed and need attention to the eating issues and associated psychological concerns.

As you can see, the types are defined by “falling just short of full criteria” (Herzog & Delinsky, 2001, p. 36). Type One includes females who meet all the criteria for anorexia except the individual has regular menses. Type Two is for people who meet all criteria for anorexia except that, despite significant weight loss, the individual’s weight is in the normal range. Type Three includes people who meet all criteria for bulimia except that binge eating and purging or other ways to control weight gain occur at a frequency of less than twice a week or for less than three months. In Type Four, individuals of normal weight vomit after eating a small amount of food or use other inappropriate compensatory behavior. Type Five is for people who repeatedly chew and spit out food (they do not swallow it). Type Six is called binge eating disorder and is described below.

People may move from one type of eating disorder not otherwise specified to another, and from an eating disorder not otherwise specified to anorexia or bulimia. For example, in Marya Hornbacher’s (1998) book *Wasted*, about her personal struggle with eating, she wrote, “I became bulimic at the age of nine, anorexic at the age of fifteen. I couldn’t decide between the two and veered back and forth from one to the other until I was twenty, and now, at twenty-three, I am an interesting creature, an eating disorder not otherwise specified” (p. 2).

Eating disorder not otherwise specified is a category that concerns researchers and clinicians for several reasons. First, the large number of people who are diagnosed with eating disorders not otherwise specified makes one wonder if the criteria for anorexia and bulimia may be too restrictive. Second, insurance companies may restrict coverage for people with this diagnosis, assuming that it is less serious than anorexia or bulimia (Andersen et al., 2001). Third, some clinicians who treat eating disorders have expressed uncertainty of the methods that they should use with eating disorders not otherwise specified since the research is based on anorexia and bulimia, but rarely mentions eating disorders not otherwise specified. In fact, the Practice Guidelines for the Treatment of Patients with Eating Disorders does not make specific treatment recommendations for people with eating disorders not otherwise specified (APA, 2000b).

If there were changes that broadened the diagnostic criteria for anorexia and bulimia, there could be a significant reduction in the number of people assigned to an eating disorder not otherwise specified. Redefining anorexia and bulimia would result in an increase in the cases of both of these disorders. For

example, one criterion for the diagnosis for anorexia requires an absence of menstruation for three months. Forty-seven percent of a group of eating disorders not otherwise specified fit into this category, thus with a revision in the criteria for anorexia, they would no longer be considered eating disorders not otherwise specified. When adjustments to the criteria for anorexia and bulimia were made, only 18 percent of people with a diagnosis of eating disorder not otherwise specified remained in this category. Since the majority of influence of reducing eating disorders not otherwise specified is due to changes in the criteria for anorexia nervosa, this is described in the chapter on anorexia.

INCIDENCE AND PREVALENCE OF EATING DISTURBANCES AND DISORDERS

Epidemiology concerns the number of people who are diagnosed with a specific disorder. Here, we are concerned with the number of people who have eating disorders or disturbances of various types. Both incidence and prevalence data are available to provide estimates of the number of people who have eating disorders or disturbances. Incidence is defined as the frequency of the occurrence of a disorder; it may refer to the number of new cases of a disorder. Prevalence is defined as the number of cases of a disorder in a specific population at a specific point in time.

Eating disturbances and disorders occur in children, adolescents, adults, and the elderly, but the majority of the research has focused on people between the ages of twelve and twenty-two. In the sections that follow, data are presented to demonstrate the number of children, adolescents, and young adults with eating disturbances. In chapters 3 and 4, data are provided on the frequency of occurrence of anorexia and bulimia. Briefly, anorexia has a lifetime prevalence of .05 percent and the prevalence reported for bulimia ranges from 1 percent to 3 percent (APA, 2000a). For bulimia nervosa, the prevalence rate is 1 to 3 percent (APA, 2000a).

Eating disorders not otherwise specified occurs in 4 percent to 6 percent of the general population (Herzog & Delinsky, 2001), thus, the prevalence of eating disorders not otherwise specified is approximately twice that of anorexia and bulimia. In addition, eating disorder not otherwise specified is the appropriate diagnosis for more than 50 percent of patients with eating disorders who present for treatment (APA, 2000b). Major epidemiological studies of eating disorders have shown that by adopting subthreshold criteria, defined as meeting all but one of the diagnostic criteria for anorexia or bulimia, the number of cases of anorexia or bulimia would more than double (Garfinkel, 1996; Garfinkel, Lin, Goering, Spegg, Goldbloom, Kennedy, Kaplan, & Woodside,

1995). Those who meet all but one of the diagnostic criteria for bulimia do not differ from those who have been diagnosed with bulimia in terms of demographic characteristics, psychiatric comorbidity, family history, or early childhood experiences (Garfinkel, 1996; Garfinkel et al., 1995). Since those with an eating disorder not otherwise specified may engage in all the same disturbed eating behaviors as those with the diagnosis of anorexia or bulimia, it is an important group that requires attention.

As for eating disturbances, studies suggest that unhealthy eating and weight-related behaviors and body image dissatisfaction exists in vast numbers of young females, as well as college students and adults. In addition, there is also increasing emphasis on eating disturbances in males (Andersen, Cohn, & Holbrook, 2000).

COLLEGE STUDENTS

College students have been the subjects in a great deal of prevalence research. For example, a group of researchers using the same instrument in four different studies of the prevalence of eating disorders in college students revealed that the prevalence of bulimia ranged from 0 percent to 3 percent, eating disorder not otherwise specified ranged from 2 percent to 5 percent and symptomatic eating issues ranged from 19 percent to 23 percent (Mintz, O'Halloran, Mulholland, & Schneider, 1997; Mulholland & Mintz, 2001). In a prevalence study of African American women enrolled in a predominately Caucasian university, 2 percent met criteria for eating disorders, 23 percent were symptomatic, and 75 percent were asymptomatic (Mulholland & Mintz, 2001). In a sample of 330 female undergraduates enrolled in psychology classes at a public university, Tripp and Petrie (2001) reported 7.6 percent met criteria for an eating disorder, 72.7 percent were symptomatic, and only 19.7 percent were asymptomatic. Likewise, using a different measure, Franko and Omori (1999) reported that in their sample of 207 female students enrolled in psychology classes, 2.4 percent fell into a group they called "probable bulimic," 6.7 percent were dieters, 23 percent were called intense dieters, 17 percent were termed casual dieters, and 51 percent were not dieters.

CHILDREN AND ADOLESCENTS

In the introduction to a book entitled *Body Image, Eating Disorders and Obesity in Youth* published in 2001, Thompson and Smolak reviewed the most recent prevalence data for children and adolescents. Three recent large surveys

of children have been conducted to assess the number of children and adolescents who have symptoms of eating disturbances.

Dieting prevalence was studied by the Heart, Lung and Blood Institute (Schreiber, Robins, Striegel-Moore, Obarzanek, Morrison, & Wright, 1996) in a study of over 2,000 black and white 9- and 10-year-old girls.

Among the 9-year-olds, 42 percent of the black girls and 37 percent of the white girls reported that they were trying to lose weight. For the 10 year olds, the corresponding percentages are 44 percent and 37 percent.

Another study that is cited often because of the large number of participants and the data available from adolescents of varying ethnic backgrounds yielded higher percentages of adolescents who report weight loss attempts of varying kinds (Serdula, Collins, Williamson, Anda, Pamuk, & Byers, 1993). Of Caucasian female adolescents, 47.4 percent were trying to lose weight, while 30.4 percent of African American and 39.1 percent of Hispanic American adolescents were also trying to lose weight. For males, the percentages were Caucasian 16.2 percent, African American 10 percent, and Hispanic 16.7 percent. Interestingly, this survey also assessed desire to gain weight and found that 26 percent of boys wanted to gain weight, along with 6.6 percent of the girls.

Field and colleagues (1999) studied a very large sample of more than 16,000 9- to 14-year-old boys and girls (93 percent of the sample was white) and found that the 44 percent of the older girls were trying to lose weight. However, they also found that 20 percent of the 9-year-old girls were trying to lose weight. Girls reported that they exercised to lose weight rather than dieted. Of the boys in this study, 17 percent of the 9-year-olds and 19 percent of the 14-year-olds were trying to lose weight.

These studies suggest that there are a large number of children and adolescents who are dissatisfied with their bodies and attempting to lose (or, in some cases, gain) weight. It is important to remember that these high rates of dieting may not indicate that these individuals have eating disorders. Rather, the data suggest that many adolescents and some children have weight concerns that may be associated with unhealthy behaviors. Some of these individuals may develop symptoms of eating disorders.

After reviewing the information on prevalence on the various types of eating disorders, one might ask the question: Why is it so difficult to provide precise figures that represent the prevalence of these problems? It is impossible to come up with exact percentages for several reasons. First of all, the current percentages provided by the American Psychiatric Association are based on documented, or reported, cases of eating disorders. These numbers represent people who are receiving treatment for their eating disorder. It is very likely that many

cases go unreported or undiagnosed, which could make this number inaccurate. Second, oftentimes, young women are asked to fill out questionnaires to indicate whether they meet criteria for an eating disorder. As with any kind of self-report questionnaire, this may not be the most accurate method of determining who has an eating disorder. For example, people who have an eating disorder may be uncomfortable filling out questionnaires or may be ashamed to answer the questions honestly. Another reason is that the numbers may not accurately reflect the prevalence of the disorder in different populations. Whenever we read about percentages or prevalence rates, we should ask the question: What group did they use to get this information? For example, if we know that a group of athletes were used, with an equal percentage of African American, Hispanic, Native American, Asian American, and white females, we may have a pretty good idea that the results represent athletes from various racial backgrounds. If, on the other hand, a group of white swimmers were used, we can say that those numbers represent that population only. Some groups may be more at-risk than other groups. For example, sorority members and athletes may be more prone to develop eating problems than other populations. For this reason, we must always be aware of the group upon which results are based.

BINGE EATING DISORDER

Binge eating disorder, in the eating disorder not otherwise specified category, involves recurrent episodes of binge eating in the absence of regular use of purging, fasting, or excessive exercise, which are also characteristic of bulimia (see criteria). Binges are characterized by some of the following: rapid eating, eating until uncomfortably full, eating when not hungry, eating alone to avoid embarrassment about how much food is eaten, and feeling disgusted, depressed, or guilty when overeating. People with binge eating disorder are concerned about their binge eating, including concern about the long-term effects of binge eating on the body. In addition, in order to have binge eating disorder, the binges must occur an average of two times a week for at least six months. Finally, binge eating disorder is not diagnosed when the person meets the criteria for anorexia or bulimia.

Binge eating disorder is also more prevalent than anorexia or bulimia. The overall prevalence of binge eating disorder taken from weight-control programs is 15 percent to 50 percent (with a mean of 30 percent; APA, 2000a). Less is known about the prevalence of this disorder in the general population. In samples taken from the general community, the prevalence of binge eating disorder ranged from .7 percent to 4 percent (APA, 2000a), though some researchers believe that the number is much greater. Some researchers say that there is no

doubt that binge eating will be increasingly recognized as a clinical problem and will be the object of additional research.

There has been more attention to binge eating disorder than any of the other types of eating disorder not otherwise specified. Although binge eating disorder is not common in adolescents or college students, a few paragraphs are included to define and describe this eating disorder. Binge eating disorder may be associated with depression and anxiety (APA, 2000a). It appears that binge eating disorder often begins following a significant weight loss from dieting. Some people report that they feel numb or spaced out by the binge episodes. Binge eating disorder is associated with obesity; this makes sense when you remember that this is a disorder of binge eating without any kind of purging or other way to compensate for the calories consumed in the binges. Many people with binge eating disorder have been struggling with weight issues for many years and have repeatedly dieted and experienced failure in their ability to lose weight and keep the weight off. Females are 1.5 times as likely to have binge eating disorder than males but note that the female/male ratio in binge eating disorder is much closer to even than in either anorexia or bulimia. The onset of binge eating disorder occurs more frequently in adults than in adolescents (APA, 2000a). Binge eating disorder appears to be a chronic kind of disorder, which means that it recurs in the lifetime.

Case of Binge Eating Disorder

Mr. Cohen is a thirty-seven-year-old man who weighed 272 pounds at 5 feet 9 inches tall. He sought therapy for weight loss related to a job promotion. Mr. Cohen indicated that he had gained 60 pounds in a year and he “ate all the time.” He explained that he dieted and could lose weight in the past, but now he could not generate the willpower. Mr. Cohen thought that having someone weigh him each week would help him to start to lose some weight. Mr. Cohen had some interesting things to say about guilt. “My guilt drives me here, but why do I feel so guilty? Why is it so out of proportion to what I have done? It is not that terrible to overeat and yet I feel it is.” Through counseling, it was difficult to discover what triggered Mr. Cohen’s overeating. It seemed as though he ate when he was frustrated and also ate when he felt like he had made a significant achievement. He did manage to lose some weight and began to feel better. The weekly weigh-in and attention in psychotherapy may have been helping. But, after New Year’s Day, Mr. Cohen reported a food binge—after he cashed his paycheck, he kept \$100 and “everything just seemed to go blank . . . all of my good intentions just seemed to fade away I . . . just said ‘what the hell’ and started eating and what I did then was an absolute sin.” He ate a

cake, several pieces of pie, and several boxes of cookies, which he ate while he drove his car around town. He ate quickly, in a kind of frenzy. Then he visited a series of restaurants, eating a little bit in each. When he described this binge, he said that he didn't enjoy it but that he couldn't stop it. He said that a part of him just blacked out (Stunkard, 1993, pp. 18–21).

These food binges described in this case were part of Mr. Cohen's food problems. They also became a part of the history of binge eating disorder, since the therapist that he saw was Dr. Albert Stunkard, who is now well known for his work in binge eating disorder.

SUMMARY

The eating disorders continuum is a way to think about the various kinds of eating problems. The continuum of eating disorders and disturbances places normal eating at one end of the spectrum (asymptomatic), eating disorders at the opposite end, and eating disturbances at intermediate points. The continuum continues to be a useful way to explain the difference between eating disturbances and eating disorders and how people may move from eating disturbances to disorders. BRIDGE (Building the Relationship between Body Image and Disordered Eating Graph and Explanation) is a graphical presentation that links attitudes and behaviors on the continuum of eating disturbances and disorders. In addition to understanding these well-known eating disorders, it is important to attend to those eating disorders that are assigned to the category called eating disorder not otherwise specified. Anorexia nervosa, bulimia nervosa, and eating disorder not otherwise specified (including binge eating disorder) are all disorders of eating.

DSM-IV-TR Criteria for Eating Disorder Not Otherwise Specified

The Eating Disorder Not Otherwise Specified category is for disorders of eating that do not meet the criteria for any specific eating disorder. Examples include:

1. For females, all of the criteria for anorexia nervosa are met except that the individual has regular menses.
2. All of the criteria for anorexia nervosa are met except that, despite significant weight loss, the individual's weight is in the normal range.
3. All of the criteria for bulimia nervosa are met except that the binge eating and inappropriate compensatory mechanisms occur at a frequency of less than twice a week or for a duration of less than 3 months.

4. The regular use of and inappropriate compensatory behavior by an individual of normal body weight after eating small amounts of food (e.g., self-induced vomiting after the consumption of two cookies).
5. Repeatedly chewing and spitting out, but not swallowing large amounts of food.
6. Binge eating disorder: recurrent episodes of binge eating in the absence of the regular use of and inappropriate compensatory behaviors characteristic of bulimia nervosa. (APA, 2000, p. 594 Reprinted with permission from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*. Copyright 2000 American Psychiatric Association.)

DSM-IV-TR Criteria for Binge Eating Disorder

- A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
 - (1) eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances
 - (2) a sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating)
- B. The binge-eating episodes are associated with three (or more) of the following:
 - (1) eating much more rapidly than normal
 - (2) eating until feeling uncomfortably full
 - (3) eating large amounts of food when not feeling physically hungry
 - (4) eating alone because of being embarrassed by how much one is eating
 - (5) feeling disgusted with oneself, depressed, or very guilty after overeating
- C. Marked distress regarding binge eating is present.
- D. The binge eating occurs, on average, at least 2 days a week for 6 months.
- E. The binge eating is not associated with regular use of inappropriate compensatory behavior (e.g., purging, fasting, excessive exercise) and does not occur exclusively during the course of anorexia nervosa or bulimia nervosa. (APA, 2000, p. 787 Reprinted with permission from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*. Copyright 2000 American Psychiatric Association.)

NOTE

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**PORNOGRAPHY, INTERNET,
GAMING, AND GAMBLING**

Addiction to Pornography: Its Psychological and Behavioral Implications¹

Robert W. Kubey, PhD

In addition to the Internet and video games another form of media content often claimed to be addictive is pornography. Nonprint pornography has experienced an enormous growth in recent decades, and the opportunities for serious habits involving these materials have clearly increased. Where once only a small minority of interested parties could afford to buy or rent films, or venture into public theaters of dubious quality and atmosphere, for nearly three decades there has been an explosion in the availability of pornography. Here, the use of the word “explosion” is hardly hyperbolic. This is now a huge, multi-billion-dollar growth industry, and even a five-year old child staying with his parents in a hotel room can see signs that it exists from the ads sitting atop the TV, unless a vigilant parent puts them in a drawer the minute the family checks into the room.

With the advent of interactive pornography and live, visual, sexual chat rooms and live video sites, the debate over the value or harm of pornography has heated up over and over again in the last decades, yet it is questionable whether the research literature has been able to keep pace. When we get to the quality of research, the issue becomes more problematic, as at least in the opinion of this observer, some researchers appear to have found it difficult to steer clear of the political controversies surrounding this highly volatile topic.

It can also be very hard to obtain good, unbiased, and honest data from people who use pornography, who potentially have a problem with it, or who have committed sex crimes. Sexuality is always a challenging area for researchers, and clearly determining whether someone is addicted to pornography may not

be so simple. As I have done in applying the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-R)* to understanding so-called television addiction (see chapter 2 in this volume), readers might wish to consult Irons and Schneider (1996), who have adapted the *DSM* for the analysis of sexual addictions, though they have little to say about pornography.

The federal government sometimes funds studies in order to inform lawmakers and set policy on pornography, but going back at least to the Nixon administration, the government or party in power, at least in the U.S. situation, sometimes appears to want to see certain results emphasized in research or official government studies, and in some instances certain findings that disagree with administration policy may be disowned or eschewed and, some believe, even suppressed. This politicization of media effects issues has been evident for an even longer period in the debate over the impact of violence in film and television, and in many of the same ways.

That said, I will review some of the alleged effects of pornography and the ways in which an addiction to pornography may develop. This chapter will focus as well on concerns that I believe are raised by the delivery of new media forms and interactive erotica.

As with other media effects debates, it is very difficult to disentangle cause from effect. Still, a number of researchers and clinicians report both negative effects *and* evidence for dependence, or in their words, *addiction*, with regard to the use of pornography (Oddone-Paolucci, Genuis, & Violato, 2000; Zillmann, 2004). As will be seen, some of the negative effects are thought to be intertwined with pornography addiction. Those interested in a dissenting research view, one that holds that pornography might be a much more benign influence in people's lives, might consult Daniel Linz's (2004) work.

Now to some of the claims. One claim is that large private pornography collections are often found by authorities in the residences of persons arrested for sexual crimes (Cline, 1994; Reed, 1994), especially pedophiles (Lanning & Burgess, 1989). There is also evidence indicating that some rapists and child molesters use sexually explicit materials both before and during sexual assaults (Marshall, 1988). At a minimum, it does seem that there is a relationship between the frequent use of pornography and problematic sexual disorders for some individuals. Whether the pornography is merely symptomatic of the disorder, or plays a causal role, is much more difficult to establish.

Still, for some, there is little doubt that both negative effects and pornography addiction do indeed occur. Reed (1994), a practicing psychiatrist, is explicit in his presentation of specific criteria that he believes would constitute an addiction to pornography. He notes that the *DSM* itself recognizes that

many *paraphilias* (compulsive sexual deviances) frequently involve the use and collection of pornography. Reed lists 13 paraphilias and the ways in which they are related to the use of pornography.

Cline (1994), a clinical psychologist who has treated hundreds of people with sexual disorders, describes a four-step process in the involvement of his patients with pornography. First described is an “addiction effect,” in which the person comes back repeatedly for more material because it provides “a very powerful sexual stimulant or aphrodisiac effect followed by sexual release most often through masturbation” (p. 233).

Cline goes on to describe an “escalation effect,” in which there is an “increasing need for more of the stimulant to get the same effect” obtained initially (p. 233). Third, he observes “desensitization,” in which things that might have once seemed shocking become less so and are thereby legitimized. Fourth, Cline claims that there is an “increasing tendency to act out sexually the behaviors viewed in the pornography” (p. 234).

A number of psychological and physiological mechanisms have been posited to explain how pornography addiction might develop. Among the most common is sexual gratification as a powerful reinforcer (Lyons, Anderson, & Larson, 1994). This is the “addiction effect” described by Cline, in which learning is made all the more powerful by virtue of the sexual release that attends pornography’s use. Here, Cline draws on McGaugh’s (1983) memory research suggesting that experiences that co-occur with high emotional and physical arousal may be better remembered. Reed (1994) suggests the possibility that some such learning might be occurring on the biological as well as the psychological level when he points out that “the neurotransmitters that are activated by pornography use may trigger similar neural pathways as cocaine or heroin” (p. 265).

Of note is a trade book by Dodge (2007), arguing that the neuroplasticity of the brain can enable an addiction to Internet- or other-mediated pornography that can leave the user with a typical pattern of less enjoyment over time, as a result of which the user looks for new forms of excitement (pp. 102–112).

In my chapter on television addiction, I applied an operant conditioning approach to the role relaxation plays in the development of the television viewing habit. It certainly makes sense that the pleasure accompanying orgasm may increase the potential for a habit to develop for some users of pornography, especially those who have few other outlets for sexual gratification. The early literature on sexual behavior points to strong associations developing between the particular ways in which first or early sexual gratifications were obtained and the object or means of that gratification (Ellis, 1906/1936). According to Ellis and the research he cites in this early, seminal work, well before Kinsey’s,

if one's primary means of sexual gratification at an early and impressionable age is via a particular technique or a particular object of desire, then there may be a kind of fixation on that technique and/or object.

Cline argues further that if sexual problems can be alleviated in sex-counseling clinics with the use of sexual films, books, and videos as tools in therapy, then one must suspect that exposure to pornography can also have an effect. For Cline, and for many other observers, pornography provides powerful occasions on which modeling and imitative learning can occur.

Zillmann and Bryant (1988b) have made an important experimental contribution to the addiction hypothesis by showing that prolonged exposure to pornography can decrease some people's level of satisfaction with their partners and with the quality of their sex lives. Zillmann (1994) has gone on to propose that in many instances, "initial sexual dissatisfaction drives exposure to pornography" and a vicious circle ensues. With the consumption of pornography, the dissatisfaction grows stronger and draws the person into further consumption. For Zillmann, consumption of pornography invites comparisons that help drive dissatisfaction: "consumers compare what they have, by way of sexual intimacy, with what pornography tells them they might and should have" (1994, p. 210).

I have proposed, similarly, that the frequent presentation of highly romanticized and sexually arousing material on television, and elsewhere in our mainstream contemporary media, may fuel similar dissatisfactions and a propensity toward invidious comparison in a much broader spectrum of the population than was previously the case (Kubey, 1994, 1996; see also Bryant & Rockwell, 1994).

Other effects of pornography, aside from dependence—or addiction—and modeling, have been studied and merit comment. Weaver (1994) has reviewed evidence indicating that exposure to pornography increases sexual callousness toward women. This callousness includes increased aggressivity toward women as well as a desensitization to the injury that violence or sexual assault causes.

Zillmann and Bryant have been interested in the degree to which so-called family values may be on a collision course with pornography, and they again offer experimental evidence. These studies (see Zillmann, 1994, for a review) typically expose an experimental group of adults to pornographic videos over a number of weeks (often six). Then, a week after the exposure, the group's answers to survey questions are compared with those of a control group that was not exposed.

The researchers' studies show that experimentally produced prolonged exposure to pornography results in a greater acceptance of both male and female promiscuity, and that as promiscuity is presumed to be more natural, adults also begin to assume that faithfulness among sexual intimates is less

common than is assumed by those in the control group. The participants in the experiment also report being more accepting of nonexclusive sexual intimacy for themselves.

In one study, when asked, "Do you feel that the institution of marriage is essential to the well-functioning of society?" 60 percent of the control group answered in the affirmative, but this was true for only 38.8 percent of the group exposed to pornography. Zillmann and Bryant (1988a) have also reported that exposure to pornography reduced the desire of their research participants, male and female, student and nonstudent, to want to have children. Zillmann (1994) suggests that this finding may

Support the contention that prolonged consumption of pornography makes having children and raising a family appear an unnecessary inconvenience—presumably because pornography continually projects easy access to superlative sexual gratification, these gratifications being attainable without emotional investment, without social confinements, without economic obligations, and without sacrifices of time and effort. (p. 208)

In this regard, the immediate gratification that standard commercial television drama and film so frequently offers and promotes may in its own right be in conflict with the values of constancy and commitment so necessary to the healthy functioning of family life (Kubey, 1994). While this research is intriguing, I can't help but editorialize and wonder how internal review boards at universities permit research to be conducted on undergraduate populations if a propensity toward promiscuity is the known, and expected (from prior research trials), result in the experimental group. This work has been replicated; it is interesting to ponder the ethics of such work, and yet its importance, and the challenge of how to do this work without exposing people to the very material that one might hypothesize will be injurious.

As noted, new technologies have led to an explosion in pornography. And, if a pornography habit—or addiction—can indeed develop, it would seem more likely to develop if pornographic materials can be easily obtained.

It is not difficult to imagine how young people can come into contact with such materials. Even if a 12-year-old boy cannot rent a pornographic video on his own, it may well be that his friend's older brother, who is 16 but looks 18, can. And, of course, an increasing number of parents own such materials and keep them in their homes. In addition, such materials are available on many cable channels, if parents do not block them or if the child wishes to order material and suffer the consequences, if there are any, later.

While I do not personally frown on all uses of pornography, I do believe that it is not to be recommended for certain audiences. I believe it is unwise for

a 12-year-old boy to experience hard core pornography, especially as it is likely to be one of his very first exposures to sexual intimacy and such intense sexual experiences at a young age may constitute powerful early occasions for learning and impression formation.

Zillmann and Bryant's work suggests that such materials might also prove detrimental in the formation of a boy's impressions of female sexuality, since most such pornography depicts women as sexual objects whose primary goal is to serve the sexual desires of men. An occasional viewing of such materials by a pubescent or prepubescent boy might not have any strong or deleterious effects. But when we recognize that some boys may view such material every few days, or even more often, and if we add that some boys typically seek and obtain sexual release upon viewing, I believe we raise the possibility not only that a strong habit or "addiction" may develop, but also that it may be one we would not want to encourage, especially when we consider that this same boy is likely to begin having his first real sexual experiences with a girl or young woman in the not so distant future.

These concerns are multiplied when we consider the arrival of interactive erotica. An early interactive offering was called Virtual Valerie. Here, computer-generated, movie-quality images of young women take their clothes off at the command of the viewer. Women on the screen can also be programmed at the touch of a button to say arousing things to the viewer, as well as to perform a variety of sexually suggestive acts before the viewer's eyes.

Let's return again to our 12-year-old boy. Imagine that he has obtained some interactive video products like Virtual Valerie. Imagine that he interacts with them while masturbating several times a week, typically spending 10 to 30 minutes in each encounter, off and on, for a few years before, at age 15, he has his first intimate encounter with an *actual, real-life* young female of the same age. Might his expectations of how she will act and how he should act if they become intimate have been altered by the many hours spent with his interactive pornography disks?

I don't believe we know the answer. Conceivably, this form of pornography may have positive effects. Perhaps it will help some people fantasize and obtain sexual release in such a way that there is a reduction in the commission of sexual crimes (see Linz and Malamuth, 1993, for a review of research on the positive, cathartic effect of traditional pornography). Still, combining common sense with what we know about the learning of sexual behavior, I must say that I am concerned about young people, as well as some adults, overusing, and perhaps becoming dependent on or "addicted" to, such a form of entertainment.

NOTE

1. Portions of this article were originally presented in, or have been adapted from, R. Kubey, *Television Dependence, Diagnosis, and Prevention: With Commentary on Video Games, Pornography, and Media Education*, in *Tuning in to Young Viewers: Social Science Perspectives on Television*, ed. T. MacBeth, pp. 221–260 (1996; Newbury Park, CA: Sage).

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Assessment and Treatment of Internet Addiction

Kimberly S. Young, PhD

Notions of technological addictions (Griffiths, 1996) and computer addiction (Shotton, 1991) have previously been studied in England. However, when Internet addiction was first introduced in 1996 at the American Psychological Association meeting (Young, 1996), it sparked a controversy among clinicians and academicians alike.

In contrast to chemical dependency, the Internet offers several direct benefits as a technological advancement in our society, rather than a device to be criticized as addictive (Levy, 1997). These benefits range from practical applications including conducting research, performing business transactions, accessing libraries, communicating with colleagues, and making vacation plans. Books have been written outlining the psychological as well as functional benefits of the Internet in our daily lives (Rheingold, 1993; Turkle, 1995). By comparison, chemical dependence is not an integral part of our professional lives, nor does it offer any direct benefit.

Furthermore, many researchers argued that the term *addiction* should be applied only to cases involving the ingestion of a drug (e.g., Rachlin, 1990; Walker, 1989). However, defining addiction has moved beyond this to include a number of behaviors that do not involve an intoxicant: these include compulsive gambling (Griffiths, 1990), video game playing (Keepers, 1990), overeating (Lesuire & Blume, 1993), exercise (Morgan, 1979), love relationships (Peele & Brodsky, 1975), and television viewing (Winn, 1983). Over the past decade, a growing body of peer-reviewed literature has adopted the term *Internet addiction*, and its acceptance as a legitimate disorder has grown (e.g., Ferris, 2001; Greenfield, 1999; Hansen, 2002).

DIAGNOSIS

The Internet is a highly promoted technological tool, making the detection and diagnosis of addiction difficult. Therefore, it is essential to understand the criteria that differentiate normal from pathological Internet use. Proper diagnosis is often complicated by the fact that there is currently no accepted set of criteria for addiction listed in the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (*DSM-IV*, 1994). Of all the diagnoses referenced, pathological gambling was viewed as most akin to compulsive Internet use, being defined as an impulse-control disorder that does not involve an intoxicant. In what is known as the Internet Addiction Diagnostic Questionnaire (IADQ), Young (1998a) developed the first screening instrument, which outlined the following criteria:

1. Do you feel preoccupied with the Internet (think about previous online activity or anticipate next online session)?
2. Do you feel the need to use the Internet with increasing amounts of time in order to achieve satisfaction?
3. Have you repeatedly made unsuccessful efforts to control, cut back, or stop Internet use?
4. Do you feel restless, moody, depressed, or irritable when attempting to cut down or stop Internet use?
5. Do you stay online longer than originally intended?
6. Have you jeopardized or risked the loss of significant relationship, job, educational or career opportunity because of the Internet?
7. Have you lied to family members, therapist, or others to conceal the extent of involvement with the Internet?
8. Do you use the Internet as a way of escaping from problems or of relieving a dysphoric mood (e.g., feelings of helplessness, guilt, anxiety, depression)?

When using the IADQ, only nonessential computer/Internet use (i.e., use that is not for business purposes or academically related) should be evaluated, and addiction is present when clients answer "yes" to five (or more) of the questions over a six-month period. This list of questions offers a workable definition of Internet addiction to help us differentiate normal from compulsive Internet use, but the warning signs can often be masked by cultural norms that encourage and reinforce Internet use. Thus, even if a person meets all eight criteria, signs of abuse can be rationalized away as "I need this for my job" or "It's just a machine," when in reality the Internet is causing significant problems in a user's life.

While time is not a function in diagnosing Internet addiction, addicts are generally excessive in their online usage, spending anywhere from 40 to

80 hours per week on the Internet, with sessions that could last up to 20 hours at a time. Sleep patterns are disrupted due to late night log-ins, and addicts generally stay up surfing until two, three, or four in the morning despite having to wake up early for work or school. In extreme cases, caffeine pills are used to facilitate longer Internet sessions. Such sleep deprivation causes excessive fatigue, impairing academic or occupational performance, and may affect the immune system, leaving the addict vulnerable to disease. Sitting at the computer for such prolonged periods also means that addicts aren't getting the proper exercise, and sometimes addicts are at increased risk for carpal tunnel syndrome.

Like alcoholics who need to consume greater levels of alcohol in order to achieve satisfaction, addicts routinely spend significant amounts of time online. Furthermore, addicts will go to great lengths to mask the nature of their online activities, primarily to conceal the extent and nature of the behavior. In most cases of impulse-control disorder, an individual's compulsion is often associated with increasingly painful states of tension and agitation that is relieved through the completion of the act. For example, an alcoholic is driven to drink or an overeater is driven to binge on food during moments of tension. In each case, the compulsive behavior serves to reduce the underlying emotional tension and serves to reward behavior. In the same manner, an Internet addict's use of the computer is less about using it as an information tool and more about finding a psychological means to cope with life's problems.

SUBTYPES OF ONLINE ABUSE

The Internet is a term denoting a variety of functions accessible online, such as the World Wide Web (WWW), chat rooms, instant messaging systems, interactive games, virtual casinos, online auction houses, news groups, and databases. Internet addicts typically become addicted to a particular application that acts as a trigger for excessive Internet use. Internet use becomes focused on a particular chat room, a particular online game, a particular virtual casino, or a particular set of adult sites. Early attempts to categorize the behavior suggested that the patterns of use fall into four major subtypes: online abuse, cybersex addiction, online affairs, online gaming, and Internet gambling. An overview of each is provided below.

Cybersex Addiction

Individuals who suffer from cybersex addiction are typically engaged in viewing, downloading, and trading online pornography or are involved in

adult fantasy role-play rooms. Adult Web sites comprise the largest segment of online development and electronic commerce, catering to a wide variety of sexual interests. Given the extensive availability of sexually explicit material online, cybersex addiction has been the most common form of problem online behavior among new users (70%) and has a high relapse rate among prior sexual compulsives (55%) (Young, 2001).

Young (2001, p. 36) stated that "computer-enabled fantasies are highly reinforcing and the addict's preoccupation with sexual arousal stems from his own imagination and fantasy history." The association of the Internet with sexual arousal is so potent that it transforms the Internet from a practical business or research device into a modern-day sex toy. Sometimes, just recalling the potent images of one's last online episode triggers arousal and reinforces the notion that cyberspace is an open gateway to immediate sexual fulfillment; as one addict explained, "I get a major erection just clicking on my computer." Based upon her studies, Young describes five interdependent stages of cybersex addiction that highlight how users utilize the Internet as a progressive means of escape as part of an addiction cycle: discovery, experimentation, escalation, compulsivity, and hopelessness.

In the discovery stage, the discovery that adult Web sites and chat rooms exist is made by the user. A man doing research online may accidentally bump into a pornographic Web site or a woman may enter a social chat room and meet a man who entices her to have cybersex. In either case, the person discovers the sexual thrill of the act, which opens the door for further exploration. In the experimentation stage, the user may secretly begin to explore and experiment online without the fear of being caught. Users feel encouraged and validated by acceptance of the cyberspace culture, especially when, cloaked in the anonymity of the computer screen, they may feel less accountable for their actions over the Internet (Cooper, Putnam, Planchon, & Boies, 1999). Within the anonymous context of cyberspace, conventional messages about sex are eliminated, allowing users to play out hidden or repressed sexual fantasies in a private lab.

In the experimentation stage, a curious person may be completely unprepared when she steps into one of many sites specifically designed for the purposes of facilitating sexual experimentation. Web site names such as the "Hot Sex Room," the "Fetish Room," or the "Bisexual Room" may intrigue the casual browser, who is initially shocked but at the same time titillated by the permissiveness of others engaged in virtual sex. Such virtual environments may be more seductive than most users anticipate, providing short-term comfort, distraction, and/or excitement. Users begin to dabble in darker or more deviant types of sexual material online. Furthermore, online experiences occur in the privacy of one's home, office, or bedroom, facilitating the perception of anonymity and the idea that Internet use is personal and untraceable.

In the escalation stage, the behavior becomes more chronic and pronounced, such that the addict becomes saturated with a continuous stream of sexual content that can take on riskier and riskier forms. Most people do not yet realize that there is any risk involved in engaging in online sexual pursuits. While in some ways such engagement may seem like a journey into foreign territory, online sexual behaviors occur in the familiar and comfortable environment of home or office, thus reducing the feeling of risk and allowing even more adventurous behaviors (Young, 2001).

In the compulsivity stage, the user engages in more constant sexual behavior online, downloading hundreds or thousands of pornographic images, or meeting people for the sole purpose of having cybersex in online sex chat rooms. Just as the alcoholic requires larger doses of the drug to achieve the same sensation and pleasure from the experience, the online addict now looks for the next big virtual thrill, perhaps engaging in more extreme sexual fantasies online.

In the hopelessness stage, in order to deal with the double life that develops, the addict often rationalizes the behavior and disowns what he says or does online with self-statements as, "It's just a computer fantasy" or "This isn't who I really am." Addicts detach themselves from the online sexual experience and perceive their secret fantasy world as a parallel life that is completely separate from their identity in real life. They may also progress into more sexually deviant topics that they would normally find reprehensible but that over time become acceptable as they become increasingly desensitized to the experience. The addict becomes preoccupied with the computer, attempts to conceal the nature of his online activities, and continues to engage in the activity despite its known potential risks, including possible job loss, divorce, or arrest. In one such case, a 34-year-old minister arrested for possession of child pornography obtained from the Internet explained, "I soon discovered the vast array of pornography, including child pornography, available on the Internet. My attraction to pornography on the computer was born of sheer amazement at the volume of available material and this amazement turned to fascination and ultimately to obsession. I knew it was wrong. My life became a lonely, isolated mess. I realized that I could lose my job, my marriage, and the respect of everyone I love if I was caught. I have two daughters and would never think about doing anything inappropriate with them, but I could not bring myself to stop, despite knowing the consequences of my actions."

Online Affairs

Individuals who become overinvolved in online relationships through instant messaging, chat rooms, voice-over Internet, and e-mail are at risk for developing an addictive pattern in these relationships. Online friends quickly become

more important to an individual, often at the expense of real-life relationships with family and friends. Among married couples, this can lead to online affairs. Married users may utilize interactive online environments to seek out support, comfort, and acceptance that provide them with a sense of belonging in a non-threatening manner.

Online affairs are among the most common consequences of online addiction. At an alarming rate, long-term and previously stable marriages are destroyed by intimate words shared over the computer. An online affair can be defined as a romantic and/or sexual relationship that is initiated via online contact and maintained predominantly through electronic conversations that occur through e-mail, chat rooms, or interactive games (Young, 1999). These virtual communities allow strangers from all over the world to meet instantly 24 hours per day, seven days a week, creating a breeding ground for online affairs. Young (1998b) found that serious relationship problems were reported by 53 percent of Internet addicts surveyed that led to marital discord, separation, and even divorce. However, the scope of the relationship problems caused by the Internet can be undermined by its popularity and advanced utility.

Online affairs differ dynamically from real-life affairs and are potentially more seductive. Given the global nature of the Internet, online affairs can be culturally diverse and consequently seem more glamorous than the people one already knows in day-to-day living (Greenfield, 1999). Electronic communication allows individuals to feel less inhibited, which accelerates perceived intimacy. Online, people are more likely to be open, honest, and forthright, revealing personal truths, and the intimacy that might take months or years to develop in an offline relationship may only take days or weeks online (Cooper & Sportolari, 1997). A friendly online conversation can quickly turn erotic, allowing users to share private sexual fantasies with one another; this can be accompanied by self-stimulation to heighten the sexual experience (Young, 1998a).

Seemingly harmless online relationships can easily progress to secret phone calls, letters, and offline meetings, and getting one's needs met through an online affair can adversely impact one's marriage. Clinicians are increasingly seeing cases of couples seeking counseling to deal with an online affair (Young, 2004), and online infidelity has accounted for a growing number of divorce cases. According to the American Academy of Matrimonial Lawyers (Quittner, 1997), 63 percent of lawyers surveyed reported that the Internet has played a significant role in the divorces they have handled during the past year (AAML, 2002). Unlike affairs that happen outside the home, online affairs occur in the home, often while an unsuspecting spouse is sitting in the next room. The warning signs of an online affair are often masked with the claim of legitimate

or necessary use of the computer. For instance, a spouse may begin to come to bed in the early morning hours or they leap out of bed an hour or two early to use the computer for a prework e-mail exchange with a new romantic partner. If a spouse begins an affair, whether online or offline, that spouse will usually go to great lengths to hide the truth from a partner. In the case of an online affair, the attempt to hide the truth usually leads to a need for greater privacy and secrecy surrounding computer use. The computer may be moved from a visible den to a secluded corner of a locked study, or the password may be changed. If disturbed or interrupted when online, unfaithful spouses may react with anger or defensiveness to conceal the extent of their online involvement (Young, 1998a).

Some online affairs can evolve into phone sex or real-life meetings, but even the process of sharing one's sexual fantasies online can alter patterns of sexual interest. If chats with an online lover also include masturbation, a person may suddenly show a reduced interest in sex with a real-life partner; this may be one of the signs that an individual has found another sexual outlet online. Often, people who engage in online affairs are less enthusiastic, energetic, and responsive with regard to lovemaking with a real-life partner and prefer the newness and excitement of virtual sexual stimulation (Young, 2004).

Online Gaming

Massive multiuser online role-playing games, or MMORPGs as they are often called, are one of the fastest growing sub-areas of Internet addiction among children and teens. Parents across the globe are increasingly concerned about their sons' and daughters' online gaming habits (Young, 2004). They are sure that there is a problem, but counselors unfamiliar with online gaming addiction often do not understand how seductive such games can be. As one parent explained, "I had gone to my son's guidance counselor, the school psychologist, and two local addiction counselors. None of them ever heard of World of Warcraft, much less someone becoming addicted to it. They told me it was a phase and that I should limit my son's game playing. They didn't understand that I couldn't. He had lost touch with reality. He lost interest in everything else. He didn't eat, sleep, or go to school. The game was the only thing that mattered to him."

Parents often feel alone and scared as their children become hooked on something that no one seems to understand. "I couldn't believe it when my therapist told me to just turn off the computer. That was like telling the parent of an alcoholic son to tell him to just stop drinking. It wasn't that simple. We felt like no one was taking us seriously, that our son had a real problem."

Like those addicted to alcohol or drugs, gamers show several classic signs of addiction. They become preoccupied with gaming, lie about their gaming use, lose interest in other activities just to game, withdraw from family and friends to game, and use gaming as a means of psychological escape (Young, 1998b). Because of their addiction, gamers become defensive about their need to play the game and angry when forced to go without it. Parents who try to put time limits on the game describe how their sons and daughters become angry, irrational, and even violent. Gamers who can't access the game experience a loss. They want to be on the game and they miss playing the game. This feeling can become so intense that they become irritable, anxious, or depressed when they are forced to go without the game (Young, 1998b). They can't concentrate on anything except going back online to play. Their minds become so fixated on the game that they can experience a psychological withdrawal from the game. As their feelings intensify, they stop thinking rationally and begin to act out toward other people in their lives, especially a parent or anyone who threatens to take the game away.

Internet Gambling

Online casinos have practically overnight sprung up and turned into a multi-million-dollar business, attracting a large number of gamblers worldwide. Compulsive gambling has been around for decades, but now access and opportunity have greatly increased with the invention of Internet gambling, bringing with it a new form of addictive behavior. The global nature of the Internet, combined with the limited, if not nonexistent, ability of local governments to effectively regulate or ban online gambling, will have profound psychological and social consequences. "It's fun. It's exciting. It's glamorized on TV and in the media in a way that other addictions are not," states the National Council on Problem Gambling (2008), referring to the traditional gambling that takes place in casino-rich places like Las Vegas and Atlantic City. Today, all anyone needs is a computer and the Internet to access the thousands of online casinos.

There are now an estimated 1,700 gambling Web sites on the Internet. As well as using the Internet, users can gamble through interactive television and mobile phones. The convenience of gambling at home, the ease of setting up an online gambling account, and the variety of Internet gambling opportunities, ranging from traditional betting to casino gambling and lotteries, makes online gambling very appealing (Petry, 2006).

However, while many people gamble online without developing any problems, several factors make online gambling more seductive for teens, increasing their risk of developing a gambling problem:

- ♦ The ability to gamble 24 hours a day.
- ♦ The access underage children have to gambling sites.
- ♦ The absorbing nature of computers, leading teens to online casinos in the first place.
- ♦ The decrease in perception of the value of cash—i.e., players forget that they are spending money.

According to the National Gambling Impact Commission (1998), the national lifetime gambling population is no less than 1.2 percent of the total population (2.5 million). That would make gambling twice as prevalent as cancer among Americans. In mature gambling markets such as Nevada, more than 5 percent of the population will develop some problem with gambling, a prevalence rate about five times that of schizophrenia and more than twice that of cocaine addiction. According to the National Coalition against Legalized Gambling, young children and teenagers are at the greatest risk of developing a problem with Internet gambling. Some recent estimates they suggest are as follows:

- ♦ 16–24-year-old males comprise 4% of Internet gamblers; and
- ♦ 11–18-year-old males comprise 4–7% of Internet gamblers

Teen gambling has a special appeal as television shows promote the fun associated with poker or Texas Hold Um. Teenagers' access to these televised poker shows makes them believe that gambling is harmless fun and not potentially addictive.

Teens experiencing a problem with Internet gambling start to become preoccupied with gambling, causing disruptions in their personal, family, and social lives. Petry (2006) found that teen Internet gamblers were more likely to have a serious problem with gambling than other gamblers. Furthermore, teen Internet gamblers were more likely to suffer from health and emotional problems such as substance abuse, circulatory disease, depression, and risky sexual behaviors. As teens and preteens go online with greater frequency, the risk of addiction in various forms becomes greater. Old favorites such as sports betting and casino games still dominate the Internet, but in the future there will be more opportunities that could draw new gamblers into the fold. People can go online and bet about whether Brad Pitt and Angelina Jolie will get married or whether Tom Cruise and Katie Holmes's marriage will last. They can bet on the outcome of the Oscars or who will win on *Survivor*. These are the new kinds of bets that are placed by people who might not normally visit a gambling site.

RISK FACTORS

While most agree that the Internet is a productive tool, research findings document serious negative consequences when it is used in an addictive

manner. In particular, recent research suggests that compulsive use of the Internet is associated with increased levels of social isolation, increased depression, familial discord, divorce, academic failure, job loss, or significant financial debt as a result of obsessive online gambling, shopping, or gaming (e.g., Cooper, Putnam, Planchon, & Boies, 1999; Cooper, Scherer, Boies, & Gordon, 1999, Orzack, 1999).

Despite the consequences, addictions accomplish something for the person, however illusory or momentary the benefits may actually be. Underlying Internet addiction is the anonymity of electronic transactions, which provide a virtual context that cultivates a subjective escape from emotional difficulties (e.g., stress, depression, anxiety) or problematic situations or personal hardships (e.g., job burnout, academic troubles, sudden unemployment, marital discord).

As the addiction cycle grows, the Internet becomes a way for the addict to self-medicate in order to temporarily run away from life's problems. Over time, however, this coping mechanism proves to be unproductive and potentially harmful, as the issues hidden by the addictive behavior develop into larger and larger problems. While not everyone becomes addicted to the Internet in the same way for the same reason, some general patterns have emerged with regard to why people become hooked and the ways in which they use the Internet to escape from or cope with underlying problems in their lives.

Emotional Problems

Like a craving for a cigarette or the desire to have a drink, emotions such as stress, depression, loneliness, anxiety, or burnout can lead to an addict's need to go online, which serves as a temporary distraction to fill an emotional void (Peele & Brodsky, 1979). Consistently, Internet addicts explain that they feel a difference between their online and offline emotions. They feel frustrated, worried, angry, anxious, and depressed when offline. When online, they feel excited, thrilled, uninhibited, attractive, supported, and more desirable. These strong positive emotions reinforce the compulsive behavior (Young, 1999). The addictive behavior itself acts as a way to temporarily avoid negative or unpleasant feelings. Under the influence, the alcoholic feels as if all the other problems in his life disappear, and when eating, the overeater experiences a sense of peace and relaxation, lessening the overwhelming stress and frustration he feels.

Interpersonal Difficulties

Individuals who suffer from low self-esteem and feel lonely, restless, or withdrawn can use cyberspace connections with others to make them feel better

about themselves and their circumstances. Internet sex offers a fantasy world in which there are endless numbers of people who appear to be interesting to—and interested in—the individuals concerned. Young, socially awkward, or emotionally troubled individuals may find it easier to engage in Internet “relationships” than risk face-to-face rejection by a real person. As the addict becomes more immersed in this shadow world, denial takes hold and she comes to view these “friends” and “partners” as more real than an actual spouse or family member.

The anonymity associated with electronic communication and the general milieu of the Internet often facilitates more frank and open communication with other users (Cooper and Sportolari, 1997). Anonymity can also increase the online user’s feeling of comfort, since it is less easy for the user to detect signs of insincerity, disapproval, or judgment than it is in face-to-face interactions. The distance afforded by cyberspace enables a person to share intimate feelings often reserved for a significant other, thus opening the door for bonding and an accelerated sense of intimacy, which in turn can disrupt real-life relationships. This can in turn lead to greater problems in the addict’s marriage or family (Young, 2004). Partners often feel hurt, betrayed, rejected, abandoned, devastated, jealous, and angry, as well as experiencing a loss of self-esteem at the discovery of the user’s activities. Being lied to repeatedly is a major source of distress. Partners will feel angry and jealous of the computer and view it as a source of conflict, pain, and stress in the relationship as the addict withdraws deeper into the virtual life.

Relapse from Prior Addictions

For those in recovery from prior addictions, the Internet becomes another way to engage in compulsive or addictive behavior (Greenfield, 1999). Recovering addicts who feel overwhelmed, experience work or money problems, or experience life-changing events such as divorce, relocation, or a death in the family can absorb themselves in a virtual world full of fantasy and intrigue. They can lose themselves in online pornography, Internet gambling, or online gaming, and once they are online, the difficulties of their lives fade into the background as their attention becomes completely focused on the Internet. Those in recovery from prior addictions look to the Internet as a new way of escaping without really dealing with the underlying problems causing their addictive behavior. Without the crutch of their prior addiction, say, to alcohol or drugs, the stress that comes from a job or a marriage or relationships in general can trigger sexually addictive online behavior. Using the Internet becomes a quick fix and an instant way to wash away troubling feelings or difficult situations that they really don’t know how to deal with (Young, 2004).

Students Most At Risk

The Internet has been touted as a premier educational tool driving schools to integrate Internet services into their classroom environments. However, one survey revealed that 86 percent of responding teachers, librarians, and computer coordinators believe that Internet use by children does not improve performance (Barber, 1997). They argue that information on the Internet is too disorganized and unrelated to the school curriculum to help students, and can even serve as a distraction. Young (1998b) found that 58 percent of students suffered from poor study habits or poor grades, or failed school due to excessive Internet use. Increasingly, college administrators are recognizing that they have put a great deal of money into an educational tool that can easily be abused.

Colleges are starting to see the potential impact of student Internet use. At Alfred University in Alfred, New York, Provost W. Richard Ott investigated why normally successful students with scores of 1200 to 1300 in the SATs had recently been dismissed. His investigation found that 43 percent of these students failed school due to extensive patterns of late-night log-ins to the university computer system (Brady, 1997). Counselors at the University of Texas at Austin began seeing students whose primary problem was an inability to control their Internet use, and in one of the first campus studies of Internet abuse they found that 14 percent met the criteria for Internet addiction (Scherer, 1997).

College counselors have argued that students are the most population most at risk of developing an addiction to the Internet because campuses, computer labs, wired dorms, and mobile Internet devices access possible anytime, day or night (Scherer, 1997). The University of Maryland even started an Internet addiction support group to help students who abused Internet use (Murphey, 1996), and gradually more such support groups are developing across campuses.

TREATMENT ISSUES

Our computerized society makes it difficult to simply go “cold turkey” from Internet sex. Today, most people need to use the computer every day for work, making abstinence from Internet sex more complex than abstinence from drink or drugs. As more jobs involve computers and as more homes have computers, complete abstinence from the Internet may be impossible, forcing the Internet addict to use self-control to achieve corrective action and abstinence from problematic Internet applications. In food addiction, recovery can be objectively measured through caloric intake and weight loss; in the same way, online addicts can objectively measure success through maintaining abstinence from problematic online applications and increasing meaningful offline activities.

But how can addicts learn that kind of willpower and self-discipline when any contact with the computer feels like a temptation?

In *Caught in the Net*, Young (1998a) provides an integrated recovery approach that combines cognitive-behavioral and insight-oriented therapies. She postulates that recovery from Internet addiction is most akin to recovery from food addiction. Food addicts cannot simply abstain from food as part of their recovery; instead they must discover healthier ways to live with food in their lives. Similarly, online addicts must discover healthier ways to live with the Internet in their lives. To make this discovery, the addict must be willing to identify and understand the underlying emotional, cognitive, or situational factors that trigger the addictive behavior, such as depression, anxiety, loneliness, stress, marital troubles, divorce, or career problems, and learn to cope with those underlying issues in a more adaptive manner.

Cognitive-Behavioral Therapy

Researchers have likened Internet addiction to addictive impulse-control disorders on the Axis I scale in the *DSM* (Beard & Wolf, 2001; Orzack, 1999), and they have utilized various forms of *DSM-IV*-based criteria to define Internet addiction. Cognitive Behavioral Therapy (CBT) has been shown to be an effective treatment for compulsive disorders such as intermittent explosive disorder, pathological gambling, and trichotillomania (Hucker, 2004). CBT has also been effective in treating substance abuse, emotional disorders, and eating disorders (Beck, 1979; Beck, Wright, Newman, & Liese, 1993).

CBT is a familiar treatment based on the premise that thoughts determine feelings. Patients are taught to monitor their thoughts and identify those that trigger addictive feelings and actions while they learn new coping skills and ways to prevent a relapse. CBT usually requires three months of treatment or approximately 12 weekly sessions. The early stage of therapy is behavioral, focusing on specific behaviors and situations in which the impulse control disorder causes the greatest difficulty. As therapy progresses, there is more of a focus on the cognitive assumptions and distortions that have developed and the effects of these on behavior. This involves assessment of the type of distortion, training in problem-solving skills and coping strategies, modeling in therapy, use of support groups, and keeping thought journals (Beck, 1979).

Behavior Change

In cases of Internet addiction, abstinence recovery models are not practical, as computers have become such a salient part of our daily lives. Therefore, clinicians have generally agreed that moderated and controlled use of the Internet

is most appropriate as a means to treat Internet addiction. Behavior therapy is the initial focus of recovery, examining both computer behavior and noncomputer behavior (Hall & Parsons, 2001). Computer behavior deals with actual online use, with a primary goal of abstinence from problematic applications while retaining controlled use of the computer for legitimate purposes. For example, a lawyer addicted to Internet pornography would need to learn to abstain from adult Web sites, while still being able to access the Internet to conduct legal research and to e-mail clients. Noncomputer behavior focuses on helping clients develop positive lifestyle changes for life without the Internet. Life activities that do not involve the computer are evaluated and may include relationship function, social function, or occupational function.

Young (2001) suggests using a daily internet log to evaluate computer behavior and establish a baseline for clinical treatment. Once a baseline has been established, behavior therapy is used to relearn how to use the Internet to achieve specific outcomes, such as moderated online use and more specifically abstinence from problematic online applications and controlled use for legitimate purposes. Behavior management for both computer usage and adaptive noncomputer behavior focuses on present and overt behavior. The techniques involved may include assertion training, behavioral rehearsal, coaching, cognitive restructuring, desensitization, modeling, reinforcement, relaxation methods, self-management, or new social skills.

Cognitive Restructuring

Addictive thinkers, for no logical reason, will feel apprehensive when anticipating disaster (Twerski, 1990). While addicts are not the only people who worry and anticipate negative happenings, they tend to do this more often than other people. Young (1998a) suggested that this type of catastrophic thinking might contribute to compulsive Internet use by providing a psychological escape mechanism to avoid real or perceived problems. Subsequent studies hypothesized that other maladaptive cognitions, such as overgeneralizing or catastrophizing, negative core beliefs, and cognitive distortions also contribute to compulsive use of the Internet (Caplan, 2002; Davis, 2001; LaRose, Mastro, & Easton, 2001). Young hypothesized that those who suffer from negative core beliefs may be the ones who are drawn the most to the anonymous interactive capabilities of the Internet in order to overcome their perceived inadequacies. She suggested that cognitive restructuring should be used to address underlying negative core beliefs, cognitive distortions, and rationalizations such as "Just a few more minutes won't hurt" for effective management of the patient's primary symptoms.

Developing Support Systems

Young suggests that addicts must first assess their current use of the Internet to examine the extent of Internet use and identify high-risk situations, feelings, or events that trigger the behavior. Most importantly, for continued recovery and relapse prevention, they need to avoid high-risk situations that can lead to relapse and they need to repair relationships hurt by their addiction.

Due to their addiction, addicts often hurt or lose significant real-life relationships, such as relationships with a spouse, a parent, or a close friend. Often, these were individuals who provided the addict with support, love, and acceptance before the Internet addiction, and their absence only makes the addict feel worthless and reinforces past notions of being unlovable. The addict must amend and reestablish these broken relationships to achieve recovery and find the support necessary to fight the addiction. Young (1998a) emphasizes that the recovery process is an ongoing self-exploration that must separate the behavior from the person, relieve shame about the behavior, correct maladaptive cognitions, and promote opportunities to learn from mistakes. The recovery process must also build relationships, provide new ways to relate to others, and allow amends to be made. Involving loved ones in the recovery process can be a rich source of the nurturing and sponsorship needed to help a client maintain sobriety and abstinence. Finally, the recovery process should provide continuous support and affirmation that creates a positive self-image.

FUTURE AREAS OF RESEARCH AND PRACTICE

Over the last decade, acceptance of Internet addiction has grown in the mental health field, and new journals such as *CyberPsychology and Behavior*, which focus on Internet behavior and addiction, have emerged. It is difficult to predict the results of these early endeavors. However, it is quite possible that with years of collective effort, Internet addiction may be recognized as a legitimate impulse-control disorder worthy of its own classification in future revisions of the *Diagnostic and Statistical Manual of Mental Disorders*. Until then, there is a need for the professional community to recognize and respond to the threat of its rapid expansion.

With the growing popularity of the Internet, the mental health field needs to develop an infrastructure of treatment programs specifically designed to care for the Internet addicted. Since this is a new and often laughed at addiction, individuals are reluctant to seek out treatment, fearing that clinicians may not take their complaints seriously. Drug and alcohol rehabilitation centers, community mental health clinics, and clinicians in private practice should avoid

minimizing the impact to addicts whose complaint involves Internet addiction and offer effective recovery programs. Advertisement of such programs both online and within the local community may encourage timid individuals to come forward to seek the help they need.

Finally, to pursue such effective recovery programs, continued research is needed to better understand the underlying motivations of Internet addiction. Future research should focus on how psychiatric illness such as depression or obsessive-compulsive disorder plays a role in the development of compulsive Internet use. Longitudinal studies may reveal how personality traits, family dynamics, or interpersonal skills influence the way people utilize the Internet. Outcome studies are needed to determine the efficacy of specialized therapy approaches to treat Internet addiction and to compare these outcomes with traditional recovery modalities.

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Gambling Addictions

Mark Griffiths, PhD

Gambling is an activity that is popular across many cultures. Surveys of gambling on a national level have tended to conclude that there are more gamblers than nongamblers, but that most participants gamble infrequently (Abbott, Volberg, Bellringer, & Reith, 2004; Wardle et al., 2007). Estimates based upon survey data from countries all over the world indicate that the majority of people have gambled at some time in their life (Griffiths, 2007; Orford, Sproston, Erens, & Mitchell, 2003).

The introduction of national lotteries and new casinos, the proliferation of electronic gaming machines, and the introduction of remote gambling (e.g., Internet gambling, mobile phone gambling, interactive television gambling) have greatly increased the accessibility and popularity of gambling all over the world. As a consequence, the number of people seeking assistance with gambling-related problems has increased (Abbott et al., 2004). Government-commissioned studies in a number of countries including the United States, the United Kingdom (UK), Australia, and New Zealand have all concluded that (in general) increased gambling availability has led to an increase in problem gambling, although the relationship is complex and nonlinear (Abbott, 2007).

Despite the recognition of the complexity of gambling behavior, most research in the area has been confined to narrow areas of specialization. Singular theoretical perspectives tend to be adhered to (e.g., behaviorism, cognitivism, addiction theory), with few attempts to establish links or draw contrasts with other research programs (Griffiths & Delfabbro, 2001). Singular perspectives assume that a single explanation or theory is sufficient to explain every aspect

of gambling behavior and that rival perspectives are thereby misguided. Yet, as a number of authors assert, this may not be so (e.g., Griffiths, 2005; Griffiths & Larkin, 2004; Shaffer et al., 2004).

A number of authors have noted that gambling is a multifaceted rather than a unitary phenomenon (Griffiths & Delfabbro, 2001; Shaffer et al., 2004). Consequently, many factors may come into play in various ways and at different levels of analysis (e.g., biological, social, or psychological) (Griffiths, 2008). Theories may be complementary rather than mutually exclusive, which suggests that the limitations of individual theories might be overcome through the combination of ideas from different perspectives. This has often been discussed before in terms of recommendations for an eclectic approach to gambling (Griffiths, 1995) or a distinction between proximal and distal influences upon gambling (Walker, 1992). However, for the most part, such discussions have been descriptive rather than analytical, and so far, few attempts have been made to explain why an adherence to singular perspectives is untenable. There are generally three specific levels of analysis: social, psychological, and biological. This chapter will focus on the psychological aspects.

Central to this eclectic view, no single level of analysis is considered sufficient to explain either the etiology or the maintenance of gambling behavior. Moreover, this view asserts that all research is context bound and should be analyzed from a combined, or biopsychosocial, perspective (Griffiths, 2005, 2008). Variations in the motivations and characteristics of gamblers and in gambling activities themselves mean that findings obtained in one context are unlikely to be relevant or valid in another. In each of the following sections, broad details of each level of analysis are provided, followed by discussions of the limitations and interdependence of each theoretical approach and the implications for research and clinical interventions.

PATHOLOGICAL GAMBLING: PREVALENCE AND HISTORY

Estimates of the number of probable adult pathological gamblers vary from just under 1 percent in the UK to 1.1–1.9 percent in the United States and 2.3 percent in Australia (Wardle et al., 2007). These surveys have also indicated that pathological gambling is twice as common among males as it is among females, that nonwhites have higher rates than whites, and that those with low levels of education are more likely to be pathological gamblers (Abbott et al., 2004; Griffiths, 2007). In 1980, pathological gambling was recognized as a mental disorder in the third edition of the *Diagnostic and Statistical Manual (DSM-III)* under the section titled “Disorders of Impulse Control,” along

with other illnesses such as kleptomania and pyromania (American Psychiatric Association, 1980). Adopting a medical model of pathological gambling in this way displaced the old image that the gambler was a sinner or a criminal.

Before the appearance of *DSM-III* (1980), the subject of pathological gambling had produced an expanding body of literature by psychiatrists, psychologists, psychoanalysts, and social workers, and the subject had appeared under a variety of labels including “neurotic,” “compulsive,” “addictive,” “excessive,” and “pathological” (Griffiths, 2007). There now seems to be an increased preference among professionals for the terms “problem” or “pathological gambling,” as opposed to terms like “compulsive” or “addictive,” which might suggest specific and homogenous etiologies.

In diagnosing the pathological gambler, *DSM-III* states that the individual is chronically and progressively unable to resist impulses to gamble and that gambling compromises, disrupts, or damages family, personal, and vocational pursuits. The behavior increases at times of stress, and associated features include lying to obtain money, committing crimes (forgery, embezzlement, fraud, etc.), and concealment from others of the extent of the individual’s gambling activities. In addition, *DSM-III* stated that, for a diagnosis of pathological gambling, the gambling must not be due to antisocial personality disorder (see Table 11.1).

As Lesieur (1988) pointed out, these criteria were criticized for (1) a middle class bias, that is, that the criminal offences like embezzlement and income tax evasion were middle class offences, (2) a lack of recognition that many com-

Table 11.1
***DSM-III* Criteria for Pathological Gambling**

The criteria state that maladaptive gambling is indicated by the following:

- A. The individual is chronically and progressively unable to resist impulses to gamble.
 - B. Gambling compromises, disrupts, or damages family, personal, and vocational pursuits, as indicated by at least three of the following:
 1. Arrest for forgery, fraud, embezzlement, or income tax evasion due to attempts to obtain money for gambling
 2. Default on debts or other financial responsibilities
 3. Disrupted family or spouse relationships due to gambling
 4. Borrowing money from illegal sources (loan sharks)
 5. Inability to account for loss of money or to produce evidence of winning money if this is claimed
 6. Loss of work due to absenteeism in order to pursue gambling activity
 7. Necessity for another person to provide money to relieve a desperate financial situation
 - C. The gambling is not due to antisocial personality disorder.
-

Source: American Psychiatric Association, 1980.

Table 11.2
DSM-III-R Criteria for Pathological Gambling

The criteria state that maladaptive gambling is indicated by at least four of the following:

1. Is frequently preoccupied with gambling or obtaining money to gamble.
2. Often gambles larger amounts of money or over a longer period than intended.
3. Needs to increase the size or frequency of bets to achieve the desired excitement.
4. Exhibits restlessness or irritability if unable to gamble.
5. Repeatedly loses money gambling and returns another day to win back losses (“chasing”).
6. Makes repeated efforts to cut down or stop gambling.
7. Often gambles when expected to fulfill social, educational, or occupational obligations.
8. Has given up some important social, occupational, or recreational activity in order to gamble.
9. Continues to gamble despite inability to pay mounting debts, or despite other significant social, occupational, or legal problems that the individual knows to be exacerbated by gambling.

Source: American Psychiatric Association, 1987.

pulsive gamblers are self-employed, and (3) the exclusion of individuals with antisocial personality disorder. Lesieur recommended the same custom be followed for pathological gamblers as for substance abusers and alcoholics in the past, that is, to allow for simultaneous diagnosis with no exclusions. In addition, the criteria leave out the “problem gambler,” who by self-admission, or by others’ testimony, spends a disproportionate amount of time gambling but has yet to produce the serious consequences laid down in *DSM-III*. The new criteria were subsequently changed, in the *Diagnostic and Statistical Manual*, third edition, revised (*DSM-III-R*) (see Table 11.2), taking on board the criticisms and modeled extensively on substance abuse disorders, due to the growing acceptance of gambling as a bona fide addictive behavior (American Psychiatric Association, 1987).

However, Rosenthal (1989) conducted an analysis of the use of the *DSM-III-R* criteria by treatment professionals. It was reported that there was some dissatisfaction with the new criteria and that there was some preference for a compromise between *DSM-III* and *DSM-III-R*. As a consequence, the criteria were changed for the *Diagnostic and Statistical Manual*, fourth edition (*DSM-IV*; American Psychiatric Association, 1994; see Table 11.3). Preparations are already under way for *DSM-V*.

PHASES OF THE PATHOLOGICAL GAMBLER’S CAREER

The acquisition, development, and maintenance of pathological gambling is an area that is continually disputed. The exact causes and reasons for continu-

Table 11.3
DSM-IV-TR Criteria for Pathological Gambling

-
- A. Persistent and recurrent maladaptive gambling behavior is indicated by five (or more) of the following:
1. Is preoccupied with gambling (e.g., preoccupied with reliving past gambling experiences, handicapping or planning the next venture, or thinking of ways to get money with which to gamble).
 2. Needs to gamble with increasing amounts of money in order to achieve the desired excitement.
 3. Made repeated unsuccessful efforts to control, cut back, or stop gambling.
 4. Is restless or irritable when attempting to cut down or stop gambling.
 5. Gambles as a way of escaping from problems or of relieving a dysphoric mood (e.g., feelings of helplessness, guilt, anxiety, depression).
 6. After losing money gambling, often returns another day to get even (“chasing” one’s losses).
 7. Lies to family members, therapist, or others to conceal the extent of involvement with gambling.
 8. Has committed illegal acts such as forgery, fraud, theft, or embezzlement to finance gambling.
 9. Has jeopardized or lost a significant relationship, job, educational, or career opportunity because of gambling
 10. Relies on others to provide money to relieve a desperate financial situation caused by gambling.
- B. The gambling behavior is not better accounted for by a manic episode.
-

Source: American Psychiatric Association, 1994.

ing gambling behavior seem to be dependent upon the individual, but there do seem to be some general underlying factors and recurring themes. Problem gambling generally begins in adolescence and may start following a major life stress, for example the death of a parent or birth of a first child (Griffiths, 2003a). Such events may induce a need to escape from the problems of reality.

Lesieur and Custer (1984) concluded that pathological gambling behavior consists of three stages—the winning phase, the losing phase, and the desperation phase. The winning phase normally begins with small but successful bets in adolescence. Early wins prompt more skillful gambling, which usually leads to larger winnings. Most social gamblers stop at this stage. However, after a considerable win maybe equaling or exceeding the individual’s annual salary, the gambler accepts the thought that this can happen again.

The next stage—the losing phase—is characterized by unrealistic optimism on the gambler’s part, and all bets placed are in an effort to recoup losses: this has been termed “the chase” by Lesieur (1984) . The result is that instead of cutting their losses, gamblers get deeper into debt, preoccupying themselves

with gambling, certain that a big win will repay their loans and solve all their problems. Family troubles (both marital and with relatives) begin, and illegal borrowing and other criminal activities usually start to occur, in an effort to get money (Lesieur, 1984). At this point in the pathological gambler's career, family and/or friends may bail out the gambler. Alienation from those closest to the pathological gambler characterizes the appearance of the final stage—the desperation phase. In a last-ditch, frenzied effort to repay debts, illegal criminal behavior reaches its height, and when there are finally no more options left, the gambler may suffer severe depression and have suicidal thoughts.

It is, then, usually at the insistence of the family (if not the courts) that the gambler must seek help. Because the pathological gambler is impatient, requiring immediate results, help should be aimed at priority areas, that is, the lessening of legal and financial difficulties, counseling to resolve family and marital problems, and most importantly hospitalization for desperate patients who are depressed and suicidal. In addition to this, Rosenthal (1989) has described a fourth phase called the hopeless or giving up phase. This is a phase in which gamblers know they cannot possibly retrieve their losses and they do not care, leading to play for play's sake.

EXPLANATIONS OF GAMBLING INVOLVEMENT

In general, research has consistently shown a positive relationship between the availability of gambling and both regular and problem gambling (Abbott, 2007; Griffiths, 2003b). Whenever new forms of gambling are introduced, or existing forms become more readily available, there is an increase in gambling, suggesting that the demand for gambling products is closely linked to their supply—although there are exceptions to this (Griffiths, Parke, & Rigbye, 2008). The larger the gambling industry infrastructure that is established (e.g., new venues), the larger the range of gambling products (e.g., through the application of new technologies), and the greater the industry's marketing efforts, the more likely people will be to gamble in the first place.

But why is gambling so popular? According to sociologists, gambling is an inherent component of human society (Goffman, 1967) and human beings have a natural penchant for play, risk, and competition. Gambling, they argue, fits easily with cultural values, virtues, and lifestyles, so that when gambling becomes more accessible and socially acceptable, more people will gamble (Abt, Smith, & McGurrin, 1985). As a form of social interaction, gambling provides a means by which people can escape the boredom of everyday life, adopt new roles, and enjoy the excitement of the action, namely, the suspense, anticipation,

and social reinforcement resulting from taking risks and being rewarded for one's daring (Abt & Smith, 1984).

Almost all surveys of gambling have shown that these broad motivational factors are central to gambling and that attitudes toward gambling are positively related to availability and cultural acceptability. However, this perspective fails to take into account many key findings and observations in gambling research. Research has consistently shown that people often gamble for reasons other than broad social and economic reasons (Griffiths, 1996). These other motivations may vary according to the personal characteristics of the gambler and the type of gambling activity. Finally, broad social and economic theories fail to explain why certain gambling activities are more popular or "addictive" than others.

Demographic variations in gambling participation have been observed since surveys were first administered. Typically, gambling has been more popular in lower socioeconomic groups, among Catholics rather than Protestants, among unmarried people, in younger age groups, and in men (Griffiths, 2007). Consistent with trends observed in overall participation rates, research has found that the incidence of gambling-related problems is considerably higher in lower socioeconomic groups and in younger people, and it is more likely to be associated with slot machines, one of the few activities that attract similar numbers of men and women (Griffiths & Delfabbro, 2001; Griffiths, 2007). Accordingly, understanding demographic variations in overall participation is vital if one is to estimate the likely social effects of expansion or product changes in existing gambling markets.

Variations in gambling preferences are thought to result from differences in both accessibility and motivation. Older people tend to choose activities that minimize the need for complex decision making or concentration (e.g., bingo, slot machines), whereas gender differences have been attributed to a number of factors, including variations in sex-role socialization, cultural differences, and theories of motivation (Delfabbro, 2000; Griffiths, 2007; Griffiths & Delfabbro, 2001).

Variations in motivation are also frequently observed among people who participate in the same gambling activity. For example, slot machine players may gamble to win money, for enjoyment and excitement, to socialize, and to escape negative feelings (Griffiths, 2002). Some people gamble for one reason only, whereas others gamble for a variety of reasons. A further complexity is that people's motivations for gambling have a strong temporal dimension; that is, they do not remain stable over time. As people progress from social to regular and finally to excessive gambling, there are often significant changes in their reasons for gambling. Whereas a person might have initially gambled to

obtain enjoyment, excitement, and socialization, the progression to problem gambling is almost always accompanied by an increased preoccupation with winning money and chasing losses.

STRUCTURAL AND SITUATIONAL CHARACTERISTICS OF GAMBLING ACTIVITIES

Another factor central to understanding gambling behavior is the structure of gambling activities. Griffiths and colleagues (Griffiths, 1993a, 1999; Parke & Griffiths, 2006, 2007) have consistently argued, gambling activities vary considerably in their structural characteristics, including the probability of winning, the amount of gambler involvement, the amount of skill that can be applied, the length of the interval between stake and outcome, and the magnitude of potential winnings. Structural variations are also observed within certain classes of activities, such as slot machines, where differences in reinforcement frequency, colors, sound effects, and machines' features can significantly influence the profitability and attractiveness of machines. Each of these structural features may (and almost certainly does) have implications for gamblers' motivations and the potential "addictiveness" of gambling activities.

For example, skillful activities that offer players the opportunity to use complex systems, study the odds, and apply skill and concentration appeal to many gamblers because their actions can influence the outcomes. Such characteristics attract people who enjoy a challenge when gambling. They may also contribute to excessive gambling if people overestimate the effectiveness of their gambling systems and strategies (see discussion of cognitive theories, below). Chantal and Vallerand (1996) have argued that people who gamble on these activities (e.g., racing punters) tend to be more intrinsically motivated than lottery gamblers in that they gamble for self-determination (to display their competence and to improve their performance). People who gamble on chance activities, such as lotteries, usually do so for external reasons (to win money or escape from problems) (Griffiths, 2007).

Although many slot machine players also overestimate the amount of skill involved in their gambling, other motivational factors (such as the desire to escape worries or to relax) tend to predominate. Thus, excessive gambling on slot machines may be more likely to result from people becoming conditioned to the tranquilizing effect brought about by playing rather than from just the pursuit of money (Griffiths, 2002).

Another vital structural characteristic of gambling is the continuity of the activity: namely, the length of the interval between stake and outcome (Parke & Griffiths, 2007). In nearly all studies, it has been found that continuous activi-

ties (e.g., racing, slot machines, casino games) with a more rapid play-rate are more likely to be associated with gambling problems (Parke & Griffiths, 2006). The ability to make repeated stakes in short time intervals increases the amount of money that can be lost and also increases the likelihood that gamblers will be unable to control their spending. Such problems are rarely observed in non-continuous activities, such as weekly or biweekly lotteries, in which gambling is undertaken less frequently and in which outcomes are often unknown for days. Consequently, it is important to recognize that the overall social and economic impact of expansion of the gambling industry will be considerably greater if the expanded activities are continuous rather than noncontinuous.

Other factors central to understanding gambling behavior are the situational characteristics of gambling activities. These are the factors that often facilitate and encourage gambling in the first place (Griffiths & Parke, 2003). Situational characteristics are primarily features of the environment (e.g., accessibility factors such as the location of the gambling venue, the number of venues in a specified area, and possible membership requirements) but can also include internal features of the venue itself (e.g., décor, heating, lighting, color, background music, floor layout, refreshment facilities) or facilitating factors that may influence gambling in the first place (e.g., advertising, free travel and/or accommodation to the gambling venue, free bets or gambles on particular games) or influence continued gambling (e.g., the placing of a cash dispenser on the casino floor, free food and/or alcoholic drinks while gambling) (Abbott, 2007; Griffiths & Parke, 2003).

These variables may be important in both the initial decision to gamble and the maintenance of the behavior. Although many of these situational characteristics are thought to influence vulnerable gamblers, there has been very little empirical research into these factors, and more research is needed before any definitive conclusions can be arrived at on the direct or indirect influence on gambling behavior and on whether vulnerable individuals are any more likely to be influenced by these particular types of marketing ploys (Griffiths, 2007).

THEORIES OF GAMBLING BEHAVIOR

Although sociological, situational, and demographic factors can explain why some people are more likely to gamble than others, these theories cannot explain why some people gamble more than others or what factors contribute to behavior maintenance in gambling. Psychological theories become important at this level. Research in this area is remarkably diverse. Almost every major branch of psychology (e.g., cognitivism, behaviorism, Freudian theory, addiction theory) has been utilized in an attempt to understand gambling. Despite this diversity,

it is possible to distinguish two broad, general perspectives: first, theories that attribute ongoing behavior and excessive gambling to habitual processes that are the consequences of gambling; second, theories that state that variations in behavior result from variations in the characteristics or makeup, of individual gamblers (Griffiths & Delfabbro, 2001). In other words, whereas the first places a stronger emphasis upon psychological determinants of gambling, the second emphasizes biological differences between individuals.

Central to psychological explanations is the idea that every person who gambles has the potential to become a problem gambler. This is because gambling activities are difficult to resist by their very nature: excitement, risk taking, and the possibility of monetary gains. The more a person gambles, the more difficult it becomes to resist the temptation to commence a gambling session or stop once gambling has commenced (Dickerson, 1989). Accordingly, it has been suggested that there is no neat distinction between problem gambling and normal gambling; rather, there is a continuum from social gambling to regular gambling to problem gambling.

People who gamble regularly may display many of the same behaviors as people with gambling problems, although to a lesser degree. This view gives rise to conceptualizations of problem gambling that emphasize the developmental and habitual nature of problem gambling behavior rather than individual pathology. This perspective avoids terms such as compulsive, addiction, or pathology, in preference for terms such as impaired control (Dickerson & O'Connor, 2006). Although researchers' views differ concerning the psychological mechanisms behind loss of control, three general classes of theory will be used to illustrate the limitations of psychological accounts. They are behaviorist theories that explain persistent gambling as a conditioned process; need-state models that see gambling as a form of psychological or physiological dependence; and cognitive theories that attribute excessive gambling to erroneous beliefs about the potential profitability of gambling.

BEHAVIORIST APPROACHES

Both classical and operant conditioning principles have been applied to the study of gambling. In operant explanations for problem gambling (Delfabbro & Winefield, 1999), persistent gambling is seen as a conditioned behavior maintained by intermittent schedules of reinforcement, most likely a variable-ratio schedule. This involves the provision of infrequent rewards after varying numbers of responses. On the other hand, proponents of classical conditioning models argue that people continue to gamble as a result of becoming conditioned to the excitement or arousal associated with gambling, so that they feel

bored, unstimulated, and restless when they are not gambling. Both the classical and operant perspectives have been central to the development of measures of impaired control over gambling (Dickerson & O'Connor, 2006) and clinical interventions using desensitization, aversive conditioning, and satiation techniques. In each of these examples, it is assumed that the more a person gambles, the more a person's behavior is dictated by factors beyond the person's control.

Despite evidence supporting both theories, neither is entirely satisfactory on its own. Classical conditioning theory seems useful in explaining people's motivation to commence a gambling session but appears less useful in explaining persistent gambling behavior. Conversely, while operant conditioning might explain ongoing behavior, it appears less useful in explaining why people commence gambling or recommence gambling after a prolonged period of abstinence (Griffiths, 1995). Researchers have also raised questions about the extent to which gambling behavior adheres to operant theory at all, since gamblers lose more than they win and because reinforcement magnitudes are not independent of player responses, for example, stake sizes (Delfabbro & Winefield, 1999). Nevertheless, the importance of subtle variations in machine characteristics in influencing behavior reinforces the role of operant conditioning in the maintenance of behavior, although perhaps in more subtle ways than has been envisaged.

It is important to recognize that these theories cannot stand in isolation. As with other psychological theories, conditioning theories cannot explain why people exposed to similar stimuli respond differently; why some gamble whereas others do not; or why some people gamble more than others. In addition, the effectiveness or strength of the conditioning effect may be a function of motivational factors and type of activity. Some but not all people gamble for excitement or relaxation, and as discussed above, people satisfy these needs by engaging in different activities. Thus, it is unlikely that classical conditioning will affect all types of gambling or gamblers. Similar difficulties plague attempts to develop general operant theories of gambling. Some activities appear to suit this form of explanation more than others. Examples include slot machines and scratch tickets, where there is a short time interval between stake and outcome, and where outcomes are entirely determined by chance. It seems more difficult to apply these principles to skilled gambling games such as blackjack, poker, and sports betting, where player decisions can significantly influence outcomes.

NEED-STATE MODELS AND THEORIES OF ADDICTION

Much of the discussion relating to classical conditioning also applies to need-state theories of gambling, which assume that people gamble to escape unpleasant

feeling states such as anxiety, depression, and boredom. These perspectives have been applied to all facets of gambling, including involvement, ongoing behavior, and excessive gambling. They are incorporated into the *DSM-IV* classification of pathological gambling (i.e., gambling as a way of escaping from problems or intolerable feeling states). Although not all researchers agree that these motivations signify the existence of a physiological addiction (Walker, 1989), most agree that people can become psychologically addicted to gambling.

The concept of arousal has been studied most extensively (e.g., Coventry & Hudson, 2001; Diskin & Hodgins, 2003; Griffiths, 1993b), but the results have not been consistent. Arousal increases have been observed in some studies but not in others, and most increases have been relatively small. Variations in arousal have co-varied reliably neither with the persistence of behavior nor with the onset of gambling sessions. Walker (1992) has questioned the explanatory value of arousal theories, arguing that the excitement of gambling is unlikely to be independent of people's desire to win money.

Similar problems have plagued attempts to associate gambling with anxiety and depression. While a considerable number of studies (Blaszczynski & McConaghy, 1989; Blaszczynski, McConaghy & Frankova, 1990; Dickerson, Cunningham, Legg England, & Hinchy, 1991; Dickerson, Hinchy, Legg England, Fabre, & Cunningham, 1992; Ramirez, McCormick, Russo, & Taber, 1984) have revealed that negative mood states commonly accompany gambling or predict the duration of gambling sessions, most analyses have been confined to problem gamblers and high-frequency gamblers. For this reason, it is unclear whether these mood states are also associated with less frequent gambling. Moreover, it is not possible to determine whether mood states precede gambling or arise as a consequence of gambling. Indeed, as Walker (1992) points out, it may be that gamblers become depressed as a result of losing more money than they can afford.

Again, the temporal dimension suggests that the role of mood states is unlikely to be independent of the gambler's characteristics. As with arousal, it is unlikely that avoidance of negative feeling states will be common to all activities or all gamblers. For example, slot machines appear to reduce anxiety, whereas racing provides arousal and excitement. In addition, variations in gambling motivation among participants involved in the same activity suggest that not all people gamble to satisfy unfulfilled needs. It is also unclear why some people apparently have a greater need for arousal or relaxation than others, and whether this is sufficient to explain differences between normal and excessive gambling. It is important to place behavior in a social context in order to understand how gambling compensates for, or assuages, problems or deficits experienced in other areas of life. Alternatively, as will be suggested later in this

chapter, it may be useful to look for dispositional or biological differences to explain the varying motivations and behavior of individual gamblers.

COGNITIVE THEORIES

Despite the fact that the odds for almost all activities are weighted strongly in favor of the house, gamblers continue to believe they can win money from gambling. This observation leads to the conclusion that gambling may be maintained by irrational or erroneous beliefs. For example, people overestimate the extent to which they can predict or influence gambling outcomes and tend to misjudge how much money they have won or lost. This hypothesis has been confirmed in numerous studies (Langer, 1975; Langer & Roth, 1983) showing that people overestimate the degree of skill or control that can be exerted in chance activities, and also in studies using the so-called thinking aloud method (Griffiths, 1994), which reveal high levels of irrationality in verbalized statements made during gambling sessions. These findings have been confirmed not only under laboratory conditions but also in ecologically valid gambling settings, using regular gamblers (Griffiths, 1994; Ladouceur, Gaboury, Bujold, Lachance, & Tremblay, 1991).

Based upon these findings, it has been suggested that irrational thinking may be related to problematic gambling behavior (Ladouceur & Walker, 1996; Wagenaar, 1988), with persistent behavior thought to be the result of people's overconfidence in their ability to win money (Wagenaar, 1988; Walker, 1992). Evidence suggests that problem gamblers frequently overestimate the amount of control and skill involved in gambling (Griffiths, 1994). Unfortunately, some of these observations have also been made using students with no gambling experience, indicating that irrational beliefs are not positively related to level of gambling involvement (Ladouceur et al., 1991). A further problem is that irrationality does not appear to co-vary with other observable facets of gambling, such as the level of risk taking or reinforcement frequency. Alternatively, where irrationality relates positively to involvement, few differences in behavior have been observed. Consequently, Dickerson and Baron (2000) have concluded that irrational thinking is probably more a reflection of demand characteristics than a rational underlying behavior. A lot of what people say may result only from the difficulty of trying to come up with rational, meaningful statements in chance-determined situations.

In addition to these conceptual difficulties, it is also possible that contextual factors play a role in cognitive research. For example, Griffiths (1994) found that regular players had greater difficulty than occasional players in verbalizing their thoughts while they were gambling. Regular players seemed capable of gambling

without attending to what they were doing, suggesting (a) that cognitive processes did not play a major role in the maintenance of their behavior, or (b) that the original justifications or rationales for behavior were less accessible. In either case, Griffiths's observations suggested that temporal factors (namely, how long a person has been gambling) appear to be important. Therefore, all other things being equal, it appears that valid comparisons cannot be drawn between gamblers with differing levels of gambling experience, because what holds for infrequent gamblers might not hold for regular players, and vice versa.

Finally, it is again important to observe that cognitive theories need to take structural variations in activities into account. Many cognitive processes thought to underlie gambling behavior (e.g., overestimations of control, biased attributions) are more likely to be observed when activities are perceived as having some skill component (Griffiths, 1995). In some activities, there is a genuine possibility for skillful play (e.g., racing, blackjack, table poker). The more people play or know about these activities, the greater is their awareness of the skills involved. Thus, beliefs about control and skill are neither completely irrational nor consistent across players. Instead, in these situations, researchers must examine the quality of play: for example, looking at the extent to which the person adheres to optimal strategies rather than looking for evidence of irrational thinking (Keren & Wagenaar, 1985).

Even in activities where outcomes are chance-determined, there are likely to be variations in the extent to which gamblers perceive that the outcomes are solely chance-determined (e.g., roulette and craps are probably more likely to be perceived as skillful than Australian slot machines, because of the greater complexity of the rules and the possibility for variations in playing strategy). Therefore, it may be ineffective to compare results across studies using different chance activities without controlling for variations in perceived skill.

It should also be noted that social and psychological explanations are insufficient to explain the full complexity of gambling behavior; that there are many other theoretical accounts examining problem gambling and gambling addictions, including those using biological and dispositional theories, sociological theories, and economic theories (Griffiths & Delfabbro, 2001), and that a unified theory of addiction will be complex and biopsychosocial (Griffiths, 2005, 2008). Whether ongoing behavior is explained in terms of behaviorism, need-state models, or cognitive theories, it remains unclear why one person gambles more heavily than another. In other words, while it seems likely that increased involvement with gambling is likely to contribute to loss of control over behavior, development of irrational beliefs, and greater psychological dependence, it is important to determine what makes some gamblers more susceptible to these outcomes than others. It is here that research into biological and personality

factors becomes important. Central to this research is the effort to ascertain whether pathological gamblers possess qualities that would predispose them to excessive gambling.

Biological and dispositional accounts assume that such factors should override environmental or contextual factors and allow for the development of a general theory of gambling addiction. However, this is clearly not so. Apart from the conceptual difficulties associated with determining a causal relationship between characteristics and behavior, dispositional theories are unable to account for the full diversity of gambling patterns and behavior. They fail to explain demographic differences in preference for activities and variations in motivation. Neither can they explain why some activities are more “addictive” than others and why the structural characteristics of specific activities (e.g., slot machines) can influence behavior. Therefore, it appears that excessive gambling is likely to result from both dispositional and psychological factors and the complex interaction between them. Psychological explanations must play a role because of the obvious importance of external factors (e.g., environmental and situational variables) in the development of gambling habits. However, it is also clear that internal factors influence the way in which certain individuals respond to these situations. The implications of this observation for the study and treatment of problem gambling are discussed below.

PATHWAYS INTO GAMBLING ADDICTION

Blaszczynski and Nower (2002) postulated a “pathway” model of the determinants of problem gambling based upon a series of clinical observations with problem gamblers and integration with the literature. They argued that there are common influences that affect all problem gamblers, such as availability and access, classical and operant conditioning reinforcements, arousal effects, and biased cognitive schemas. However, they suggested that there are three distinct pathways into problem gambling, representing three primary motivating forces that drive different problem gamblers to gamble. The members of the first group of gamblers, *behaviorally conditioned problem gamblers*, are not pathologically disturbed but instead gamble excessively as a result of poor decision-making strategies and bad judgments. Any features such as preoccupation with gambling, chasing, depression, anxiety, and related substance abuse are seen as the consequence, not the cause, of their excessive gambling. These gamblers are usually motivated to seek and attend treatment, and to reestablish controlled levels of gambling posttreatment.

The members of the second group, *emotionally vulnerable problem gamblers*, are characterized by a predisposition to be emotionally susceptible. This group

uses gambling as a means of modifying mood states and/or in order to meet specific psychological needs. These gamblers display higher levels of premorbid psychopathology including depression, anxiety, substance dependence, and deficits in coping or managing stress. They tend to engage in avoidant or passive aggressive behavior and to use gambling as a means of emotional relief through dissociation and mood modification. The psychological dysfunction in these gamblers makes them more resistant to treatment and not suitable for controlled gambling. Treatment must focus the underlying vulnerabilities as well as the gambling behavior.

The members of the third group, *antisocial impulsivist problem gamblers*, have biological dysfunctions, either neurological or neurochemical. They also possess psychosocial vulnerabilities similar to the second group of gamblers mentioned above. However, they are characterized by antisocial personality disorder and impulsivity and/or attention-deficit disorders. It is argued that these gamblers have a propensity to seek out rewarding activities (such as gambling) in order to receive stimulation. They tend to be clinically impulsive and display a broad range of problems independent of their gambling. These problems include substance abuse, low tolerance for boredom, sensation seeking, criminal acts, poor relationship skills, family history of antisocial behavior, and alcoholism. Gambling usually begins at an early age, has a rapid onset, and occurs in binges. The members of this third group are less motivated to seek treatment, have poor compliance rates, and respond poorly to all interventions. All three groups are affected by environmental variables, conditioning effects, and cognitive processes. However, in terms of treatment intervention, each group will have specific needs.

FURTHER IMPLICATIONS FOR RESEARCH AND INTERVENTIONS

In summary, it seems that gamblers are first influenced by sociological factors: for example, the availability of gambling opportunities and the attitudes and habits of parents, friends, and peer groups as well as a lack of alternative activities. During the middle stages of development, there are many factors that heavily influence the maintenance of gambling behavior. Three of these factors are schedules of reinforcement, the escape qualities of gambling, and cognitive biases, all of which have been summarized in this chapter. While it remains unclear exactly how some people come to gamble excessively, it is agreed that persistent gambling eventually leads to a desperate "spiral of options" (Lesieur, 1984), in which gambling is largely maintained by the desire to win money, recover losses, and pay back debts. Gambling is thus a complex, multidimen-

sional activity that is unlikely to be explained by any single theory. Instead, research into this subject is best served by a biopsychosocial model that stresses the individual and idiosyncratic nature of the development of gambling problems and emphasizes the role of contextual factors internal and external to the process of gambling (Griffiths, 2005, 2008).

Recognition of this complexity has important implications for gambling research, in terms of both the selection of samples and the data analysis. First, the existence of structural variations in activities suggests that results obtained using one activity cannot be generalized to other activities that are not structurally equivalent. Existing research suggests that continuity and the element of skill involved are two factors that must be similar in order for valid comparisons to be made. Second, studies of gambling motivation are unlikely to be valid unless both individual and situational factors are taken into account. Since motivations differ across demographic groups (e.g., different genders and ages), across activities, and over time, studies must ensure that these factors are controlled for before conclusions are drawn. Samples should contain equal numbers of men and women of a similar age with similar levels of gambling experience. In situations where this cannot be achieved, gender, age, and experience should be used as co-variants or as the first variables in regression analyses.

Third, in recognition that personality may influence the strength of experimental effects, it is important that researchers match comparison groups in terms of these variables. For example, cognitive experiments investigating the illusion of control should include measures of desirability for control, whereas arousal experiments should include measures of gambling motivation (Griffiths & Delfabbro, 2001). In addition, researchers should not assume that biological differences or psychological factors will explain all gambling behavior. Instead, it may be useful to explore the interaction between these different levels of analysis, for example, by examining whether variations in the structural characteristics of activities (e.g., reinforcement frequency) affect people with, or without, the characteristic under observation.

IMPLICATIONS FOR PREVENTION, INTERVENTION, AND TREATMENT

Since sociological factors appear to be critical in the acquisition of gambling behavior and subsequent gambling addiction, prevention needs to be aimed at the social and situational antecedents. These can be approached from a number of levels (e.g., societal, school, family, individual), some of which may be more practical than others. Since problem gamblers start gambling at a significantly earlier age than nonpathological gamblers, an obvious step would be for

governments to legislate against young people gambling (i.e., below 18 years of age). A blanket ban on gambling would, in most cases, reduce acquisition until at least late adolescence. Both parents and peers may model gambling; therefore, the family's role in maintaining gambling behavior should be addressed in therapy, and prevention plans should aim to increase the gambler's contact with nongambling peers. Also, evidence or knowledge of a gambler's own negative thoughts or feelings about gambling behavior and irrational biases may provide useful cues for behavior modification.

These findings have led to suggestions designed to enhance educational awareness of the dangers of gambling, not only among children and adolescents but also among parents, guardians, and teachers. Although recommendations of this nature typically tend to focus upon the need for greater awareness of the true odds and the nonprofitability of gambling, this approach needs to be applied with caution. It is quite possible for education to have the opposite effect, namely, to increase students' knowledge of how to gamble. In addition, it is questionable whether knowing the true odds has a significant effect upon dissuading people from gambling, given that many problems gamblers are well educated and have, in some cases, some knowledge of basic mathematics. For many, the belief that they are inherently lucky or different from others helps maintain their interest in gambling. Accordingly, educational campaigns that focus upon the negative consequences of gambling and alternatives to it may have greater success. While these sorts of campaigns are unlikely to prevent gambling in all young people, they might reduce (a) the total number of adolescents who start to gamble and (b) the amount of time an adolescent spends gambling.

The fact that some gamblers are socially rewarded for gambling cannot be altered directly, but more adaptive personal and social skills can be taught as responses to stress (i.e., emotional antecedents), for example, relaxation, assertion, and social skills training. Alternatively, where people seek the company of other gamblers as a way to escape from unpleasant feeling states or life stress, the development of alternative interests, hobbies, and social networks should be afforded priority during intervention. This approach could also be extended to people who gamble alone. An essential aspect of treatments should be to identify and address the factors that are antecedents to gambling, those that provide the underlying motivation and social and cultural context in which the behavior has developed. Only when these are addressed can treatment be extended to more specific psychological aspects of the behavior itself. This is because these broader social and structural factors influence a person's exposure to gambling, opportunities to gamble, and ability to recover. Detailed analysis of the person's daily schedule and the nature and extent of available social supports is essential during this phase of treatment.

Viewing problem gambling as a biopsychosocial process recognizes the diversity of psychological factors involved in maintaining the behavior as well as the fact that problem gamblers are not a homogeneous group; in fact, there appear to be a number of subtypes (Griffiths, 2005). This has major treatment implications. For instance, Griffiths (1995) outlined two very different types of gamblers. The first type appeared to be addicted to gambling itself and played to test skill, to gain social rewards, and mostly for excitement (i.e., the “buzz” or “high”). This was termed a primary addiction and appears to be a mixture of subcultural and impulsivist types of gamblers (Moran, 1970; Blaszczynski & Nower, 2002). Identifying the environmental, situational, or emotional factors that precede a gambling session are important to know in administering any therapeutic intervention. Imaginal desensitization, counterconditioning, and situational exposure are methods that have been used to teach people to resist the urge to gamble. Of course, therapists differ in their views concerning the factors underlying this urge. Whereas some emphasize the learned or conditional quality of the behavior and emphasize the role of stimulus control, others may emphasize irrational beliefs or the gambler’s desire to obtain physiological stimulation from the activity.

Furthermore, as emphasized by Griffiths (1995), a second type of gambler may gamble for the reasons described earlier, such as escape. These gamblers are usually depressed and socially isolated, and could be described as having a secondary addiction, in that the player uses gambling as an escape from a primary problem (e.g., broken home, relationship crisis, etc.). It seems that this type of escape gambler is not confined to the United Kingdom. This type appears to be a mixture of neurotic and symptomatic” (i.e., emotionally vulnerable) types (Moran, 1970; Blaszczynski & Nower, 2002). If the primary problem is resolved by excessive gambling, then playing should disappear. This distinction between types of gamblers obviously has clinical usefulness and may also help explain conflicting research, some of which states that gambling is a social activity and some of which states that it is a solitary activity. As discussed above, addicted gamblers are likely to benefit from any intervention that tries to find alternative activities to take the place of gambling. Like Griffiths’s writing, more recent writings by Blaszczynski and Nower (2002), suggest there are different subtypes of gamblers that follow different pathways.

CONCLUSIONS

Examining gambling and gambling addiction as a biopsychosocial behavior makes it evident that individual differences and broader contextual factors must be considered and not ignored (Griffiths, 2005). This chapter provides

evidence that a narrow focus upon one theoretical perspective in research and clinical interventions may, in many cases, not be justified. Such an approach fails to consider the interrelationships between different levels of analysis. It would be of limited value to many gamblers whose problems have a different etiology, which may be multifaceted. As Gambino and Shaffer (1979) pointed out nearly three decades ago, individuals are self-determining agents, and therefore, a taxonomy of situations must be developed to describe the vast majority of contexts and conditions in which people use substances or engage in habitual behaviors to alter their perceived experience.

Gambino and Shaffer also make the important point that these behaviors are not completely self-developed or understood by the people themselves and should be examined more broadly. This is because gambling becomes a habitual behavior. Since the perceived experience of the individual can change over time, it is possible that focusing upon the self-reported factors currently maintaining the behavior does not provide insights into the factors that led to the development of the behavior. Thus, when one takes a biopsychosocial view, it becomes possible to perceive individual gambling in terms of its broader social and cultural context. This approach also suggests that different perspectives and approaches may be beneficial, as long as they appear to apply to the particular gambler concerned. Moreover, it indicates that a variety of treatments could be beneficial simultaneously.

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Youth Gambling Problems: An International Perspective

Isabelle D. Lussier, MA,
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Gambling involves the wagering of money on games of chance and is a popular pastime for people in most parts of the world. The literature on gambling behavior indicates that children and adolescents enjoy and frequently participate in gambling despite legal restrictions on underage gambling (Derevensky & Gupta, 2000; Gupta & Derevensky, 1998a). Recent reviews suggest that upwards of two-thirds of underage North American youth have gambled in regulated and licensed gambling venues (Jacobs, 2000, 2004), with adolescents having been reported to have pathological gambling prevalence rates two to four times those of adults (Gupta & Derevensky, 1998a; National Research Council [NRC], 1999). In fact, there is growing evidence that a small but identifiable proportion of adolescents in many countries exhibit excessive gambling behavior (Becoña, 1997; Delfabbro & Thrupp, 2003; Fisher, 1993; Johansson & Götestam, 2003; Ólason, Sigurdardottir, & Smari, 2005; Skokauskas, 2007).

Current research supports the notion that problem gambling behavior often begins early, between the ages of nine and eleven years of age (Gupta & Derevensky, 1998a; Jacobs, 2000, 2004), an age of onset that is earlier than that for most illicit substances (Gupta & Derevensky, 1998a). As well, excessive gambling among adolescents has been shown to be positively correlated with participation in increased delinquency and criminal behaviors, substance use, and antisocial behaviors (Derevensky & Gupta, 2004a; Ladouceur, Dubé, & Bujold, 1994). The serious nature of gambling problems is especially disconcerting considering that gambling is perceived to be a highly socially acceptable

activity among adults and adolescents, with little recognition of its inherent risks (Azmer, 2000; Gupta & Derevensky, 1997).

For a long time, adolescent gambling dependency went unnoticed compared with other addictions given that gambling dependence is not always directly observable in youth, that the negative consequences for youth may not be perceived to be as severe as those for adults, and that gambling behavior is prevalent and currently widely accepted (Derevensky, 2007, and Derevensky, in press; Derevensky & Gupta, 2004a; Hardoon & Derevensky, 2002). In fact, gambling is so widely acceptable in our society that unregulated forms of gambling frequently occur in the home and begin as a family activity (Felsher, Derevensky, & Gupta, 2003; Gupta & Derevensky, 1997). Parents are often aware of their children's gambling activities and many children's first gambling experience occurs in the home with a family member. However, as children get older, they tend to gamble less with family members and more with peers (Gupta & Derevensky, 1997).

Recently, a pathways model has been formulated, suggesting that there are several subtypes of adolescents who meet the criteria for probable pathological gambling behavior, but who demonstrate different antecedents and related symptoms (Nower & Blaszczynski, 2004). Further sharpening our understanding of gambling problems, Abbott, Volberg, Bellringer, and Reith (2004) point out that the scientific investigation of gambling problems must address nuances inherent to the broad subject of gambling. For example, the popularity of certain types of gambling appears to vary from country to country, and some forms of gambling are likely more strongly associated with gambling problems (Abbott et al., 2004). However, it is equally important to note that apparently less problematic forms of gambling (for example, the lottery) may be a gateway to more harmful types of gambling (Felsher, Derevensky, & Gupta, 2004).

MEASUREMENT ISSUES

The most widely used categories to represent youth gambling behavior are based upon a continuum and diagnostic screens that include designated cut-off scores for problem and pathological gambling, at-risk gambling behaviors, and social gambling (Derevensky, Gupta, & Winters, 2003). Adolescents who meet the criteria for pathological gambling demonstrate a pervasive pattern of excessive gambling behaviors and experience severe gambling-related problems. Derevensky and Gupta (2004b) contend that the adolescent classification of *pathological gambler* is in itself problematic since pathological behavior, as it is currently operationalized, implies a long history of gambling behavior. As such, they have argued that it may be premature to apply this term to young

populations, and they recommend the use of the term *probable pathological gambler* instead. The category *at-risk gambler* refers to adolescents who do not yet meet sufficient criteria to be classified as probable pathological gamblers on gambling screens, but who remain at risk for the development of severe gambling problems should their behaviors and the negative consequences of excessive gambling escalate (Shaffer & Hall, 1996). In contrast, *social gamblers* most often gamble occasionally, appear to have no difficulty controlling their gambling behavior (in terms of setting money and time limits) and have no negative consequences associated with their gambling.

Despite advances in our understanding of the development, acquisition, and maintenance of youth gambling problems, most adolescent gambling screens are adaptations of adult instruments, with items having been modified to make them more developmentally appropriate. Several of the most commonly used instruments include the South Oaks Gambling Screen—Revised for Adolescents (SOGS-RA) (Winters, Stinchfield, & Fulkerson, 1993), the DSM-IV-J (Fisher, 1992), and its revision the DSM-IV-MR-J (Fisher, 2000) (see Derevensky & Gupta, 2004b for a detailed description of each instrument and its criteria). Currently, the Canadian Centre for Substance Abuse and the Ontario Problem Gambling Research Centre are in the final stages of developing a new adolescent instrument, the Canadian Adolescent Gambling Inventory. Further testing of this instrument will be necessary, but this will in fact be the first instrument specifically designed for adolescents.

Although no gold standard for the measurement of adolescent problem gambling currently exists (Derevensky et al., 2003), concordance between the DSM-IV, DSM-IV-MR-J, and the SOGS-RA is reportedly high, particularly for identifying gambling problems among boys (Derevensky & Gupta, 2000). The DSM-IV-MR-J appears to be a slightly more conservative measure than the SOGS-RA (Derevensky & Gupta, 2000; Ólason et al., 2005). However, variations in cut score criteria, omissions and/or insertion of items, and translation problems have led to serious difficulties in reliably estimating the prevalence rates of adolescent problem gambling and comparing study outcomes (Derevensky & Gupta, 2006). As well, Gambino (2006) has emphasized the need for community-specific validation of youth gambling scales, given the variability in accessibility to different forms of gambling.

PREVALENCE

Gambling and problem gambling have been described as “moving targets” (Abbott et al., 2004), because gambling activities and venues for gambling continue to change (e.g., Internet gambling; mobile gambling), and because the

criteria for classifying individuals with gambling problems continue to evolve with each new release of the classificatory system in the *Diagnostic and Statistical Manual (DSM)*, thus making comparisons between outcomes in prevalence studies over time difficult. Although little is known regarding best practices in gambling research, increasingly governments are establishing systems to monitor the impact of gambling over time (e.g., in Australia, Canada, New Zealand, South Africa, and the United States) (Abbott et al., 2004).

The fact that the discrepant variability in prevalence rates for youth problem gambling is generally larger than the variability in prevalence rates for adults (e.g., NRC, 1999) has elicited some debate among researchers (Derevensky & Gupta, 2006; Derevensky et al., 2003; Ladouceur et al., 2000). Aside from the possibility that adolescent reports are simply more variable than adult reports (Derevensky & Gupta, 2006), it has been postulated that the larger variability in youth gambling prevalence studies may be due to various situational and measurement variables including sampling procedures, the use of different instruments (including varying cut-point scores, the use of modified instruments, and unverified translations), gender distributions within samples, the age of the population being assessed, cultural and ethnic differences, the availability and accessibility of different forms of gambling, the existing statutes concerning regulated forms of gambling, and the time frame used for assessing gambling behavior (see Derevensky & Gupta, 2000; Derevensky et al., 2003; Shaffer, LaBrie, LaPlante, Nelson, & Stanton, 2004; Stinchfield, 2002). In addition, the variability in terminology used to identify adolescents with gambling problems (e.g., pathological gamblers, probable pathological gamblers, compulsive gamblers, problem gamblers, level 3 gamblers, disordered gamblers) further obscures comparisons among outcomes in prevalence studies and has led to a need for greater standardization in nomenclature and terminology in youth gambling research (Derevensky & Gupta, 2006; Shaffer et al., 2004).

North America

The onset of gambling experiences occurs early among North American youth, with a median age ranging between 11 and 13 years (Jacobs, 2000). This age of onset is younger than the expected age of onset for cigarette use, consumption of alcohol, and substance use (Gupta & Derevensky, 1998a; Jacobs, 2000). Among North American youth, the lottery appears to be the preferred legalized/regulated form of wagering (Jacobs, 2000, 2004), likely due to the lax regulations concerning selling to underage minors and the perception of the lottery as a nonaddictive form of gambling.

Youth gambling behaviors are often dependent upon the availability and accessibility of games and gaming locations, gender and type of game (males more frequently report sports wagering as a preference, whereas girls more frequently report bingo), age (older adolescents are more likely to play video lottery terminals and to engage in casino gambling), and cultural and ethnic background (Chevalier, Deguire, Gupta, & Derevensky, 2003; Derevensky, *in press*; Ellenbogen, Gupta, & Derevensky, 2007; Gupta & Derevensky, 2004).

Meta-analyses and reviews that look at youth gambling behaviors and problems in North America reveal lifetime gambling rates among adolescents that range from 39 percent to 92 percent, prevalence rates for serious youth gambling problems that range from 4 percent to 8 percent, and prevalence rates for youth at risk for developing or returning to serious gambling problems that range from 10 percent to 15 percent (Jacobs, 2000, 2004; NRC, 1999; Shaffer & Hall, 1996). Gambling participation and problematic gambling behavior among youth appear to have increased substantially between 1984 and 2002 (Jacobs, 2004). Based on findings from an examination of 20 prevalence studies, Jacobs (2000) estimated that 2.2 million North American adolescents experience gambling-related problems. The National Research Council (NRC, 1999), designed to assist the United States National Gambling Impact Study Commission, reported that the proportion of adolescents exhibiting pathological gambling behavior in the United States could be more than three times that of adults (5.0 percent vs. 1.5 percent) (NRC, 1999). Several recent studies conducted in the United States describe findings similar to those of these large reviews and early meta-analyses (Gealt & O'Connell, 2006; Langhinrichsen-Rohling, Rohde, Seeley, & Rohling, 2004).

In Canada, recent studies also demonstrate that approximately 3–7 percent of adolescents surveyed in prevalence studies meet the criteria for pathological gambling using the DSM-IV or DSM-IV-MR-J screens (Derevensky & Gupta, 2000 [3.4 percent], 2001 [3.4 percent]; Gupta & Derevensky, 1998a [4.7 percent], 2000 [6.7 percent]; Hardoon, Gupta, & Derevensky, 2002 [4.9 percent]; Lussier, Derevensky, Gupta, Bergevin, & Ellenbogen, 2007 [3.2 percent]; Ste-Marie, Derevensky, & Gupta, 2002 [4.4 percent]). While most of these surveys have been conducted in Quebec and Ontario, a large-scale prevalence study in four Atlantic provinces of Canada was conducted in 1998. The sample design was a single-stage cluster sample of randomly selected and stratified classes (grades 7, 9, 10, and 12) (Poulin, 2000). Broad definitions of problem gambling and at-risk gambling led to prevalence rates of 6.4 percent and 8.2 percent, respectively, whereas narrow definitions of problem gambling and at-risk gambling revealed prevalence rates of 2.2 percent and 3.8 percent, respectively.

Europe

During the 1960s and 1970s, many European countries legalized various forms of gambling, including electronic gaming machines (Becoña, Labrador, Echeburúa, Ochoa, & Vallejo, 1995). Early studies suggested that per capita spending on gambling in Germany, Holland, and Spain was among the highest in European countries (Becoña et al., 1995). Further, it was estimated that at least half of the people with pathological gambling problems in Holland, Spain, and Germany were under the age of 30 (Becoña et al., 1995). Despite these statistics, there remains a dearth of information regarding gambling behavior and problem gambling estimates among children and adolescents in these countries. Most published research on youth gambling in Europe has been conducted in the United Kingdom (UK), the Nordic countries, Spain, Iceland, and more recently Eastern Europe. The findings of these studies are summarized by region below.

United Kingdom

Research on youth gambling problems in the UK has focused mostly on amusement machines, commonly referred to as fruit machines (Fisher, 1993, 1995; Fisher & Griffiths, 1995; Yeoman & Griffiths, 1996), lottery and scratch-cards (Griffiths, 2000; Wood & Griffiths, 1998, 2002, 2004; Wood, Griffiths, Derevensky, & Gupta, 2002; Wood, Griffiths, Stevens, Bartlett, & Pye, 2006), and more recently, video games and the Internet (Chappell, Eatough, Davies, & Griffiths, 2006; Griffiths & Wood, 2000; Wood, Griffiths, & Parke, 2007). Although most forms of commercial gambling are reserved for adults (18+), no age restriction has been placed on low-stakes fruit machines, and the lottery and sports pools have long incorporated an age restriction to the age of 16 years and above (Fisher, 1999). The UK is currently the only country in the world that allows juveniles to legally wager on fruit machines, for which the government has been subject to criticism (Orford, 2003). From 1997 to 1998, more than 82 percent of problem-related calls from adolescents placed to a gambling helpline in Britain were from individuals who gambled on fruit machines (Griffiths, Scarfe, & Bellringer, 1999).

Fruit machines, found in seaside arcades, cafés, and restaurants, are easily accessible to many youths in the UK and represent a serious problem (Griffiths, 2000). As such, it is not surprising that there has been a proliferation of research and proposals for the elimination of fruit machines and for raising the minimum age at which to gamble. Similarly, given the wide variety of gambling opportunities and the social acceptability of gambling, it is not surprising that

the rates of youth problem gambling in the UK remain relatively high. The first national prevalence study, conducted by Fisher (1999), examined youth gambling behaviors among 10,000 adolescents in England and Wales, aged 12–15. The study focused on fruit machines and scratchcards. Based on DSM-IV-MR-J scores, findings revealed an overall problem gambling prevalence rate of 5.6 percent. Males were more likely to be problem gamblers than females, and children identified as problem gamblers were more than three times as likely to report that their parents gambled too much. As well, problem gambling was reported to be more prevalent among seaside residents than among those that lived inland, likely due to the popularity of seaside arcades (Fisher, 1999). Similarly, using an adapted version of the DSM-IV-J, Wood and Griffiths (1998) explored the psychosocial effects of the lottery and scratchcards among 1,195 adolescents (aged 11–15). A positive correlation was found between parental and child gambling, with most lottery tickets and scratchcards being bought for juveniles by their parents. Of the 6 percent of participants who met the criteria for pathological gambling, the majority were male.

More recently, Wood and his colleagues (2006) conducted a large-scale national prevalence study, which included 8,017 adolescents aged 12–15. Overall, lifetime participation in gambling activities in this age group had fallen to 73 percent. Most notably, the prevalence of problem gambling had declined to 3.5 percent (based on DSM-IV-MR-J cut scores). Although prevalence of problem gambling on scratchcards and/or fruit machines in particular had also declined, it remained relatively high at 6.0 percent compared with international rates. As might be expected, boys were more likely to participate in gambling activities and to demonstrate problematic gambling behaviors. As well, youth living in coastal areas were more likely to exhibit problems with fruit machine gambling compared to those that lived inland (4.7 percent vs. 2.9 percent). This last-mentioned finding was attributed to the wide availability and easy accessibility of fruit machines in coastal areas. It is also important to note that this prevalence study did not include older adolescents.

In Scotland, Moodie and Finnigan (2006) conducted a study of the prevalence of gambling behavior and problems in Scotland among 2,043 adolescents aged 11–16. This was the first prevalence study of its kind in the country. Using the DSM-IV-J as a gambling screen, findings revealed a striking 9.0 percent probable pathological gambling rate with an additional 15.1 percent reported as being at risk for developing or returning to a serious gambling problem. The most popular gambling activity was the use of fruit machines. Males were more likely to meet the criteria for probable pathological gambling (3.5:1), and 76 percent of all adolescents reported that they had gambled in the past. Also, youth with gambling problems were more likely to report having friends and

family members who gambled. The age of onset for gambling was young, at 10.3 years of age for nonproblem gambling, 9.5 years for at-risk gambling, and 9.3 years for probable pathological gambling. More than a third of the sample considered gambling a “good” or “very good” way to make money. Despite the high rates of problem gambling in Scotland, treatment options remain scarce (Moodie & Finnigan, 2006).

Nordic Countries

Prevalence estimates indicate that the rate of problem gambling in Nordic countries may be lower than those obtained in North America and the UK (Johansson & Götestam, 2003; Ólason et al., 2005; Ólason, Skarphedinnsson, Jonsdottir, Mikaelsson, & Gretarsson, 2006; Volberg, Abbott, Ronnberg, & Munck, 2001). However, further research must be conducted within Nordic countries to confirm these results, particularly in Denmark and Finland where no published studies of adolescent problem gambling were found.

In Iceland, there is no age restriction on scratch cards, lotteries, sport pools, and bingo. However, electronic gaming machines (EGMs) are restricted for youth under the age of 16, and wagering on horse races is illegal for anyone under the age of 18 (Ólason et al., 2005). Two adolescent prevalence studies in Iceland have examined youth gambling rates amongst 13–15-year-old and 16–18-year-old adolescents (Ólason et al., 2005, 2006). The survey for youth aged 13–15 was distributed among 25 primary schools in Reykjavik ($N = 3,511$). The DSM-IV-MR-J and the SOGS-RA screening items were both administered, with results indicating prevalence rates of 1.9 percent (DSM-IV-MR-J) and 2.8 percent (SOGS-RA) for problematic gambling, and an additional 3.7 percent (DSM-IV-MR-J) and 4.1 percent (SOGS-RA) for being at risk of developing or returning to serious gambling problems (Ólason et al., 2006). Of the full sample, 70 percent of adolescents reported that they had gambled in the past year, and 93 percent reported that they had gambled at least once in their lifetime. The age of onset for gambling was 9.5 years, and boys were again more likely than girls to demonstrate gambling problems. In addition, those classified as exhibiting a gambling problem were more likely to report that their parents and peers gambled. EGMs, which are widely available, were the most popular form of gambling among youth with gambling problems (41 percent). The survey for youth aged 16–18 found similar rates, with 2 percent (DSM-IV-MR-J) and 2.7 percent (SOGS-RA) of youth identified as having gambling problems, and an additional 3.2 percent (DSM-IV-MR-J) and 4.4 percent (SOGS-RA) being at risk for gambling problems (Ólason et al., 2005).

In Norway, a study conducted by Johansson and Götestam (2003) included 3,237 youths aged 12–18 that were solicited via telephone and postal interviews. Using selected DSM-IV criteria to classify problem gamblers, 1.8 percent of adolescents were identified as exhibiting problematic gambling behavior, while another 5.2 percent were at risk of developing or returning to serious gambling problems. Boys were four times as likely as girls to exhibit gambling problems. Slot machines were rated as the most popular form of gambling, and 82 percent of youth reported that they had gambled in the past. Interestingly, the age of onset for gambling in this study was 9 years with an onset age range of 4–18 years of age, indicating that while the age of onset in Norway is low, problematic gambling rates also remain relatively low.

In a study carried out by Statistics Sweden, 2 percent of adults were identified as exhibiting gambling problems (Volberg et al., 2001). Individuals in the sample ranged in age from 15 to 74 years ($N = 9,917$). Analyses carried out on the younger participants (15–24) revealed that youth had a 151 percent higher risk than those over 25 years of exhibiting lifetime problem gambling behavior. Unfortunately, the prevalence rates for adolescents (15–17) were not reported in this study, and only adult gambling screens were administered.

Spain

Spain is believed to be among the countries in Europe that spends the most money per capita on gambling (Becoña et al., 1995; Hand, 1992). In Spain, type A machines, known as amusement machines or more colloquially as *comecocos*, are available to youth under the age of 18. Although they offer no cash prizes, they do offer free games and publish the winner's name and score (Becoña et al., 1995). A study conducted by Becoña (1997) estimated the prevalence rates to be 2.2 percent and 1.6 percent for problem gambling among adolescents aged 11–16 in two northern regions of Spain (Galicia and Asturias) ($N = 2,185$). More recently, Becoña and Miguez (2001) surveyed a sample of 2,790 adolescents using the SOGS-RA. Their findings revealed that overall, 5.6 percent of the participants met the criteria for problem gambling and another 8.2 percent were at risk of developing or returning to serious gambling problems.

Eastern Europe

Research conducted in Lithuania and Romania has recently emerged regarding youth gambling behavior. During Soviet control, access to gambling was largely prohibited. However, there appears to have been a rapid expansion of gambling venues and opportunities since that time (Lupu, Onaca, & Lupu,

2002; Skokauskas, 2007). In the early 1990s, slot machines, initially registered as computer games or gaming machines, were made available to the public in Lithuania (Skokauskas, 2007). Due to inadequate controls, youth were free to engage in these forms of wagering. In 2002, gambling was legalized in Lithuania and youth became exposed to a wider variety of gambling activities (Skokauskas, 2007). A recent prevalence study in Lithuania using the DSM-IV-MR-J identified 4.2 percent of youth (aged 10–18) as exhibiting probable pathological gambling behavior. An additional 9.1 percent were classified as being at risk of developing or returning to severe gambling problems. Overall, 82.6 percent of adolescents had engaged in some form of gambling. Six characteristics that were found to be associated with problem gambling included being male, having cognitive distortions regarding gambling, having parents who gambled, using alcohol, and smoking (Skokauskas, 2007). In Romania, a prevalence study of youth gambling based on the Gamblers Anonymous 20 questions in three districts identified 6.8 percent of youth (aged 14–19) as exhibiting gambling problems (Lupu et al., 2002). Males were found to be almost five times more likely to meet the criteria for problem gambling than females. The most frequent forms of gambling were pool (56%), poker (35%), and bingo (32%).

Australia

In Australia, gambling activities are generally available only in licensed establishments and are restricted to adults (Delfabbro & Thrupp, 2003). Most gambling among Australian youth occurs privately (individually or with peers and/or parents), which has been presented as support for the notion that regulatory provisions are working well in the country (Delfabbro, Lahn, & Grabosky, 2005). In terms of prevalence estimates in Australia, early research by Moore and Ohtsuka (1997) revealed that 3 percent of youth aged 14–25 in Melbourne were identified, using a modified version of the SOGS, as having a gambling problem. Approximately 75 percent of the sample had gambled in the past, with higher prevalence estimates among boys. Further research by Moore and Ohtsuka (1999, 2000) supported these findings, with 3.8 percent of youth being classified as having gambling problems based on scores from the SOGS in two studies of 14–25-year-old and 15–18-year-old participants. As well, findings from a sample of 505 adolescents aged 15–17 by Delfabbro and Thrupp (2003), revealed that 62.5 percent had gambled in the previous year, and that 3.5 percent could be classified, based on scores from the DSM-IV-J, as having a gambling problem. Lotteries, scratch-tickets, and sports betting were identified as the most popular gambling activities, and youth with gambling

problems were more likely to have friends and family members who approved of their gambling and/or gambled themselves. Most recently, Delfabbro and his colleagues (2005) identified 4.4 percent of youth aged 11–19 as exhibiting gambling problems (based on DSM-IV-J scores), indicating a slightly higher prevalence rate of gambling problems than was revealed by prior studies in the country.

RISK AND VULNERABILITY FACTORS

Among adolescents, there appears to be a rapid movement from social to problem gambling (Derevensky & Gupta, 1999). There are many factors involved in the acquisition, development, and maintenance of youth gambling problems. Although gambling does not involve the ingestion of a substance, and is unique in its emphasis on attributions of luck, skill, and attitudes about money, pathological gambling and drug dependency share common consequences including tolerance, dissociative states, and physiological arousal (APA, 2000; Felsher, 2007). Stinchfield and Winters (1998) have identified commonalities between risk factors identified in the substance abuse and youth gambling literature, including family history of the respective problem, low self-esteem, depression, family norms (e.g., attitudes that promote the problem), physical or sexual abuse, poor academic performance, delinquency, community norms (e.g., promotion and access related to drug use or gambling), and early onset. Similarly, Dickson, Derevensky, and Gupta (2002) demonstrated a large degree of overlap in risk factors shared by people exhibiting problem gambling and those exhibiting other addictions over a wide breadth of domains including individual, social/familial, and neighborhood/societal (Dickson et al., 2002). The overlap in risk factors identified in the gambling and substance abuse literature has led clinicians to adopt Jacobs' (1986) general theory of addictions as a framework for conceptualizing problem gambling behavior and commonalities across addictions (Gupta & Derevensky, 1998b; Winters & Anderson, 2000). Unique risk factors and overlapping risk factors between youth gambling problems and other youth addictions are described in greater detail below.

Individual Factors

Individual factors such as physiological, personality, emotional, coping, values and attitudes, and chronic problem behaviors have been shown to be associated with excessive youth gambling behavior (Derevensky & Gupta, 2004a; Dickson et al., 2002; Hardoon & Derevensky, 2002). Adolescents meeting the criteria for pathological gambling are also more likely to report difficulty in

school, exhibit truancy, and have poor grades (Hardoon, Gupta, & Derevensky, 2004; Lesieur et al., 1991). Current research regarding individual risk correlates among adolescents with gambling problems suggests that probable pathological gambling is more prevalent in males than females (NRC, 1999), with males being more likely to gamble larger amounts of money (Derevensky, Gupta, & Della-Cioppa, 1996), to begin gambling at an earlier age (Derevensky & Gupta, 2001), to gamble more frequently (Jacobs, 2000, 2004), and to exhibit a wide variety of gambling-related problems (Derevensky & Gupta, 2004a).

Adolescents with gambling problems often report higher levels of risk-taking behaviors (Gupta, Derevensky, & Ellenbogen, 2006), impulsivity (Nower, Derevensky, & Gupta, 2004; Vitaro, Arseneault, & Tremblay, 1999), anxiety (Ste-Marie, Gupta, & Derevensky, 2006), depression, suicide ideation, and suicide attempts (Gupta & Derevensky, 1998b; Kaufman, 2004; Nower, Gupta, Blaszczyński, & Derevensky, 2004). As well, youth with gambling problems are more likely to have a history of delinquency (Magoon, Gupta, & Derevensky, 2005) and/or to engage in other maladaptive behaviors including substance and alcohol abuse (Hardoon et al., 2004; Winters & Anderson, 2000). Adolescents have been reported to be four times more likely to gamble daily or weekly if they also consume drugs on a regular basis (Winters & Anderson, 2000).

Familial/Social Factors

Many youth who exhibit severe gambling problems report that their first gambling experience occurred at home with a family member (Gupta & Derevensky, 1997). They are also more likely to have a parent who struggles with an addiction (Gupta & Derevensky, 1998a; Wood & Griffiths, 1998). Although youth gambling frequency appears to be related to both parents' gambling frequency and gambling problems, youth gambling problems appear to be linked mostly to fathers' severity of gambling problems (Vachon, Vitaro, Wanner, & Tremblay, 2004). In addition, research findings indicate that even after controlling for socioeconomic status (SES), gender, and impulsivity-hyperactivity problems, significant associations remain between youth gambling problems and poor parental monitoring and disciplinary strategies (Vachon et al., 2004).

More recently, the combination of being in a family that interacts infrequently and concurrently feeling a lack of bond to one's family was found to contribute to the prediction of problem gambling (Lussier et al., 2007). Although these findings require replication and further study, they indicate the possibility of a curvilinear relationship between familial interaction and gambling

behavior. A curvilinear relationship for parental control/monitoring has been demonstrated in adolescent sexual behavior research (Miller, McCoy, Olson, & Wallace, 1986). As well, it has been noted that drug-using adolescents often report their parents as being overcontrolling (Meschke & Patterson, 2003).

There is some evidence that peer modeling and social learning are involved in the onset of gambling problems (Gupta & Derevensky, 1997; Hardoon & Derevensky, 2001). Many adolescents report that they gamble because their friends engage in this behavior (Griffiths, 1990). As well, adolescents with gambling problems commonly replace old friends with individuals who share their interests in gambling (Gupta & Derevensky, 2000).

Neighborhood/Societal Factors

Despite the lack of formal prevalence studies for youth problem gambling among various socioeconomic groups, preliminary data demonstrate that low SES youth may be at higher risk for gambling problems compared to other youth (Fisher, 1993; Kaufman, 2004; Schissel, 2001; Vitaro et al., 1999). As well, ethnic/racial minority youth appear to be at greater risk for developing and maintaining gambling problems (Lesieur et al., 1991; Schissel, 2001; Volberg et al., 2001). Interestingly, compared with Francophone (French-speaking) or Anglophone (English-speaking) youth, Allophone (neither English nor French is their mother tongue) adolescents made up the greatest proportion of youth with gambling problems in a community sample of over 1,000 Quebec adolescents (Ellenbogen, Gupta, & Derevensky, 2007).

First Nation youth appear to be at particularly high risk for gambling problems (Delfabbro et al., 2005; Peacock, Day, & Peacock, 1999; Schissel, 2001; Stinchfield, Cassuto, Winters, & Latimer, 1997). In a review of literature concerning aboriginal populations and problem gambling, Wardman, el-Guebaly, and Hodgins (2001) concluded that aboriginal adolescent problem gambling and adult problem and pathological gambling rates were considerably higher, ranging from 2 to 16 times those of non-Aboriginal populations, although they caution that there are concerns regarding the validity and reliability of these rates.

Situational and environmental risk factors may interact with individual risk factors through the availability and accessibility of gambling activities and venues to further augment the possibility of developing and maintaining gambling problems (Felsher et al., 2003, 2004; Fisher, 1999; Gupta & Derevensky, 1998a; Jacobs, 2004). More specifically, game features and technological advances have been associated with problem gambling. Structural characteristics of games that encourage continued, repetitive play such as high event

frequencies and intermittent reinforcement schedules (e.g., electronic gambling machines and scratchcards) as well as qualities that create a favorable ambience for play, such as vivid colors, sounds, music, and lights (e.g., electronic forms of gambling) are believed to enhance the availability, accessibility, and addictive potential of games (Abbott et al., 2004; Derevensky, 2007; Felsher et al., 2003; Griffiths & Wood, 2004). Technological advances continue to provide enticing gambling opportunities in the form of Internet gambling, interactive lotteries, keno and television wagering, mobile gambling (via cell phones), and novel slot machines (Griffiths & Wood, 2000). Recent research indicates that a large number of youth have gambled on Internet sites without money (Byrne, Gupta, & Derevensky, 2004), leading to a growing concern that such sites may be training youth to gamble with money once they obtain their own means to do so (Derevensky, 2007).

YOUTH GAMBLING BEHAVIOR AND RESILIENCY

Clearly, bio-psycho-social factors are involved in the acquisition, development, and maintenance of gambling behavior. Despite the existence of much literature on factors that predispose youth to problem gambling, very little research has addressed the identification of moderating variables that serve to mitigate the development and maintenance of severe gambling behavior (Dickson, Derevensky, & Gupta, 2008; Lussier et al., 2007). Youth gambling researchers have specified a need for effective ways to strengthen resiliency traits in children (Derevensky, Gupta, Dickson, & Deguire, 2004; Dickson et al., 2002, 2008; Winters, Arthur, Leitten, & Botzet, 2004). Educating children to develop the capacity and resources required to resist and overcome adversity is a rational and increasingly effective approach. The research that has focused on adolescent resilience has demonstrated a strong relationship between healthy, resilient behaviors and successful outcomes (Werner & Smith, 1992).

Dickson and colleagues hypothesized that the protective factors that apply to other addictive behaviors would also buffer against the acquisition, development, and maintenance of excessive youth gambling (Dickson et al., 2008). Using a community sample of adolescents, Lussier and colleagues (2007) examined whether youth identified as resilient (high risk exposure/high internalized protection scores) were as likely as those identified as vulnerable (high risk exposure/low internalized protection scores) to engage in excessive gambling behavior. Their findings demonstrated that resilient and vulnerable youth differed significantly in their self-reported gambling severity. As well, youth identified as resilient were not found to be statistically distinguishable from low-risk exposure groups in terms of their gambling severity. Lussier and colleagues also

examined the relative contribution of various risk (family, peers, neighborhood, substance use) and resiliency traits (social bonding, personal competence, social competence) domains in relation to problem gambling behavior and reported that environmental risk and resiliency traits each provided a unique contribution to the prediction model of gambling problems, with low levels of social bonding being the greatest predictor (Lussier et al., 2007).

SUMMARY AND FUTURE DIRECTIONS

While caution is necessary in comparing prevalence rates from different studies, it appears that the prevalence of youth gambling problems in Nordic countries (Johansson & Götestam, 2003; Ólason et al., 2005, 2006) and Australia (Delfabbro & Thrupp, 2003) is lower than in North America (Derevensky & Gupta, 2000; Jacobs, 2000, 2004; NRC, 1999) and the UK. However, in all countries, adolescents and young adults appear to have higher prevalence rates than older adults (Abbott et al., 2004), boys appear to have higher prevalence rates than girls, and youth whose parents endorse gambling activities have higher prevalence rates than youth whose parents do not. Also, a small but identifiable proportion of the adolescents in all countries where prevalence estimates exist reported significant gambling-related problems.

In Europe, electronic gambling machines appear to be more easily accessible and more popular among adolescents than in North America. The fact that they are often widely distributed in public places in Europe has led some policy experts to suggest that their popularity is related in part to easy access, where enforcement of age limits is lax (Ólason et al., 2006). In fact, accessibility and availability of gambling activities and venues are increasingly identified as significant risk factors that may interact with individual risk factors to further augment the chances for certain youth to acquire and maintain problematic gambling behavior (Abbott et al., 2004; Derevensky, 2007). For this reason, it has been suggested that legislation and policies that increase access to gambling activities will likely create higher problem gambling prevalence rates and in turn generate social and economic costs to families and communities (Abbott et al., 2004).

It is estimated that active participation in Internet gambling among youth may continue to rise significantly as accessibility becomes easier and as popularity of and familiarity with such gambling venues increase (Derevensky, 2007). Internationally, there is ample indication that individuals having significant gambling problems do not seek or acquire treatment for their symptoms, indicating a need for better prevention and intervention programs that reduce the barriers for individuals seeking help.

Adolescent problem gambling remains an important social policy issue in need of appropriate prevention and responsible social policies (see chapter 17 in this volume for more information regarding prevention strategies). The study of youth gambling research supports and broadens contemporary theories of typical and atypical development and provides information concerning risk and protective factors that may be applicable to the development of prevention and intervention initiatives for a targeted gender, or for age groups, cultures, or adolescents as a whole.

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Macau: China's Entry into the World of Gambling¹

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Gaming in Macau is not a new phenomenon. Its history traces back to before the Portuguese colonized the island in the sixteenth century. When the Portuguese did arrive, they did not attempt to change the customs of the indigenous people. However, gaming was not officially legalized until the 1850s, and the industry did not start booming until the end of the nineteenth century.

In 1930, the decision to auction off a monopoly on gaming was made by the Portuguese Colonial rulers to the Hou Heng Company, headed by Fok Chi Ting.² It was then awarded in 1937 to the Tai Heng Company, which narrowly lost the right to it in 1962 to STDM. The Portuguese government contemplated four special licenses in 1982, which would have given groups a specific geographic region over which they would have a monopoly. However, this proposition did not pass, and STDM's monopoly existed until 2002. In 2002, Portugal handed over control of Macau to the Chinese government. Since 2002, the Chinese government has made many concessions and sub-concessions to gaming companies. The first resort to open as a result of these moves was the Sands in May 2004. Another achievement in 2004 for the gaming companies was the new law that gave them the ability to grant credit and enforce gaming debts, a practice previously not allowed because of the cultural ideals of the residents. However, this new law was so important that Steve Wynn (owner of a premier Las Vegas casino) announced that he would not plan on buying property or opening a casino in Macau until the law was in effect.

MACAU'S GAMBLING EXPLOSION

Recently, Macau has been dubbed the “Monte Carlo of the Orient.”³ This nickname is becoming well-deserved. There were only 11 casinos in 2002. As of August 2006, there were 21 casinos operating on the island. This number was expected to more than double, to 45, in the subsequent three years. As of 2006, 60 new hotels were being planned or built to provide rooms for the upcoming influx of gamblers. However, according to locals, only two of the casinos are actually flourishing. Despite these reports, Macau’s gross domestic product (GDP) grew 14.2 percent in 2003 and 28.3 percent in 2004. These factors help the younger locals to be optimistic about Macau’s future.

This increase in casinos and hotels has resulted in a similarly strong increase in visitors to the island. In 2005 Macau welcomed 10.5 million visitors from China, 2.5 times as many as it had seen in 2002. Chinese visitors accounted for 56 percent of all visitors in 2005, up from 37 percent in the same time frame. Macau has growth potential in a variety of areas. According to the American Gaming Association, the acronym MICE describes the facets on which Macau should concentrate: meetings, incentives, conventions, and exhibitions. Almost every hotel planned for Macau is looking to specialize in at least one of these growth areas. For instance, the Venetian Macau plans on having 35 percent of its rooms filled by conventioners. The Macau government has stated publicly that it intends to double its number of visitors to approximately 37–38 million by 2010.⁴ Although most indicators are positive, many difficulties need to be addressed. First, there are still various issues with the Chinese government, mainly China’s strong tendency to have inconsistent policies. Also, locals have some major concerns for Macau. One obvious concern is that they will become, if they have not already, too dependent on casinos. In a similar vein, they are somewhat bothered by their overreliance on gamblers coming from the Chinese mainland. Also, they realize that the rapid growth of the casino industry in Macau in the recent past and near future cannot continue given restrictions on not only demand, but also, and more importantly, land. Last, local authorities have been citing a sharp increase in casino-related crimes, such as money laundering, but others feel that the numbers are inflated because the grouping “casino-related crimes” is vaguely defined. Clearly, there is a fair amount of unease about Macau’s long-term development.

Many companies are vying for a strong foothold in Macau, and some have a set strategy already. There are two basic strategies that casino-hotels can follow, embodied by two Hong Kong-listed companies. First, Melco International Development will compete directly with the U.S. gambling heavyweights Wynn

Resorts, Las Vegas Sands, and MGM Mirage on the basis of grandiose luxury.⁵ Melco is planning on building Macau's first six-star hotel, the Crown Macau, in 2007, as well as the City of Dreams (a series of casinos that Macau hopes to rival the Las Vegas strip) marketed to both VIP and mass-market gamblers, in 2008, in a joint venture with Australia's Publishing and Broadcasting. Melco has a leg up in the race for supremacy in Macau because of the familiarity of its CEO, Lawrence Ho, the son of the casino monopolist Stanley Ho, with the gaming industry in Macau.

Galaxy Entertainment Group, on the other hand, intends to pursue casual visitors from mainland China who are on a budget. This is the less popular of the two strategies, but it has its advantages because there is less competition with the U.S. companies, and Melco is looking for higher-end customers. With this strategy, Galaxy does not have to invest as much in extravagant architecture and other amenities. However, Galaxy cannot afford to save on real estate, so the company is investing heavily in some of the best real estate on Macau. Either way, any new casino must have a good conception, a good location, and imagination because copycat casinos will suffer.

The growing popularity of the Macau gaming industry is aided in many ways. First, the government is improving the infrastructure in the hope, as noted earlier, of doubling visitation from 18.7 million in 2005 to 37 million in 2010. Second, the most profitable game, slots, is surprisingly popular with the Asian gamblers in Macau. Also, they have taken a liking to electronic table games, which are preferred by casinos over live table games because they take up less space and do not require paying dealer salaries. This is a key point because there are currently major labor shortages, including for dealers, in Macau, and this could signify a shift in Macau into Vegas-style gaming. This shortage of a labor supply exists because Macau's population is less than 500,000, but its residents protest the hiring of Chinese and Philippine workers, slowing the growth ability of the gaming industry in Macau. Many new casinos now poach some of the best employees from competing casinos and start wage wars. All of these developments are creating growing concerns about wage inflation among gaming companies. The average Macau gambler is searching for convenience and value. Most of them will not travel beyond the Macau peninsula center of mass, and despite the cheap hotel rates (US\$20–40 per night), a decent percentage will stay just off the island for the slightly cheaper rates and then commute to the casinos, making Macau extremely dependent on gaming revenues. Because this market is geared to a low-end gambler, Macau's government does not want any permanent residents, but would like to see some time shares, second homes, and vacation suites.

COTAI—THE RICH MAN'S ALTERNATIVE

Currently, Macau is generating the majority of buzz in the gaming industry, but much of that attention may soon be shifting to its neighbor island, Cotai. Right now, Cotai mainly attracts “Macau rejecters”⁶ and some conventioners, but the island plans on attracting more developers and gamblers from Macau beginning around 2009. These “Macau rejecters” are affluent gamblers who have already become disinterested in Macau and want Cotai to become a high-end resort. The geographical area that Cotai would target has 120 million residents, giving it a large population from which to draw. This target audience will travel great lengths and pay premium prices (approximately US\$200 per night) for a quality product. Also, nearby Hangquin Island is waiting for government approval to begin development of residential and leisure resorts. It is hoped that by 2010, Cotai can reach its full potential with many high-quality casinos and improved access to the area.

However, many pitfalls could arise and lessen Cotai's ability to match or surpass Macau's gaming potential. There is currently a lack of critical mass of casino venues on and access to Cotai, which will not be improved until at least 2008. This means that only “must see” casinos will have any chance to succeed. The most difficult of these problems to improve is the projected extra nine million land visitors coming through already saturated border crossings and congested roadways. Once the critical mass and access issues are resolved, the casinos of Cotai have to convince the gamblers of Macau to change their preferred casino, so that they can add them to the current group of “Macau rejecters.” The optimistic view points to the surprising change in Asian preferences toward slots as a possible precedent for gamblers switching from Macau to Cotai. A bad sign for Cotai is that the opening of the Grand Waldo Cotai fell short of all expectations and has spooked investors for other potential Cotai casinos. However, optimists in this case focus on the differences between the unsuccessful opening of the Grand Waldo Cotai and the successful opening of the Venetian Macau. A few of the reasons for these differing results are that the Grand Waldo Cotai did not have as strong of a marketing strategy and it also lags behind the Venetian Macau in size and amenities. Many companies, including Wynn, are taking a wait-and-see approach to get a better feel for the market, its customers, and the progress on Cotai's infrastructure, delaying many openings until 2009 or 2010. The casinos are not the only industry struggling on Cotai. As in Macau, the short supply of land in Cotai has started a land scramble that is sending real estate prices through the roof.

If all of Cotai's needed changes occur in a timely fashion, and the pitfalls are avoided, then Cotai has the ability to become one of the top casino resort locations in Asia. The projections for Cotai predict that it could have double or triple the number of casinos that Macau has, sometime between 2012 and 2015.⁷ This could make it the dominant casino resort destination in the world.

Another potential revenue driver is the availability of retail on both Macau and Cotai. Many investors are skeptical because of the difficulty that the Fisherman's Wharf is having. However, this area has some of the lowest rents on the island and attracts a low-end shopper. Two planned casinos will court high-end retailers, in order to be attractive to high-end customers. The Wynn Macau is planning on opening 10,000 square feet of retail space to satisfy its gamblers. The Venetian Macau is pulling out all of the stops to open up a retail mall that will rival its Grand Canal Shoppes in Las Vegas. However, many retailers do have reservations, so they are signing short-term leases, to take a wait-and-see approach toward the viability of retail at the Venetian Macau before signing a long-term lease. Most indicators suggest that both of these retailing endeavors will thrive, and investors should not be concerned with the Fisherman's Wharf struggles.

QUESTIONS

Clearly, Macau has achieved the greatest growth of any recent market for additional gambling. Yet some interesting questions need to be asked about whether this growth can be sustained. The first consideration is, of course, the attitude of Chinese officials. If they fear that they are losing control of these islands, they can easily deny the remaining available land parcels on both Macau and Cotai. This could easily happen, given their fear of being too dependent on one industry—namely, casino gambling. And after all, the Chinese government has made no firm commitment to the concept of private property, especially for casino operations.

Another concern of Chinese officials is the possibility of wage inflation because of the labor shortage on the island. Finally, it will be interesting to see how the governing Communist Party will reconcile its previous ban of all types of gambling in China with this establishment of another Las Vegas. If the party's authority is ever threatened on the mainland, would the Communist Party crack down on gambling on Macau in an effort to reestablish its "purity" and authority? So far, the Chinese government has "tolerated" this gambling exception, but whether or not it would sacrifice Macau as its gambling capital in times of need has yet to be tested.

NOTES

1. From *The Gambling Debate*, Richard A. McGowan. Copyright 2007 by Richard A. McGowan. Reproduced with permission of Greenwood Publishing Group, Inc., Westport, CT.
2. Jorge Godinho, "Macau Gaming Law," paper presented at the 13th International Conference on Gambling and Risk-Taking, Lake Tahoe, May 2006.
3. "Macau," *Antara News*, August 8, 2006.
4. Keri Geiger, "In Macau, It's Time to Bet," *Wall Street Journal*, June 30, 2006.
5. Ibid.
6. J. P. Morgan, *Macau Update*, newsletter, June 12, 2006.
7. Ibid.

Native American Gambling: Economic Development or Dependence?

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There are over four million Native Americans living in the 567 federally recognized Indian Tribes in the United States. Over the past 20 years, the quality of life for American Indians living on reservations has increased tremendously. However, the economic welfare statistics of these tribes still consistently place them far behind the rest of the American population. Although the cultural and historical reasons for this discrepancy are important, they will not be the focus of this chapter. This chapter concentrates purely on the rationale for Native American gambling. More specifically, this chapter concentrates on the effects that the Indian Gaming Regulatory Act (IGRA, 1988) has had on the Native American population in the United States.

This issue is of importance because many financial and political effects must be considered during development of plans for new casinos, creation of tax codes, or drafting of federal legislation, for example. States cannot impose taxes on American Indian casinos, but the IGRA allows states to negotiate compacts for exclusive rights with tribes for a share of their revenues. One-third of the 22 states that permit “Las Vegas–style” games on American Indian land receive significant revenue from the tribes.¹ Although certainly many other aspects must be considered when these political tasks are undertaken, the effects that tribal casinos have had on the welfare of the Native American population, if significant, should be weighed heavily. And if not, then the claims that tribal casinos have been a huge success need to be examined more closely. Although the data available limit the scope of this study, it should be recognized that concerns over the social welfare of Native Americans since the passing of the

IGRA (drafted as a direct result of the decision of the *California v. Cabazon*,³ case) have even served as an impetus for a recent push for Congress to draft further legislation. Some of the proposed bills call for more closely measuring the negative effects that casinos have had on Native Americans, altering the legal uses for Indian casino revenue and changing the way the oversight committee operates. Further, in light of the recent Jack Abramoff lobbying scandals, the political associations of tribal leaders have been called into question, thereby implicating the casinos that they run.²

Tribal gaming is a \$19.6 billion per year industry, and it is getting larger,³ as reports from February and June 2005 indicate with headlines such as, "Tribal Casino Takes Are Soaring, Surpassing Those in Nevada."⁴ According to excerpts from Dr. Alan Meister's study on Indian gaming, the growth rate of Indian casino revenues from 2003 to 2004 exceeded 15 percent.⁵ The number of tribes with gaming facilities grew about 3 percent in 2004 (from 221 to 228), and the number of Indian gaming facilities saw growth at about 5 percent in 2004 (from 385 to 405).⁶ Although they are highly correlated with the development of new gaming facilities, the numbers of gaming tables and gaming machines have seen tremendous growth as well. In 2004, the number of gaming machines grew by 10.7 percent, and the number of table games grew by 9.4 percent. These numbers are significantly larger than the percentage of growth we see in new gaming facilities; therefore, the currently existing gaming facilities clearly are continuing to grow. In 2004, for instance, in California there were no new tribes with gaming facilities, and there were no additional Indian gaming facilities in the entire state. However, California saw a 4.5 percent growth in gaming machines and saw 16.9 percent growth in the amount of table games within its already existing 54 Indian casinos.⁷

Even nongaming revenue at Indian gaming facilities saw significant growth in 2004. This revenue includes money spent by casino patrons on food, beverages, hotel stays, retail purchases, and other entertainment at the gaming facilities. If it were possible to measure the contribution these patrons made to neighboring facilities as a direct result of their visits to the casino, then this revenue would be included as well. However, because this data is practically nonexistent, the reported nongaming revenues have the effect of underestimating the total economic contribution of expenditures at casinos. Nongaming revenue grew by 7.6 percent in 2004 or from \$1.79 billion to \$1.93 billion dollars. However, as discussed in the following sections, the stipulations of the IGRA are less strict about nongaming revenue than they are about revenue directly created by and received from gaming expenditures at casinos. Therefore, the effects that these revenues have on Native American welfare are much less than the effects of revenues received from gaming. Also, nongaming revenues make up less than

10 percent of gaming revenue. In general, it can be asserted that noncasino revenue does not play an important role for Native American casinos.

Furthermore, in the economic impact analysis that Dr. Alan Meister performed, he estimated several effects that tribal gaming has had on the overall economy. In total, the claim is that Indian gaming in the year 2004 contributed about \$53.1 billion in output, \$19.7 billion in wages, and 545,000 total jobs and helped create about \$6.3 billion in tax revenue. Indian gaming in the year 2003 saw about \$45.3 billion in output, \$17.3 billion in wages, 489,000 jobs, and \$5.7 billion in tax revenue. When the revenue-sharing agreements that each state has developed are considered, totaling \$889 million, the total tax revenue garnered in 2004 reaches \$7.2 billion. Of the 545,000 jobs supported by Indian casinos in 2004, 279,000 of those jobs were directly induced, and 266,000 were indirectly supported, by the output of Indian gaming. The \$6.3 billion of tax revenue mainly comes from secondary economic activity as estimated by the input-output analysis that Dr. Alan Meister conducted. In his study, Meister used the Impact Analysis for Planning (IMPLAN) method, which has been in use since 1979 and is used by the Federal Emergency Management Agency (FEMA) and the Bureau of Economic Analysis; it is also very similar to the format used by the United Nations. For most of the economic estimations such as tax revenue, jobs created, and wages distributed, IMPLAN came into use.

Figure 14.1 shows the amount of revenue shared by the tribes and states according to their agreements in 2004. As one can see, states such as Connecticut, Wisconsin, and California have reasonably substantial revenue-sharing agreements with their tribes, whereas the governors of states such as Minnesota and Washington often receive flak for failing to negotiate successful compacts for their states. At this time, the IGRA does not explicitly mandate that states receive a portion of the revenue from the tribes. However, it is pervasively assumed that changes to the IGRA will be made in the future and that among those changes will be an additional clause that provides the framework for adopting revenue-sharing agreements in new compacts.⁸

The issue surrounding revenue-sharing agreements is a tricky one. From the states' perspective, they are permitting such activity to go on within their borders, and most likely their residents are the patrons of Indian casinos on reservations in their state. Therefore, as with any other commercial activity, the states should have the right to receive some portion of the profit from these casinos. However, from the Native American viewpoint, they are a sovereign nation and not subject to the laws and taxation principles of the states in which they are located. Also, a fear often expressed by politicians who side with Indian tribes is that the states will basically coerce the tribes rather than meet them

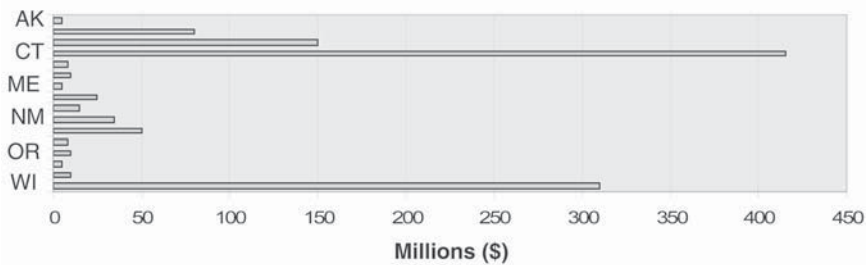


FIGURE 14.1 Revenue sharing between states and Native American casinos. Source: Analysis of the Economic Impact of Indian Gaming in 2004, National Indian Gaming Association (January 2005).

as equals at the bargaining table.⁹ Hence the issue is once again whether the tribes are truly sovereign or have become merely wards of state government. Two well-versed political scientists have raised the question of whether compacts are “*compromises*, or are they *compromised*?”¹⁰ The focus of Steven Light and Kathryn Rand’s work is the political consideration of the impact of Indian gaming, mainly on sovereignty of the tribes. Light and Rand’s work is considered further throughout this chapter and more specifically when we consider the pros and cons of tribal gambling.

Clearly, given the preceding facts and figures, Indian gaming is becoming a significant factor in the U.S. economy, in addition to being the most significant contributor to the Native American economy. Although commercial casinos brought in just under \$30 billion in revenue last year, Indian casinos grew to nearly \$20 billion. The growth rate of Indian casinos has also significantly outpaced commercial casino development—even since the year 2000—as the establishment of Indian casinos has become more complete. Dr. Alan Meister sees no reason to assume that the growth of Indian casinos will stop and even predicts that they will continue to grow faster than their commercial counterparts. Obviously, as the markets mature and the base of revenue becomes much larger, Indian growth rates will have to decline. However, as more and more states begin to negotiate casino development with the tribes located within their states, continued expansion is to be expected.¹¹ Another reason it is important to consider the influence of casinos on Indian welfare is that at first glance there appears to be a significant relationship between casinos and expedited improvement in quality of life. Table 14.1 shows a chart created by a group at Harvard when they looked at some of the simple observable results from the 2000 U.S. census.

Table 14.1.
Changes on Reservations Other than Navajo (Changes 1990–2000
presented in points unless indicated as %; OTSAs excluded)

	Nongaming	Gaming	United States
Real per capita income	+21%	+36%	+11%
Median household income	+14%	+35%	+4%
Family poverty	-6.9	-11.8	-0.8
Child poverty	-8.1	-11.6	-1.7
Deep poverty	-1.4	-3.4	-0.4
Public assistance	+0.7	-1.6	+0.3
Unemployment	-1.8	-4.8	-0.5
Labor force participation	-1.6	+1.6	-1.3
Overcrowded homes	-1.3	-0.1	+1.1
Homes lacking complete plumbing	-4.6	-3.3	-0.1
Homes lacking complete kitchen	+1.3	-0.6	+0.2
College graduates	+1.7	+2.6	+4.2
High school or equivalency only	-0.3	+1.8	-1.4
Less than ninth-grade education	-5.5	-6.3	-2.8

Source: Taylor, Jonathan B., and Kalt, Joseph P, *American Indians on Reservations: A Databook of Socioeconomic Change between the 1990 and 2000 Censuses* (Cambridge, MA: Harvard Project on American Indian Economic Development, 2005). See www.ksg.harvard.edu/hpaied/pubs/pub_151.htm.

These numbers suggest that there might be a significant correlation between gaming and a stronger performance of welfare improvement over time. In 13 of the 15 categories, gaming tribes performed better than nongaming tribes. Although at first glance it is apparent that Native Americans' lives have improved since the inception of the IGRA, will advances and growth in Indian gaming result in comparable gains in Native American welfare in the future? Does this improvement in the lives of Native Americans justify the costs of gambling in the communities that surround these casinos? Are states using Native American casinos as agents for revenue while leaving these casinos largely unregulated?

INDIAN GAMING REGULATORY ACT (IGRA)

The impetus to address the Indian gaming situation came from a court case involving a tribe of Native Americans from California called the Cabazon Band of Mission Indians. In 1953 Congress passed a law that authorized states to

extend state criminal laws to Native Americans. This law, known as Public Law 280, was often used by the state to justify regulation of activity on reservations. However, when states began to impede the rights of tribes to operate gaming facilities on their reservations, the Cabazon tribe forced the state of California to take them to the Supreme Court. In *California v. Cabazon* (1987), the Supreme Court ruled that Indian tribes had the inherent right to self-rule and that Public Law 280 applied only to limited circumstances, particularly when criminal activity was taking place between Indians and non-Indians. Specifically, the courts ruled that Public Law 280 was not enough justification for states to impede on tribal sovereignty in civil terms.¹² Noticing this glaring legal omission, Congress quickly acted to draft legislation that would help fill the void of confusion, whence came the Indian Gaming Regulatory Act.

In the time between the *Cabazon* decision and the adoption of the Indian Gaming Regulatory Act (IGRA), gaming sprang up nationwide on tribal reservations. This helped charge the atmosphere surrounding the debate on the IGRA. In drafting the IGRA, Congress sought to balance tribal rights to sovereignty with the right of a state to regulate what sort of activity takes place within its borders, thereby affecting its citizens. One of the major considerations and justifications for federal intervention in this matter was the issue of organized crime. One major fear that came in discussions of gambling was the concern about organized crime gaining a foothold in the casino industry. Because the business involves transactions with large amounts of cash, many spectators were suspicious that Indians, without private-run management interference or federal intervention, would turn to the realm of organized crime to help them run their businesses and gain political influence. This was definitely something that legislators kept in mind when drafting earlier forms of the bill and that influenced legislators' decision to allow private firms to help run Indian casinos.¹³

According to the opening section of U.S. Code Title 25 Chapter 29, Congress had five main things in mind when considering the IGRA: (1) tribes had begun to utilize the revenue drawn from casinos to generate governmental funding; (2) tribes had turned to outside management, but existing law provided no standards by which those management contracts could be regulated or approved; (3) existing federal law did not provide any clear stipulations for regulation of Indian gaming; (4) at that time, the goal of federal policy involving Indians was to "promote tribal economic development, tribal self-sufficiency, and strong tribal government"; and (5) Indian tribes had the right to wholly regulate any gaming activity on their land that was neither prohibited nor strictly regulated by the state or federal governments.

The major provisions of the IGRA sought to create three separate classes of gaming, and a different regulatory scheme for each class, and put stipulations

on the use of casino revenue. The first thing that the IGRA established, the three classes of gaming, are still used today to define various types of gaming in both commercial and Indian casinos. Class I gaming refers to traditional social games with minimal prizes, clearly targeted toward ceremonial Native American forms of gaming. The regulatory authority over these types of games is vested exclusively in tribal governments and is not subject to any of the requirements in the IGRA. Class II gaming refers to bingo and other similar games of inter-player chance, such as lotto, pull-tabs, and punchboards, if played at the same location as bingo. Also included in this are card games where the establishment is not banking any of the money. The regulatory authority over these types of games is vested in the tribal governments insofar as the state in which the tribe is located permits such gaming for any purpose and the tribal government adopts a gaming ordinance that is approved by the National Indian Gaming Commission (which is also established later in the IGRA). Class III gaming refers to every other type of gaming, including slot machines, banked card games, and typical casino games such as blackjack, roulette, craps, any wagering games, and electronic facsimiles of any game of chance. There are three main clauses regarding the regulatory authority of such gaming: the particular form of gaming must already be permitted by the state in which the tribe is located, the tribe must negotiate a contract with the state and have it approved by the Secretary of the Interior, and the tribe must have a tribal gaming ordinance that has been approved by the National Indian Gaming Commission.

Further, the IGRA limits the use of any casino revenue to three major categories: (1) to fund tribal government operations or programs; (2) to provide for the general welfare of the Indian tribe and its members; or (3) to promote tribal economic development. Of course, the tribes are also allowed to make donations to charitable organizations or help fund the operations of local government agencies.

The tribal compacts described in the text of the IGRA are very vaguely outlined. The IGRA does not require the compacts to have any specific terms except that both parties approach the negotiations in good faith—particularly the state, given that the Indian tribe is the party that initiates the negotiations. If this disposition of good faith is in question, the Indian tribe has the right to sue the state in federal court. Many procedures detailed in the IGRA are in place to handle these types of situations as they develop. The procedures are not as important as the implications for tribal and state sovereignties, but in general, government mediators step in and utilize loosely constructed general principles, the goal of which is to establish a well-balanced compromise between both parties. It is through these mediums that states are able to negotiate revenue-sharing agreements and other issues of taxation. Although these

work on a state-by-state basis, as is evident by the disparity among revenues collected by states, in general they provide a means to mitigate the cost that the casinos incur to the state, and they often times go above and beyond this inferred cost.

In particular cases, it is in the Indian tribe's interest to agree to pay more if the state will promise to help keep commercial casinos banned or kept far away from the prime location of the tribal casino. For instance, in 1992, the Mashantucket Pequot tribe negotiated such a contract with the state of Connecticut. In exchange for the tribe's promise to share with the state 25 percent of the revenue generated from the Foxwoods Resort Casino's slot machines, Connecticut effectively guarantees them exclusive rights (along with Mohegan Sun, which now has the same contract) to operate slot machines within the state. Since the precedence of this revenue-sharing agreement, many other tribes have offered similar terms and come to settlement on them. Quite recently, Harrah's Entertainment offered similar commercial revenue-sharing terms with the states of Rhode Island and Pennsylvania if they grant Harrah's exclusive slot machine rights. In Rhode Island, Harrah's has agreed to pay 25 percent of slot revenue up if revenues do not surpass \$400 million and a higher percentage to be determined if revenues exceeded \$400 million, while in Pennsylvania, Harrah's has agreed to pay a whopping 53 percent excise tax on slot revenue.¹⁴ The justification that this commercial entertainment giant offers to Rhode Island legislators is that the facility to be developed in Rhode Island is more of a resort; therefore, it needs fewer taxes to operate its smaller casino. Harrah's Entertainment assists in the management of as many as nearly 200 Indian casinos in North America.

Also established by the IGRA was the National Indian Gaming Commission (NIGC). As an oversight committee on tribal gaming in the United States, with limited regulatory powers, the NIGC was to be funded by a minuscule tax on the revenues of Indian casinos. With the commission's funding limited to 2.5 percent of the first \$1.5 million in revenues and 5 percent thereafter, with a cap of \$8 million, the effectiveness of the commission has been questioned at every level of government (U.S. Code Title 25). In 2005, Senator John McCain (R-AZ), then chair of the Senate Indian Affairs Committee, introduced the legislation regarding the NIGC. This bill, S.1295, would have forced the NIGC to be held more accountable and would also provided an increased amount of funding, to the tune of .08 percent of Indian casino revenue without any cap. Under this setup, the revenues received by the commission would have increased to about double what they are now, and then would have proportionally increased relative to the growth of the industry. This bill would have also allow the NIGC to crack down on off-reservation gaming, which is often seen

as a scam that allows the tribes to illegitimately profit by creating and supporting commercial casinos under the guise of tribal sovereignty. In 2006, this bill passed the Senate Indian Affairs Committee but still remains on the agenda of the House Resources Committee awaiting approval for vote.¹⁵

PRO-INDIAN CASINO ARGUMENTS

There is a lot of literature supporting the propagation of Indian casinos. The study with the most data to back its conclusions was conducted by the Harvard Project for American Indian Economic Development. Authored primarily by Jonathan Taylor, a leading research expert on Indian welfare, *American Indians on Reservations: A Databook of Socioeconomic Change between the 1990 and 2000 Censuses* provides a summary glimpse into the changes in welfare that American Indians experienced during the explosion of tribal casinos. Basically providing two snapshot images of the state of Native American welfare, this study looked at the empirical census data from both 1990 and 2000, breaking it down by every single federally recognized reservation. But aside from the fact that this study neglected to use econometric analysis or examine the revenue-side data, the institution that funded this study receives massive donations from the National Indian Gaming Association (NIGA) to run its research. The NIGA is a nonprofit organization of all the Indian tribes that have casinos—it is clearly in their best interest to promote the expansion and growth of the Indian casino industry. Therefore, the research that the NIGA conducts, though mainly objective, often has suspect results that appear to maintain an optimistic outlook on Indian gaming. The *Cabazon* project, one that specifically focuses on economic development with regard to Indian gaming and of which the Harvard Project study is a part, on the whole manifestly supports the expansion of tribal sovereignty and rights—issues that are not so clearly defined on the national political stage. “Essentially, the research of the Harvard Project finds that poverty in Indian Country is a political problem—not an economic one.”¹⁶ Their claim is that the economic development of the tribes, which is bolstered by Indian gaming, is merely the means to the end of achieving full tribal sovereignty and self-reliance. In 2004, the NIGA produced its *Analysis of the Economic Impact of Indian Gaming*. This report details much of the alleged success that tribes have had with casinos. Although much of the evidence is anecdotal or qualitative, the report does provide some firm statistical support for its very optimistic outlook for Indian gaming. The NIGA touts statistics such as the fact that in 2005, 69 percent of Americans thought that Indian nations deserve their help, or that 86 percent of Americans thought that Indian tribes benefit from having casinos.¹⁷ The *Analysis of the Economic Impact*

of *Indian Gaming* clearly states that the mission of NIGA is to “protect and preserve the general welfare of tribes striving for self-sufficiency through gaming enterprises in Indian Country.”¹⁸ Also included in the association’s analysis is a mention of every positive outcome that Indian gaming could have ever possibly influenced, from jobs to roads to schools. In order to further garner sympathy and support, the NIGA points out that there are various shortfalls among the Native American community when it comes to keeping up with national norms and includes notations of various education, poverty, health, and crime statistics.

Other published books that may give the reader a clearer picture of the effects of Native American gambling are *Gambling and Survival in Native North America* by Paul Pasquaretta (2003) and *Indian Gaming and Tribal Sovereignty* by Steven Andrew Light and Kathryn R. L. Rand (2005). The latter provides a very thorough analysis of the political implications of casinos through the lens of tribal sovereignty. Again, the researchers behind *Indian Gaming* clearly favor the expansion of tribal sovereignty, and their book is predominately anecdotal and historically based.

ANTI-INDIAN CASINO LITERATURE

Legalized Gambling (2006), edited by David Haugen, provides a collection of abridged articles on various gambling topics, such as Indian gaming, Internet gaming, social consequences, personal stories, and a general overview of gaming in the United States. Although not every article in this collection is anti-casino—in fact, it attempts to provide an equal amount of articles for each side—it is one of the only available sources that clearly try to present this point of view. In these articles, once again, we see that the evidence provided is largely anecdotal and subjective. Although this is clearly an important component of the consideration as to whether casinos are a viable and good option for Indian tribes to gain economic independence, anecdotal evidence is very difficult to include in any quantitative analysis or econometric study. Some of the interesting things for legislatures and concerned citizens to keep in mind about Indian casinos are the alleged social burdens that they place on the public: costs to local communities in the form of upkeep, roadway paving, and police patrols and other implied public costs. There are claims that casinos lead to increased crime in the surrounding areas, that the people who are drawn to visit communities with casinos are not the most upstanding citizens of this country, and finally, that the harmful effects on addicted gamblers and ordinary, but excessive, gamblers are not nearly outweighed by the benefits that Indian casinos receive from the economic independence they gain. And these concerns do not

consider the larger moral question as to whether gambling should be legalized in the first place, which as a democratic society, America has determined it should, viewing it as an acceptable form of business practice.

Finally, there is the story about the famous Mashantucket Pequot founder who, on his marriage license, claimed to be "white." Many people point to this as evidence of Native Americans simply taking advantage of a crooked system that seeks to pay reparations to a people that no longer necessarily deserves them. It is true that there were only four registered members of this tribe in 1990; today, however, there are several hundred members. The Mashantucket Pequots now host the largest Native American casino in the country and hence are flourishing as operators of one of the most successful casinos in the world. There are two sides to every story. The next section gives the reader a chance to ascertain whether the advent of Native American casino gaming has really made a difference in the welfare of tribal members.

COMPARING GAMING AND NONGAMING TRIBES IN 2005

One fundamental question that needs to be addressed is this: has Native American gambling improved the plight of Native Americans? One way to explore this question would be to test different sets of welfare statistics on two groups: those with gaming and those without. The method that was utilized to determine whether or not there was a statistically significant difference exists is called the unpaired (independent) samples "t" test. The categories (which refer to American Indians on reservations, including Navajo, unless otherwise noted) to be tested included:

1. median income,
2. family poverty, unemployment,
3. percentage of houses that lack kitchen facilities,
4. actual number of houses that lack kitchen facilities,
5. aggregate income of tribe,
6. average aggregate income,
7. percentage over the age of 25 who are college graduates,
8. percentage over the age of 25 who have a high school degree,
9. percentage over the age of 25 who have less than a ninth-grade education,
10. the actual numbers for each of the preceding three statistics,
11. percentage of families living in poverty, percentage of population that owns houses,
12. percentage of occupied houses that are actually owned by the Indians occupying them,

13. percentage of homes that are occupied by American Indians that are overcrowded,
14. percentage of all races on reservations that are self-employed, and
15. percentage of American Indians that live in deep poverty.

RESULTS OF INDEPENDENT SAMPLES TESTS

Out of the various categories that were tested, only six of them came out statistically significant (a “t” test value of 2 or greater), with a seventh one reasonably close. Median income produced t-scores of 3.086 and 3.094; percentage of houses lacking kitchen facilities produced t-scores of -2.391 and -2.304 ; average aggregate income produced t-scores of 1.797 and 1.873; actual number of college graduates came really close, producing a t-score of 1.320; percentage of American Indians over the age of 25 with a less than a ninth-grade education produced t-scores of -2.045 and -1.991 ; percentage of occupied homes that are owned by American Indian residents produced t-scores of -2.370 and -2.346 ; and percentage of population of all races on reservations that are self-employed produced t-scores of 2.069 and 2.049. The rest of the statistics produced t-scores that ranged from .344 to .998, none of them being significant at even the 10 percent level.

CONCLUSIONS

From these analyses, it appears as though the only welfare statistic that has been significantly influenced by casino revenue in the past 16 years is average aggregate income of American Indians. When you take this result and compare it with the fact that median income has not seen an equivalent impact, it appears as though a lot of the money could be staying at the top. If some of the wealthiest tribal members were keeping a lot of the profits for themselves, it would explain why the average income is much higher than the median. This is being addressed in various political circles. In particular, Senator John McCain’s bill addresses the issue of tribal casinos using profits to reinvest in commercial casinos or build other casinos in off-reservation locations. Although tribal leaders argue that, oftentimes, building a casino away from their reservation can provide opportunities that otherwise would not be economically feasible, opponents of this argue that it also has the potential to cause a great deal of trouble. No one imagined that Indian casinos would have expanded to the extent that they already have, and this is just one more way that they could grow even more—which is undesirable to many.¹⁹

Whereas commercial casinos grew at a rate of 6.7 percent in 2004, according to the American Gaming Association,²⁰ Dr. Alan Meister's numbers show us that Indian casino revenue grew at 15.2 percent.²¹ This beats even Las Vegas's growth rate of about 10 percent. These significant increases mean that the influence that Indian tribes have on politics and the welfare of their citizens is only going to increase over time. In 1999, Indian tribes donated a total of \$2,000 to politicians in the United States. In 2004 that number had surged to \$7 million.²² Although in the wake of the Jack Abramoff scandals, this tremendous increase should slow down, the contributions are not expected to stop any time soon. As their economic well-being increases, Indian tribes are going to become steadily more influential. Real per capita income of gaming tribes increased 36 percent between 1990 and 2000, whereas the income of nongaming tribes and the rest of the nation grew at 21 percent and 11 percent, respectively, during that same time period. This seems significant considering that American Indians received the lowest amount of per capita income assistance out of all Americans.²³ Obviously, it is also possible that the tremendous growth we see is merely a result of the historical setbacks that American Indians have faced over time—that any improvement we see is a result of the relative weakness of their starting point. However, this is not always the case, and if one looks at mere percentage point changes in the census data, there are still significant differences on the surface between the data for Indian reservations and the data for the nation as a whole.

Between the years 1990 and 2000, Indian tribes on the whole increased their overall income at an astoundingly higher rate than the rest of the United States, as described earlier in this chapter. Yet the differences between Indian tribes with gaming and without do not seem to be significant at this time. There are many things to consider when recognizing the lack of influence that gaming has had in 17 years. Many of the effects that are calculated would take much longer than these 17 years to have a massive measurable impact on the Indian population as a whole. Welfare statistics that are related to education and housing, for example, would take a lot longer to be affected by casino income than the aggregate incomenumbers. The time it takes to receive an education must be considered, and additionally, the investment in infrastructure and way of life definitely does not occur successfully over night. Aside from the fact that it took about 8 years for Indian casinos to take off and about 10 years for those tribes to gain any significant political influence, schools have to be built, a culture of education has to be established, and pupils that are of the appropriate age need to pass through the newly established learning systems. For instance, take the Mashantucket Pequot Tribal Nation; this tribe profits so substantially

from its world-renowned Foxwoods Resort Casino that it pays for any tribal member to attend college. Assuming that a person begins high school at the age of 14, that same person probably decides whether he or she is going to attend college by about age 17. Because the education statistics are not measured for anyone under the age of 25, at which age education levels become standardized and typically no longer change, this effect would take anywhere from 8 to 11 years to have any significant effect and much longer to make up a significant portion of the 25-and-older population. Considering this, it is not hard to see why the positive effects that many claim economic independence is having on the tribes might not yet be showing themselves. Either this is the case, or tribal leaders are, to date, making poor investment decisions or restricting the flow of money downward to the rest of the members of their tribes.

Finally, it is always important to look at the big picture when critiquing policy decisions. It is therefore difficult to gauge the specific impact that casinos have had—even more so for the Indian gaming industry because of its perceived isolation on reservations and mysterious reporting practices that are not subject to the same transparency laws as commercial casinos in the rest of the country. More specific to this chapter, it is even more difficult to estimate the negative effects that casinos have had on the Native American populace. Although studies may provide hard statistical evidence of negative effects in the future—one such study is soon due to produce the results of research on the use of methamphetamines by Indians on reservations—currently there is no such evidence.

Therefore, in coming years, we can only hope that the size and power of the Indian gaming industry influences public and private parties to engage in further studies of the effects that Indian gaming has had on the Native American population as well as on the American population at large.

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The Current Climate of Gambling in the United States¹

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A look at how gambling revenues stack up against revenues from other recreational/leisure time activity sectors reveals not only that the gambling revenues outweigh both music sales and movies combined, but also that the gambling industry is the only one of the industries in this study to have shown consistent growth in each of the last three years.

—Joseph Greff, “U.S. Gambling” (Bear, Stearns, January 2005)

With a few notable exceptions, it is a great time to be in the gambling industry. The year 2005, for example, was a record-breaking one for Las Vegas casinos, which took in \$11 billion from gamblers in casino revenues—excluding hotel, restaurant, and bar revenues.² In 2004 alone, U.S. gamblers spent \$78.6 billion on commercial gambling, a 7.6 percent increase over the year before.³ Lottery sales increased by an average of 12.5 percent throughout the United States.⁴ Tribal gambling and Internet gambling experienced double-digit growth, a rate not seen anywhere else within the gambling industry.

But can discussions about the gambling industry be painted in such broad, sweeping terms? Can one really talk about “the” gambling industry as a whole without generalizing to the point that trends become half-truths and facts and figures become meaningless? What similarities are there between an Internet sports book based on the Isle of Man and the Massachusetts state lottery’s daily operations? Given the explosive rate of growth in Internet gambling and the gradual decline of horserace betting, can one ignore the fact that the various segments within the industry are at different stages in their life cycles and

should therefore expect very different opportunities and threats in coming years? It is obvious that each segment deserves (or, more accurately, demands) its own assessment in order for any analysis to be fully developed, relevant, and—most important—meaningful.

There are, however, recurring themes that weave throughout each segment of “the” gambling industry and that merit special attention. The most obvious, and perhaps most important, of these themes is that of regulation. Regardless of what type of gambling is being discussed—be it Internet poker, slot machines in Vegas, or a sports book in the United Kingdom—each and every one of these various business enterprises faces some sort of regulation. In some instances, regulation creates state-held monopolies through special gambling licensing. In other jurisdictions more lax regulations allow for numerous firms to compete for consumer dollars. Finally, in the United States, ambiguous legislation and inconsistent activity by the courts regarding Internet gambling create a legal gray area. In this type of environment, sites enjoy a surplus of consumers and a scarcity of competitors, often resulting in huge profits for the more daring Internet gambling site operators.

Monopolies in the industry, however, are becoming things of the past. A second recurring and universal theme throughout “the” gambling industry is increasing levels of competition. The forms in which this competition manifests itself are as diverse as ever. California’s tribal casinos now compete with the Las Vegas Strip. Las Vegas bookmakers compete with Internet sports books based in the United Kingdom. These Internet sports books diversify their product offerings and allow users to play poker online, competing with other Internet poker sites. In many instances, gambling operators compete not only with other operators within the same segment (for example, a casino competing with another casino) but with *every other form of gambling readily available to customers*.

INTERNET GAMBLING

The rise of Internet gambling has been the primary driver of the intensifying levels of competition within the industry. No longer is consumers’ ability to place wagers limited by their geographic proximity to gambling operators (nor, in some instances, are they limited by the legislation of their country’s jurisdiction—for example, China). Internet gambling operators can serve a truly global customer base, and with the financial barriers to entry relatively low in comparison with the huge profits being reaped through Internet gambling, new entrants can enter at will and attempt to compete with the market leaders. As discussed earlier, these online operators compete not only with each other

but with traditional land-based operators as well. Although both land-based and Internet gambling operators have done fairly well in recent years, given the explosive growth and successful initial public offerings (IPOs) of several online-only firms, it appears that the Internet sites will ultimately come out ahead. Indeed, players in the gambling industry must be ready to compete in the "borderless global marketplace the Internet has created."⁵

Regardless of which segment of the gambling industry a particular firm is involved in, be it market leader or new entrant, no firm can afford to underestimate the impact that the Internet will have on its business. Internet gambling has revolutionized the gambling industry, and what we have seen thus far is only the tip of the iceberg. Estimates vary, but for discussion's sake, one expert estimates that consumers spent over \$8 billion on Internet gambling in 2004, and he expects that number to more than triple by the end of the decade.⁶ Although this sum represents only a small portion of global expenditures on commercial gambling, certain indicators point toward a bright future for Internet gambling operators. A case in point: PartyGambling plc, operator of PartyPoker, executed a highly successful IPO and listed on the London Stock Exchange with a market cap of almost \$8.5 billion. Its shares have appreciated significantly since then, and PartyGambling now has a market capitalization larger than Harrah's Entertainment.⁷ In light of the fact that Harrah's Entertainment is the world's largest casino operator, the true potential of Internet gambling has become apparent.

The landscape of the online gambling industry is undoubtedly the most challenging to navigate of any of the gambling industry's segments. In no other segment must an operator navigate such a web of legislative snarls or compete so ferociously for revenues. Unlike for traditional land-based gambling operators, for online casinos, poker tables, and bookmakers, barriers to entry are extremely low. With relatively little initial capital, a firm can purchase third-party software at minimal cost (royalties included) and apply for a license in any of a number of jurisdictions throughout the world. As a result, "given the portability of pure online services,"⁸ jurisdictions now compete to draw online operators, resulting in attractive tax regimes for firms willing to be flexible in their location. This leads to increasing levels of competition for consumers, driving up marketing spending. The added complexity of the various legal issues regarding the jurisdiction of the consumers themselves further muddles the legal waters.

The following is a short summary of the various issues surrounding Internet gambling. Current legislation in various countries runs the gamut from complete prohibition of Internet gambling to its legalization and regulation. In the United States, the Department of Justice (DOJ) holds that all Internet

gambling is illegal, under the 1961 Federal Wire Act, which prohibits bets made over telephone and other “wires.”⁹ Although the DOJ has no intention of prosecuting casual gamers, it is adamantly opposed to allowing firms located within U.S. jurisdiction to run online gambling sites. Harrah’s and MGM Mirage, for example, both formed Internet casinos, only to shut them down under pressure from the DOJ.¹⁰ The DOJ’s strategy has been to put pressure on financial intermediaries, fining them for processing illegal online gambling transactions. For example, the DOJ fined PayPal \$10 million in 2003 for such violations.¹¹

Interestingly enough, the legality of certain actions by the Department of Justice in restricting online gambling subsequently came under scrutiny. A case filed by the island of Antigua, a small Caribbean center for offshore Internet gambling, charged that the Department of Justice had restricted the “cross border supply of gambling and betting services” in violation of U.S. obligations under the General Agreement on Trade in Services (GATS) and World Trade Organization (WTO) regulations. The outcome proved ambiguous, with both sides claiming victory. Nevertheless, it appears that the United States ultimately will have to acquiesce to the WTO ruling—either through “total prohibition, including currently legal forms of online gambling . . . or liberalization [*sic*] and permissive regulation of online gambling.”¹²

Unlike U.S. legislation, legislation within the United Kingdom was updated following passage of the Gambling Act in 2005. Although online betting had not previously been illegal in the United Kingdom, the Gambling Act explicitly legalized online gambling and clarified a number of issues regarding advertising to the UK audience.¹³ But although the United Kingdom’s stance on Internet gambling is quite clear (permissive regulation), the greater European landscape is still divided. The 1957 Treaty of Rome established free trade principles regarding services, yet the European Court of Justice “has wrestled with the conflicting claims of member state laws predicated on sovereign power over gambling and free trade principles.”¹⁴ The political structure and conflicting interests of greater Europe are immeasurably complex, but research analysts at Deutsche Bank believe that the European market ultimately “will open up to cross-border online gambling . . . through rulings from the EU (European Union) courts rather than through a directive.”¹⁵

Regardless of the short-term developments in global regulation, the expansion of Internet gambling is inevitable in the long term. The blistering growth rates of online revenues, seemingly endless consumer demand, and market capitalization figures usually reserved for blue-chip stocks all point in one direction: Internet gambling will continue to grow as more firms enter the industry and cater to “an audience that is discovering that it actually quite enjoys casual gambling.”¹⁶ In regard to the future of Internet gambling, the competition will

eventually be whittled away until, as the industry matures, only the most successful operators remain. Consolidation is also likely as smaller sites are bought up by major firms, several of which, after very successful IPOs, now have plenty of acquisition currency.

What, therefore, is in store for traditional land-based gambling operators, given the unfettered explosion of Internet gambling in the United States—despite legislation aimed at preventing American gamers from utilizing online services? Like many things in life, it all depends on whom you ask, and even then, the answer you get today is likely to change over the course of the next few years. One study that analyzed the relationship between the increasing prevalence of Internet gambling and states' casino revenues came to the conclusion that "Internet gambling has not had a statistically significant negative impact on the gambling revenues of . . . Nevada and New Jersey."¹⁷

Yet by the close of this first decade of the twenty-first century, the advent of Internet gambling will have had a significant impact on traditional land-based revenues, negatively *or positively*. One scenario foresees Internet gambling reducing revenues through a substitution effect. The UK Treasury currently holds a different view, stating that the "assumption of a substitution effect between traditional based gambling offerings and remote gambling is false. Remote gambling is a unique customer experience."¹⁸ Although the experience is indeed different, this does nothing to imply that casual gamers will not choose one form of entertainment over the other. Internet gambling cannot replicate the experience of a weekend in Vegas, but online gambling sites offer betting services from the home. For consumers looking only to place a bet—with no interest in luxurious hotels, restaurants commanded by world-renowned chefs, or bustling nightlife—the online gambling experience may be preferable to what traditional casinos have to offer. In order to succeed in a post-Internet environment, casinos and other traditionally based gambling operations will have to evolve from being merchants of gambling services to merchants of *entertainment* services. This process has already begun, with certain casinos on the Las Vegas Strip earning less than half their revenues from gambling activities. If online gambling does negatively impact traditional operators, those operators will have to adapt their product offerings in order to replace lost revenues.

A second possible outcome scenario would find Internet gambling actually benefiting traditionally based games operators. Internet gambling—online poker, specifically—has introduced a record number of Americans to casual gambling. The stigma attached to gambling by moral authorities is diminished every time a consumer visits an online gambling site. The trend was started when Las Vegas shed its image as a seedy gambling hotspot and began to be perceived as a more family-friendly destination. What the Internet has done is

accelerate a shift in public opinion about gambling as a form of leisure, from a vice to an acceptable, and oftentimes enjoyable, pastime. Should this scenario hold true, casinos would see increases in their gambling revenues *as well as* in their other operating revenues. According to this “rising tide lifts all boats” view, casinos would see not only higher room occupancy rates *but also a greater percentage of guests actually sitting down to play at gambling tables*. Not only is there the opportunity to draw more people to casinos and other traditional gambling sites, but the opportunity also exists to encourage them to gamble more. Whereas Americans spend an average of 1 percent of after-tax earnings on gambling, Australians, for example, spend approximately 3.5 percent on gambling.¹⁹ Clearly, the market for American gambling services is far from saturated.

For horseracing in particular, with declining purses caused by years of declining race attendance, Internet gambling may be the last hope for survival. Simulcast races and off-track betting offer two ways to stimulate the sluggish industry by increasing purse sizes. Not everyone is embracing Internet gambling, though. Betting exchanges, which operate by matching a gambler who sets odds with another willing to take the bet (the operator of a betting exchange site takes no risk), can offer better prices than traditional bookmakers. Traditional bookmakers must manage their risk exposure and are also subject to higher taxes. Therefore, traditional bookmakers are unambiguously harmed by the existence of betting exchanges, because betting exchanges reduce the margins bookmakers can hope to earn.

To say that the Internet has revolutionized the gambling industry is far from an overstatement. If anything, the word “revolution” has been so overused that it fails to capture the tremendous impact Internet gambling will have on the industry for years to come.

NATIVE AMERICAN GAMBLING

Although online gambling has taken the globe by storm, it is not the only segment of the gambling industry to experience double-digit growth in recent years. Within the United States, gambling ventures operated under the Indian Gambling Regulatory Act have proven highly lucrative for Native American tribes as well as for investors lucky enough to have gotten in on the action. Collectively, the tribes now have the largest gambling industry segment in the United States, having surpassed the gross gambling revenues of the state of Nevada in 2001.²⁰ The climate of tribal gambling in the United States has become increasingly political, a fact that will shape the future of tribal gambling to come.

The most heated political debates revolve around tribal recognition and off-reservation casinos. Formal recognition of a tribe's legitimacy can mean the difference between financial success and poverty, and the political maneuverings employed by tribes seeking recognition, the investors backing them, casino operators, and other tribes who fear competition demonstrate the varied interests at play in tribal gambling. In 2005, the U.S. Senate Committee on Indian Affairs met to discuss the recognition process for Indian tribes. As one commentator noted, "Connecticut's governor, both its senators, and three of its congressmen showed up to testify on a matter none would have cared much about a decade or so ago."²¹ Connecticut already has two well-established tribal casinos, and those in office are not interested in a third.

Senator John McCain, who then chaired the Senate committee, noted that wealthy investors have a vested interest in helping tribes win recognition because the tribes would, in turn, provide the investors with profitable investment opportunities.²² Indeed, lobbying expenditures by tribes—whose poverty-stricken members are purportedly among the poorest in America—can total in the millions of dollars. As a matter of illustration, the Schaghticoke tribal nation spent approximately \$12 million in its efforts for recognition, financed in part by the founder of the Subway restaurant chain, and the Eastern Pequots of Connecticut were supported financially by none other than Donald Trump.²³ Although it would be nice to consider these acts as particularly altruistic, partnering with Native American casino operators can prove highly profitable. Witness a recent partnership between the Creek Indians and Harrah's Entertainment Inc. in trying to expand gambling in Rhode Island.²⁴

Off-reservation casinos are also a hot-button issue within the scope of tribal gambling. Whereas landless tribes maintain that restricting off-reservation gambling deprives them of opportunities to raise their socioeconomic status by opening a casino, opponents of off-reservation casinos, led by Senator McCain, argue that Congress (in passing the Indian Gaming Regulatory Act in 1988) never intended Native Americans to build off-reservation, Vegas-style casinos.²⁵ Opposition can even come from a seemingly unlikely source—other Indian tribes. Many tribes oppose off-reservation casinos strictly for fear of competition with their own tribal casinos.

Future prospects for Indian gambling are similar to those for traditional land-based casinos and other gambling sites. Although rapid expansion continues, the market segment is already showing signs of slowing growth rates as tribal casinos face increased competition from private casinos, state-run gambling operations, online gambling sites, and other tribal casinos themselves. As tribal casinos become established in their marketplace, fewer tribes will seek to enter a saturated market, especially if casinos are restricted to reservations not

frequented by the majority of the public. Though tribal gambling's fantastic rate of growth has been second only to that of Internet gambling, according to one economist, the "double-digit growth is over."²⁶

THE EXPANSION OF GAMBLING BY STATES: SLOTS, SPORTS GAMBLING, AND PRIVATIZATION

The final segment of the gambling industry to be discussed is the state of gambling in traditional gambling operations within the United States, including casinos, lotteries, and slot machines. As mentioned at the opening of this chapter, 2005 was a banner year for brick-and-mortar casinos throughout the country. Despite the threat posed by Internet gambling and tribal gambling, casinos in Las Vegas and Atlantic City are positioned to continue their financial success of recent years into the near future. The gambling industry as a whole will benefit from a favorable demographic shift in the U.S. population. "The average gambling patron is 49 years old, placing the average U.S. gamer in an age category that is growing three times faster than the overall U.S. population."²⁷ It is also noteworthy that the Las Vegas Strip tends to be a supply-driven economy, in that increasing the number of rooms available in effect increases the demand for said rooms. With the addition in 2005 of the \$2.7 billion Wynn Las Vegas, revenues from the hotel side of Vegas casinos could reach an all-time high.

Moving away from Las Vegas, casinos become less about profits and more about tax revenues. Permitting slot machines has become a favorite tactic of legislators seeking to raise revenue for state treasuries without raising taxes. Oftentimes, states vie for each other's residents' gambling dollars, building casinos just across their borders in hopes of luring revenues from out of state. As an example, Maryland is currently considering the legalization of slot machines in the state. James Browning, former executive director of Common Cause Maryland, which oversees campaign spending by the gambling industry, makes a deft comparison:

If you look at the other states, Pennsylvania got slots. West Virginia is talking about table gambling. It's like an arms race between the states, and campaign contributions and lobbying expenditures are the weapons to win.²⁸

Although the analogy may seem a bit overblown, it does bring to light an underlying theme of state-run gambling. The initial success of many of the first movers was a result of an inflow of out-of-state money into state-run casinos. Indiana, for example, has taken advantage of differences in legislation by allowing riverboat gambling near the border of two states that do not, those states

being Ohio and Kentucky.²⁹ In effect, Ohio and Kentucky residents are subsidizing lower taxes for residents in Indiana—a politician's dream come true.

In a similar vein, states such as New Jersey are considering legalizing sports gambling in order to protect their current flow of gambling revenue. In 1976, New Jersey became the first state besides Nevada to legalize casino gambling. Casino gambling was confined to Atlantic City in the hope that Atlantic City would recover some of its cachet as a resort community. It has been a success in that Atlantic City is the second-largest casino gambling market in the United States, yet Atlantic City casino gambling has experienced slow growth from 2001 to 2006. With bordering states such as Delaware, Pennsylvania, and New York permitting slot machines at racetracks as well as other venues, Atlantic City's prospects appear bleak. Hence, legalized sports gambling is seen as the newest weapon in New Jersey's arsenal to protect its gambling revenues by reinvigorating Atlantic City as a casino destination. This is a highly controversial move on New Jersey's part. Many professional sports leagues, such as the National Football League and the National Basketball Association, as well as the National Collegiate Athletic Association, are adamantly opposed to legalizing sports betting.

Finally, the state of Illinois, among others, has proposed selling its lottery to private operators. Currently, the state lotteries are owned and operated as government agencies. This proposal does give rise to two series of questions: (1) Why should government have a monopoly over lotteries? Isn't our entire economy built on the merits of competition? Wouldn't the bettor be better off with competitors offering a variety of games and odds? and (2) Why is gambling regulated by government at all? If so, what is the appropriate amount of regulation, and can government really regulate an industry from which it draws so much revenue?

Of course, all of these questions have one common denominator: revenue! As the reader proceeds to examine all of the various facets of gaming, Tables 15.1, 15.2, and 15.3 should provide an idea as to why gambling has become such an important topic for public policy officials.

Although the threads of competition and regulation run through any discussion regarding any segment of the gambling industry, it is a daunting task to make any statement summarizing the present climate or future outlook of "the" gambling industry, for the industry is manifested in many distinct forms. What *can* be said about the gambling industry in its entirety is that each part is connected to the whole more deeply than ever before. Consumers enjoy gambling, and firms are just scratching the surface in terms of developing innovative service offerings to cater to the gambling public. Yet although the public enjoys additional forms of gambling, opposition to the expansion of gambling remains quite strong.

Table 15.1
State Prohibitions on Gaming

State	Lottery	Casino/ Resort	Native Casino	Video Lottery Terminals	Betting Tracks
Alabama	No	No	Yes(3)	Yes	Yes
Alaska	Yes (non- profits)	No	No	No	No
Arizona	Yes	Yes	No	Yes	Yes
Arkansas	No	No	No	No	No
California	Yes	Yes	Yes	Yes	Yes
Colorado	Yes	Yes	Yes	Yes	Yes
Connecticut	Yes	No	Yes(2)	Yes	Yes
Delaware	Yes	No	No	Yes	Yes
Florida	Yes	Yes	Yes(4)	No	Yes
Georgia	Yes	No	No	No	No
Hawaii	No	No	No	No	No
Idaho	Yes	No	Yes(1)	Yes	No
Illinois	Yes	Yes	No	Yes	Yes(?)
Indiana	Yes	Yes	No	Yes	Yes
Iowa	Yes	Yes	Yes	Yes	Yes
Kansas	Yes	Yes	Yes(4)	Yes	Yes
Kentucky	Yes	No	No	No	Yes
Louisiana	Yes	Yes	Yes(3)	Yes	Yes
Maine	Yes	No	No	No	Yes
Maryland	Yes	No	No	No	Yes
Massachusetts	Yes	No	No	No	Yes
Michigan	Yes	Yes	Yes	Yes	Yes
Minnesota	Yes	No	Yes(18)	Yes	Yes
Mississippi	No	Yes	Yes	Yes	Yes(?)
Missouri	Yes	Yes	No	Yes	No
Montana	Yes	No	No	Yes	No
Nebraska	Yes	Yes	Yes(1)	Yes	No
Nevada	No	Yes	No	Yes	Yes
New Hampshire	Yes	No	No	No	Yes(4)
New Jersey	Yes	Yes	Yes	Yes	Yes

**Table 15.1
(continued)**

State	Lottery	Casino/ Resort	Native Casino	Video Lottery Terminals	Betting Tracks
New Mexico	Yes	Yes	Yes(7)	Yes	Yes(4)
New York	Yes	Yes	Yes(2)	Yes	Yes
North Carolina	No	Yes	Yes(1)	Yes	No
North Dakota	No	No	Yes(4)	Yes	No
Ohio	Yes	No	No	No	Yes(7)
Oklahoma	No	No	Yes(4)	No	Yes
Oregon	Yes	No	Yes(6)	Yes	No(?)
Pennsylvania	Yes	No	No	No	Yes(4)
Rhode Island	Yes	No	No	Yes	Yes
South Carolina	Yes	No	No	No	No
South Dakota	Yes	Yes	Yes(10)	Yes	No(?)
Tennessee	Yes	No	No	No	Yes
Texas	Yes	No	Yes(2)	No	Yes
Utah	No	No	No	No	No
Vermont	Yes	No	No	No	Yes
Virginia	No	No	No	No	No
Washington	Yes	Yes	Yes(20)	Yes	Yes
West Virginia	Yes	No	No	Yes	Yes(4)
Wisconsin	Yes	No	Yes(17)	Yes	No(?)
Wyoming	No	No	No	No	Home Only

Source: Retrieved from <http://www.gamblingandthelaw.com>, and <http://www.naspl.org>.

Table 15.2
Gambling Taxes (Millions \$) Collected by States (2005)

State	Lottery	Casino/ Resort	Rac- inggo	Chari- table	Pari- Mutual	Total
Alabama	0	0	0	0	0.5	0.5
Alaska	0	0	0	0	0	0
Arizona	104.57	0	0	5.61	0.64	110.82
Arkansas	0	0	0	0	2.59	2.59
California	945.16	0	0	20.72	37.43	1,003.31
Colorado	93	95.6	0	4.68	0.52	193.80
Connecticut	270.37	0	0	1.36	4.52	275.93
Delaware	32.87	0	175.7	0.09	0.24	208.89
Florida	1,178.36	0	0	4.95	8.91	1,192.23
Georgia	768.16	0	0	1.1	0	769.25
Hawaii	0	0	0	0	0	0
Idaho	20.7	0	0	0	0.47	21.17
Illinois	578.08	719.9	0	9.21	12.01	1,319.20
Indiana	188.47	702.7	0	0	4.12	895.28
Iowa	48.85	141.3	68.4	1.18	0.19	259.93
Kansas	63.43	0	0	1.33	1.65	66.41
Kentucky	187.66	0	0	14.12	5.6	207.58
Louisiana	119.25	517.66	76.7	4.57	4.83	723.01
Maine	44.02	0	0	0	1.74	45.77
Maryland	464.59	0	0	5.75	1.89	472.23
Massachusetts	971.78	0	0	4.15	0.98	976.90
Michigan	609.75	250.2	0	12.59	11.87	884.41
Minnesota	79.17	0	0	25.26	0.17	104.60
Mississippi	0	325	0	2.7	0	327.70
Missouri	214.74	377.2	0	2.89	0	594.82
Montana	7.01	46.13	0	0.09	0.1	53.33
Nebraska	62.13	0	0	2.32	0.76	65.21
Nevada	0	776.5	0	0.34	5.01	781.85
New Hampshire	71.28	0	0	3.52	2.14	76.94
New Jersey	824.20	414.5	0	4.81	0	1,243.50
New Mexico	32.86	0	37.7	0.72	0.64	71.92

**Table 15.2
(continued)**

State	Lottery	Casino/ Resort	Rac- inggo	Chari- table	Pari- Mutual	Total
New York	2,144.51	0	n/a		27.85	2,172.35
North Carolina	0	0	0	0.89	0	0.89
North Dakota	0	0	0	5.39	4.01	9.40
Ohio	580.66	0	0	22.49	10.08	613.23
Oklahoma	0	0	0	2.15	3.33	5.48
Oregon	68.97	0	256.66	0	0.76	326.40
Pennsylvania	519.19	0	0	6.14	19.71	545.04
Rhode Island	69.75	0	188.8	0.41	3.26	262.22
South Carolina	0	0	0	3.87	0	3.87
South Dakota	6.25	11.6	138.93	0.64	0.18	157.61
Tennessee	0	0	0	0	0	0.00
Texas	1,004.74	0	0	16.85	3.38	1,024.96
Utah	0	0	0	0	0	0.00
Vermont	20.52	0	0	0.28	0	28.80
Virginia	377.58	0	0	0	2.29	379.88
Washington	63.82	93.42	0	6.1	1.84	165.18
West Virginia	54.35	0	324.6	0	1.02	379.97
Wisconsin	120.21	0	0	2.93	0	123.15
Wyoming	0	0	0	0.59	0.18	0.76
Totals	\$13,088.70	\$4,471.80	\$1,267.50	\$202.80	\$187.10	19,217.70

Source: Christiansen Capital Advisors, *Insight*, August 2005, retrieved from <http://www.cca-1.com>; <http://www.naspl.org>.

Table 15.3
Gambling's Contributions to State Finances

State	Gambling Revenue	Total Revenue	Percentage
Alabama	\$0.50	\$5,585	0.01
Alaska	0	2,471	0
Arizona	110.8	6,031	1.84
Arkansas	2.6	3,251	0.08
California	1003.3	79,412	1.26
Colorado	193.8	6,137	3.16
Connecticut	275.9	12,016	2.3
Delaware	208.9	2,918	7.16
Florida	1192.2	21,197	5.62
Georgia	769.3	16,383	4.7
Hawaii	0	3,923	0
Idaho	21.2	1,941	1.09
Illinois	1319.2	25,161	5.24
Indiana	895.3	10,446	8.57
Iowa	259.9	4,484	5.8
Kansas	66.4	4,260	1.56
Kentucky	207.6	7,444	2.79
Louisiana	723	6,662	10.85
Maine	45.8	2,564	1.78
Maryland	472.2	10,469	4.51
Massachusetts	976.9	23,363	4.18
Michigan	884.4	8,895	9.94
Minnesota	104.6	14,180	0.74
Mississippi	327.7	3,494	9.38
Missouri	594.8	7,669	7.76
Montana	53.3	1,322	4.03
Nebraska	65.2	2,622	2.49
Nevada	781.9	2,139	36.55
New Hampshire	76.9	1,336	5.76
New Jersey	1243.5	23,223	5.35
New Mexico	71.9	4,339	1.66

Table 15.3
(continued)

State	Gambling Revenue	Total Revenue	Percentage
New York	2172.4	40,328	5.39
North Carolina	0.9	14,271	0.01
North Dakota	9.4	870	1.08
Ohio	613.2	22,558	2.72
Oklahoma	5.5	4,687	0.12
Oregon	326.4	3,969	8.22
Pennsylvania	545	20,679	2.64
Rhode Island	262.2	2,735	9.59
South Carolina	3.9	5,040	0.08
South Dakota	157.6	891	17.69
Tennessee	0	8,126	0
Texas	1025	31,064	3.3
Utah	0	3,560	0
Vermont	20.8	884	2.35
Virginia	379.9	12,204	3.11
Washington	165.2	11,666	1.42
West Virginia	380	3,139	12.1
Wisconsin	123.1	10,772	1.14
Wyoming	0.8	768	0.1
Totals	19,217.70	523,548	3.67

Source: Statistical Abstract of the United States for 2004–05, State Regulatory Agencies.

This chapter has focused on the current state of the various segments of the gambling industry, on why states compete for expanded gambling revenues, and on the forces expected to shape how that competition will take place. There are various ethical concerns that public policy officials need to take into account before they develop a coherent gaming strategy for their states. How states formulate and implement these strategies will, of course, determine whether they are successful in achieving the goal of a delicate balance between the revenue needs of the state and the social costs that invariably accompany the expansion of gambling activity.

NOTES

1. From *The Gambling Debate*, Richard A. McGowan; Chapter 1, pp. 3–18, “The Current Climate of Gambling in the United States.” Copyright 2007 by Richard A. McGowan. Reproduced with permission of Greenwood Publishing Group, Inc. Westport, CT.
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Online Gaming Addiction: Symptoms, Risk Factors, and Treatment

Kimberly S. Young, PhD

My son is a sophomore in high school and he appears to be addicted to on-line video games. I think his ideal life would be sitting in front of a computer monitor with an IV in his arm to deliver enough nutrients and caffeine that he wouldn't have to eat or sleep. He also has started to lie to his father and me—and to his teachers—about his schoolwork to maximize his access to the video games, particularly those on the web. He has some friends, but they are limited to other “gamers” and he went from being a straight “A” student to failing out of school. In one sense, I'm glad he isn't out on the streets getting into drugs or other forms of trouble. But I fear his life has become so one-dimensional that he will be damaged as a result of this obsession.

—Linda, a concerned mother in California

Adolescents are encouraged to utilize the Internet to enhance school performance and competitiveness; however, heavy use has several negative consequences. Internet addiction is one of the most serious problems (Young, 1998a; Griffiths et al., 2003; Kelly, 2004). Adolescents who are addicted to the Internet also usually suffer from problems in their daily routine, school performance, family relationships, and mood (Leung, 2004; Ng & Wiemer-Hastings, 2005). It is important, therefore, for mental health professionals to develop effective intervention strategies for preventing Internet addiction among adolescents. It is also important to examine the warning signs, risk factors, and treatment strategies associated with gaming addiction, to aid in detection and prevention.

WHAT IS ONLINE GAMING ADDICTION?

Online gaming addiction is an addiction to online video games, role-playing games, or any interactive gaming environment available through the Internet (Young, 1998b). Online games such as EverQuest, the Dark Age of Camelot, or Diablo II—dubbed “heroinware” by some players—can pose much more complex problems. Extensive chat features give such games a social aspect missing from offline activities, and the collaborative/competitive nature of working with or against other players can make these games a hard habit to break (Ducheneaut & Moore, 2004).

“I really want my life back,” explained one gaming addict. “Three years ago I was one of the most popular kids at school. I got invited to all the parties, got lots of girls, had too many friends. Then I discovered an online game called Counter-Strike. It’s very hard for me to stop. I wake up in the morning, no shower, get on the computer, stay on till the wee hours of the mornings, go to sleep, repeat. I don’t know how to get off, I’ve tried. . . . It’s just too hard. I heard this is a very common problem but I really want to get my life back and I’d give anything.”

In the early days of the Internet, interactive online games were a takeoff on the old Dungeons and Dragons games, often known as Multi-User Dungeons, or MUDs, that drew upon power, dominance, and recognition within a role-playing, make-believe virtual world. Young men traditionally gravitated toward these role-playing games to assume a character role associated with specific skills, attributes, and rankings that fellow players would acknowledge and treat accordingly (Turkle, 1998). MUDs differed from traditional video arcade games in that instead of a player’s hand-eye coordination improving, the actual strength, skills, and rankings of the character improved. MUD players earned respect and recognition from fellow players (Turkle, 1998), and younger men, especially those with low self-esteem and weak interpersonal skills, were at greatest risk of becoming addicted if they developed a powerful persona within the game (Young, 1998b).

Interactive gaming has taken on new themes beyond Dungeons and Dragons that are easier to learn and appealing to those who are more mainstream. In several documented cases, interactive gaming has led to divorce, job loss, and health problems among those suffering from an addiction. While online gaming addiction is not as prevalent as addictions to cyberporn or online chatting, online gaming has grown substantially over the last few decades, reaching millions of users. Gaming also encompasses traditional board games such as YAHZEE or Bingo, which have taken on an interactive and social nature when

played online, and virtual casinos have also grown rapidly, especially among teenagers and college-aged populations who now easily access black jack, roulette, or poker tables online.

Globally, recent reports have indicated that interactive online gaming has reached addictive proportions in China, Korea, and Taiwan (Lee, 2007). About 10 percent of China's more than 30 million Internet gamers are said to be addicted. To battle what has been called an epidemic in some reports, Chinese authorities regularly shut down Internet cafes, many illegally operated, in crackdowns that also include huge fines for their operators. The Chinese government has also instituted laws to reduce the number of hours adolescents can play online games (BBC News, 2007) and in 2005 opened the first treatment center for Internet addiction in Beijing. Online gaming addiction continues to raise such serious concerns that the first detox center for video game addiction has opened in Amsterdam (CBSNews.com, 2006), and most recently the American Medical Association, at its annual policy meeting, has considered calling video game overuse an addiction (Tanner, 2007).

SIGNS OF ONLINE GAMING ADDICTION

As online gaming becomes more popular, more parents discover how addictive it can be for their children. "My son has completely withdrawn from his family and from all reality," explains one mother. "At first, his father and I were happy that he seemed interested in the Internet. He had no other hobbies and he seemed to make friends online, but soon, the game took over his life. He didn't shower, didn't eat, and didn't leave his room. My husband and I became worried and tried to set time limits, but he just got mad. I mean angry and hateful towards us. It was a side of our son we had never seen. All he wanted was the game. We are so scared and don't know where to turn. Counselors we have talked to just tell us it is a phase and to ignore it, but we can't. His whole life is the game. This is more than a phase—it is an obsession. We are desperate to find him help."

Parents often feel alone and scared as their children become hooked on something that no one seems to understand. Parents search for information and help of any kind as they helplessly watch their children become absorbed in the computer and begin to see the warning signs of a dangerous pattern. Gamers who become hooked show clear signs of addiction. Serious gamers, who play for extended periods of time (over four hours at a time), get restless or irritable if they can't play, and sacrifice other social activities just to game, are

showing signs of addiction (Griffiths, Davies, & Chappell, 2003). Other common warning signs include the following:

- A preoccupation with gaming
- Lying or hiding gaming use
- Disobeying time limits
- Loss of interest in other activities
- Social withdrawal from family and friends
- Psychological withdrawal from the game when forced away from it
- Using gaming as an escape
- Continuing to game despite its consequences

Preoccupation with Gaming

The addiction process begins with a preoccupation with gaming. Gamers will think about the game when offline and often fantasize about playing the game when they should be concentrating on other things. Instead of thinking about the paper that needs to be completed for school, or going to class, or studying at the library, the gamer becomes completely focused on playing the game. Gamers start to miss deadlines and neglect work or social activities, as being online and playing the game becomes their main priority.

Lying or Hiding Gaming Use

Some gamers spend days and nights online. They don't eat, sleep, or take showers because of the game. They lie to family and friends about what they are really doing on the computer. Students tell their parents that they are doing their homework, spouses tell their family that they are using the computer for work, and friends will make up excuses for why they can't go out—all to find more time to play the game.

Loss of Interest in Other Activities

As the addiction grows, gamers become less interested in hobbies or activities that they used to enjoy and become more fascinated by the game. One mother told me about her son who loved baseball and played Varsity on his high school team until he discovered Xbox Live. "His grades plummeted after he discovered the game, but it wasn't until he quit the baseball team that I knew that something was seriously wrong. He loved baseball too much. He even won

a baseball scholarship for college and dreamed about playing professionally. Now, nothing else matters to him except the game.”

Social Withdrawal

Some gamers experience personality changes the more addicted they become. A once outgoing and social daughter withdraws from friends and family only to spend more time alone in front of the computer. A normally happy son becomes withdrawn, preferring to make friends in the game as the people that were once important in real life become less important. As one mother explained, “If no one else existed, he would play all day.” If children do have real-life friends, they are usually fellow gamers. In some cases, gamers are introverts who have problems making social connections in real life and turn to the game for companionship and acceptance.

Disobeying Time Limits

Because of their addiction, gamers become defensive about their need to play the game and angry when forced to go without it. Parents who try to put time limits on the game describe how their sons and daughters become angry, irrational, and even violent. In one case, a mother told me about her son who spent his nights gaming and his days sleeping. “When I took away his computer, he pushed me, slammed the door to his room, and wouldn’t come out all night. When I came home from work the next day, he took a sledgehammer to my computer, which was off limits to him. This isn’t my son. He was a good kid and never gave me a moment’s trouble until I lost him to the game.”

Psychological Withdrawal

Gamers who can’t access the game experience a loss. They want to be on the game and they miss playing the game. This feeling can become so intense that they become irritable, anxious, or depressed when they are forced to go without the game. They can’t concentrate on anything other than going back online to play. Their minds become so fixated on the game that they can experience a psychological withdrawal from the game such as depression and irritability. Their feelings intensify and they stop thinking rationally and begin to act out toward other people in their lives. All that they can think about is getting back to the game, and they become vent their anger and bitterness against anyone who threatens to take it away.

Using Gaming as an Escape

Gaming addicts use the online world as a psychological escape. The game becomes a safe means to cope with life's problems. It is a legal and inexpensive way to soothe troubling feelings and can quickly become a convenient way to instantly forget stresses and pains. Like drug addicts or alcoholics who use drugs or alcohol as a way to escape problems that they aren't able to deal with, gaming addicts use the game to avoid stressful situations and unpleasant feelings. They escape into the gratification of the game and the feelings they associate with playing it. Gamers who feel socially awkward, isolated, and insecure in real life can transform themselves into people who feel socially confident, connected, and self-assured in interacting with others through the game. As gamers progress further into the game, they make friends (or maybe their friends were the ones who first introduced them to the game) and these social relationships with other players become highly significant. While playing, gamers feel more accomplished, more accepted, and better about themselves. Through their characters, gamers live out a fictional life that is more satisfying and interesting than their own.

Continuing to Game despite Its Consequences

Gamers often want to be the best at the game. In order to grow in the game, they need to play. Especially in quest-type games that include a shared activity, they hunt for items together, and can take several hours to complete one quest. Gamers who become hooked become obsessed with the need to be the best at the game. They want to feel powerful and to be recognized by other players; in order to do this they must spend time in the game. They continue to use the game despite its effects on their lives. Adolescents may fail out of school, lose a scholarship, break up with a girlfriend or boyfriend, and ignore basic hygiene, just to be online. Adults may lose a job or a relationship, or their marriage may be on the brink of divorce, but still they remain loyal to the game.

PSYCHOSOCIAL RISK FACTORS

People of all ages are quickly becoming immersed in the virtual fantasy world in which they can easily escape problems in their real lives (Kolo & Baur, 2004). "For me, gaming was a way of coping with my divorce," said Susan, a regular player of the game *EverQuest*. "A guy I talk to has been through three girlfriends and even more jobs because of the game." Like other players, Susan struggles to find a workable balance between gaming and the responsibilities

in her life. She spends nearly eight hours a day online and often questions her devotion to the game. "I think of quitting all the time," she said. "I'm neglecting my kids and my husband but the game is so powerful I feel helpless to stop." Recent research has explored several potential risk factors associated with addictive online gaming behavior.

Low Self-Esteem

Individuals who suffer from low self-esteem or other emotional problems are at greater risk for developing an addiction to online gaming. Recent studies suggest that hardcore players may have a tendency toward neuroticism or may suffer from emotional problems or low self-worth and esteem (Yee, 2007). The studies suggest that individuals who have other emotional problems may be more at risk of developing an addiction to interactive gaming. In the game, the interactive environments allow individuals to experiment with parts of their personality: they can be more vocal, try out leadership roles, and try out new identities. The problem comes when players rely upon these new online personae and the distinction between reality and a fantasy role-play game becomes blurred. Kevin was a 21-year-old from Rochester, NY, who was dismissed from college because of his gaming habit. When I asked him about the game, he said that his life seemed to be important when he was playing the game. He was important in the game, but in real life he was a person who couldn't make friends and wasn't meeting his parent's expectations. He had failed in school, not so much because he couldn't pass the tests but because he couldn't make it to class. He didn't have a direction in his life, and because of this, he didn't feel good about his life. But in the game, all that changed. He was good at the game, had a network of fellow gamers who, he felt, were his closest (and only) friends, and he felt validated and confident when playing the game.

Poor Social Relationships

A large part of gaming is about making social relationships. Gamers often make friends with other gamers (Kolo & Baur, 2004). Ultimately, online gaming is a social activity. Most online games include copious amounts of chatting, allowing players to interact with each other in the guise of the characters they represent. The social aspect is a primary factor in many game addictions (Leung, 2007). Many adolescents have trouble with social relationships and feel lonely, as if they have never truly belonged. Adolescents can develop a sense of belonging in the game. In some cases, the game provides the only friends they interact with. Gamers can become hooked on the social aspect of the game.

They may join guilds that provide a strong sense of community and accomplishment when they take out monsters or strategize about their next online session. Through quests or nightly turns playing the game, gamers can form close bonds and friendships with fellow players that provide the social contact that has been missing from their lives.

Highly Intelligent and Imaginative Individuals

Gaming provides players with an outlet for their imaginations (Turkle, 1998). Adolescents who are academically bright and who feel understimulated in school turn to the game as a place for adventure and intellectual stimulation (Kelly, 2004). Games also lure players with complex systems of goals and achievements. The players are drawn into the virtual fantasy world of the game; they internalize the game as a real place, and other characters are seen as real people, not fictional characters. Especially in goal-oriented games such as *EverQuest*, players engage in activities designed to develop their characters and compete to find valuable in-game elements such as armor and weapons. Players can find themselves wrapped up in the game for hours as they struggle to gain one more skill or weapon.

Need for Recognition and Power

Turkle (1998) describes how gamers often achieve recognition and power through online gaming. "I'd say the most addictive part for me was definitely the gain of power and status," explained Mark, a gamer hooked on *Diablo II*. "The way you progressively gain power you become more of an object of awe to the other players. . . . each new skill isn't enough." Among most multi-user gamers, each goal leads to another goal, and gamers make critical choices along the way. They invest significant time and thought in developing a character. They feel they have wasted their time unless they reach the next goal. For example, Mark, a college sophomore, explained, "By day I am a mild-mannered student, but at night, I become the most aggressive warrior online." Mark had always been a loner. He described how, growing up as a middle child, he felt ignored by his parents, who gloated over his older sister, a medical doctor, and his younger sister, a freshman at Brandeis, while he attended a state university. He had built up a great deal of resentment toward his siblings, and deep down he resented his parents for their neglect. "On the outside, I looked like the perfect child and no one knew of the anger and resentment that I felt inside," Mark explained. "I was afraid to give into my anger, yet within the game, I confronted my fears and liked dominating other players. I became known as the most powerful and the

most respected player in the game, and I needed that. The game was the only place in my life where I felt important.”

The Younger They Start

Some research has suggested that the younger children start to use the Internet, the more they are at risk of developing an addiction to online gaming (Yee, 2007). Dan started gaming by age 12. He was drawn to Gameboy, Sony Play Station, and Nintendo with his friends, and gradually progressed to XBox. He was able to manage the time he spent gaming until he went on XBox Live. “It was like a whole other world opened up to me,” he explained. Suddenly, he was able to interact with fellow players instead of sitting beside friends while playing the game. Gaming had already become a large part of his personal identity, and despite suffering from attention deficit disorder (ADD) he was able to sit in front of the computer for hours. His parents became concerned when his gaming habit turned into an obsession. “He went into a trance-like state every time he went online but unlike other hobbies, he never lost interest in this,” his mother explained. “When he quit the track team, which he loved, we knew he had a serious problem and the game took over his life.” Interestingly, children with ADD have been prone to gaming addiction and are more likely to form an addiction to gaming due to the stimulation that the interaction with other online players and the challenge of the game can provide.

Family History of Addiction

Recent studies in Taiwan suggest that family factors also increase risk for developing online gaming addiction (Yen, Yen, Chen, Chen, and Ko, 2007). Adolescents from households of lower economic levels, whose parents are separated or divorced, whose families have high parent-adolescent conflict, or whose families have a history of addiction are at greater risk of developing gaming addiction. Many addictions stem from a history of addiction in the family as a way of coping with painful feelings and difficult situations. Seeing that an aunt, uncle, or other relative copes with problems through drinking, drug use, gaming, or smoking might indicate to an adolescent that this is the way to cope with all problems. Gamers who become addicted, especially adolescents, often use the game as a way of escaping conflict or turbulence in their lives. Adolescents experiencing a traumatic transition such as divorce, or family relocation, or the acquisition of a new step-parent face a personal crisis and learn to cope through the Internet. Adolescents addicted to gaming explain that they feel alone, feel emotionally removed from others, or feel that their parents are somehow

disappointed with them (Young, 1998b). Like those addicted to drugs or alcohol, they use the game to escape these painful feelings and momentarily feel a sense of acceptance and accomplishment in their lives.

TREATING GAMING ADDICTS

As in any treatment program, the primary step to take in the path to recovery is to accept and not refute “denial,” a defense mechanism that addicts frequently employ and that effectively stops them from accepting treatment. Once this obstacle is overcome, treatment can be more effective. It is important to understand that compulsive online gaming is treatable. It affects the gamers, their families, their schoolwork or employer, and their community. For players who do admit they have a problem, the most common response is a guilt-and-purge cycle, which is common to many addictions (Kelly, 2004). Many players who realize that they are addicted will kill their characters and delete the game software with no regrets; however, many other game addicts aren’t as successful in doing this. For most players, true recovery involves looking at the issues underlying the game habit. Addicted players need to examine the emotional motives that prompt them to play a game excessively and look for alternate ways to satisfy those needs.

Knowing the Clinical Signs

It is important to be able to recognize the symptoms of online gaming addiction and possible warning signs. The sooner one seeks help for an adolescent experiencing online gaming addiction, the more beneficial it will be. Consistent patterns of addiction in adolescence are in most cases a sign that there are prevalent issues in the adolescent’s immediate environment that need to be addressed. Some warning signs that an adolescent may be abusing games include change of friends, change in physical health, behavioral problems, academic problems, change in attitude, indifference, increased irritability and hostility, frequent changes in mood, eating, and sleeping patterns, and depression and isolation. Young (2007) developed an eight-item screening test based upon the American Psychiatric Association’s *Diagnostic and Statistical Manual of Mental Disorders (DSM)* to help clinicians identify the most common signs of compulsive behavior related to online games:

1. Do you need to play for increasing amounts of time?
2. Are you preoccupied with gaming (thinking about it when offline, anticipating your next online session)?

3. Have you lied to friends and family members to conceal the extent of your gaming?
4. Do you feel restless or irritable when attempting to cut down or stop online gaming?
5. Have you made repeated unsuccessful efforts to control, cut back, or stop online gaming?
6. Do you use gaming as a way of escaping from problems or relieving feelings of helplessness, guilt, anxiety, or depression?
7. Have you jeopardized or lost a significant relationship because of your on-line gaming habit?
8. Have you jeopardized a job, educational, or career opportunity because of your online gaming habit?
9. Do you suffer from eye strain, back strain, or lack of sleep because of the amount of time you spend at the computer?
10. Do you suffer from carpal tunnel syndrome or other repetitive stress injuries because of the amount of time you spend at the computer?

Answering “yes” to give or more of questions without the response being better accounted for by a manic episode suggests that a client may suffer from online gaming addiction. These signs suggest that a client has lost control, lied, risked a relationship or job, or possibly suffered from physical problems because of online gaming.

Symptom Management

Understanding how and when a gamer uses the computer is an initial step in the recovery process. Keep a daily log to track how the gamer actually uses the Internet, then take a few minutes to consider his or her current online habits. On what days of the week does he typically log online? At what time of day does she usually begin? How long does he stay online during a typical session? Where does he usually use the computer? Does a pattern emerge? Now, using the daily log, construct a new schedule, or what Young (1998b, 56) refers to as “practicing the opposite.” The goal of this exercise is to disrupt the client’s normal routine and construct new patterns of time use in an effort to break the online habit. Let’s say the client’s Internet habit involves playing the game from 5 a.m. until after midnight. Instead of going online, the client should take a shower or start breakfast first instead of logging on. Or, perhaps, a client uses the Internet only in the evening, and has an established pattern of coming home and sitting in front of the computer for the remainder of the evening. Instead, he should wait until he has had dinner and watched the news before logging on. Practicing the opposite will disrupt clients’ normal Internet patterns and increase their ability to effectively manage their online time.

Online gaming is an emotionally draining and time-consuming activity, and to create more time for the computer, addicts neglect sleep, diet, exercise, hobbies, and socializing. The initial loss of online gaming means an increase in idle time or boredom, which only increases the temptation to surf, making it vital for clients to create positive lifestyle changes to fill the void created by time no longer spent at the computer.

Symptom management also involves creating positive lifestyle changes that take clients away from the computer and improve their emotional and physical well-being (Young, 2007). This varies, depending upon the client's specific situation. Some strategies may involve finding spiritual fellowship in the form of personal prayer or pastoral counseling as part of spiritual wellness and daily recovery (Young & Klausing, 2007). Clients may practice meditation to focus their energy during recovery and use prayer and scripture to improve their ability to fight the temptation to return to the computer. Other activities include getting the proper rest, going to bed at a reasonable hour, joining a gym, and improving diet to manage overall physical health.

As in food addiction, symptom management is an essential part of recovery. In food addiction, certain foods trigger binge behavior. Chocolate or potato chips will trigger binges but celery sticks will not, so avoidance of the trigger foods is a necessary part of recovery. This means that recovery from binge eating is about relearning how to eat in order to make more informed and healthier food selections, with success being measured through objective goals such as changes in caloric intake and weight loss. The same logic is applied to addictive online gaming. In part, recovery involves relearning how to use the computer, making better choices about its use. Reducing the number of hours a gaming addict spends online is an important first step, but to move toward full recovery, the addict must also address the underlying issues that led to gaming (Young, 1998b).

Addressing Underlying Issues

The ability to mentally absorb oneself in a virtual environment that seems more exciting and more interesting than one's real life reinforces the addictive behavior and can be used as a coping mechanism to deal with missing or unfulfilled needs. That is, gaming momentarily allows the gamer to forget his or her problems. In the short term, gaming may be a useful way to cope with the stress of a hard situation; however, addictive behaviors used to enable the individual to escape or run away from unpleasant situations in the long run only make the problem worse. For the gaming addict, situations such as a death of a loved one, a divorce, or a job loss may trigger using the game as a mental distraction that

temporarily makes such problems fade into the background. Since the escape is only temporary, addicts return to gaming as a means of making themselves feel better without dealing with and resolving the underlying feelings of depression or anxiety in their lives.

The game produces a “high” that provides an emotional escape, altered state of reality, or mental rush (Ng & Wiemer-Hastings, 2005). That is, online gaming, through the excitement of becoming someone new in a role-playing game, the challenge of winning the quest, and the pleasure of making new friends through the game, provides an immediate mental escape from problems and serves to reinforce future behavior.

Therefore, treatment requires addressing those needs that the game fulfills. For James, a 21-year-old college freshman addicted to Xbox Live, the hardest part of getting better was finding something else in life that mattered as much as the game. “At 21, I was going nowhere fast,” James explained. “I didn’t like school, I didn’t have any friends except those I knew in the game, but yet I saw others around me moving on with their lives. The friends that I had during freshman year were going to graduate while I got myself kicked out of school because I couldn’t stop gaming. My older brother was graduating from graduate school, had a girlfriend and was getting married in the fall, while I did nothing and felt completely stuck in the game. I tried quitting the game so many times, but I felt there was nothing important enough in my life to really quit it for.”

James repeatedly relapsed into the game because he still wasn’t dealing with his feelings about his career goals. Each time he thought of registering for classes, taking a course, or studying for a test, he felt the pressure and internal judgment of feeling like a failure. He constantly compared himself to his friends and his brother, and relapsed into the game as a way to relieve his underlying feelings of depression and self-doubt.

As part of his recovery, James started taking night classes at a community college, taking one or two classes to see what type of work or vocation he wanted to pursue. He liked finance, a far cry from his major in engineering at the University of Buffalo, and with the financial and emotional support of his parents, he re-enrolled full-time at the university and graduated with a degree in business and financial management. His interest in online gaming diminished as he spent his free time studying, going to classes, and making new friends—and he was finally doing something he loved.

Whatever the situation, confronting the issues that initially drove a client toward the addiction will not be easy, but it is the only way to achieve the personal growth necessary to maintain long-term recovery. In our work together, James gained a deeper sense of why he gamed. Important questions to ask clients, in order to help them understand their gaming behavior are as follows:

What types of needs does gaming fulfill? Does gaming give you a sense of power, but offline, do you still feel out of control? Does gaming make you feel better about yourself, but offline, do you still feel unsure about the choices you have made in life? Instead of using gaming to avoid difficult feelings, therapists should work with their clients to learn how and why gaming has become a way to deal with what hasn't been working in people's lives.

Family Therapy

Adolescent gaming addiction continues to be a major issue in our society as teen gaming abuse is growing at an alarmingly high rate. Adolescence alone, regardless of involvement in the Internet, is an extremely challenging and complex transition for young individuals. Exploring and attempting to discover one's identity as an adolescent can be an overwhelming stage in one's life. In the event that an adolescent is using online games, it is more than likely that many more obstacles will be encountered and as a result a teen will struggle with unmanageable physical and emotional consequences (Kelly, 2004).

Peer pressure and environmental stresses are the main influences on an adolescent who becomes involved with gaming. Friends are often gamers, and, as discussed above, family dynamics can play a role in the development of online gaming addiction. Furthermore, children of substance-abusing parents have been shown to have an increased risk of using gaming as a means to cope with problems such as developmental issues, school problems, health problems, delinquency, sexual problems, mental issues, and family problems.

It is very hard for a teen to recover from gaming addiction, especially when the computer is often a necessary component of the teen's home and school environments. Effective treatment requires that the dynamics of the family should be assessed and that family members must also be helped to achieve health, or relapse is much more likely.

For most adolescents, referral to treatment is involuntary and is usually mandated by parents, teachers, or the judicial system. When asked at the intake stage what the problem is, adolescents' most common answers are "Don't know" or "Somebody [family, teacher, policeman] just overreacted." When pressed, most adolescents say they are doing nothing different from their peers or explain that they aren't online as much as other friends who game.

Successful treatment must not only address the gaming behavior but also help an adolescent navigate the normal developmental tasks of identity formation that are often neglected while gaming is being used as a means of coping with life's problems. Treatment should focus on effective problem solving and the social skills necessary to build self-esteem. Many gamers lack a strong sense

of self, using gaming as means to form their identities. However, their self-esteem in real life is fragile or nonexistent. Family therapy must focus on ways to build or rebuild their identities within a nongaming environment.

Gamers often minimize the extent to which they game and avoid dealing with the family issues that may be driving their desire to game. It is important to consider an adolescent's specific family situation when treating the addiction. Comprehending the teen's immediate environment in most cases enhances the understanding of the addiction's causes. It is necessary to look at family dynamics, such as family history of addiction, background, communication dynamics, or conflict and to look at the ways in which these factors may be impacting a teen's developmental stages, emotional well-being, and self-esteem.

Finally, family therapy needs to include educating the family on ways in which they can help the addict, whether or not he or she is in individual counseling or treatment. This may include counseling for family members, education on problem/compulsive gaming for the family, strategies on how to cope with the addict's anger and loss of trust, and education on the emotional costs of online gaming. Often, gaming addiction is addressed as a part of a weekly family program. Each week, topics related to addiction are addressed, to help family members understand the process of recovery, the possible relapse triggers, and the importance of maintaining healthy boundaries. This is especially important for parents as they struggle to understand a son or daughter's compulsive need to game and the underlying dynamics associated with the addiction.

Communication Skills

Communication skills may also need to be learned. Many gamers cannot communicate well in face-to-face situations (Leo Sang-Min, 2003). This one reason why children game in the first place. Communicating online seems safer and easier for them. However, a lack of communication skills can cause poor self-esteem and feelings of isolation and create additional problems in life among adolescents, so therapy needs to address the way they communicate with others offline. Some basic guidelines for therapists include the following:

- ♦ Enlisting the aid of an older child who may help to engage your client in short conversations to help develop skills.
- ♦ Engaging as many of your client's senses as you can during a conversation and teaching the client to do the same. The client's interest in the discussion will remain higher.
- ♦ Using books, magazines, and television to talk to your client about facial expressions and what they mean, and to enable the client to watch for body

language so as to improve the understanding of what the other person is feeling.

- ♦ Using role-playing conversations to build the client's confidence. You should start one on one and introduce other children one at a time as the client begins to build confidence in his abilities. Older siblings, cousins, or neighbors might be more than willing to help.
- ♦ Taking the time to tell to your clients what you think they meant. If needed, you should help them find ways to better explain themselves.
- ♦ Asking your client to tell you what she thinks you said. This will help you see how well your client listens during a conversation.
- ♦ Using regular eye contact and having your client practice using eye contact when speaking to other people.

Residential Care

Residential care may be required to provide intensive therapy when the effects of the game have become severe. Often gamers refuse treatment until they become deeply depressed, are dismissed from school, are terminated from a job, are threatened with divorce and separation, or are thinking about suicide. Once the problems have become this severe, it is important to seek professional help in evaluating the situation. Residential treatment programs often last for four to six weeks of intensive treatment. Some gamers may require more or less time, so recommendations will be made following an initial assessment.

In most cases, the treatment program of a residential care facility is specifically designed to fit the needs of the client, and most sessions focus on individual treatment, educational groups, and family therapy where appropriate to best manage and address the intense feelings surrounding the addiction. Often, parents will initiate residential care for a child addicted to online gaming. It may be difficult to find a facility that understands the special requirements in treating compulsive online gaming, but gradually more inpatient addiction rehabilitation centers are learning about this new form of addictive behavior.

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Youth Gambling Prevention and Resilience Education: A Harm Reduction Approach

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Gambling in its many forms, has permeated every society and culture all the way back to ancient times (Caltabiano, 2003). While gambling has been a source of entertainment for countless people, a small but identifiable minority of people exhibit compulsive gambling behaviors that lead to personal harm and suffering (Abbott, Volberg, Bellringer, & Reith, 2004). Over the last two decades, an unprecedented growth has occurred in the legalization, availability, and accessibility of gambling activities and venues. Internationally, the legitimacy and popularity of gambling continue to rise, and technological advances continue to evolve, attracting both young and old to participate (Abbott et al., 2004; Derevensky, 2007).

Of particular concern is the fact that young people are consistently reported to be at higher risk of demonstrating compulsive gambling behavior (Gupta & Derevensky, 1998; National Research Council [NRC], 1999). It is estimated that 3–8 percent of adolescents meet the criteria for pathological gambling, while another 10–15 percent of adolescents are at risk for the development of severe gambling behavior (Derevensky & Gupta, 2000, 2004; Jacobs, 2000, 2004; NRC, 1999; Shaffer & Hall, 1996). Probable pathological gambling is more prevalent among males than females (NRC, 1999), and the onset of gambling problems occurs early, between the ages of 11 and 13 (Jacobs, 2000), indicating a need for targeted public education and awareness campaigns (Abbott et al., 2004).

As well, there appears to be a large degree of overlap between risk factors that predispose youth to severe gambling problems and those that predispose youth

to other risky behaviors such as delinquency and substance abuse (Derevensky & Gupta, 2004; Ladouceur, Dubé, & Bujold, 1994). These bio-psycho-social risk factors, (e.g., familial attitudes and history of gambling problems, depression, abuse, school failure, delinquency, availability of and access to gambling opportunities, and early onset) span individual, peer, familial, neighborhood, and societal domains (Dickson, Derevensky, & Gupta, 2002; see chapter 12 in this volume for a more comprehensive review of international youth gambling prevalence rates and risk and protective correlates).

The harm reduction/minimization approach, prevalent among alcohol and substance prevention initiatives, has recently attracted considerable attention from youth gambling researchers (Derevensky, 2007, and Derevensky, in press; Dickson, Derevensky, & Gupta, 2004; Gupta & Derevensky, 2008). These researchers advocate the adoption of harm reduction prevention programs (HRPPs) in targeting youth gambling behaviors, but they recommend that these strategies also emphasize the promotion of resiliency traits, by reducing the negative effects of risk factors while enhancing the beneficial moderating effects of protective factors and resiliency traits (Derevensky, 2007, and Derevensky, in press; Dickson et al., 2004; Dickson, Derevensky, & Gupta, 2008). The significant overlap in risk and protective factors for youth with respect to problem gambling and other problem behaviors (Dickson et al., 2002, 2004) has led to the creation of prevention initiatives that target multiple risk behaviors (Jessor, 1998), including problem gambling (Dickson et al., 2002, 2004; Jacobs, 2004). To date, very little resilience research regarding youth gambling behaviors has been conducted (Lussier, Derevensky, Gupta, Bergevin, & Ellenbogen, 2007). However, resiliency skills have long been incorporated into prevention programs for a wide variety of risky behaviors (Jessor, 1998). It is therefore important to extend resilience research, especially in an area such as youth gambling, which has received such little attention (Dickson et al., 2002).

RESILIENCY

Traditionally, the major focus of prevention research has been to identify risk factors and high-risk individuals (Leshner, 1999). However, it is evident that many youth exposed to high levels of risk never develop the anticipated negative problem behavior(s), and many thrive in spite of them; a concept referred to as *resilience*. Although there is substantial variation in the definition of resilience, two central constructs exist in most definitions, that is, *risk* or *adversity*, and *positive adaptation* or *competence* (Luthar, 1997). A widely accepted, simplified definition of resilience therefore relates to the presence of manifest competence despite exposure to significant adversity (Rolf & Glantz, 1999). Manifest

competence generally refers to internal states of well-being and/or effective functioning in the environment (Masten, Best, & Garmezy, 1990). Individuals may be resilient in one domain or several, but rarely in all (Luthar, 1997). For example, resilient adolescents who demonstrate high social competence despite much adversity in their lives may also report depressive symptoms. In light of these findings, resilience researchers have become increasingly cautious in using the term resilience, opting instead for more specific terms such as *educational resilience*, *emotional resilience*, and *behavioral resilience* (Luthar, Cicchetti, & Becker, 2000).

Resilience research has to date experienced three waves (O'Dougherty Wright & Masten, 2005). In the first wave, early studies on resilience focused mostly on the identification of protective factors. Influenced by Urie Bronfenbrenner's ecological (1979) and bioecological (2005) models, a second wave of resilience research emphasized relationships and systems, and integrated biological, social, and cultural processes across time. Ecological theory is conceptualized by Urie Bronfenbrenner as

the scientific study of the progressive, mutual accommodation, throughout the life course, between an active, growing human being and the changing properties of the immediate settings in which the developing person lives, as this process is affected by the relations between these settings, and by the larger contexts in which the settings are embedded. (2005, p. 107)

According to this model, there are four environmental levels including the *microsystem* (the actions and interactions within the environment that a child is behaving in, at any given moment in time, e.g., home and school); the *meso-system* (the interrelations among the child's microsystems, e.g., the relationship between a child's parents and school); the *exosystem* (the environmental factors that indirectly influence the child's behavior and development, e.g., parental workplace), and the *macrosystem* (broad social factors and cultural values that influence other settings, e.g., public social policies) (Bronfenbrenner, 2005; Kaminski & Stormshak, 2007).

Risk and Vulnerability Factors

The term *risk* commonly refers to early predictors of probable negative outcomes and to descriptions of negative life conditions such as family conflict and poverty (Kaplan, 1999). Probable negative outcomes may include psychopathology, excessive gambling, drug or alcohol abuse, dropping out of school, and so on. Two terms commonly used in reference to risk include *vulnerability factors* and *risk factors*. Risk and vulnerability factors may include individual attributes,

characteristics, situations, or contexts within the environment that increase the likelihood of acquiring and maintaining maladaptive behaviors (Kaplan, 1999). However, vulnerability factors suggest variables that increase the chances of negative outcomes within the context of adversity, while risk factors refer to variables that increase the chances of negative outcomes regardless of the occurrence of adversity (Rose, Holmbeck, Millstein Coakley, & Franks, 2004).

Researchers and clinicians have long recognized that the relationship between risk and maladaptive behaviors is such that as the co-occurrence and accumulation of risk factors over time increases, so too do maladaptive behaviors (Jessor, 1998; Jessor, Van Den Bos, Vanderryn, Costa, & Turbin, 1995; Rutter, 1990). In other words, the more risk factors an individual is exposed to, the less likely the individual will be to build internal or external assets (Benson, Galbraith, & Espeland, 1995). Risk is often described on a continuum, with a positive end associated with positive outcomes and a negative end associated with negative outcomes (e.g., socioeconomic status) (Masten, 2001). However, not all risk factors may be conceptualized in this manner. For example, teen pregnancy and cigarette use have been shown to be associated with negative outcomes, but the lack of pregnancy or smoking is not necessarily associated with positive outcomes.

Protective and Resource Factors

The term *protection* commonly involves conditions that improve an individual's resistance to negative outcomes. Two terms commonly used in reference to protection include *protective factors* and *resource factors*. Protective factors include variables that decrease the chances of negative outcomes in the context of adversity, whereas resource factors refer to variables that positively influence outcome independent of the occurrence of adversity (Rose et al., 2004). Protective factors may include personal attributes (e.g., temperament, intelligence, social bonding, personal competence, social competence), familial factors (e.g., encouragement of trust, autonomy, and initiative), and community characteristics (e.g., external support systems including church, youth groups, and school) that *moderate* a person's reaction to adversity in a positive manner (Dickson, Derevensky, & Gupta, 2008; Werner, 1995; Werner & Smith, 1992). Fostering the growth and presence of protective factors thus moderates the undesired effects of risk in such a way that development is more positive than if the protective factors had not existed (Masten et al., 1990).

To summarize, when a variable promotes or impedes adaptive outcomes within the context of adversity, it may be conceptualized in terms of protective or vulnerability factors, serving a moderating role. However, when a variable

promotes or impedes adaptive outcomes regardless of the context of adversity, it may be conceptualized in terms of resource or risk factors (Rose et al., 2004).

Most researchers now agree that a child may be identified as resilient at one point in his development but not in another. Similarly, a child may be competent in one context or aspect of life but not in another (O'Dougherty Wright & Masten, 2005). A second wave of research has sought to search for mediating and moderating processes that ultimately lead to resilience. Although this wave of research is far from complete, a third wave of research has already begun, with a focus on intervention strategies designed to promote resilience.

PREVENTION EFFORTS

The importance of resilience research rests in its applicability to the field of prevention. Researchers have begun to incorporate resilience research into prevention and intervention programs for high-risk youth (Coie et al., 1993; Leshner, 1999). The focus in prevention research was initially to identify risk and vulnerability factors and at-risk populations (Garmezy, 1971; Pasamanick & Lilienfeld, 1956). However, the identification of risk and vulnerability factors by themselves has not been of great use to prevention efforts since many of these factors are difficult to minimize (e.g., poverty) or identify (e.g., sexual abuse) (Leshner, 1999) and since many high-risk youth never actually develop the anticipated negative behaviors. As a result, an attempt to identify variables and interactions between variables that might act as buffers or protective factors to counteract the risks associated with aberrant behavior has begun.

Dickson and her colleagues (2004) have integrated adolescent gambling behavior into Jessor's (1998) adolescent risk behavior model. Jessor's model follows current trends in resilience research, where risk and protection are seen as interacting across various domains (biological, social environment, perceived environment, personality, and behavior) and high-risk behaviors. Further, the protection variables listed in each of the domains of the model correspond to broad resiliency traits including *social bonding* (pro-social ties to one's school, family, and community), *personal competence* (one's individual identity and sense of personal development), and *social competence* (one's ability to adjust in social situations) (Springer & Phillips, 1992).

HARM REDUCTION

There are certain risky behaviors, such as alcohol consumption, that, though potentially harmful, have nonetheless become part of the fabric of our society.

This has led certain prevention specialists to reevaluate abstinence models as being unrealistic and impractical (Beck, 1998; Dickson et al., 2004; Poulin & Elliott, 1997). Rather, a movement toward responsible, controlled involvement has led to a harm reduction approach versus an abstinence approach. Harm reduction strategies are designed to limit the harmful effects that may result from involvement in risky behaviors without demanding abstinence per se. Such strategies were first developed to curb alcohol and illicit substance abuse (Erickson, 1997). More recently however, a youth gambling risk prevention model based on a public health perspective has been proposed (Messerlian, Derevensky, & Gupta, 2005). Within this model, primary prevention strategies are designed to prevent the onset of risky gambling behavior by educating youth, parents, professionals, and the public regarding the risks and consequences of problem gambling. As well, based on the assumption that it is not realistic to expect youth to abstain from gambling altogether (especially unregulated forms of gambling), secondary prevention strategies are designed to prevent juveniles at risk of developing serious gambling problems from escalating toward problem gambling. These harm reduction strategies include early identification of gambling problems by educating primary health care workers to identify some of the risk and warning signs of excessive gambling. Finally, tertiary prevention strategies within this model, designed for youth exhibiting excessive gambling behaviors, seek to augment the access to and availability of treatment, services, and support (Messerlian et al., 2005).

HARM REDUCTION AND RESILIENCE EDUCATION INITIATIVES

Given the increasing availability, accessibility, and popularity of gambling, the utility of a harm reduction approach to prevent probable pathological gambling among youth is promising. Based on a harm reduction approach, the International Centre for Youth Gambling Problems and High-Risk Behaviors at McGill University in Montreal has developed a number of prevention initiatives including *The Amazing Chateau* and *Hooked City* (interactive CD ROM games for children and adolescents aged 11–18), prevention workshops for youth, and *Clean Break* (a DVD/VHS docudrama designed for adolescents 13–18) (Derevensky, in press). Although there are very few evaluated outcomes of harm reduction prevention initiatives for youth gambling (Petry, 2005), parents (Ladouceur, Vitaro, & Côté, 2001; Côté, Vitaro, & Ladouceur, 2003) and educators (Ladouceur, Ferland, Côté, & Vitaro, 2004) in Quebec, Canada, are reportedly becoming increasingly aware of the potential risks involved in youth gambling behavior, indicating that primary prevention efforts may be having a

beneficial effect. As well, estimates from a large-scale national prevalence study in the United Kingdom (UK) indicate that lifetime participation in gambling activities and rates of problem gambling among youth have been on a steady decline since 1997 (Wood, Griffiths, Stevens, Bartlett, & Pye, 2006). The authors suggest that this decline may be an indication of the beneficial effects of prevention measures put in place in the country.

Resilience education programs have received some evaluative attention, supporting the plausibility of translating resilience research into effective practice-based prevention and intervention programs (Battistich, Schaps, & Wilson, 2004; Lynch, Geller, & Schmidt, 2004). For example, Battistich and colleagues (2004) examined the effects of an elementary-school intervention program aimed at reducing risk and promoting resilience among youth. Students exposed to the program experienced greater levels of pro-social behavior and engaged in fewer problem behaviors than did the control group. Similarly, social-emotional competence, positive coping skills, and suppression of antisocial and aggressive behavior were strengthened by a carefully designed, research-based resilience program for children (Lynch et al., 2004).

Nation and colleagues (2003) have identified nine qualities that are consistently displayed in effective prevention programs. These principles include (a) comprehensive programming, (b) varied methods of teaching, (c) adequate exposure to the intervention in terms of duration, (d) theory-driven programming, (e) promotion of strong relationships between adults and participants, (f) developmentally sensitive programming such that exposure occurs early enough to have an impact on the problem behavior, (g) sociocultural relevance, (h) clear goals and objectives and documentation of results relative to these goals, and (i) well-trained personnel. Resilience programs that are grounded in research and theory tend to be multifaceted in nature and include multiple strategies designed to strengthen protective factors while concurrently reducing or minimizing risk.

Concluding Remarks

Gambling activities have entertained people across cultures for thousands of years (Caltabiano, 2003). However, over the last 20 years there has been a proliferation in the legalization and expansion of various forms of gambling. Consequently, a reevaluation of how best to prevent youth from developing and maintaining serious gambling problems has fostered the adoption of a harm reduction approach (Dickson et al., 2002; Gupta & Derevensky, 2008; Messerlian et al., 2005). Although such efforts are currently in their infancy, environmental micro-, meso-, exo-, and macrosystems should be taken

into consideration in the design, implementation, and evaluation stages of such initiatives, as these four systems are increasingly recognized as important transactional variables that significantly influence human development (Bronfenbrenner, 2005; Kaminski & Stormshak, 2007).

Despite the promising potential of resilience education programs, various concerns have been raised regarding the hazards of applying such programs in schools. In particular, Pianta and Walsh (1998) delineate numerous cautions to bear in mind regarding the immaturity of the study of resilience, and they draw a parallel between resilience education programs and historical fads such as the *effective schools movement* that was popular in the 1970s and early 1980s. During the period of popularity of this movement, schools were identified that had students doing better academically than could be expected, given their high-risk backgrounds. These schools were then used to derive lists of factors that could improve the performance of students in schools with an overrepresentation of high-risk youth. Pianta and Walsh (1998) point out that despite the promise of early findings, methodological flaws in early evaluative studies, eventual lack of evidence, and lack of theory led to the downfall of the movement. They suggest a parallel between the rise and fall of the effective schools movement and the proliferation of recent success stories arising from the resilience movement. Although Pianta and Walsh's article was originally published in 1998, their concerns remain poignant today, as new articles reporting on resilience theory and education programs are published in greater numbers than ever before. Pianta and Walsh caution that a heavy focus on stories of success may deter individuals from appreciating that success is a process that develops over time, and that such a focus may deflect attention away from the harsh realities that high-risk youth are exposed to (Pianta & Walsh, 1998). Similarly, Cantinotti and Ladouceur (2008) caution that harm reduction initiatives for gambling behavior require adherence to the integrity of the original term, harm reduction (i.e., the reduction of negative effects related to gambling, without reducing gambling participation *per se*), lest the term become so broad as to lose its utility.

Ultimately, the successful prevention of gambling and other problems among youth and the treatment of youth with gambling problems and other addictions is the desired outcome of youth gambling research. Today, it is generally acknowledged that gambling problem prevention efforts, as well as public and industry policies, must be empirically science based (Abbott et al., 2004; Dickson et al., 2002, 2004). The efficacy of programs is largely dependent upon commitment from stakeholders to work together and on conceptually driven research on risk and resilience theory (Abbott et al., 2004; Gupta & Derevensky, 1997; Luthar et al., 2000).

The lack of recognition by youth, parents, educators, and primary health care workers of the prevalence and negative effects of problem gambling is disconcerting, considering that estimates for problem gambling among youth are predicted to rise as gambling activities increase in accessibility, availability, and popularity (Abbott et al., 2004; Derevensky, 2007). Though more complex and controversial in terms of its goals than an abstinence model, the notion of a harm reduction approach that promulgates self-control and responsible involvement may thus become increasingly realistic and palatable as a way of protecting our adolescents.

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About the Editor and Contributors

EDITOR

Angela Browne-Miller, PhD, DSW, MPH, is the Set Editor of the *Praeger International Collection on Addictions* (2009), Director of Metaxis Institute for Personal, Social, and Systems Change, based in northern California, United States; Director of Browne and Associates Violence, Substance Abuse, and Trauma Treatment and Prevention Program, also in northern California; has been a keynote speaker at conferences around the world on addiction, violence, and behavior change; and is the author of numerous books, including *To Have and to Hurt: Seeing, Changing or Escaping Patterns of Abuse in Relationships* (2007) and *Rewiring Your Brain to Change Your Behavior* (2009). Dr. Browne-Miller earned two doctorates and two master's degrees at the University of California, Berkeley, where she lectured in three departments for 14 years, and has served as a National Institute of Mental Health Postdoctoral Fellow, a U.S. Department of Public Health Fellow, the public relations director for Californians for Drug Free Youth, the Research Education and Treatment Director for the Cokenders Alcohol and Drug Program, a member of the board of directors of the Employee Assistance Society of North America, an advisor to addiction treatment programs in the United States and several other countries, and project director on three California Department of Health violence prevention projects.

CONTRIBUTORS

Hugo Barrera, MD, completed his internship and general surgery residency training at the University of California, San Diego from 1992 until 1997. Since 1997, he has been with Coast Surgical Group in Chula Vista, California, United States, where he became a partner in 2000. Dr. Barrera's special interests in surgery include surgery for the correction of heartburn using minimally invasive techniques (laparoscopic Nissen fundoplication), advanced laparoscopic surgery including removal of the colon and spleen, and cancer surgery. Dr. Barrera is the Medical Director of the Bloodless Medicine and Surgery Program at Sharp Chula Vista Medical Program. This is a program focusing on the implementation of specialized techniques to minimize operative blood loss and decrease the use of blood transfusions.

Ronald J. Burke, PhD, University of Michigan, is currently professor of organizational behavior, Schulich School of Business, York University, Toronto, Ontario, Canada. His research interests include gender in organizations, work and health, work hours and work addiction, and the use of human resource management research to build more humane and more effective organizations.

Jeffrey L. Derevensky, PhD, is professor in the School of Applied Child Psychology, Department of Educational and Counseling Psychology, also professor in the Department of Psychiatry, McGill University, Montreal, Quebec, Canada. He is codirector of the McGill University Youth Gambling Research and Treatment Clinic and the International Centre for Youth Gambling Problems and High-Risk Behaviors. He is a child psychologist who has published widely in the field of youth gambling. Dr. Derevensky remains on the editorial board of several journals and is an international consultant on responsible gambling practices.

Mark Griffiths, PhD, is a chartered psychologist and professor of gambling studies at Nottingham Trent University, Nottingham, England, and director of the International Gaming Research Unit. He has spent over two decades in the field, is internationally known for his work on gambling and gaming, and has won seven national and international awards for his research. He has published over 200 refereed research papers, two books, 50 book chapters, and over 550 other articles. He has served on numerous national and international committees and gambling charities (e.g., [the] Society for the Study of Gambling, Gamblers Anonymous General Services Board, National Council on Gambling, and as national chair of GamCare). He has won eight national and international awards for his work, including the John Rosecrance Prize (1994), the CELEJ Prize (1998), and the Joseph Lister Prize (2004). He also

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Rina Gupta, PhD, is a clinical child psychologist and assistant professor of school/applied child psychology, Department of Educational and Counseling Psychology at McGill University, Montreal, Quebec, Canada. She has published widely and has focused her research and social policy work in the area of youth high-risk behaviors. Her early work testing a general theory of addictions was recognized with the doctoral dissertation award of the National Council on Problem Gambling. Most recently, Dr. Gupta was named the National Centre for Responsible Gambling's young researcher of 2006. Dr. Gupta is the founder and codirector of the International Centre for Youth Gambling Problems and High-Risk Behaviors, where her research focus is on prevention. She has worked hard to effect social change and has been invited to provide expert testimony before a number of governmental committees internationally.

Norman Jackson, MS, is a senior learning skills counselor with University of San Diego (UCSD) Center for Academic Research and Training in Anthropogeny (CARTA) in San Diego, California, United States. Prior to working at UCSD, he worked for the Information and Education Section in the California Department of Health Services Immunization Branch as an educational specialist. He was awarded an academic fellowship from the Andrus Foundation and completed a master's of science degree from San Diego State University's College of Health and Human Services. He has over 14 years of health promotion and education work experience in the nonprofit and government sectors. He is committed to working to decrease the health disparities in populations of color, historically disadvantaged populations, and the aged.

Cynthia R. Kalodner, PhD, is professor of psychology at Towson University in Baltimore, Maryland, United States. She teaches graduate and undergraduate courses in abnormal psychology, group counseling, and counseling techniques. Aside from her work in eating disorders, Dr. Kalodner is well known for her work in group counseling and psychotherapy. She coedited a book entitled *The Handbook of Group Counseling and Psychotherapy* (2004). She also writes fiction for young adults.

Robert W. Kubey, PhD, is director of the Center for Media Studies and professor of journalism and media studies at Rutgers University in New Brunswick, New Jersey, United States. Professor Kubey received his doctorate from the Committee on Comparative Human Development at the University of Chicago. Dr. Kubey has been an Annenberg Scholar in Media Literacy at the University of Pennsylvania, and a National Institute of Mental Health research fellow in

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Isabelle D. Lussier, MA, PhD candidate, is a doctoral student in the School/ Applied Child Psychology Program, Department of Educational and Counseling Psychology, McGill University, Montreal, Quebec, Canada. Her master's thesis examined youth gambling problems and resilience, and was recognized by the National Council on Problem Gambling with its master's thesis award. Her current research explores personal resiliency traits as moderators of the relationship between environmental risk and gambling problems among low socioeconomic status youth.

Richard A. McGowan, MA, MDiv, ThM, DBA, is associate professor in the Carroll School of Management at Boston College in Boston, Massachusetts, United States, and research associate at Harvard Medical, Division on Addictions also in Boston. The focus of his research is on the interaction of the business and public policy processes, especially as they relate to the gambling, tobacco, and alcohol industries. Father McGowan has published five books, entitled *State Lotteries and Legalized Gambling: Painless Revenue or Painful Mirage* (1994); *Business, Politics and Cigarettes: Multiple Levels, Multiple Agendas* (1995); *Industry as a Player in the Social and Political Arenas* (1996); and *The Search for Revenue and the Common Good: An Analysis of Government Regulation of the Alcohol Industry* (1997). He has also published 48 referred articles in various academic journals and made over 80 academic and professional presentations.

Basant K. Puri, MA, PhD, MB, MRCPsych, MMath, of the Medical Research Council (MRC) Clinical Sciences Centre, Hammersmith Hospital, and the Imperial College in London, England, received his primary and postgraduate degrees in medicine from the University of Cambridge and carried out postdoctoral work in molecular genetics at the MRC and the University of Cambridge, and in imaging at the Royal Postgraduate Medical School at Hammersmith Hospital, London. He also has a first-class honors degree in mathematics and postgraduate degrees in mathematics and is a member of the Royal College of Psychiatrists.

Paul Rose, PhD, is an assistant professor of psychology at Southern Illinois University, Edwardsville, Illinois, United States. His current research is focused on consumer behavior. He has also published on the self and romantic relationships.

Amanda Ruiz, MD, trained in psychiatry at the University of California San Diego, in San Diego, California, United States. She also completed a fellowship in forensic psychiatry at the University of California, San Francisco. Dr. Ruiz currently provides consultation services to physicians, attorneys, and companies on mental illness and risk management.

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Mamta Sood, MD, earned her MD degree from Ranchi University in India, followed by a diploma in psychiatry. She has been elected as a fellow of the Indian Association for Social Psychiatry in India. She worked as a psychiatric specialist in the Army Medical Corps of India and subsequently joined the All India Institute of Medical Sciences, New Delhi, Delhi, India as an assistant professor. She has several publications and has received the award for the best paper in military psychiatry and industrial psychiatry.

Ian H. Treasaden, MB, LRCP, MRCS, FRCPsych, LLM, is head of forensic neurosciences, Lipid Neuroscience Group, Imperial College, London, England, and, since 1984, he has been consultant forensic psychiatrist at the Three Bridges Medium Secure Unit for mentally disordered offenders, West London Mental Health NHS Trust, where he has also been clinical director. He qualified in medicine in 1975 from the London Hospital Medical College, University of London, where he was awarded the James Anderson Prize in Clinical Medicine. He undertook training in forensic psychiatry at the Maudsley and Bethlem Royal Hospitals in London and Broadmoor Special Hospital, Berkshire, England, between 1982 and 1984. He is the author of papers on forensic psychiatry, and he is also coauthor of the *Textbook of Psychiatry and Mental Health Law: A Practical Guide*. His current research interests include the relationship between mental disorder and offending, including violence among those with schizophrenia and associated lipid neuro-imaging abnormalities.

Meera Vaswani, PhD, earned her PhD degree from Delhi University, a leading university in India. She is a member of the All India Institute of Medical Sciences in New Delhi, Delhi, a prestigious and internationally recognized

institute in India, where she was first a postdoctoral fellow, subsequently became a lecturer, and rose to be a professor. During this time, she was elected as a fellow of the Royal Society, London, and member of the National Academy of Medical Sciences, India. She was selected for a United Nations fellowship, during which she worked in the University of Glasgow, in Scotland, UK. She was one of three scientists in the world selected for the Distinguished International Scientist Collaborative Award (DISCA) from the U.S. National Institute on Drug Addiction (NIDA), the U.S. National Institutes of Health (NIH), 2007. She has completed several projects on addiction (alcohol and heroin) and published many papers in both national and international journals. She has been a guest speaker at several national and international forums. She was the only delegate invited by Japan to represent India in the Asia Pacific Society of Biological Research in Alcoholism. Subsequently, she was elected as a member of the board of directors of the Asia Pacific Society for Alcohol and Addiction Research (APSAAR).

Kimberly S. Young, PhD, is an internationally known expert on Internet addiction and online behavior. She serves as the director of the Center for Internet Addiction Recovery, founded in 1995, and travels nationally conducting seminars on the impact of the Internet. She is the author of *Caught in the Net* (1998), the first book to address Internet addiction, which has been translated into six languages; *Tangled in the Web* (1998); and her most recent, *Breaking Free of the Web: Catholics and Internet Addiction* (2009). She is a professor at St. Bonaventure University in St. Bonaventure, New York, United States, and has published over 40 articles on the impact of online abuse. Her work has been featured in media outlets such as the *New York Times*, *USA Today*, *Newsweek*, *Time*, CBS News, Fox News, *Good Morning America*, and ABC's *World News Tonight*. Dr. Young received the Psychology in the Media Award from the Pennsylvania Psychological Association, and in 2000 she received the Alumni Ambassador of the Year Award for Outstanding Achievement from Indiana University at Pennsylvania in Pennsylvania, United States.