

# Malevolent Employees and Their Effect on the Ethical Culture of Business Organizations

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## Abstract

Robert D. Hare is arguably the world's foremost expert on psychopaths. He has spent his entire career examining and interacting with psychopaths in prison, in the general population and in corporate settings. His Psychopathy Checklist—Revised ('PCL:R') is considered the "gold standard" clinical scale for diagnosing psychopaths. Unfortunately, Hare reports from his work with business executives that approximately 3.5% of executives would be diagnosed as 'psychopaths'. However, the mere existence of these individuals in an organization is not the worst part. Psychopaths cause havoc, financial losses and morale problems in a company by 'leveraging their evil. The negative effects of 3.5% of malevolent individuals (psychopaths) in business organizations are multiple. Not only do they engage in unethical behavior, but they also induce others in the organization to behave unethically, not only by pressuring their employees to participate in their unethical actions. Their nefarious influence is magnified by dynamics demonstrated in extensive research showing that a large portion of the general population who are (in economic game theory language) 'reciprocators' (Kurzban 2005). That is, reciprocators will 'cooperate', that is, behave ethically in an ethical culture but much less so when they observe other individuals "getting away with it".

We believe that the study of psychopaths in organizational settings is important for a number of reasons. First, we believe that psychopaths or at least psychopathic attributes are significant explanatory causes of the recent global financial crisis. Secondly, we hypothesize that business not only *attracts* psychopaths, but also *rewards* them for psychopathic behavior. Thirdly, due to the chaos created by psychopaths in organizational dynamics, it is important for companies to have tools to recognize and deal with psychopaths in their midst.

Our study uses well-tested and validated diagnostic tools to identify individuals with psychopathic attributes enrolled in the business school at a major university (Levenson et al. 1995). We also use behavioral economics, economic game theory and organizational dynamics as tools to explain and understand why the presence of these individuals can be very damaging to the organization. Finally, we explore and correlate the 'free-riding' and team disruption caused by these same individuals in team activities that were real-world, significant and semester-long projects.

## Introduction

### *Psychos in Suits and why We Study Psychopaths in the Global Crisis*

We all encounter personalities in our organizations that we could describe as 'malevolent personalities'. Although they may be 'successful' in their organizations, they share some or all of the following traits:

1. The person may be superficial, grandiose and/or deceitful.
2. The person may lack remorse, lack empathy and/or not accept responsibility.
3. The person may be impulsive, lack goals and/or be irresponsible.
4. The person may be unrestrained by conscience and/or be later untroubled by guilt.
5. The person may have poor behavioral controls and/or engage in antisocial behavior.

Under certain circumstances, anyone may exhibit a variant of one or more of these characteristics. However, the confluence of a number of these traits in an individual will lead psychiatrists to diagnose that person as a psychopath (Babiak and Hare 2006). Psychopaths are individuals who have no conscience - since they cannot be morally socialize - and are incapable of empathy, guilt or loyalty to anyone but themselves. In order to correct a popular misconception, we need first to point out that the diagnosis of psychopathy is clinically distinguished from sociopaths and individuals with antisocial personality disorders ('APD'). The latter individuals may have well-developed consciences and be capable of empathy and loyalty to their group, but it is their group's subculture they are loyal to, and this subculture (e.g. the "Hell's Angels" or street gangs) endorses antisocial behavior. Conversely, psychopaths have no loyalty to anyone.

Robert D. Hare is arguably the world's foremost expert on psychopaths. He has spent his entire career examining and interacting with psychopaths in prison, in the general population and in corporate settings. Most importantly, he is the creator of the 'gold standard' scales for evaluating psychopaths: The Hare Psychopathy Checklist—Revised ('PCL:R'). This clinical rating scale is used all over the world for diagnosing institutionalized psychopaths. Hare is also the creator of the diagnostic tool for evaluating psychopaths in the general population - The Psychopathy Checklist: Screening Version ('PCL:SV': Babiak and Hare 2006, 25). Much to our chagrin, Hare reports an unusually high percentage of psychopaths among business executives:

"In our original research working with almost 200 high-potential executives, we found about 3.5% who fit the profile of the psychopath as measured on the PCL:SV. While this may not seem like a large percentage, it is considerably higher than that found in the general population (1 percent), and perhaps more than most business would want to leave on their payrolls, especially as these individuals were on the road to becoming leaders in their organizations. Of these individuals, we found that all had the traits of the manipulative psychopath: superficial, grandiose, deceitful, impulsive, irresponsible, not taking responsibility for their own actions, and lacking goals, remorse and empathy. Of these individuals, two exhibited bullying, as well. From the cases we have reviewed from others in the field, as well as from readers, this level of incidence seems correct.

"The average PCL:SV score for the corporate psychopaths was 19 (out of a top score of 24), which is well within the research range for psychopathy. In evaluating these findings, it is important to note that scores at this level indicate

the presence of enough psychopathic features to be problematic for the organization”. (Babiak and Hare 2006, 193)

The negative effects of the 3.5% malevolent individuals (psychopaths) in business organizations are multiple. Not only do they engage in unethical behavior, but they also induce others in the organization to behave unethically, and not only by pressuring their employees to participate in their unethical actions. Their nefarious influence is magnified by dynamics demonstrated in extensive research showing that a large portion of the general population are - in economic game theory language—‘Reciprocators’. Reciprocators will ‘cooperate’, that is, behave ethically within an organizational culture that is ethical but much less so when they observe other individuals - termed ‘Cheaters’ - “getting away with it” (Kurzban 2005). Babiak and Hare, in their recent book, *Snakes in Suits*, analyze ‘successful’ psychopaths:

“The premise of this book is that psychopaths do work in modern organizations; they often are successful by most standard measures of career success; and their destructive personality characteristics are invisible to most people with whom they interact. They are able to circumvent and sometimes hijack succession planning and performance management systems in order to give legitimacy to their behaviors. They take advantage of communication weaknesses, organizational systems and processes, interpersonal conflicts, and general stressors that plague all companies. They abuse co-workers and, by lowering morale and stirring up conflict, the company itself. Some may even steal and defraud”. (Babiak and Hare 2006, xiv)

We believe that the study of psychopaths in organizational settings is important for a number of reasons. First, we see evidence that psychopaths or at least individuals with psychopathic attributes are significant explanatory causes of the behavior that precipitated the global financial crisis. Secondly, we hypothesize that business not only *attracts* psychopaths, but also *rewards* them for psychopathic behavior. Thirdly, due to the chaos and negative results created by psychopaths in organizational dynamics, it is important for companies to have tools to recognize and deal with psychopaths in their midst.

### *The Global Financial Crisis*

Financial markets around the world experienced profound losses beginning in 2007 and continuing through early 2009 as a result of the Worldwide Credit Crisis. As a consequence of the credit crisis, caused by the collapse of the mortgage-backed securities market, the U.S. entered into the worst recession since the Great Depression. (It is now being called ‘The Great Recession’.) The answer to how this happened cannot be found in economics or business textbooks. It was the result of runaway greed, overconfidence and the willingness to ignore risks by Wall Street’s bankers, investors and traders. According to President Obama, millions of responsible and hard-working Americans have endured enormous suffering through job losses

and foreclosures caused by the general irresponsibility of the financial industry and the resulting credit crisis and recession. *The Economist* agrees with President Obama:

“It should be obvious by now that in banking and finance the twin evils of excessive risk and excessive reward can poison capitalism and ravage the economy. Yet the price of saving finance has been to create a system that is more vulnerable and more dangerous than ever before.

“In an ideal world any government would vow that, next time, it will let the devil take the hindmost. But promises to leave finance to fail tomorrow are undermined by today’s vast rescue. Because the market has seen the state step in when the worst happens, it will again let financiers take on too much risk. Because taxpayers will be subsidizing banks’ funding costs, they will also be subsidizing the dividends of their shareholders and the bonuses of their staff”.  
(*Economist* 16May09)

### **Malevolent Personalities in the Global Financial Crisis**

It is clear to us that many of the protagonists in the recent global financial meltdown were not just greedy, but are what we would term ‘malevolent personalities’. These include well-known characters such as Bernie Madoff—who bilked his investors out of \$26 billion—but also actors less well known to the general public, such as Lloyd Blankfein, CEO of Goldman Sachs. Goldman Sachs has been widely and publicly criticized for being one of the main villains in the global financial crisis. Nevertheless, this investment bank received over \$23 billion in direct government bailout money and from the bailout of AIG, Inc. (from whom Goldman had purchased financial insurance in order to cover its CDO losses). In interviews, Blankfein steadfastly denies that his firm helped trigger the global financial crisis, denies that his firm actually ‘needed’ the bailout money and defends the work his company is doing as being good for society:

“So, it’s business as usual, then, regardless of whether it makes most people howl at the moon with rage? Goldman Sachs, this pillar of the free market, breeder of super citizens, object of envy and awe will go on raking it in, getting richer than God? An impish grin spreads across Blankfein’s face. Call him a fat cat who mocks the public. Call him wicked. Call him what you will. He is, he says, just a banker ‘doing God’s work’”. (*Times Online*, 8Nov09)

All is not well for Goldman Sachs, however. The U.S. Securities Exchange Commission has sued the company for fraud and the Justice Department has opened a criminal investigation of the company—a prelude to a possible criminal indictment. Additionally, it has recently come to light that Goldman was instrumental in creating the current debt crisis in the European Economic Union (‘EU’) by secretly and illegally lending money to the countries affectionately called the ‘PIIGS’—Portugal, Ireland, Italy, Greece and Spain. This precipitated a \$1 Trillion bailout by other members of the EU in May, 2010. As of this writing, the European financial markets are

still in turmoil, as a result of this crisis.

Gillian Tett, chief of global financial markets coverage for The Financial Times, one of the world's leading business newspaper, also agrees that the single-minded pursuit of money—a malevolent behavior in any traditional ethical system—was one of the prime causes of the financial meltdown. Her recent book, *Fool's Gold: How the Bold Dream of a Small Tribe at J.P. Morgan Was Corrupted by Wall Street Greed and Unleashed a Catastrophe*, recounts, in exhaustive detail, exactly how Collateralized Debt Obligations were invented at J.P. Morgan and then how they spiraled out of control to create the global financial crisis (Tett 2009).

The book *Animal Spirits* (2009) by Akerlof and Shiller provides us with further insight into the correlation between unethical management practices and recessions. These authors show how each of the past three U.S. recessions, including the current one, involved large corruption scandals. Further, these scandals played a role in determining the severity of each of these recessions (Akerlof and Shiller 2009, 29). George Akerlof of the University of California at Berkeley is the recipient of the 2001 Nobel Prize in Economics. Robert Shiller of Yale is the author of the best-selling book about financial markets, *Irrational Exuberance*, and one of the founders of the field of behavioral economics.

### **Why Does Business Attract Psychopaths?**

The reason that psychopaths are over-represented in business is that psychopaths are *attracted* to business. Business not only attracts psychopaths, but it *rewards* them for a lot of their malevolent behavior. We might think that lying, deceit, manipulation, narcissism and callousness—the behavioral attributes of psychopaths - would eventually lead to termination. This is not the case, according to Babiak and Hare (2006, xi) and they posit four possible reasons for this. First, psychopaths are skilled at social manipulation and come off as charming and poised in job interviews. Second, recruiters can mistake the well-disguised psychopathic traits of coercion, domination and manipulation for the “leadership” qualities of taking charge, making decisions and getting others to do what you want. Third, the nature of business is changing into simpler, faster and more employee-empowered organizational structures. Psychopaths can easily hide in these structures. Finally, fast-paced, high-risk, high-profit environments with fewer constraints or rules are *extremely attractive* to psychopaths.

Another feature of today's business environment that is attractive to psychopaths is that management theory has been dominated for many years by the ‘Chicago School of Thought’, which was promulgated by the members of the Department of Economics at the University of Chicago. The legacy of the Chicago School of Thought is the pessimistic, over-simplifying assumptions that underlie our economic teaching and our management theories, according to Ghoshal (2005). These include: 1) the behavioral assumption of rational self interest of individuals; 2) that morals, other than obeying the law and corporate policy, have no place in

corporate management; 3) that profit maximization is the only proper goal of managers and 4) that humans are imperfect and thus we must create organizations that prevent bad people from doing harm as much as enabling good people to do good. We can add to these assumptions another ideology that was preached widely but also proven to be erroneous—that free markets should not be interfered with, since they ‘self-regulate’ (Goodman 2009. Krugman 2009).

However, as Ghoshal points out, unlike theories in the physical sciences, theories in the social sciences are often self-fulfilling. That is, if a cosmologist believes that the sun goes around the earth, this does not change the physical fact. However, a management theory that states that individuals are merely self-interested and opportunistic will cause managers to adapt their behaviors and treat them that way. This has been shown, according to Ghosal, to induce employees to actually become more opportunistic and less trustworthy.

Even a cursory examination of these assumptions shows a close mapping with the behavioral traits of a psychopath. In such an environment, psychopaths get rewarded for ‘leveraging their evil’. As a matter of fact, in his book, *The Corporation, The Pathological Pursuit of Profit and Power*, Joel Bakan reports asking Dr. Robert Hare, the world’s expert on psychopathy to apply his Psychopathy Check List to the attributes of the corporation, as if he were diagnosing a patient. Dr. Hare found a close match. Hare reported that corporations:

- 1) are *irresponsible*, putting everyone else at risk in attempting to satisfy their goals;
- 2) try to *manipulate* everything, including public opinion;
- 3) are *grandiose* in always insisting that they or their products are number one, the best;
- 4) have a *lack of empathy and asocial tendencies*, not caring about whom they hurt;
- 5) *refuse to accept responsibility for their actions* and are *unable to feel remorse*, paying fines when caught but continuing the same behavior unless stopped by authorities;
- 6) *relate to others superficially*, presenting themselves to the public in a way that is appealing to the public but which is not a true representation of their real character and goals (Bakan 2004, 57).

Is it any wonder that psychopaths are attracted to corporations?

### **Definition of Psychopaths, Behavioral Characteristics and Factor Analysis**

According to Babiak and Hare (2006, 19), Psychopathy is a personality disorder that is described by behavioral traits in individuals that include being without conscience and being incapable of empathy or guilt or loyalty to anyone but themselves. As we examine psychopathy in more detail, we will see that it is a particular form of emotional dysfunction that entails anti-social behavior but is further uniquely characterized by what is known as ‘instrumental aggression’ as opposed to ‘reactive aggression’. Reactive aggression is the last resort of an animal’s response to threat. An animal will freeze in response to a distant threat and flee in response to a proximate threat. It is only when escape is impossible that an animal will engage in reactive aggression. However, the unique characteristic of psychopaths, in addition to their emotional dysfunction, is

that they will routinely engage in instrumental aggression to achieve their goals. Remarkably, there is no biologically based disorder other than psychopathy that is associated with an increased risk of instrumental aggression. The reason for this is that these two types of aggression are controlled by separate brain systems. We shall see that psychopaths have a genetic/biological deficiency in one of these brain systems—the system that processes emotions and fear - as revealed by brain scans (Blair et al. 2005, 13).

First, however, we must correct a common misconception concerning psychopaths. The general public and even some professionals routinely confuse Psychopathy with both *Sociopathy* and *Antisocial Personality Disorder* ('APD') (Babiak and Hare 2006, 19). Sociopathy is not a formally defined psychiatric diagnosis. The term refers to attitudes and behaviors that are considered criminal or antisocial by society but are considered normal behavior in a specific subculture (e.g., 'Hell's Angels' or street gangs). In contrast to psychopaths, sociopaths have a well-developed conscience as to acceptable behavior toward their 'in-group' and have normal capacity for empathy, guilt and loyalty to the subculture group, but their sense of right and wrong is based on the norms and expectations of the subculture.

On the other hand, Antisocial Personality Disorder ('APD') is a very broad psychiatric diagnostic category. Antisocial and criminal behaviors are part of its behavioral definition, so in a sense sociopaths and criminals would qualify for an APD diagnosis. However, individuals with APD do not show the lack of empathy, the grandiosity, the callousness and the shallow emotion that are typical of psychopaths. Psychopaths are egocentric in the extreme, unable to feel the deep emotions of love and compassion that others feel and often engage in acts of violence that seem random and senseless. Even their sexual relations are superficial and impersonal. However, they do seem to be able to feel primitive "proto-emotions" such as anger, frustration and rage and, in order to get what they want, they can act extremely—albeit superficially - charming and sociable (Hare 1993, 33ff).

As to behavioral characteristics, psychopaths 1) lack empathy and possibly the most basic understanding of human feelings 2) lack feelings of remorse and guilt and 3) need considerable novel stimulation to keep from being bored (Babiak and Hare 2006, 46).

Psychopaths seem to be unable to construct in their minds an accurate emotional facsimile of others, believing that everyone is as greedy, selfish and unfeeling as they are. Therefore, to these individuals, people are pawns, objects, targets or obstacles in the pursuit of their goal-directed behavior.

In normal humans, our conscience is an internal moral sense that prevents us from acting out the 'animal instincts' or 'fantasies' we might have about using, manipulating, stealing from or hurting others. We will see that because of their defective brain system, psychopaths cannot be

‘morally socialized’. This, together with their ability to turn on the charm when required, makes them ‘a near perfect human predator’ (Babiak and Hare 2006, 39).

Finally, the need for novel stimulation, which appears to be also rooted in their brain physiology, leads them to move from relationship to relationship and to constantly seek new and exciting opportunities. Although psychopaths may graduate from college or achieve professional credentials, in most cases it is not through hard work and dedication, but through short cuts: cheating, getting others to do their work, or gaming the system (Babiak and Hare 2006, 47).

#### *How Do Psychopaths ‘Succeed’ in Organizations?*

It is very natural to wonder how psychopaths—who possess such abhorrent antisocial behaviors—can escape detection and even succeed in organizations. The reason is that they are masters of camouflage (Babiak and Hare 2006, 37). First, they have a talent for ‘reading people’ and sizing them up quickly as possible targets. Secondly, psychopaths come across as having excellent oral communication skills. This is, however, more a matter of appearances than substance. Lacking the normal social inhibition that most people have, they jump into conversations easily with glib remarks, clichés and sincere-sounding ‘revelations’ about themselves. This induces the target to open up with information that will be used to exert leverage against them. Thirdly, they are social chameleons—they are masters of impression management and change their public personas to establish solidarity with their target and to cause their victim to lower his/her defenses. However, if the charming approach does not work, psychopaths readily can and will resort to both covert and overt intimidation and proactive aggression (Babiak and Hare 2006, 39).

#### *Factor Analysis of Psychopaths*

There are a number of ways of defining the ‘factors’ or ‘domains’ that make up the personality of a psychopath. These “factor models” are ways of organizing the 20 various traits or characteristics of psychopaths contained in the Psychopathy Check List-Revised which correlate with each other into more general facets or “factors” of the psychopathic disorder. However, The PCL-R created by Hare was based on a two-factor model and this is factor model still extensively used to aggregate the 20 characteristics of the PCL-R into groups (Blair et al. 2005, 7).

**Two-factor Model of Psychopathy**

<b>Factor 1: Interpersonal/Affective Items</b>	<b>Factor 2: Impulsive/Antisocial Lifestyle Items</b>	<b>Items That Fail to Load on Either Factor</b>
1. Glib/superficial charm	3. Need for stimulation/proneness to boredom	11. Promiscuous sexual behavior
2. Grandiose sense of self-worth	9. Parasitic lifestyle	17. Many short-term marital affairs
4. Pathological lying	10. Poor behavioral controls	20. Criminal versatility
5. Conning/manipulative	12. Early behavioral problems	
6. Lack of remorse or guilt	13. Lack of realistic, long-term goals	
7. Shallow affect	14. Impulsivity	
8. Callous/lack of empathy	15. Irresponsibility	
16. Failure to accept responsibility for own actions	18. Juvenal delinquency	
	19. Revocation of conditional release	

Blair et al. also review the literature on the use of a three-factor model, which, in essence, divides Factor 1 above into two separate categories—Arrogant and Deceitful Interpersonal Items (Items 1,2, 4 & 5) and Deficient Affective Experience (Items 6, 7, 8 & 16). They report that in some studies this seems to fit the data better (Blair et al. 2005, 8).

Recently, Babiak and Hare (2006) argue for a revised four-factor model. It is represented as follows:

**Domains and Traits of the Psychopath**

<b>Interpersonal Domain - The person is:</b>	<b>Affective Domain - The person:</b>	<b>Lifestyle Domain - The person:</b>	<b>Antisocial Domain - The person has a history of:</b>
Superficial	Lacks Remorse	Is impulsive	Poor behavioral controls
Grandiose	Lacks empathy	Lacks goals	Adolescent antisocial behavior
Deceitful	Doesn't accept responsibility	Is irresponsible	Adult antisocial behavior

The point to be made here appears to be a minor one: how do we organize the well documented attributes of psychopaths into general groups of traits that are correlated? However, despite these few different ways of organizing the characteristics, all these models contain essentially the same traits as those in the PCL-R and PCL-SV.

*Is Psychopathy Caused by Nature or Nurture ?—It is Caused by Both!*

The influences that cause psychopathy are provided mostly by nature—genetic abnormalities and perhaps some currently undiscovered biological influences on the developing fetus. Then, influences in the individual's environment can exacerbate or ameliorate this predisposition. However, Babiak and Hare (2006, 25) make it clear that the social environment will have a difficult time overcoming the genetic component.

The most comprehensive study of the genetic components of psychopathy is by Viding et al. (2005). Viding and his colleagues studied 3,687 seven-year old twin pairs for psychopathic attributes. They focused on the two-factor model (Blair et al. 2005, 8) of both affective-interpersonal impairment (callous-unemotional traits such as lack of empathy, lack of guilt and shallow emotions) and overt antisocial behavior. They discovered that psychopathic attributes could be identified at an early age, pointing to a strong genetic component. They report that pronounced callous-unemotional traits ('CU') are under strong genetic influence, are highly heritable and are not explained by environmental influences (such as socio-economic status, school and neighborhood). Moreover, the antisocial behavior accompanying the CU traits is also highly heritable.

Further, Larsson et al. (2006) studied 1,090 monozygotic and dizygotic twin pairs, 16-17 years old and found a “strong genetic influence behind the higher order ‘psychopathic personality’ factor underpinned by the three psychopathic personality dimensions...(a) an interpersonal style of glibness, grandiosity and manipulation; (b) an affective disposition of callousness, lack of empathy and shallow emotionality and (c) a behavioral/lifestyle dimension of impulsivity, need for stimulation and irresponsibility, underpinning a higher order construct, psychopathic personality”. Further, and perhaps more important, is their finding that there was no significant sex difference both in the genetic and environmental factors determining the psychopathic personality dimensions of the twins in the study. This finding is consistent with most behavioral genetic studies in the field of normal personality and also in line with one of the hypotheses of this paper.

Finally, Blonigen et al. (2003) employed a self-report scale (the Psychopathic Personality Inventory by Lilienfeld) to investigate psychopathic traits in a sample of 165 monozygotic and 106 dizygotic twins born between the years 1961 to 1964. Although the sample size was small and therefore limits the universality of the conclusions, the authors found significant genetic contributions to the psychopathic personality attributes and no significant environmental contribution.

#### *Prognosis for Treatment of Adult Psychopaths*

Unfortunately, the prognosis for successful treatment of psychopaths is chilling. Harris and Rice (2006) reviewed all relevant empirical research on treatment of criminal psychopaths. They did not deny the dangers to society from the behavior of non-criminal psychopaths, but focused on criminals as the most important population group from a social policy perspective. This is their conclusion:

“We believe there is no evidence that any treatments yet applied to psychopaths have been shown to be effective in reducing violent crime. In fact, some treatments that are effective for other offenders are actually harmful for psychopaths in that they promote recidivism. We believe that the reason for these findings is that psychopaths are fundamentally different from other offenders in that there is nothing ‘wrong’ with them in the manner of a deficit or impairment that therapy can ‘fix’. Instead, they exhibit an evolutionary viable life strategy that involves lying, cheating, and manipulating others.

“Although no therapy has yet been shown to reduce the likelihood of future violence or crime among psychopaths, this does not mean that nothing can help. The best available evidence for effective intervention comes from the application of social learning principles in the form of behavioral programs and MST [Multi-Systemic Therapy]. We believe that the strongest evidentiary support exists for institutional incapacitation where practical, and in tightly

controlled behavioral programs with contingencies that remain in effect both inside and outside the institution”. (Harris and Rice 2006)

In essence, Harris and Rice are saying that psychopathy is an Evolutionary Stable Strategy (‘ESS’), which means that natural selection has favored it in certain ways and will likely continue to favor it. Psychopaths exhibit promiscuous sexual behavior—‘high mating effort’—short-term marital relationships and low parental investment. It is truly a genetically determined life strategy that has been continued in the general population over time because of its relationship with reproductive success (Harris and Rice 2006, 564). Later in this paper, we will show how psychopathy is actually a subset of the Evolutionary Stable Strategy (‘ESS’) known in evolutionary game theory as ‘Always Cheat’.

However, there is some hope for psychopaths. Thornton and Blud (2007) also reviewed all the literature on treatment of psychopaths. They report that it appears that if the psychopath is an adult and the treatment is relatively short, there is no effect on recidivism. However, if long-term cognitive behavior therapy is used on adult psychopaths, there is some reduction in recidivism. Further, long-term cognitive behavior therapy used on adolescents can be even more effective in reducing recidivism.

#### *The ‘Successful’ Psychopath*

So what about non-criminal psychopaths? What is different about these ‘successful’ psychopaths? A review of the evidence by Hall and Benning (2006) shows that they exhibit the callousness, non-emotionality of the incarcerated psychopaths (Factor 1), but some members of this subgroup have mitigating traits that compensate for the impulsivity and antisocial behavior (Factor 2). As an example, undergraduates with psychopathic attributes favor aggressive tactics in laboratory tasks and express positive attitudes toward aggressive behavior but may not commit acts that are egregious enough to get them arrested. Therefore, these authors conclude that the etiology of both incarcerated and non-incarcerated psychopaths is the same. However, even though ‘successful’ psychopaths self-report a high prevalence of criminal deviance, they tend to come from high socioeconomic status groups, have intact executive brain function and have autonomic hyperactivity to social stress. These compensatory characteristics make them less impulsive and more careful in their antisocial activities (Hall and Benning 2006).

Nevertheless, we only term these individuals ‘successful’ psychopaths because they are able to avoid long-term incarceration. According to Babiak (2007), who performed a recent investigation of psychopathic corporate executives, the subjects of his study manipulated their bosses and coworkers and were deceitful, lying and actually did minimal work, getting those who worked for them to do their job. They also purposely created conflict among their coworkers, abused fellow employees and lied about their experience and their education on their resumes. Many were padding their expense accounts and two were actually stealing company

property to sell on the side. Nevertheless, because of their skill in manipulating their bosses' impressions of them, many were identified as 'executives on the fast track' (Babiak 2007)!

### *Psychopathy Co-morbidity*

According to Blair et al. (2005, 24), there is no correlation between IQ and psychopathy, although their confidence, brazenness and superficial charm may make them appear more intelligent. Further, there is no co-morbidity with anxiety or mood disorders. Quite the opposite, psychopaths do not experience anxiety or depression. Also, psychopathy is not similar to autism. Autistic individuals are deficient in social cognition, which is mediated mainly by the 'mirror neurons' in the brain. Psychopaths, on the other hand, are great students of human nature and masterful manipulators of social cues.

However, Blair et al. (2005, 146).report that Attention Deficit/Hyperactivity Disorder ('ADHD') is co-morbid with psychopathy, with a correlation possibly as high as 75%. Blair and his colleagues contend that one of the brain areas that is deficient in psychopathy is an area designated as 'Brodmann Area 47', which is in the prefrontal cortex and is an area that mediates executive function and behavioral control. Thus, it is actually hyperactivity and impulsiveness that is co-morbid with psychopathy.

### *Psychopathic Recidivism*

There are a large number of studies establishing the fact that criminal psychopaths—as diagnosed by the PCL-R - the 'gold standard' scale—reoffend at substantially higher rates than non-psychopaths (Blair et al. 2005, 15). Within three years, 25% of non-psychopaths are re-incarcerated for a new offence. On the other hand, various studies of U.S. criminal psychopaths show that within three years 65% to 80% are jailed again. International studies show similar disparities in recidivism, although at smaller rates.

## **Incidence of Psychopathy**

In his book, *Without Conscience, The Disturbing World of the Psychopaths Among Us*, Robert Hare states:

“ There is certainly no shortage of psychopaths who con people into doing things for them, usually to obtain money, prestige, power or, when incarcerated, freedom. In a sense, it is difficult to see how they could do otherwise, given a personality that makes them 'naturals' for the job. Add those universal door openers—good looks and the gift of gab—and we have a potent recipe for a life of scams and swindles, as someone like Brad could attest.

“ Their job is made a lot easier simply because a lot of people are surprisingly gullible, with an unshaken belief in the inherent goodness of man”.  
(Hare 1993, 110)

Further, Babiak and Hare (2006, 37) contend that the sheer number of people with psychopathic personalities means that most of us will encounter at least one psychopath during a

typical day. However, we will likely not recognize them due to the ability of psychopaths to mask their true nature.

White-collar psychopaths take advantage of their victims by first gaining their *trust*. Some do this by using their skills of manipulation and their studied understanding of human nature - we all want to be liked and want to find people we can trust. Some enter professions that are presumed by the general public to be trustworthy and they therefore don't have to *earn* their victims' trust: lawyers, financial advisors, clergy, physicians, teachers, counselors, and foster parents.

“In summary, the psychopath's psychological game involves analyzing the individual's expectations and desires, and then reflecting them in a psychological mask that is so convincing the person bonds with him or her. This bonding can take place very quickly, even during the space of one cross-country airplane ride. There are two payoffs: the psychopath wins the immediate game by gaining the person's trust, and the victim, now in the grip of the psychopath's power, will soon give up whatever the psychopath requests or demands” (Babiak and Hare, 2006, p. 79).

Robert Hare, from his life-long work with incarcerated psychopaths, estimates that they make up about 15% of the prison population (Babiak and Hare 2006, 18). The remaining 85% would likely be diagnosed with Sociopathy or antisocial personality disorder. Additionally, Hare estimates that 3.5% of business executives would be diagnosed as psychopaths. In support of these estimates, Blair et al.'s review of the literature led them to estimate that psychopaths comprised between 15 to 30% of the male prison population, 15% of the female prison population and 0.75% of the male general population. We will return to the subject of the incidence of female psychopathy later in this paper. However, suffice it to say here that despite the paucity of research on female psychopathy, there is good reason to believe that the incidence of female psychopathy is equal to the incidence of male psychopathy. Although there is a similar incidence of Factor 1 Traits—emotional dysfunction—in females, the incidence of Factor 2 Traits—behavioral dysfunction—is less. Blair et al. (2005, 20) believe this is due to extraneous influences, such as social modeling and simple physical size, which cause the behavioral manifestation of female psychopathy to be different.

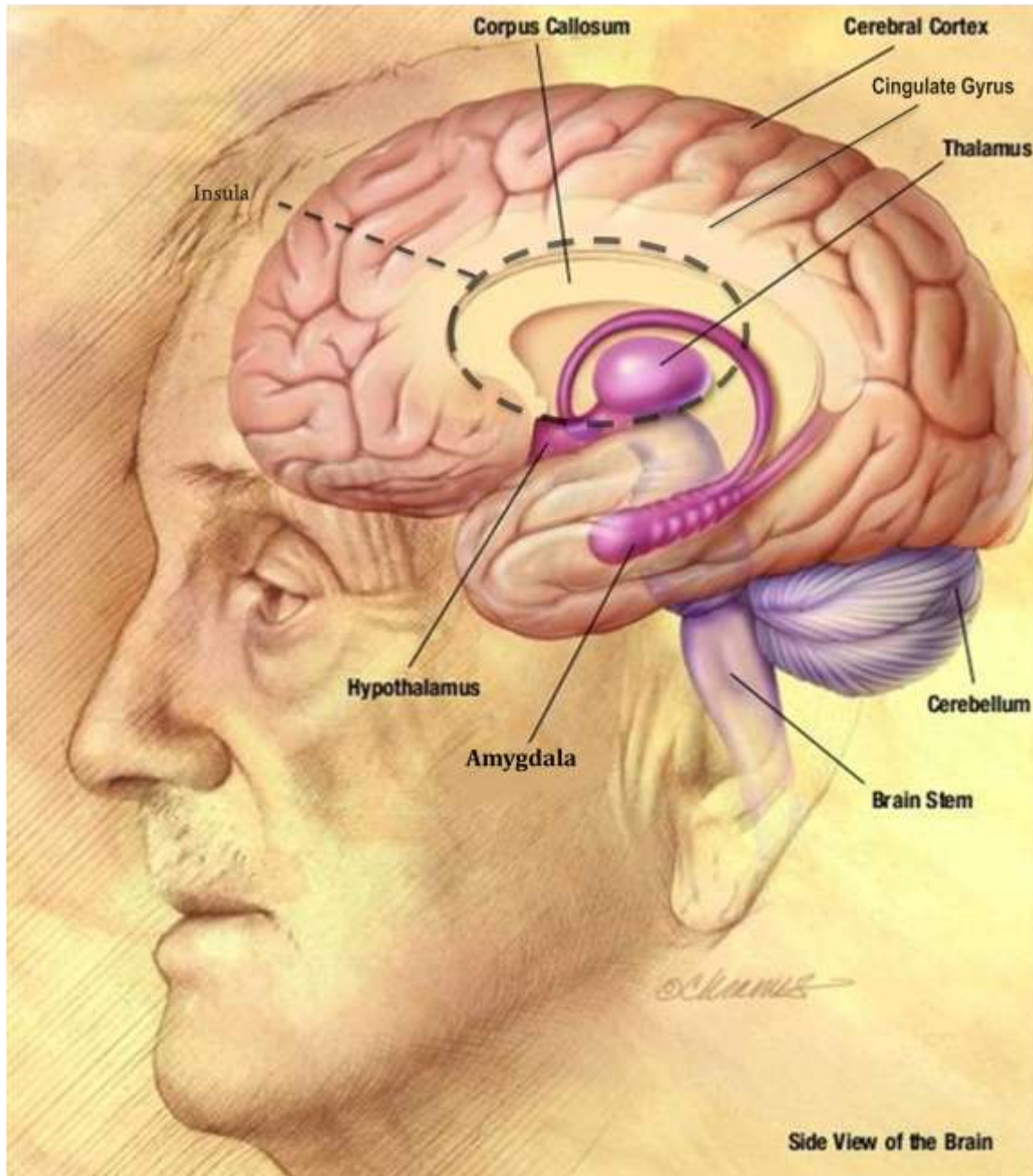
Some simple calculations (and these are just estimates based on Bureau of Labor Statistics data) shows that these estimates imply that the number of actual psychopaths in the United States is quite large—and this number is consequently quite frightening:

<b>U.S. Subject Group</b>	<b>Est. Incidence</b>	<b>Total Population</b>	<b>Total Psychopaths</b>
<b>Employed Males</b>	1%	73,315,000	733,150
<b>Employed Females</b>	1%	65,988,000	659,880
<b>Civilian Labor Force</b>	1%	153,911,000	1,539,110
<b>Male Management Bus. and Financial</b>	3.5%	12,240,000	428,400
<b>Female Management Bus. and Financial</b>	3.5%	8,975,000	314,125

### **The Neuroscience of Psychopathy**

The emotion-processing center of the brain is termed the ‘Limbic System’. The word emotion connotes a feeling that moves us to action, and accordingly emotions activate approach or avoidance behavior. This behavior is mediated via the two major circuits of the brain’s limbic system - the reward /approach and loss/avoidance systems. Our brain’s reward/approach system and the complimentary loss/avoidance system have an ancient evolutionary origin and are fundamentally the same systems that reptiles and mammals are endowed with. (See Figure 1.)

## THE BRAIN'S LOSS AVOIDANCE SYSTEM



**Figure 1. Source: National Institute on Aging**

We will concentrate on the loss avoidance system, as psychopaths have a deficiency in this brain system. The loss-avoidance/emotional motivational circuit in the limbic system motivates us to avoid loss and is triggered by perceived threats or danger. (Taylor 2006, 4063) The structures in this system include the anterior insula, which registers pain and disgust; the amygdala, which processes emotions; the hippocampus, the center of memory processing and

fixating; and the hypothalamus, which secretes hormones to activate physiological responses. Anxiety, fear and panic are all triggered in the loss/avoidance system. These emotions have correlating cognitive thoughts of pessimism and worry.

When confronted with a threat or danger, the loss/avoidance system activates the entire body. Neurotransmitters prepare the brain to focus on the danger. Further, the hypothalamus-pituitary- adrenal axis ('HPA axis') floods the bloodstream with stress hormones and epinephrine. Then, the sympathetic nervous system prepares the entire body for the 'fight or flight' response. Of course, if this system is over activated, it causes panic attacks and when it is chronically activated by stress, it causes high blood pressure, arteriosclerosis and heart attacks and strokes.

“At the core of the model is the suggestion of amygdala dysfunction in individuals with the disorder [psychopathy]. This amygdala dysfunction gives rise to impairments in aversive conditioning, instrumental learning, and the processing of fearful and sad expressions. These impairments interfere with socialization such that the individual does not learn to avoid actions that cause harm to other individuals. If such an individual has a reason to offend, because their other opportunities for financial resources or respect are limited, they will be more likely to offend than healthy developing individuals”. (Blair et al. 2005, 124)

However, the impairment to the functionality of the amygdala is not total. Research has shown that psychopaths are not impaired in the making of trustworthiness judgments or in the judging of complex social emotions from peoples' eyes. They are specifically impaired in the learning of stimulus-punishment associations, which makes it all but impossible to morally socialize them. Their stimulus-reward learning functioning, on the other hand, is quite intact. Blair et al. (2005, 124 &129) agree that “individuals with psychopathy are unimpaired in processing positive material”. This is not surprising, since rewards –both expected and actual— are processed in a different part of the brain (albeit interconnected with the amygdala). The implication of this finding is that psychopaths seek anticipated rewards every bit as much as normal people do—they just use unethical means to obtain them.

“In addition, there are also indications that individuals with psychopathy present with orbital frontal cortex dysfunction. One aspect of this impairment, impairment on reversal learning tasks, may be related to amygdala pathology. However, a second aspect of this impairment, impairment on response control tasks, cannot be easily related to amygdala pathology. This suggests that there is an orbital frontal cortex pathology that is additional to the amygdala pathology. As yet, the degree to which the amygdala and orbital frontal cortex pathology have similar developmental origins remains unclear”. (Blair et al. 2005, 139)

Herba et al. (2007) agree with this analysis, at least as a hypothesis. They state, “In summary, we hypothesize that an emotion-processing deficit, linked to the abnormal development of the amygdala and its projections to other cortical and sub-cortical areas, occurs early in childhood and contributes to the development of the other aspects of psychopathy”. Further, Kiehl et al. (2006) also found abnormalities in the temporal lobes of criminal psychopaths, as did Raine and Yang (2006) and Rogers (2006).

### *Psychopaths and Moral Socialization*

Psychopaths exhibit a group of impairments that primarily affect emotional processing. They have reduced responses to threatening stimuli, reduced emotional learning and relearning, reduced empathic responding, difficulties with certain aspects of moral reasoning and difficulties with affect-laden language (Blair 2006).

“Our basic argument is that, at the neural level, psychopathy is associated with amygdala dysfunction. At the cognitive/computational level, the suggestion with respect to psychopathy is that the affect representations implemented by the amygdala are either less responsive or learning on the basis of activation of these representations is disrupted.

“The affect representations are activated by the fear and distress of others. Reduced responsiveness to these expressions interferes with moral socialization, leading to an individual who is at risk for learning to use antisocial behavior for achieving his/her goals”. (Blair et al. 2005, 128)

### **Psychopaths as ‘Cheaters’, Incidence of Cheaters & Organizational Dynamics With Cheaters.**

Recent research in economic game theory has emphasized the polymorphic nature of the makeup of the human population and the importance of individual differences in modeling group behavior and dynamics in economic games and decisions problems. In an important seminal article, Kurzban and Houser (2005) detail experiments in ‘public goods games’ they performed that were designed to identify and analyze these differences. They find that human subjects consistently fall into one of three types: reciprocators, cooperators and ‘free riders’ or cheaters.

1. Reciprocators, who make up 63% of the population, contribute to the public good as a positive function of their beliefs about others’ contributions. In game theory parlance, they use a conditional strategy called ‘Tit-for-tat’.
2. Cooperators, who make up 13% of the human population, always contribute to the public good at a cost to themselves whether others do or not. In game theory parlance, they play the absolute strategy of ‘Always cooperate’.

3. Free riders, who make up 20% of the human population, do not contribute to the public good but take from it. Again, in game theory parlance, these agents employ the absolute strategy of 'Always cheat'.

(Unable to Classify = approximately 3% did not fit any of the above categories)

There has been extensive mathematical modeling and theoretical analysis of the behavior of each of these types in group dynamics (Dugatkin & Wilson 1991. Lomborg 1996. Aktipis 2004). Further, and extremely important to the ethical behavior of groups in institutions, cooperative behavior of a group can be accurately predicted if one knows the statistical makeup of the group in terms of these three types. (In the real world, there are plenty of simple psychological and economic game theory tests to determine this.) The implications of this and of the mathematical modeling of group behavior in economic games suggest that evolutionary dynamics has generated in our society an evolutionary stable, polymorphic, non-homogenous population made up of individuals that vary in their degree of cooperation in group interactions (Kurzban & Houser 2005).

Therefore, the make-up of the members of an institution or corporation can be a serious impediment to (or conversely an aid to) the ethical behavior of the individual. More importantly, since institutions and corporations are not democracies but rather dictatorships, the ethical culture is always created from the top down so the behavioral type of the CEO is critically important to the ethics of the entire organization. (Enron is a prime example.)

### **Cooperation, Altruism, Free Riders & Fairness**

The voluminous research on cooperation contends that there is no doubt that having as many cooperators (or at least reciprocators) as possible in an organization is important. This is especially important with today's organizational emphasis on teamwork in the workplace. Kurzban and Houser (2005) found that the payoffs to the individuals within groups randomly composed of each of the three behavioral types was the same for each individual. However, in groups composed of three reciprocators with one cooperator, each individual earned approximately 40% more than three reciprocators grouped with a free rider due to the contingent strategy used by the reciprocators. As we saw above, free riders not only reduce payoffs by 'cheating' but also 'pollute' the group by reducing the cooperation of the reciprocators.

Richard Dawkins (1989) has shown that in computer game simulations that 'Tit-for-tat' and 'Always cheat' are 'Evolutionary Stable Strategies' ('ESS'). That is, if all the members of a group play either of these strategies, the other strategy cannot do well in it and will eventually be 'extinguished'. That is, if one or a number of 'Always cheats' joins a group dominated by 'Tit-

for-tats', they will be shunned or punished (Hauert et al. 2007). On the other hand, if 'Tit-for-tats' join a group dominated by 'Always cheats,' they will become 'Always cheats' or die.

However, Dawkins also showed that the evolutionary payoffs to a group composed of 'Tit-for-tats' both in fitness and procreation (group growth) were significantly larger than an 'Always cheat' group. Moreover, in a polymorphic group, if there are as few as 5% 'Tit-for-tats' they can eventually overwhelm the 'Always cheats' so long as they are allowed to cooperate with each other (which they will) and exclude the 'Always cheats.' More recently, Gurerk et al. (2006) and Hauert et al. (2007) have shown in mathematical models that adding punishment of cheaters and indirect reciprocity ('gossip') to the group's organizational dynamics maintains cooperative behavior in the group. The implications of these findings for fostering teamwork and cooperative group behavior should be obvious.

### **Psychopaths Are a Subset of Free Riders**

Psychopaths are a subset of free riders or the strategy 'Always Cheat'. If they are put on a team with reciprocators, the reciprocators will play the strategy, "Tit-for-Tat" and become Cheaters also. This is why "psychos in suits" wreak so much havoc in organizations. Kurzban and Houser (2005) support this hypothesis because by categorizing the nature of each member of a group beforehand, they were able to accurately predict the level of cooperation or non-cooperation in then group. Unfortunately, since organizations are not democracies but rather hierarchical dictatorships, the cooperators and reciprocators are often required to work on teams with free riders (or worse psychopaths). Even more disastrous is having a boss who is a psychopath. Babiak and Hare say, "One of the most debilitating things for your personal and professional life is to work for a psychopathic boss. He or she can make your life hell". We will come to understand that psychopaths inevitably abuse their power creating misery among their subordinates (Babiak and Hare 2006, xiii).

How can cooperation of Tit-for-tats actually come about in groups, when there are a lot of "Always Cheats" in the general population? In early mathematical models of reciprocal altruism in moderately large groups, cooperation collapsed because of the existence of free riders in the group (Pachanathan and Boyd 2004). However, as Haidt (2007) reports, a big breakthrough in modeling reciprocal altruism in communities was the ability of individuals to know the reputation of members of the group through gossip - 'indirect reciprocity' (Nowak and Sigmund 2005). When behavioral economics games allow players to know each other's reputations, the rates of cooperation skyrocketed (Fehr and Henrich 2003). This gives the cooperators and the reciprocators the opportunity to shun (which they will) the free-riders/cheaters and deal only with each other.

Anthropological research has shown the overwhelming importance of indirect reciprocity in societies. In the real world, Dunbar (2004) reports that anthropologists have found that two-thirds

of our conversation is ‘gossip’ in the sense of ‘indirect reciprocity’ and that this gossip is essential to the functioning of any group.

### **Self-Report Psychopathy Scales: Evaluation**

In order to assess psychopathic attributes among business students at a major East Coast research university, we utilized a well-validated and respected self-report psychopathy scale—the Levenson Primary and Secondary Psychopathy Scales (‘LPSP’). Although the Psychopathy Check List—Revised (PCL-R) and the Psychopathy Check List Screening Version (PCL-SV) are the ‘gold standards’ for diagnosing psychopaths, they require extensive training, individual assessment of a subject’s history and extensive individual interviews with the subject. This makes them labor-intensive and therefore expensive and cumbersome to utilize with the general population. Additionally, they require collaborative information on behavior and this requirement has run into great logistical roadblocks in research done outside of prisons and mental institutions. In response to these difficulties, experts in the field have crafted a number of self-report tests for assessing psychopathy.

The value of self-report scales, according to Lilienfield and Fowler (2006), are: 1.They are good at assessing internal states, in this case the *absence* of empathy, guilt and fear and the systematic detection of the psychopath’s positive impression management and malingering. 2.They are economical and can be administered anonymously. 3.They can assess response styles systematically. 4.They are not biased by subjective reliability among interviewers as is the PCL-SV.

On the other hand, the disadvantages of self-report scales are: 1.Since psychopaths are liars and sometimes lie just for sheer fun, dishonesty is an issue. 2. Psychopaths often lack insight into the true nature and extent of their psychological problems. 3.It may be problematic to ask individuals who have never experienced an emotion to report on its absence. This condition is call ‘semantic aphasia’. 4.Many questions on self-report scales in the past are heavily saturated with negative emotionality and this biases the results.

However, Lilienfield and Fowler (2006) and Williams, Paulhus and Hare (2007) report that three self-report scales, that were created with a view to correcting the disadvantages mentioned above, are now well-established, extensively used and rigorously validated self-report scales for psychopathy. These are the Levenson Primary and Secondary Psychopathy Scales (‘LPSP’), used for the research in this paper; the Self-Report Psychopathy Scale (‘SRP-II’), developed by Hare and his colleagues, and the Psychopathy Personality Inventory (‘PPI’), developed by Lilienfield. As is to be expected, each has positive attributes and also shortcomings.

The LPSP (used in our research) is a scale based on the two-factor model of the PCL-R and has good correlation with it. However, Levenson (1995) and his colleagues believe that the

second factor, Impulsive Antisocial Lifestyle, is associated with trait anxiety and they term it ‘Secondary Psychopathy’. Lilienfeld and Fowler (2006) criticize it on this point, saying that their Factor 2 captures antisocial behavior in general and not psychopathy-related behavior. We have taken this into consideration in our analysis below and are circumspect in our interpretation of the secondary psychopathy scale results.

The SRP-II is reliable on its Factor 1 questions, but also can be criticized as to whether its Factor 2 questions are able to discriminate between general antisocial behavior and psychopathy-related behavior.

Finally, the PPI (created by Lilienfeld, one of the authors of Lilienfeld and Fowler 2006) shows, according to the studies, good validity with other scales of psychopathy and also correlates well with Factor 2 of the PCL-R. However, it still needs more studies to determine if it discriminates prison vs. non-prison psychopaths and if it correlates with other studies of psychopathy.

The conclusion is that, while each of these three scales has considerable validity, there is still not enough research to establish a universally preferred questionnaire. We chose to use the LPSP for a number of significant reasons. First, we were actually *interested* in looking at primary psychopathy and secondary psychopathy. The Levenson scale (LPSD) is the only one that purportedly does this. Secondly, some of the behavioral questions of the SRP-II appeared to us as inappropriate to a university study. These include, as examples, “I have been arrested”; “I have been involved in delinquent gang activity”; “I have stolen a motor vehicle”. Thirdly, we felt that the Levenson scale correctly assessed ‘Psychopathic Attributes’. In support of this, Babiak (2007) reports that the best measures of what he calls ‘aberrant self-promotion’ or ‘subclinical psychopathy’ use conditional reasoning items. That is, the questions posit an attitude or a position and ask if the respondent agrees or disagrees with the question. Of the three established self-report scales, the Levenson scale is far and away the best constructed from this point of view.

### **Male Vs. Female Psychopaths**

Female psychopathy is relatively understudied, but Verona and Vitale (2006) and Jackson and Richards (2007) have reviewed all the extant research on the subject. Verona and Vitale conclude: “It is likely that although men and women have similar underlying deficits (emotional and attentional), these are manifested differently across the genders, or the measures currently available to assess dis-inhibition in the laboratory are inadequate in tapping into real-life psychopathic behaviors in women”. These behavioral differences could be prostitution, intimate partner violence, abuse and neglect of children, histrionic personality and relational forms of aggression such as friendship betrayal and ‘back-biting’. Due to the fact that the PCL-R and PCL-SV—the bases for all of the self-report psychopathy scales - were constructed from an

overwhelmingly male population, we agree that the scales are male-biased and therefore under-report the number of females endorsing psychopathic attributes. However, there is insufficient research to judge the extent of the under-reporting.

### **Analysis of Experiments Using the LPSP.**

The participants in the study were 182 students in an undergraduate Principles of Management class in the business school of a major East Coast research university. Of these, 103 participants were male and 79 were female. All were freshman. The questionnaire was administered through a password-secured, web-based format. The questionnaire was titled “Success Strategy Assessment” and was given to the class as a regular assignment by the professor of that class, one of the co-authors of this paper, who assured anonymity to her students. We used the LPSP Scales, as first presented in the article “Assessing Psychopathic Attributes in a Non-Institutionalized Population” by Levenson et al. (1995). From the total of 36 questions, 16 questions addressed primary psychopathy, which assesses ‘selfish, uncaring, and manipulative posture towards others’. The questions testing for primary psychopathy attributes are phrased with both positive and negative valence in order to avoid an excess negativity bias in the questionnaire. The LPSP also includes ten secondary psychopathy items assessing anxiety, impulsivity, and a self-defeating lifestyle. The key difference between primary and secondary psychopathy is that secondary psychopaths have significant trait anxiety. This is quite distinct from primary psychopaths, who experience no anxiety or depression.

Further, these questions were constructed using an ‘antisocial desirability manipulation’ which phrased questions “in a way that does not signal disapproval of portrait endorsement”. We analyze below not only the number of questions endorsed, but also rated the responses on a four-point scale, from 0 to 3 (“disagree strongly,” “disagree somewhat,” “agree somewhat,” “agree strongly,”) for each item (Levenson et al., 1995). In addition, seven questions were added from the “Authentic Happiness Inventory Questionnaire” created by Seligman (2002). These were added to create a more neutral tone to the entire questionnaire, so that there would not be an excess negativity bias. The questionnaire is added to this paper as Appendix A.

### *Number of Individuals Endorsing Psychopathic Attributes*

Responses to the questionnaire were first considered in terms of the general level of response to items reflecting primary psychopathy attributes. This is in line with our endorsement of the continuous model of the psychopathy construct, as we discussed above (Levenson, 1995). . In this analysis, the response was counted simply as endorsement of the item if the respondent selected either “agree somewhat” or “agree strongly” if agreement with the item’s statement was designed to indicate the typical perspective of a psychopathic individual. The percentage of total subjects endorsing each of the primary psychopathy items in the valence that indicates a psychopathic attribute is reported in the table below. (Recall that questions were formulated in both positive and negative valences in order to avoid excess negativity bias.)

<b>Primary Psychopathy Question</b>	<b>Percent Endorsing Psychopathic Valence</b>
In today's world, I feel justified in doing anything I can get away with to succeed.	38%
Cheating is not justified because it is unfair to others.	20%
People who are stupid enough to get ripped off usually deserve it.	23%
Even if I were trying very hard to sell something, I wouldn't lie about it.	23%
I enjoy manipulating other people's feelings.	13%
I tell other people what they want to hear so that they will do what I want them to do.	27%
I feel bad if my words or actions cause someone else to feel emotional pain.	11%
I quickly lose interest in tasks I start.	68%
Looking out for myself is my top priority.	14%
I make a point of trying not to hurt others in pursuit of my goals.	9%
I let others worry about higher values; my main concern is with the bottom line.	27%
I would be upset if my success came at someone else's expense.	25%
Success is based on survival of the fittest; I am not concerned about the losers.	52%
I often admire a really clever scam.	38%
Making a lot of money is my most important goal.	55%
My main purpose in life is getting as many goodies as I can.	29%
<b>Average Percentage Endorsing a Primary Psychopathy Item</b>	29%

In our study, all of the primary psychopathy questions were endorsed by some of our subjects and almost all statements were endorsed by 20% or more of the respondents. This lends support to the hypothesis of a strong genetic component to psychopathy, as we were able to detect psychopathic attitudes and attributes in a student population in which few would actually be considered psychopathic. It also lends support to the model of psychopathy as a continuum, which we discussed above. The most frequently endorsed primary psychopathy items were: "I quickly lose interest in the tasks I start" (68%) and "Success is based on survival of the fittest, I am not concerned about the losers" (52% agreed); and "Making a lot of money is my most important goal" (55% agreed).

Our results appear generally consistent with those achieved by Levenson et al. (1995), who reported that 23% of their male subjects endorsed eight or more of the primary psychopathic

attributes and 6% of their female subjects endorsed eight or more of the primary psychopathic attributes. In our study, 24% of male subjects endorsed eight or more of the psychopathic items, but only 1% of the female subjects endorsed eight or more of the primary psychopathy items.

The means and standard deviations for the number of questions answered as indicating or endorsing primary psychopathic attributes and endorsing secondary psychopathic attributes for males and for females are reported below:

	Primary Psychopathy Endorsement Score	Secondary Psychopathy Endorsement Score
Male Mean	5.50	3.00
Male Std. Dev.	3.20	2.04
Male Max	14.00	9.00
Male Min	0.00	0.00
Female Mean	3.67	2.58
Female Std. Dev.	2.39	1.79
Female Max	9.00	8.00
Female Min	0.00	0.00

An independent-samples t-test was conducted to compare the rate of endorsement of primary psychopathy items by males and the rate of endorsement of primary psychopathy items by females. We found a significant difference between the rate of endorsement scores for males (M=5.50, SD=3.20) and females (M=3.67, SD=2.39);  $t=4.24$ ,  $p < .01$ ) for primary psychopathy items.

Likewise, an independent-samples t-test was conducted to compare the rate of endorsement of secondary psychopathy items by males and the rate of endorsement of secondary psychopathy items by females. . There was no significant difference between the rate of endorsement scores for males (M=3.00, SD=2.04) and females (M=2.58, SD=1.79);  $t=1.44$ ,  $p= .15$ ) for secondary psychopathy items. This is consistent with Levenson's results (1995).

*Analysis of Psychopathic Attribute Scores As A Continuous Variable*

We further analyzed the responses to our questionnaire as a continuous variable, assigning values of zero to three corresponding to the response reflecting the least psychopathic perspective answer to the answer reflecting the greatest psychopathic perspective. This is important because all the relevant literature contends that psychopathy is a continuous variable (Levenson, 1995; Blair et al. 2005). Then, responses indicative of the typical perspective of a psychopathic individual were added to the total score of the respondent.

This procedure resulted in a primary psychopathy and secondary psychopathy score (a rate of endorsement score) for each respondent that is the total number of items they endorsed as would be endorsed by a psychopathic individual. Having assigned values from 0 to 3 to the responses, the highest possible score on the primary psychopathy questions would be 48 and the highest possible score on the secondary psychopathy questions would be 30.

	Primary Psychopathy Score	Secondary Psychopathy Score
Male Mean	18.59	11.09
Male Std. Dev.	6.63	3.98
Male Max	41	21
Male Min	0	2
Female Mean	14.05	10
Female Std. Dev.	5.72	5.03
Female Max	25	22
Female Min	2	2

There was a significant difference between the primary psychopathy scores for males (M=18.59, SD=6.63) and females (M=14.05, SD=5.72);  $t=21.80$ ,  $p < .01$ ). There was also a significant difference between the secondary psychopathy scores for males (M=11.09, SD=3.98) and females (M=10.00, SD=4.03);  $t=28.30$ ,  $p < .01$ ).

**Conclusion and Recommendations for Future Study**

Our results are consistent with a wide range of self-report psychopathic attribute studies of student populations, using self-report psychopathy questionnaires. Our results show that psychopathic attributes can be detected with self-report measures in student populations. This is

consistent with the contention of experts in the field that psychopathy is a combination of nature and nurture and that it has a very strong genetic component.

Freshman male students and freshman female students respond with subtle but statistically significant differences to this standard measure of psychopathy. Generally, male subjects agree with self-descriptive statements that reflect primary psychopathy more often than do female students, but their rate of agreement with statements reflecting secondary psychopathy is not significantly greater than that of female students. However, when the strength of agreement (as agree somewhat versus agree strongly) is taken into account by the analysis, males agree with items reflecting the perspective of a psychopathic individual on both primary and secondary psychopathy scales to a significantly greater extent than do females.

There are a number of new insights from our study. First, the university population we tested is one of the most diverse student populations in the U.S. It is comprised of students from over 160 countries attending and these students represent every possible ethnic, racial and religious group. Therefore, our results have wide-ranging application. A possible next step for investigation is whether different demographic groups have different endorsement of psychopathic attributes.

Further, we agree that psychopathic attributes form a continuous spectrum from, say, Mother Theresa of Calcutta to Adolf Hitler. That is why it is important both theoretically and statistically to analyze the data as a continuous variable, as we have done. Having done so in our study, we found evidence that supports this hypothesis—our continuous variable was normally distributed.

Also, consistent with the extant literature, we found a significant number of students who endorse psychopathic attributes. Our sample for this study (N=182) was composed exclusively of freshman. We are now conducting another study of a similarly sized student population at the same university that is evenly distributed among freshmen, sophomores, juniors and seniors and analyzing the data to see if advancing maturity makes a difference in the endorsement of psychopathic attributes.

Finally, we are currently analyzing whether how those with high psychopathic attribute scores function in a group setting. This is almost non-existent in the published studies of non-institutionalized studies. However, we have organized all our subjects into groups and given them graded group projects to accomplish over the course of a semester. Behavior was assessed by observation and also by a large number of peer-reported assessments of group cohesiveness and individual contribution to the group's success and grade. We will report our findings in a future paper.

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**Appendix A:  
Success Strategy Assessment Questionnaire**  
**Primary Psychopathy Trait, Secondary Psychopathy Trait or Authentic Happiness**  
**Questions are identified. For each participant in the questionnaire, a computer program**  
**randomly scrambled the questions.**

**Primary Psychopathy Trait Questions**

1. Success is based on survival of the fittest; I am not concerned about the losers.

Disagree strongly strongly	disagree somewhat	agree somewhat	agree
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2. For me, what's right is whatever I can get away with.

Disagree strongly strongly	disagree somewhat	agree somewhat	agree
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3. In today's world, I feel justified in doing anything I can get away with to succeed

Disagree strongly strongly	disagree somewhat	agree somewhat	agree
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4. My main purpose in life is getting as many goodies as I can.

Disagree strongly strongly	disagree somewhat	agree somewhat	agree
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5. Making a lot of money is my most important goal.

Disagree strongly strongly	disagree somewhat	agree somewhat	agree
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6. I let others worry about higher values; my main concern is with the bottom line.

Disagree strongly strongly	disagree somewhat	agree somewhat	agree
-------------------------------	-------------------	----------------	-------

7. People who are stupid enough to be ripped off usually deserve it.

Disagree strongly strongly	disagree somewhat	agree somewhat	agree
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8. Looking out for myself is my top priority.

	Disagree strongly strongly	disagree somewhat	agree somewhat	agree
9. I tell other people what they want to hear so that they will do what I want them to do.	Disagree strongly strongly	disagree somewhat	agree somewhat	agree
10. I would be upset if my success came at someone else's expense.	Disagree strongly strongly	disagree somewhat	agree somewhat	agree
11. I often admire a really clever scam.	Disagree strongly strongly	disagree somewhat	agree somewhat	agree
12. I make a point of trying not to hurt others in pursuit of my goals.	Disagree strongly strongly	disagree somewhat	agree somewhat	agree
13. I enjoy manipulating other people's feelings.	Disagree strongly strongly	disagree somewhat	agree somewhat	agree
14. I feel bad if my words or actions cause someone else to feel emotional pain.	Disagree strongly strongly	disagree somewhat	agree somewhat	agree
15. Even if I were trying very hard to sell something, I wouldn't lie about it.	Disagree strongly strongly	disagree somewhat	agree somewhat	agree
16. Cheating is not justified because it is unfair to others.	Disagree strongly strongly	disagree somewhat	agree somewhat	agree

**Secondary Psychopathy Trait Questions**

17. I find myself in the same kinds of trouble, time after time.

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	Disagree strongly strongly	disagree somewhat	agree somewhat	agree
18. I am often bored.				
	Disagree strongly strongly	disagree somewhat	agree somewhat	agree
19. I find that I am able to pursue one goal for a long time.				
	Disagree strongly strongly	disagree somewhat	agree somewhat	agree
20. I don't plan anything very far in advance.				
	Disagree strongly strongly	disagree somewhat	agree somewhat	agree
21. I quickly lose interest in tasks I start.				
	Disagree strongly strongly	disagree somewhat	agree somewhat	agree
22. Most of my problems are due to that fact that other people just don't understand me.				
	Disagree strongly strongly	disagree somewhat	agree somewhat	agree
23. Before I do anything, I carefully consider the possible consequences.				
	Disagree strongly strongly	disagree somewhat	agree somewhat	agree
24. I have been in a lot of shouting matches with other people.				
	Disagree strongly strongly	disagree somewhat	agree somewhat	agree
25. When I get frustrated, I often "let off steam" by blowing my top.				
	Disagree strongly strongly	disagree somewhat	agree somewhat	agree
26. Love is overrated.				

Disagree strongly strongly	disagree somewhat	agree somewhat	agree
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**Authentic Happiness Questions**

27. If I were keeping score in life, I would be far ahead.

Disagree strongly strongly	disagree somewhat	agree somewhat	agree
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28. I have accomplished a great deal more in my life than most people.

Disagree strongly strongly	disagree somewhat	agree somewhat	agree
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29. By objective standards, I do amazingly well.

Disagree strongly strongly	disagree somewhat	agree somewhat	agree
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30. Most of the time I feel neither bored nor interested in what I am doing.

Disagree strongly strongly	disagree somewhat	agree somewhat	agree
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31. I always get what I want.

Disagree strongly strongly	disagree somewhat	agree somewhat	agree
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32. When I am working, I pay more attention to what is going on around me than to what I am doing.

Disagree strongly strongly	disagree somewhat	agree somewhat	agree
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33. I feel I am extraordinarily successful.

Disagree strongly strongly	disagree somewhat	agree somewhat	agree
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