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**EXPLORATION OF THE IMPOSTOR PHENOMENON
IN LAW SCHOOL STUDENTS**

By

Owen Glenn Smith

A Dissertation Submitted in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

University of San Diego

May 2011

Dissertation Committee

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ABSTRACT

Law schools compel students to think like lawyers by using intensive Socratic dialogue built around voluminous case readings. This method sometimes pushes students to feel overwhelmed, to lose self-confidence, and even to wonder whether law school was the right choice for them. To some extent, such outcomes are intended because the articulated goal of law school pedagogy is to tear law students down so they can be rebuilt to think like lawyers.

Unfortunately, this demanding and competitive atmosphere prompts some law students to develop the *impostor phenomenon* (IP). The IP hampers students' leadership abilities because the students persistently feel like impostors undeserving of being in law school, despite compelling evidence to the contrary. Though studies of other graduate students (e.g., engineering and nursing) indicate a substantial number of them suffer from the IP, no previous research on law students exists.

This study attempted to fill this research gap by administering an IP instrument to a convenience sample of approximately 1,000 law students. After identifying the occurrence of the IP among these students, multiple regression analysis then decomposed variation in the intensity of the IP as a function of personal demographic measures like sex, age, and race, as well as measures of the law school experience like GPA and clinical coursework.

This study's finding of the IP in one third of the law students surveyed was similar to findings in other graduate programs. Among powerful predictors of the IP, increased procrastination, a higher year in school, being female, and taking clinical courses correlated with increased impostor feelings, while increased family support and

LSAT scores correlated with decreased impostor feelings. The correlations between the IP and clinical courses and sex were particularly noteworthy.

This research should benefit those in legal education, particularly law students, by increasing awareness of the IP. The significant occurrence of the IP might also encourage law professors to consider potential costs and presumed benefits of current pedagogical strategies. Likewise, student academic support programs might develop a better sense of the support some students require for success in law school and in leadership of the legal field upon graduation.

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CHAPTER ONE – Overview, Problem Statement, and Purpose of the Study

“Success is counted sweetest by those who ne'er succeeded.”

~ Emily Dickinson ~

Overview of the Study

Sometimes high-achieving individuals feel as if they are frauds or impostors who are unintelligent and undeserving of their success. Virtually everyone has had similar feelings at some point in life, such as when starting a new job or getting a promotion. Such concern about being found out is temporary for many people, with the first praise or commendation putting to rest impostor fears. However, for some individuals, these impostor feelings are so intense that they cannot internalize praise or objective proof of their abilities, and thus may not realize their leadership potential. The impostor phenomenon (IP) is the term for the most intense and pervasive of these insecurities and fears (Clance & Imes, 1978).

The IP is particularly relevant for students in graduate programs, such as programs offered by law schools, because the students are admitted to the programs based on perceived intelligence and achievement. Researchers have found significant numbers of students suffering from the IP in programs such as engineering, nursing, and medicine. However, no IP research has been conducted with law students. This absence of research is surprising because the IP seems especially likely to occur among law students given the pedagogy employed in most law school programs. The overarching purpose of most law school curricula is to teach students to think like lawyers; this is done by intentionally creating intensely stressful and competitive environment that presumably could lead to self-doubt for many law students.

A major factor in this intensified stress is the use of the Langdell method of thorough case reading and Socratic dialogue, both of which intentionally create stress in the students as it teaches them to think like lawyers (Rubin, 2007; Saunders & Levine, 1994). While the voluminous case readings are especially difficult to master, with the author of the popular book, *One L* referring to reading cases as “something like stirring concrete with my eyelashes” (Turow, 1977, p. 31), the Socratic dialogue also creates high levels of self-doubt in students.

The Langdell form of pedagogy is dramatically different from the forms of teaching most students encountered in their previous educational experiences, particularly because it intentionally pushes students to their intellectual limits and creates “an aura of the survival of the fittest” (Stevens, 1983, p. 55). Professor Kingsfield (as portrayed by the actor John Houseman) in the film and television series *The Paper Chase*, is arguably the best known (albeit fictional) practitioner of the Langdell method. The entire law school experience is sometimes euphemistically described as breaking students down so professors can build them back up again to think like lawyers (Saunders & Levine, 1994). This deconstruction of the law student potentially occurs each time the professor randomly asks a student to discuss a particular case from the voluminous readings assigned; if the student is unprepared, ruinous embarrassment in front of classmates follows. This recurring process “pressures its students and practitioners in the direction of fragmentation” (Grover, 2008, p. 423), and for “some students, ‘learning to think like a lawyer’ means abandoning their ideals, ethical values, and sense of self” as well as their last sliver of self-confidence (Hess, 2002, p. 79).

This stressful competition starts even before the students are admitted to law school during the selection process itself, which is often treacherous and torturous, with the acceptance rate being as low as four students accepted for each 100 students who apply (Randozza, 2009). Law school admissions offices compare students' Law School Admission Test scores, undergraduate academic achievement, and extracurricular activities in order to make their decisions. Though most pre-law students seldom feel inferior and have high self-confidence, an accepted law student might be flooded with self-doubt and concern upon opening the acceptance email, knowing the intensive experience and hard work that lie ahead (Bohn, 1971).

Once the student does enter law school, the stress increases and continues unabated throughout the student's law school career (Shanfield & Benjamin, 1985). The student's expectations are encapsulated by one first-year law student who wrote, "I am somewhat less intelligent than anyone around me – and – suspect that the privilege I enjoy was conferred as some kind of peculiar hoax" (Turow, 1977, p. 7). The newly minted law student might take some comfort in the popular wisdom dispensed by many law schools that the first year will be the most difficult. However, contrary to this often-repeated idea, research has confirmed that stress actually culminates in the third year of classes (Soonpaa, 2003). This escalating stress is likely caused by the constant emphasis on grades and the competition to demonstrate research and writing skills, such as membership in a law review editorial board, passing the bar exam, paying off student loans, and looking for a job. A demonstration of this intense competition and stress is that one survey found 63% of first-year law students frequently worked harder than they

thought they possibly could in order to meet their law professors' expectations (Center for Postsecondary Research, 2008).

Such hard work is highly admirable. Unfortunately, most law students cannot be sure their extraordinary efforts will be rewarded with good grades until their courses are over. This is because law students often receive no grades for courses until they take final comprehensive exams. Furthermore, the grade a student receives is normally based on only one exam at the end of a course. Much like the Socratic dialogue of the classroom, this administration of a single exam at the end of the course seems purposely created to inflate levels of student stress and uncertainty. As an indication of the deconstruction of the students and their resulting stress, they are so exhausted and uncertain by the end of the semester that "regardless of how well they do on exams, most students feel like failures" (Lustbader, 1997a, page 317). Recognizing that some students are stressed and begin to lose self-confidence, many law schools offer students special assistance with their academic issues, while addressing the students' "myriad of psychological barriers (attitude, self-esteem, motivation, and alienation) to learning" (Lustbader, 1997b, p. 857).

Putting these factors into context, the combination of heavy stress and uncertainty about grades erodes some students' already fragile sense of self-confidence, leaving them with self-doubt and feelings that they are impostors or frauds, who never should have been admitted to the law school program. If the IP can be environmentally induced, it is unlikely that one could design a better environment to do this than the environment found in most law schools.

Whether the IP is environmentally induced or not, however, students suffering from the IP experience their fears so intensely that it alters their self-perception of ability

and affects their eventual levels of success and leadership abilities. Although the IP does not necessarily prevent an impostor student's success, it likely prevents the enjoyment of successes and likely prevents the impostor from achieving all that he or she is capable.

Statement of the Problem

There is inadequate research on the presence of the IP in law students, who are under intense pressure to succeed academically. This pressure is compounded by a law school curriculum and process that can lead to self-doubt and feelings of being unqualified to be in the law school program. Though some research has mentioned in passing that the IP contributes to law student stress, no studies have focused on the IP's presence in law students (Grover, 2008). Researchers have found significant impostor feelings in approximately 30% of students in other academically rigorous programs, such as in engineering, medicine, dentistry, and pharmacy schools (French, Ullrich-French, & Follman, 2008; Oriel, Plane, & Mundt, 2004; Henning, Ey, & Shaw, 1998). Taken together, the law schools' stressful environment and the prevalence of impostor feelings in other graduate programs make it likely that impostor feelings and the IP are also present in law school students (Beck & Burns, 1979). The lack of IP research in law students seems doubly surprising because the teaching method and curriculum of law schools seem designed to create significantly higher levels of academic stress and fear-of-failing in law students than occurs in other students, such as those in medicine (Heins, Fahey, & Henderson, 1983). This lack of research has allowed law professors to perfunctorily dismiss the IP as a myth (Lake, 2009), even as law students blog about their own impostor feelings holding back their law school careers (New Kid on the Hallway, 2009; UBC Law Orientation, 2009).

Though impostor feelings are likely intensive enough to hinder law students' academic achievement, the lack of IP research has hampered the development of assistance programs that deal with the IP issue. This lack of IP research also makes it uncertain whether correlations exist between the IP and independent variables, such as academic ability, year in school, and age. Such IP research would assist those involved in legal education to recognize the phenomenon, and to predict its presence based on associations with other variables. In short, there is a need for research to determine if the IP is present in the law school's "learning to think like a lawyer" environment, and whether the IP has correlations with other variables so that schools and students can identify and deal with the phenomenon's damper on success and leadership.

Purpose of the Study/Research Questions

The purpose of this study is to determine the prevalence of the IP in a law student sample, as well as possible correlations between impostor feelings and variables, such as age, race, and year in school, and then to make associative predictions about the IP based on these variables. Initially, such information would help identify law students suffering from the IP so they could receive assistance through the already established student assistance programs operating in most law schools. Later, these benefits would aid the students' careers and organizations upon their graduation from law school by improving their confidence and leadership abilities. A law student suffering from the IP is less likely to accept additional leadership challenges if he or she feels undeserving of the accomplishment already achieved. While the IP does not eliminate leadership potential, it does likely hamper attempts at leadership. This study's exploration of the IP and

variables for predicting its presence can benefit not just law students but legal professionals in exploring their leadership potential.

The study attempted to answer the following research questions:

- a. To what extent is the impostor phenomenon present in a law student sample?
- b. Are there correlations between the impostor phenomenon and other variables, such as age, race, or sex, which would allow predictions about the occurrence of the impostor phenomenon?

CHAPTER TWO – Review of the Literature

“I am always looking over my shoulder, wondering if I measure up.”

~ Justice Sonia Sotomayor ~

This chapter reviews, synthesizes, and assesses the previous research on law student learning and attendant psychological issues, the impostor phenomenon (IP), and other pertinent methodological literature. The review begins with a general discussion of law school curriculums and their influence on law student’s stress levels and self-confidence. The review then delves into the IP literature, following the four avenues of previous IP research. The review will synthesize and highlight the research that is particularly relevant for this study of the presence of the IP in law students. A brief discussion of the relevant literature for justification of the methodology will also be included. Finally, the chapter synthesizes the law student literature and IP literature to discern implications for the current study and for future research.

The Law School Environment and Law Student Behaviors

American law schools use a method of case reading and Socratic dialogue that was created more than a century ago at Harvard University (Rubin, 2007). This curriculum, called the Langdell method, uses extensive case reading to prepare students for classroom Socratic dialogue that demonstrates the student’s knowledge and preparation. For most law students, this model is dramatically different from their previous educational experiences, particularly because it intentionally pushes students to their intellectual limits. Such a troubling change led 10% of the students in one study to say that “by maximizing pressure while at the same time minimizing feedback on the performance, the law school brought out the worst in many of the students” (Robert &

Winter, 1978, p. 453). This experience is sometimes euphemistically described as breaking students down so professors can build them back up again to think analytically – “to think like lawyers” (Saunders & Levine, 1994).

The Stress of Learning to Think Like a Lawyer

Learning to think like lawyers is a very stressful and competitive process for students as they sharpen their analytical skills (Christensen, 2007; Saunders & Levine, 1994). This process of breaking down students and rebuilding them to think like lawyers occurs most prominently when the professor randomly calls upon students to discuss particular cases from the voluminous readings; if the student is unprepared, ruinous embarrassment in front of classmates may follow.

Compounding the magnitude of the embarrassment, as well as the general stress level, most classrooms used by first-year students may seat up to one hundred students. Not only does this present difficulty for the student troubled by speaking in front of large groups, it also ensures that fellow classmates will see ample evidence of his or her ability to think like a lawyer. One student described the experience as learning “that he was to required to read and operate upon large amounts of legal material, and that he needed to be prepared to follow and participate in class discussion because he could experience ridicule from faculty and fellow students for appearing unprepared” (Patton, 1968, p. 19).

Because the law environment is a completely new experience for most law students, they rely heavily on the reactions and social cues from other law students and the law school’s staff. Studies have found that though law students are “a group which projects itself or attempts to project itself as socially successful, as possessing a high degree of social polish, and at least the appearance of great self-confidence, poise, and

leadership,” there is “indication that on an inner level, on the level of self-doubt, the law student does not see himself as a polished, aggressive, successful, and dominant person” (Reich, 1976, p. 873). The law school process “pressures its students and practitioners in the direction of fragmentation” (Grover, 2008, p. 423), and for “some students, ‘learning to think like a lawyer’ means abandoning their ideals, ethical values, sense of self,” and self-confidence (Hess, 2002, p. 79). Simply put, “the law school experience may be damaging to an individual whose self-esteem depends on continual demonstration of success,” and this is an accurate description of many law students in research studies (Beck & Burns, 1979, p. 287).

While there is an optimal level of stress that causes a student to study and achieve optimal grades (Benjamin, Kazniak, Sales, & Shanfield, 1986), for every student at this beneficial level, there are many others experiencing too little, or more likely, too much stress. *Yerkes-Dodson Law* discusses this relationship between stress and performance as that optimal level of stress or arousal needed to attain an optimal level of performance (Yerkes & Dodson, 1908). This relationship between stress and performance is of particular concern for law students because a study has found a relationship between too much stress in law students and their poor academic performance (Silver, 1968).

While other graduate academic programs are also academically rigorous, the teaching method and curriculum of law school create significantly higher levels of academic stress and fear-of-failing in law students than in these other programs, such as medicine (Heins et al., 1983). Compounding the problem is that law students are far less likely to seek help in dealing with their stress, and thus are not aware of how their stress compares to others (Heins et al., 1983). A latter section will also discuss the relevant

research on the presence of the IP in other graduate programs. The combination of research in high levels of law student stress, synthesized with the findings of significant impostor feelings in other graduate students, makes a strong argument for the value of studying impostor feelings in law students.

A High Level of Competition

Most law students have achieved outstanding undergraduate academic records through hard work and their intelligence. Many of them have “developed a belief system which equates self-worth with achievement” (Beck & Burns, 1979, p. 287). Studies have found that many law students are highly competitive, even before they enter law school, with one researcher describing the potential lawyers as “having some definite need requirements, such as the needs to be a leader, to attract attention, and to avoid feeling inferior or taking a subordinate role” (Bohn, 1971, p. 361). Adding to this competitiveness is that law school trains students to succeed in the legal profession, which is fundamentally an adversarial situation. Though students do not typically share their grades, the Socratic dialogue is a very public display of one’s abilities, not just to the professor, but to other students as well. This is particularly effective and competitive when a student volunteers to answer a question another student could not. One author has described this very public display of self-confidence and the competition for intellectual superiority among law students as having “an aura of the survival of the fittest” (Stevens, 1983, p. 55).

Though not all law students are highly competitive or self-confident, these descriptions are defining markers in many students (Bohn, 1971). Breaking down students who are not overly confident or competitive to begin with, and then trying to

rebuild them as analytical lawyers whose job is to win in court, adds a layer of complexity to issues of feeling like an impostor. Among this group are students who attend law school not because they want to be lawyers, but for a myriad of other reasons such as they enjoy the academic challenge or they are unsure of future career plans (Daicoff, 1997). Reformulating the student to think like a lawyer might not make sense to students who are already struggling with identity issues, and they may be at particular risk of having serious issues of self-doubt and impostor feelings.

Measures of Law School Achievement

Classroom participation. Classroom Socratic dialogue stresses some students and allows others to express their competitive natures. However, it typically does not have much impact on the most important indicator of achievement, the student's grade, which is often determined only by how well the student does on the exam. Because attendance is typically mandatory for most first and second-year courses, class participation is infrequently considered in determining grades. Law professors might not consider how well a student does during the random Socratic dialogue. Instead, the professor is more likely to play the situation by ear and push the unprepared student sufficiently to make the point with the student, and his or her classmates.

Some professors do use participation scores in which they use "push or pull" points to make changes. The dialogue determines these points. The push points might assist a student with low exam grades or in a borderline situation. Pull points might apply in deciding the fate of student whose exam grade was in a borderline situation. Though professors discuss the impact of class participation on students' grades, professors might explain the push or pull option less clearly to retain flexibility in grading. The professors

typically are not required to explain their push points to students, but they should have a justifiable reason for any pull points deducted from the student's grade.

Law school exams. Many first-year law courses and most second-year courses do not administer an exam until the end of the semester. Though some courses do give a midterm examination, students often do not know how they are doing in the majority of their courses until the course is over. Such a suspension of feedback can easily lead to self-doubt or over-confidence. Because this format is unusual for most first-year students, it is more likely to promote self-doubt. There is little reason to imagine that it would lead to over-confidence in students in higher years, unless they have a proven record of accomplishment. Again, it seems that law schools' resistance to giving students information with which to judge their academic progress is intentionally designed to increase their stress levels and feelings of inadequacy and self-doubt so the law school can rebuild the student to think like a lawyer.

Unapproachable Law School Professors

The gruff, unapproachable, and snobbish law professor is part of the popular culture lexicon, such as with Professor Kingsfield in the book, *The Paper Chase* (Osborn, 2003). Though such a stereotype is not always true, it does resonate with many students who have been studied (Patton, 1968). One law student said, "It seemed that professors were trying to prove to you that you weren't good enough to be a lawyer . . . from the way they expect a lot of you and ridicule you" (Patton, 1968, p. 19). Along with creating stress in students, the use of the Langdell method and the practice of intensive Socratic dialogue can arguably give rise to such stereotypes.

Psychological Manifestations in Law Students

Self-Doubt and self-concept in law students. The constant stress of reading and being prepared for classes and then taking a several-hour final exam, are very powerful forces in the lives of law students. Though the exams are difficult, and often the only objective measure of the student's abilities, the daily grind of the classes can be mentally and physically exhausting. As one student reflected, "I felt most inadequate after a simple day of classes" (Robert & Winter, 1978, p. 453). Interesting differences in these self-doubts have been found in male and female students.

Female law students in one older study were notably more vocal in their self-doubts than were the male students, although the female students had higher grades on average (Robert & Winter, 1978). Interestingly, the authors noted that 71% of the male students, but only 43% of the female student demonstrated tension-related behavior in the classroom during their observations spread over six days. The authors found that "men's performance suffers more from anxiety and depression than women's does, and this distinguishes our sample from others that have been reported" (p. 455). Also, "It seems clear from these data that high evaluation of the law school experience has the effect of encouraging achievement among men but not among women" (p. 455). Interestingly, the authors also found that "Anxiety and depression experienced during the school year lowered the grades of both men and women, but the effects were moderate" (p. 455). "Correlations between significant self-concept traits and GPA tend to be larger among women than among men, and thus there appears to be some evidence that women's achievement is more influenced by their professional self-concept than (sic) men's" (p. 456). Additionally, other studies found that female law students also reported lower self-

confidence than male law students (Homer & Schwartz, 1990), and suffer from more stress than their male counterparts (Clark & Rieker, 1986). Subsequent changes in social constructions might alter the findings of gender differences in these early studies if similar studies were conducted today. This area of research would benefit from further research.

The IP in law students. Though the IP has not been thoroughly studied in law students, it has been mentioned in passing in a few studies. In 2008, Grover described a law school “outsider” in this way:

A good marker for feeling like an outsider is the ‘impostor phenomenon,’ which afflicts many people who ostensibly are mainstream. The impostor syndrome is a manifestation of poor self-esteem. It is the students’ sense that they got to law school by pretending to be good enough, by tricking decision-makers along the way into believing they were law school material. The law school experience can become an ongoing battle for the student suffering from the imposter phenomenon to keep others from learning that the student is in law school under false pretenses. (p. 430)

While Grover briefly discusses the IP here, he does not give further explanation or authority for his assertions. Unlike Grover’s 2008 article, older studies typically do not use the term impostor phenomenon because it was not in common scholarly usage. However, their descriptions of law student behavior are very similar to the descriptions of individuals burdened with the IP. Researchers have described the way some students experience a cognitive distortion that accumulates until “the individual views himself as a

failure and in the case of the law student as inadequate to master professional training” (Beck & Burns, 1979, p. 273).

Another study described the self-perpetuating nature of negative self-concepts as when it “further reinforces and escalates his negative view of himself. The internal communication system becomes self-generating and the student is unable to stem the tide of negative automatic thoughts and their concomitant counter-productive emotions” (Beck & Burns, 1979, p. 273-274). This description does not mention the IP, however, the language is very similar to the formation and perpetuation of the impostor cycle, as discussed later in this paper. Likewise, in the same way a law student with the IP cannot internalize success, “he views any evidence of substandard performance as proof that he is a total failure, and anticipates that his failure will be cataclysmic to himself, his friends and family” (Beck & Burns, 1979, p. 274). A particularly anxious student “may be telling himself that he is intellectually inferior; he cannot master the material; he cannot remember it; he will make a fool of himself or go blank if he is called on in class; and his inadequacies will become obvious to the professor” (Beck & Burns, 1979, p. 283-284).

Again, although the impostor phenomenon term was not in common usage, these descriptions of law student’s behavior mimic Grover’s 2008 summary of what the IP experience is possibly like for law students. Without research into the presence of the IP in law students, we can only assume that these older descriptions, as well as the more recent ones, are accurate portrayals of the IP in law students.

Procrastination. Procrastination has been discussed in the law student literature as an impediment for becoming a successful law student (Beck & Burns, 1979). The threat of being called at random to discuss the assigned case readings makes

procrastination not just dangerous, but almost impossible for a successful student to do. Likewise, a student who keeps up with the reading assignments is also likely to prepare for the final exams as well, and studies have shown that this preparation reduces law student stress and correlates with higher grades. “It can be stated with some confidence then that differences in the amount of time spent studying are associated with a student’s level of academic achievement” (Patton, 1968, p. 21).

Of course, not all students do keep up with the readings or prepare in advance for the exams. Because this procrastination harms student learning, these students are less likely to do well on their exams. Not doing well on the exams, or being anxious about not having enough time to study at the end of the semester, might contribute to the student feeling unqualified to be in the program, and to feel like an impostor. Such procrastination has a positive correlation with the IP, as discussed later in this paper’s discussion of the impostor cycle (Clance & Imes, 1978).

Law School Assistance Programs

The difficulty of the law school program has led many law schools to offer support programs for students who need academic assistance through tutoring or extra classes. These academic assistance programs are triggered when a student’s GPA falls below a pre-designated threshold, which can vary depending on the student’s year in school. At the University of San Diego (USD), for instance, such a first-year student must meet with an Academic Supervisor, who assists the student with selecting future courses, and the student is required to complete the first-year Academic Support Program (USD, 2010b). The threshold score increases for second and third-year students who are

required to enroll in the academic assistance program at USD, and this is not unusual (USD, 2010b).

The purpose of the law school assistance programs is not just so that the student is able to complete and pass law school, but that the student will also be able to pass the bar examination after completing law school. Though much of the assistance program for law students is built around these academic issues, directors of these programs at most law schools also find it “essential to address the myriad of psychological barriers (attitude, self-esteem, motivation, and alienation) to learning” that frustrate academic achievement (Lustbader, 1997b, p. 857).

These academic assistance programs currently look solely at grades to see if students need assistance, with the assumption that because the students’ grades are good, they do not need any help. As with other graduate programs (Henning et al., 1998), the IP might cause severe psychological distress that affects academic performance. The lack of IP research in law school students most likely hampers the assistance program staff from recognizing the IP as a possible factor in the law student’s academic issues.

Introduction to IP Research

While many of us have occasionally felt that we are frauds or impostors who are undeserving of the success we enjoy, some individuals are burdened persistently with such feelings. Individuals experiencing such feelings, in spite of objective verification of their qualifications, successes, and achievements may suffer from the Impostor Phenomenon (IP). These insecurities and fears of being found out do not disappear, even in the face of objective evidence that the individuals are not impostors. Repeated reports of success might temporarily decrease the impostor’s feelings of fraudulence, but the

impostor cannot internalize the success so as to prevent the return of feelings of inadequacy that might be overpowering or debilitating (Clance, 1985; Thompson, Davis, & Davidson, 1998). Rather than ability or intelligence, impostors credit luck, a mistake by others, or fooling others as the source for their achievements (Harvey & Katz, 1985).

Because the IP affects individuals who are high achieving and intelligent, it is particularly relevant for students in higher education and graduate programs, such as law school students, because they are admitted to the programs at least partially on the basis of these qualities (Felder, 1988; King & Cooley, 1995; Topping & Kimmel, 1985). The IP is particularly relevant for law students because the law school curriculum designed to teach them to think like lawyers, creates a highly stressful and competitive environment. This section will emphasize IP research, particularly where it relates to IP's possible existence in law students.

How The IP Develops, Persists, and Interacts with Other Phenomenon

Clance and Imes' pioneering research (1978) was limited only to females and postulated several origins for the feelings of fraudulence and the dynamics that maintained these feelings. The authors felt that early family history was one of the strongest predictors for IP, with the feelings starting in two different scenarios (Clance & Imes, 1978; Langford & Clance, 1993). In the first situation, a woman who felt like an impostor had been told directly or indirectly that she was the "sensitive" member of the family, rather than the "intelligent" one (Clance & Imes, 1978, p. 3). The implication from family members was that she was not, nor would she become, as smart as her siblings. After repeatedly hearing this scenario, part of the individual begins to believe it, while another part wants to work extra hard to prove the prediction wrong. Regardless of

her hard work, her family never perceives her as intelligent. She begins to believe the family members are correct and that her academic success happened only because of her social sensitivity and pleasing nature. According to Clance and Imes, these impostor feelings arose from her continued striving for academic success, in spite of family perceptions that she was unintelligent.

The Clance and Imes second scenario for IP formation began not with the family finding the person unintelligent, but rather that she could accomplish anything, including academic challenges, with little or no effort (1978). While this praise and reassurance prove accurate in the youngster's academic career, she begins to doubt herself as the praise became indiscriminate. She finds academic work increasingly difficult as she advances through grades at school. She must work harder to maintain her family's perception that she is gifted and that good grades come easily to her. She begins to fully doubt her family's perception of her high intelligence. Finally, "having internalized her parents' definition of brightness as 'perfection with ease,' and realizing that she cannot live up to this standard; she jumps to the conclusion that she must be dumb" (Clance & Imes, 1978, p.3). Because she is not as smart as her parents believe, she must be an intellectual impostor.

Both these scenarios align with Sonnak and Towell's 2001 study that found the more a student perceives a parent as controlling, the more likely the individual is to suffer from feeling like an impostor. Additionally, high IP scores have been significantly correlated with a family of origin that has a strong achievement orientation (King & Cooley, 1995). Parental overprotection also had a positive correlation with IP scores in another study, though this study found the relationship as being significant only with

paternal overprotection (Want & Kleitman, 2006). A lack of *paternal* care also forecast impostor feelings in this same sample. The maternal relationship was not found to have a significant association with impostor feelings, though there was a significant connection with the development of self-handicapping behaviors, which will be discussed later.

After these familial interactions create a young woman's self-perception as a fraud or imposter, societal norms and self-imposed behaviors enter the picture to reinforce these beliefs (Clance & Imes, 1978). The young woman's perceptions of herself as a fraud are reinforced by the contemporary societal expectation that "women are not defined as being competent" (Clance & Imes, 1978, p. 4).

The theoretical young woman in Clance and Imes (1978) research also engaged in at least one of the four behaviors that bolster the societal reinforcement, making it even more difficult for her to break free of the IP. The first behavior occurs when the impostor's diligence and hard work lead to success recognized by others, but not fully appreciated by the impostor. Her enjoyment of the success is short-lived as she starts to suspect that she will fail if she does not strive harder the next time, thus reinforcing her impostor feelings.

The second behavior happens when an impostor restricts her own intellectual output in order to complement or flatter a supervisor, such as when she excludes her thoughts from a report so the supervisor will look good. Such actions leave the impostor not knowing whether her contribution would have had value in the report or even been accepted. She comes to feel like an impostor because of her own actions.

In the third behavior, a woman uses her charms and social skills to gain a mentor's intellectual approval. After she is given the approval she seeks, she cannot

believe it is genuine, so she seeks a new mentor to impress. This behavior of seeking approval through charm, rather than intelligence, reinforces her feelings of fraudulence.

The fourth behavior has roots in society's negative responses to a woman who displays confidence in her own abilities. This is much like the independent woman Margaret Mead said "is viewed as a hostile and destructive force within society" (As quoted in Clance & Imes, 1978, p. 5). The authors hypothesize that a woman wanting to avoid this self-critical view, might perceive herself has an intellectual phony, though she is high achieving and intelligent.

Though Clance and Imes' theories about societal reinforcement and their fourth behavior are logically organized, an argument can be made that their societal assumptions are not as relevant today as they were in the late 1970s. Changes in the societal components of societal reinforcement and in the fourth impostor behavior may have negated the full applicability of these behaviors to modern IP sufferers. In addition, because the 1978 Clance and Imes research only addressed the IP in females, the lack of similar societal norms for males would negate the applicability of these two particular reinforcements for males. However, there is no sex-specific reason the other behaviors could not theoretically apply to males as well.

IP Behaviors and Psychological Markers – Methods for Finishing Work

As research continued into the IP, distinct psychological markers and behaviors were found to correlate with high IP scores and impostor behavior. The method of working on a project often proceeds down one of two paths that are similar to the behaviors that Clance and Imes (1978) described as reinforcing imposter behavior. In the first scenario, an impostor starts early on a project, but then the impostor continues

working much longer than other people. When success is achieved, the impostor attributes it solely to this extra work, rather than any innate ability. This also leads to the reinforcement of the IP later as the impostor believes he or she must work as hard for the next project, or else failure will occur. Under the second work method the impostor postpones completing a task until the last possible minute. If the impostor fails, it was because he or she could not work until the last minute, and if the impostor was successful, it was due to good luck rather than one's own ability. Though the two work methods are divergent in their approach, the result is the same, with the impostor developing no confidence in his or her own abilities because the successful outcome is attributed to hard work or luck (Clance, Dingman, Reviere, & Stober, 1995).

IP Behaviors and Psychological Markers – Self-Handicapping Behaviors

Along with the inability to appreciate one's success, the IP leads some impostors to fear circumstances that might produce failure. This in turn drives many impostors to avoid negative evaluations whenever possible (Chrisman, Pieper, Clance, Holland, & Glickauf-Hughes, 1995; Leary, Patton, Orlando, & Funk, 2000). One way of avoiding negative evaluations is the strategy of self-handicapping – if success is not certain, then blame the possible future failure on real or imaginary handicaps. Positive correlations between self-handicapping and the IP have been found in several studies (Chrisman et al., 1995; Cowman & Ferrari, 2002; Higgins, Snyder, & Berglas, 1990; Leary et al., 2000; Ross, Stewart, Mugge, & Fultz, 2001; Want & Kleitman, 2006). Self-handicapping behavior operates similar to some of the behaviors reinforcing impostor fears that Clance and Imes described in 1978.

Self-handicapping behavior takes two forms that both produce the same desired outcome: the self-handicapper has something to blame rather than blaming himself or herself (Bernard, Dollinger, & Ramanianah, 2002; Ferrari, 1991a; Ferrari, 1991b; Ferrari & Thompson, 2006; Ferrari & Tice, 2000; Hirt, McCrea, & Kimble, 2000; Leary et al., 2000; Snyder, 1990). In *behavioral self-handicapping* the self-handicappers hinder their own performance in order to blame the sabotage, rather than blaming themselves for failing (Hirt et al., 2000). An example of such behavior would be extreme procrastination, such that when the work is done, the project still fails. Such self-sabotage allows the self-handicapper to avoid negative evaluation by blaming something other than one's own abilities. In this case, the individual is likely to say that he or she was not able to devote full effort to the project, and so it failed. However, along with the scapegoating for the project's failure is an increased chance that the project will indeed fail. Behavioral self-handicappers are willing to take such a risk in order to avoid blaming themselves.

Claimed self-handicapping is the other self-handicapping behavior, in which a person blames his or her own psychological reactions, such as anxiety about testing, illness, or general distress for the eventual failure (Hirt et al., 2000). Because self-handicappers cannot control this psychological reaction, neither they nor their abilities are to blame if failures occur. Such logic and behavior are reinforced each time the self-handicapper fails and then blames the failure on personal psychological shortcomings or behavior, rather than lack of effort.

IP Behaviors and Psychological Markers – Conscientiousness

The self-handicapping discussed earlier is one way to avoid negative evaluations, but thorough preparation and hard work are obvious alternatives. Studying harder for exams would be an example of what researchers have described as conscientiousness, which is marked by dependability, carefulness, and thoroughness (Barrick & Mount, 1991). One study found that the IP was negatively correlated to conscientiousness, and that “those inclined to impostor feelings place much greater faith in their intelligence than in their effort (or that their parents did so)” (Bernard et al., 2002, p. 330). Intelligence might carry these students through high school, but increased effort is required as the student advances in grade levels. This emphasis on parental expectation is similar to the earlier discussion of Clance and Imes’ 1978 description of parental enforcement as a major factor in the formation of the IP.

IP Behaviors and Psychological Markers – The Impostor Cycle

Clance and Imes developed the theory of an “Imposter Cycle” in 1978 to describe the self-perpetuating characteristic of the IP. In this scenario, the impostor starts having feelings of worry, self-doubt, and fears that he or she will be found out. These feelings lead to procrastination, as found in self-handicapping, or to the over-preparation behavior described previously. If the impostor’s project succeeds, the success is attributed not to one’s own ability, but to external factors. This belief that success is unrelated to ability is reinforced as the impostor surmises that if the project succeeds in spite of procrastination, ability was not the deciding factor. Likewise, if the project succeeds, the hard-working impostor’s abilities would not have been sufficient alone, without the extra effort. In both

scenarios, procrastination or over-preparation reinforces the belief that success was not because of ability; the IP persists.

Demographic Factors Related to the IP

Clance and Imes' exclusion of males from their study (1978) limited the applicability of their findings, and sparked interest in other researchers whether the IP was indeed positively correlated with females. Because of this initial controversy, sex-based correlations occupied many subsequent researchers. Some later researchers explored other demographic areas of the IP as the focus of their study, such as the prevalence of the IP in adolescents (Caselman, Self, & Self, 2006). Other researchers studied demographic issues only indirectly, such as the implicit understanding that adolescents would not be in the sample of banking professionals being asked about impostor feelings (Crouch, Grant, Posner-Cahill, & Rose, 1991). The following are demographic areas that have had been explored sufficiently to formulate conclusions about their correlations with the IP.

Sex-Based Differences Related to IP Scores

Clance and Imes (1978) highlighted the question of sex-based correlations with the IP when their female-only study determined that, "the phenomenon occurs with much less frequency in men and that when it does occur, it is with much less intensity," and in "men who appear to be more in touch with their 'feminine' qualities" (Clance & Imes, 1978, p. 1). The authors suggested this was an area for further research, and then in later articles noted the subsequent research of some other authors showing that males displayed IP scores comparable to females (Clance & O'Toole, 1987). Several researchers have found that males experience impostor feelings with frequencies similar

to that experienced by females (Bernard et al., 2002; Caselman et al., 2006; Cowman & Ferrari, 2002; Cozzarelli & Major, 1990; Cromwell, Brown, Sanchez-Huceles, & Adair, 1990; Edwards, Zeichner, Lawler, & Kowalski, 1987; Flewelling, 1985, as cited in Chrisman et al., 1995; Harvey, 1981; King & Cooley, 1995; Lawler, 1984). However, one atypical study even found that male university faculty members experienced the phenomenon more frequently than their female counterparts (Topping & Kimmel, 1985). It was posited that because female faculty members survived “a finer filtering process” than male faculty members experienced, female IP suffers had been eliminated before reaching faculty status (Topping & Kimmel, 1985, p. 221). The authors also speculated that the IP might diminish as one assumed increasingly more responsible positions. This speculation has not been researched further.

Some researchers who found sex-based differences in the occurrence of the IP have suggested cultural and societal forces that may be responsible for the differences. One study recommended that although the IP does affect men, women are more likely to be constrained, and to be constrained more intensely by the IP (Clance & O’Toole, 1987). These authors felt that men are less affected by the IP because society saddles women with expectations of success in the workplace, though the women maintain a sense of maternal nurturing at the same time. This resulting conflict makes women more susceptible to IP, according to the authors (Clance & O’Toole, 1987). Likewise, other researchers have written that the IP was primarily limited to women because of the cultural expectations about sex roles (Clance & Imes, 1978). These studies have been contradicted by multiple subsequent studies. A partial explanation for the opposing conclusions might lie in the 30-year evolution of cultural norms and individual

expectations, that has occurred since this research and the study of the IP began.

Although the IP was “initially identified in high achieving women, it was later found to exist among men as well, although the research is contradictory as to whether or not it is more prevalent among women” (Caselman et al., 2006, p. 396).

Other studies found no correlations in the IP based on sex, but they did find sex-based correlation for issues peripheral to the IP. One study found nothing significant with the IP, but found a sex-based difference in the fear of success metric (Fried-Buchalter, 1997). However, the researcher did not see a correlation between the fear of success metric and the IP. Caselman et al. (2006), found no significant sex-based variation with IP scores in their adolescent sample, but female students’ scores were significantly lower than the male students’ scores on the self-perception and social support instruments. Arguably, these lower scores might indicate females were more susceptible to the IP than were males.

Age-Based Differences Related to IP Scores

Little research has focused directly on the relationship of age and IP development. However, several studies formulated findings about age-based correlations with the IP by focusing indirectly on age as attendant to educational level or occupation. Harvey’s 1981 research found high school honor students had higher IP scores than other students, though the difference decreased as the student’s age and years in school increased. He also found a negative correlation between IP scores and the number of years a student had been in school, and with the student’s age. The younger the students, the higher their IP scores were. Subsequent research seemed to confirm this negative correlation between age and IP (Chae, Piedmont, Estadt, & Wicks, 1995).

One study researched 136 adolescents and discussed the results of earlier studies (Stahl, Turner, Wheeler, & Elbert, 1980) to conclude that the IP is well established by adolescence, and its etiology is likely substantially earlier than adolescence (Caselman et al., 2006; Cromwell et al., 1990). This aligns with early IP research that hypothesized that the IP begins in early childhood and might arise from family dynamics of that period, as discussed in earlier in theories for the formation of the IP (Clance & Imes, 1978; Clance & O'Toole, 1987). Future research might concentrate on younger study participants to find the formative years for the IP. Longitudinal research might possibly be even more authoritative and show chronological development and whether the IP changes over time. Therefore, longitudinal studies are also suggested for future research focused on age-based correlations with the IP.

Racial, Ethnic, and Cultural Differences Related to the IP

Few IP research projects have concentrated on race, ethnicity or culture as factors. Most research has been conducted in the United States, and racial/ethnic/cultural diversity has been insufficient to analyze related differences in IP scores. One study, administered in South Korea, found the Korean sample had lower scores than the American group on the instrument used to measure impostor feelings (Chae et al., 1995). The Korean-American authors proposed that this difference might spring from Korean culture's clearly defined societal roles. Because the typical Korean theoretically has a clear idea of his or her pre-defined role, the Korean is less likely to feel like an impostor than an American whose societal role is often not clearly defined and open to change. The authors felt their theory aligned with the earlier findings of Clance and Imes (1978)

that impostor feelings were often heightened when an individual accepted a new and unfamiliar role.

One clear shortcoming of the Chae et al. study is that it only has conclusions for Korean and American cultures. Most studies of specific cultural groups would have such a limitation because of their delimitations to particular groups. Also, the Korean sample was drawn from an entirely Catholic group, and therefore not demographically analogous to the American sample. Finally, many of the correlations were relative weak, for example, < 0.20 .

Research with law school students found that non-white students spent more time attending classes and more time studying than white students, and yet their graduation rates were significantly less than white students (Edwards, 1997; Wightman, 1997). African-American females studied harder than any of the other grouping these studies. This same group also reported that 60% had experienced discrimination in the first year of law school - greater discrimination than any other group (Wightman, 1997; Edwards, 1997).

Stereotype threat may also come into play when discussing these academic achievement scores for minorities. “*Stereotype threat* is being at risk of confirming, as self-characteristic, a negative stereotype about one’s group” (Steele, 1995). Students of different ethnic identities might experience the same classroom environment differently because of the negative stereotypes associated with their groups.

Claude Steel (1997) has also theorized that *domain identification* by the student with the school is necessary for long-term academic achievement. Some ethnic groups, such as African Americans, are hindered in this identification by the stereotyping and

other disadvantages. Those students who work hard to overcome this domain identification and assume an identity aligning with the institution, are placed in a dangerous situation with the stereotype threat because any failure will be blamed on their ethnicity. Steele's research (1997) found that this threat has been correlated with dramatically lowered grades for African Americans. This scenario is especially important for this study because if students conform to a negative stereotype, their recognition of this stereotype confirmation leads to self-doubt and self-criticism, which might bear a relationship with impostor feelings and the IP.

Relationships in Hours Studied/GPA and IP Scores

Research on the relationship of the IP, studying, and grades is inconclusive. Barrick and Mount (1991) described studying harder for exams as an example of conscientiousness, which is marked by dependability, carefulness, and thoroughness. One study found that conscientiousness was negatively correlated to the IP (Bernard et al., 2002). Authors of the study felt that, "those inclined to impostor feelings place much greater faith in their intelligence than in their effort (or that their parents did so)" (Bernard et al., 2002, p. 330). While intelligence might carry these students through high school, increased effort would be required for advancement at the university or college level. This important role for parental expectation is very similar to Clance and Imes' 1978 description of scenarios for the formation of the IP.

A few studies have found correlation between grades and IP behavior. One study (Bernard et al., 2002), focused on college students' grades and IP behavior to distinguish if IP sufferers had higher grade point averages than other students. The researchers wondered whether a student who felt like an impostor might study harder to compensate

for feelings of fraudulence. The researchers found that “it did not appear that collegiate IP sufferers dealt with the imposter feelings by studying harder,” because their grades were not significantly different from those of other students (Bernard et al., 2002, p. 328). Other researchers found higher IP scores were associated with higher GPA and hours studied, although the number of undergraduates studied was fairly small at 136 (King & Cooley, 1995). One final study, conducted in South Korea, found that higher IP scores were associated with higher grades in females, but not in male students (Chae et al., 1995). Clearly further research is needed to disambiguate these divergent research results regarding correlation between the IP, time spent studying, and grades.

IP Research in Graduate Programs

Impostor phenomenon research has been performed with students in several different graduate school programs. Henning, Ey, and Shaw (1998) conducted IP research in the widest array of graduate programs covering medical, dental, nursing, and pharmacy students. Their research looked at perfectionism, overall psychological adjustment, and the presence of the impostor phenomenon in 477 of these students. The 477 students were 47% male and 53% female. The authors identified the demographic variables that affected students in medical training fields as gender, marital status, race, prior mental health history, and academic year (Henning et al., 1998, p. 456). This study used the Clance Impostor Phenomenon Scale (CIPS) instrument and the more conservative threshold score of 62 to indicate the presence of the IP. The data showed 30.2% of the students scored 62 or higher on the CIPS, indicating the clinical range for the IP. Also interesting was that 37.8% of women were in this range, while 22% of the men scored 62 or above on the CIPS instrument (Henning et al., 1998, p. 459). Interestingly, the

pharmacy students appeared to be the most psychologically distressed student group in the study. In talking about the IP and the other variables studied, such as race, age, marital status, perfectionism, and gender, the authors said, “the severity of these impostor concerns served as a better predictor of students’ current psychological distress than all of the other demographic and personality characteristics examined” (Henning et al., 1998, p. 463).

The 2004 study by Oriel, Plane, and Mundt administered the CIPS to 185 family medicine residents. Of these 185 residents, there were 98 women and 87 men with a mean age of 33. Forty-one percent of the women and 24% of the men scored on the CIPS instrument as impostors. Also, impostor scores did not vary with the age, marital status, or training. The study also tested for *Trait Anxiety*, and once this was accounted for, the sex-based differences became insignificant. Melding the results for the two genders, a full third of the family medicine residents scored as impostors. The prevalence of the IP did not vary according to the year of the student’s residency. The authors suggested that a longitudinal study might address the development of the IP throughout the residency. The authors also addressed the lack of research in professional graduate students, specifically in medical residents. They suggested that the residents played impostors immediately because they were called “doctor” the first day of the residency, though most did not feel qualified to play the role of doctor. The researchers finished with discussion of the value of specific-level feedback that Clance and Imes suggested for IP sufferers, because more generalized feedback was easily dismissed by those with the IP.

Instruments Used to Ascertain the Impostor Phenomenon

Though the IP was identified in 1978, instruments for measuring the construct were not created until the 1981 Harvey Impostor Phenomenon Scale (HIPS), the 1985 Clance Impostor Phenomenon Scale (CIPS), and the 1991 Perceived Fraudulence Scale (PFS). The following is a description of the research conducted on these three instruments.

Reliability of the Three IP Instruments

Past research into the reliability and internal consistency of the three instruments guided the selection of the instrument with the best reliability. Past studies with the CIPS (Clance, 1985) instrument showed Cronbach's alpha scores of $\alpha = .84$, $\alpha = .91$, $\alpha = .92$, and $\alpha = .96$ respectively (Prince, 1989; Holmes, Kertay, Adamson, Holland, & Clance, 1993; Chrisman et al., 1995; Chae et al., 1995). The lowest threshold point for indication of the IP in the CIPS instrument has been recommended as scores of 60 and above, though latter researchers suggested a threshold of 62 and higher (Clance, 1981; Holmes et al., 1993). Topping and Kimmel (1985) found an alpha coefficient of $\alpha = .75$ for the HIPS (Harvey, 1981) instrument, while Harvey and Katz (1985) found $\alpha = .85$ for the HIPS in their research. The PFS instrument (Kolligian & Sternberg, 1991) has been used in fewer studies than the CIPS or HIPS, probably because it is three times longer than the other instruments. The reliability of the PFS has also been tested in previous studies with the alpha coefficients ranging from $\alpha = .89$ to $\alpha = .94$ (Bernard et al., 2002; Kolligian & Sternberg, 1991).

HIPS – Harvey Impostor Phenomenon Scale

The HIPS (Harvey, 1981) has 14 items on a 7-point Likert-style scale ranging from 0 points “not at all true” to 6 points “very true.” The total score possible is from 0 to 84. The higher the score, the more likely the individual suffers from impostor feelings. Harvey selected the 14 items for the self-reporting instrument from the work of previous researchers (Clance & Imes, 1978; Stahl et al., 1980), and his own observations. Some researchers felt the instrument was not adequately differentiating impostors from nonimpostors (Holmes et al., 1993). In addition, some researchers thought significant relationships were missed because respondents perceived the wording of the HIPS as negative, and thus impaired accurate responses (Flewelling, 1985, as cited in Chrisman et al., 1995; Lawler, 1984; Topping, 1983).

Harvey and Katz (1985) found average inter-item reliability of .85 in their survey of 74 graduate students while using the HIPS. Topping and Kimmel (1985) found an internal consistency of .75 using Cronbach’s alphas when sampling a university’s faculty. Chrisman et al. (1995) also found acceptable internal reliability in the HIPS.

Other researchers questioned Harvey’s one-dimensional construct because of low Cronbach’s alpha scores, and suggested a multidimensional construct was more likely (Edwards et al., 1987; Hellman & Caselman, 2004). One particular factor analysis found the HIPS structure contained three factors, impostor, unworthiness, and inadequacy, which accounted for more than 50% of the variance (Edwards et al., 1987). The impostor factor accounted for 32.2% of the total variance and had an eigenvalue of 4.52. The unworthiness factor accounted for 12.7% of the total variance, and had an eigenvalue of 1.78, while the inadequacy factor accounted for 9.8% of the total variance, with an

eigenvalue of 1.37. The full HIPS instrument had a Cronbach's alpha of 0.34 – considerably below the level indicating an internal consistency. The Cronbach's alphas for the impostor, unworthiness, and inadequacy factors were .81, .71, and .65 respectively (Edwards et al., 1987, p. 258). The researchers found the factor analysis strongly indicated the validity of HIPS for measuring the IP. The Cronbach's alpha research seemed to indicate that although unworthiness and inadequacy are parts of IP, they are not integral to IP.

A second researcher examined the HIPS correlation with a fear of failure (FOF) construct as a way of determining the HIPS validity (Fried-Buchalter, 1992). This researcher's factor analysis found four factors with sufficient eigenvalues, but each had dual loadings making interpretation difficult. The four factors were only moderately correlated, which might be expected with the dual loadings. The researcher concluded with a cautionary statement advising researchers to “take a cautious approach to the development and popularization of new psychological constructs” (Fried-Buchalter, 1992, p. 377).

Hellman and Caselman (2004) examined the psychometric properties of the HIPS using a sample of 136 adolescent students. The researchers found acceptable internal consistency reliability ($\alpha = .70$), but were concerned with the factor structure derived from the composite scoring. These researchers felt that parallel- extraction loading criteria were preferable to criteria used by previous researchers' work. This criterion recommended a nine-item instrument with two factor constructs related to impostor feelings and self-confidence. They suggested using items 2,4,5,7, and 10 for the self-confidence construct and items 3, 8, 13, and 14 for the impostor feelings construct

(Hellman & Caselman, 2004, p. 164). The authors cited the less attractive extraction used in previous research, and the poor definition of rotated factors as explanation for the differing results. Although other studies indicated concerns for the HIPS instrument (Chrisman et al., 1995; Edwards et al., 1987; Fried-Buchalter, 1992), this research thoroughly analyzed and evaluated the validity and reliability of scores from the HIPS instrument. The authors felt that “previous studies suggesting empirical support or falsification on the IP’s ‘nomological net’ while using the Harvey IP 14-item Scale in composite form may be suspect due to methodological artifacts that must be resolved” (Hellman & Caselman, 2004, p. 165). Taken together, the subsequent research on the validity of the HIPS would suggest that a thorough factor analysis might aid in exploring the multiple factors that have been found, and improve the instrument through fine-tuning.

CIPS – Clance Impostor Phenomenon Scale

The CIPS (Clance, 1985; Clance & O’Toole, 1987) consists of 20 items using a Likert-type scale ranging from 1 point “not at all true” to 5 points “very true,” and uses a cutoff score of 60 and above to identify IP sufferers. However, some researchers have suggested a cutoff score of 62 rather than 60 to identify the presence of the IP (Holmes et al., 1993). Clance developed the questionnaire to identify a. fear of evaluation, b. fear of not being able to repeat success, and c. fear of being less capable than others (Clance & Katz, 1985). Clance also specifically designed the CIPS to compensate for concerns about the HIPS’ negative language and non-differentiation of impostors from non-impostors (Clance, 1981). Subsequent research has shown that CIPS does reliably

differentiate impostors from nonimpostors (Campbell, 1986, as cited in Chrisman et al., 1995; Holmes et al., 1993).

In terms of the CIPS instrument's validity, researchers have found CIPS to be reliable with coefficient α between 0.92 and 0.96 (Chrisman et al., 1995; Chae et al., 1995), and a researcher found that the CIPS might be a more sensitive and reliable instrument than the HIPS (Holmes et al., 1993). Examining the instrument's form, one study concluded that four of the questions be discontinued because they offered only low levels of discrimination (Kertay, Clance, & Holland, 1991, as cited in French et al., 2008). A recent exploration of the CIPS found it had satisfactory internal consistency and reliability, though the authors also found the theoretical model itself problematic (French et al., 2008). The authors suggested further study of the factor structure to improve the instrument. They found the 20 items contained three subscales of the IP (a) Fake, (b) Discount, and (c) Luck. Fake is the lack of confidence in one's ability and intelligence. Discount is the inability to internalize praise for performance as being earned by ability or the performance itself. The Luck subscale examines the individual's attributions of the cause for success to luck or error, rather than to effort or ability (French et al., 2008).

Some evidence was found for validation of the CIPS construct using data-driven exploratory factor analytic (EFA) methods (Kertay et al., 1991, as cited in Chrisman et al., 1995). A more recent study used theory-driven confirmatory factor analysis to test the validity of the CIPS construct in a sample of 1271 undergraduate engineering students. Both these studies found internal consistency reliability in the total score for all three subscales, and in the individual subscales (Chrisman et al., 1995; French et al., 2008).

However, the latter study disagreed with the earlier study's finding of stability in the factor structure of the CIPS.

The French et al. (2008) study used confirmatory factor analysis to test three models with the three subscales. The first model used Fake, Discount, and Luck. Inspection of this model found a good fit, but high correlation between Fake and Discount, which suggested combining Fake and Discount into a single factor to create a two-factor model. This second model also had a good fit. Collapsing the two factors of model two into a single-factor model created the third model. This model's fit was substantially worse than the fit of either model one or model two. Model two was then found to have a superior fit to model one because of model one's high factor intercorrelations and model two's parsimoniousness.

Although the CIPS is easier to administer and shorter than other IP instruments, factor analysis of the instrument was troubling for researchers because "the lack of a clearly identifiable factor structure warrants caution when using its scores for decisions," and when total scores are used rather than individual ones (French et al., 2008, p. 1275). Researchers also advised clarifying the Luck subscale by adding items, although Luck and Discount should collapse to form a single subscale because of their high correlations (French et al., 2008). Future researchers would also be well advised to explore the test-retest reliability and the test's predictive ability for student persistence (French et al., 2008). This clearly beckons as a area of further work for a statistical researcher.

Considering the results of previous researchers' studies, this study will use the CIPS instrument to explore the IP's presence in the law student population. This decision was based not just on the CIPS' reliability measures being as high as the other

instruments, but also on the parsimoniousness of the CIPS 20-item format. Though the confirmatory factor analysis research does present some concerns about the instrument's basic format, this also presents an area for future research.

PFS - Perceived Fraudulence Scale

The PFS comes in two versions of 51 items or 67 items, with both versions using a 7-point Likert scale with 1 being “strongly disagree” and 7 being “strongly agree” (Kolligian & Sternberg, 1991). The PFS was created because of the “psychometric inadequacy of the [C]IPS” in measuring the IP and feelings of fraudulence (Kolligian & Sternberg, 1991, p. 311). The authors also felt that the term *impostor phenomenon* denotes a specific diagnostic category, and instead we should use the term *perceived fraudulence*, which is measured by the PFS (Kolligian & Sternberg, 1991). The instrument's creators applied the 67-item PFS instrument to two sample groups of 100 and 50 college students, and then used factor analysis and validity testing. Inauthenticity and Self-Deprecation accounted for slightly more than 30% of the data's variance in both studies, though Inauthenticity and Self-Deprecation switched places in prominence in the second study.

Alpha coefficients for the PFS have ranged from .89 to .94 (Bernard et al., 2002; Kolligian & Sternberg, 1991). Kolligian & Sternberg felt they had proven the validity of the PFS, though they thought that their small Yale undergraduate samples might be holding back application of the instrument to wider groups of various ages. The large number of items might also be a factor contributing to the PFS' apparent lack of popularity, as it has not been the primary instrument in other studies of the IP.

Survey Methodology and Development

Surveys are amply covered in the literature, and the survey format in this study made use of previous recommendations for the creation, administration, and analysis of the data results. Surveys are typically created to describe, explore, and explain an occurrence (Babbie, 1990). The use of a cross-sectional survey method was appropriate in this survey, as I was not looking for the evolution of the IP over time in the student. “In a cross-sectional survey, data are collected at one point in time from a sample selected to describe some larger population at that time. Such a survey can be used not only for purposes of description but also for the determination of relationships between variables at the time of the study” (Babbie, 1990, p. 56). Though the study spread over approximately five weeks, the data were still considered to be collected in the same period.

Because I surveyed the entire USD J.D. student population, sampling was not a major concern. In selecting the students who received a survey or survey request, the use of student mailboxes to recruit participants was an equal-probability-of-selection-method (EPSEM) (Babbie, 1990, p. 71) because all students had the same theoretical likelihood of responding. Because I asked the entire population of USD law students to complete the survey, those who completed the survey should represent the entire population of USD law students because everyone’s chances of selection were the same.

The literature has recommendations for creation of survey items. Most survey items were closed-ended, with the exception of the items about age and email address. I strove to make the response categories for the closed-ended items exhaustive by including all possible responses, and I attempted to make the categories mutually

exclusive (Babbie, 1990). The instructions for the instrument also asked the participant to select the one best answer from the categories. In addition, the electronic instrument would not allow for the selection of more than one category in an item.

Each item was on a separate line when possible, in order to maximize the white space as suggested by the literature (Babbie, 1990). As mentioned earlier, the year in school allowed access to the remaining Items 30 through 32 in the electronic document only for second, third, and fourth-year students. First-year students did not see these contingency questions because they were not applicable to first-year students. In addition, the CIPS was at the start of the survey instrument as suggested by the literature for self-administered surveys, and the demographic data were at the end of the survey (Babbie, 1990). This encouraged active engagement on the initial items versus putting the demographic items at the front, which would give the impression that the survey was concerned only with demographic information. The survey began with a brief introduction. The CIPS and demographic sections also began with a short introduction as recommended by the survey literature (Babbie, 1990).

Correlational Analysis and Regression Analysis

The concepts of correlation analysis and multiple linear regression analysis have been used for decades, though regression is still being finely tuned in some areas. The correlation and multiple regression methods used in this study are well established. Therefore, this literature review only covered the basics of these inferential statistical procedures, and highlighted literature regarding issues that might be problematic and their possible solutions.

Correlational Analysis

The second research question in this study requires performing a correlation analysis between the dependent variable of the IP's presence and the independent variables of demographic data (Fink, 2003). The *Pearson product-movement coefficient* (Pearson's r) ranges from +1 to -1, and is the simplest method for describing this linear relationship (Fink, 2003). The sign of the coefficient indicates the direction of the relationship, and the coefficient's absolute value indicates magnitude (Hinkle, Wiersma, & Jurs, 2003).

When discussing the correlations between two variables, there are some general guidelines for judging how strong the relationship is. Below are two widely used rules. The first is from Fink's 2003 work on page 58, and the second is from page 109 of the 2003 text by Hinkle, Wiersma, and Jurs.

Fink's Description:

- .0 to +.25 (or -.25) = Little or no relationship
- +.26 to +.50 (or -.26 to -.50) = Fair degree of relationship
- +.51 to +.75 (or -.51 to -.75) = Moderate to good relationship
- Over +.75 (or -.75) = Very good to excellent relationship

Hinkle, Wiersma, and Jurs' Description:

- .90 to 1.00 (-.90 to -1.00) Very high positive (negative) correlation
- .70 to .90 (-.70 to -.90) High positive (negative) correlation
- .50 to .70 (-.50 to -.70) Moderate positive (negative) correlation
- .30 to .50 (-.30 to -.50) Low positive (negative) correlation
- .00 to .30 (.00 to -.30) Little if any correlation

The literature indicates several important issues when using the Pearson's r . One should note that the scale of the correlation coefficient values is interval or ratio (Hinkle et al., 2003). When comparing correlation coefficients one can say that one is high or low, but not make quantitative comparisons, such as one is double another (Hinkle et al., 2003). It is also very important to note that "Correlation indicates relationship or association between two variables; it does not necessarily follow that scores on one variable are caused by scores on the other variable" (Hinkle et al., 2003, p. 114). Therefore, it would be imprudent to speak of causation when discussing the associations, relationships, and correlations in this study's analysis.

A possible limitation of the Pearson's r is that it only explains linear relationships, though this typically is not a problem in the behavioral sciences (Hinkle et al., 2003). In order to alleviate this possible limitation, I also examined individual scatterplots for each of the correlations to look for nonlinear relationships. I gave special attention to independent variables that the literature had suggested might have nonlinear relationships with the IP, such as year in school (Hinkle et al., 2003). All the relationship appeared to be linear.

Spearman's r is a special case of the Pearson's r (Hinkle et al., 2003) that makes no assumptions about the linear relationship. Spearman's r uses a range from -1 to +1 to indicate the correlation between ordinal data, such as rankings. I used both Spearman's r and Pearson's r in this research to compare the results and to insure the appropriate test for all types of variable scales.

Regression Analysis

While correlational analysis explains the relationships between variables, it is of no value in predicting how one value will change based on changes in another value. Regression analysis has this predictive capacity. Simply put “correlation describes a relationship whereas regression predicts a value” (Fink, 2003, p. 61). Regression analysis can take different forms, but I used simple and multiple regression analysis models.

Simple linear regression relies on a linear relationship between the two variables, and allow for predictions of one variable given changes in the other variable. Such analysis makes use of the least squares approach to minimize the variance of errors of prediction. The research also relies on assumptions of homoscedasticity and normal distribution to make probability statements and to develop confidence intervals for the predictions (Hinkle et al., 2003).

Multiple linear regression can initially be considered as starting with the simple linear regression covered earlier. While simple linear regression was conceived as a linear relationship between variables on the X and Y-axis, the multiple linear regression enters the field of geometry to describe its *hyperplane* existence (Hinkle et al., 2003). This three dimensional approach to the simple linear regression is quite complex, but the logic is still the same: to create a line that best represents the plotting of the IP and the independent variables while reducing residual values. The methodology section of Chapter Three contains a thorough description of the use of correlations and multiple linear regression as tools for exploring statistical questions.

Implications for Future Research

Suggested Research of the Impostor Phenomenon in Law Students

The law student literature indicates a culture and environment that is conducive to high stress and feelings of inadequacy in law students. The lack of IP studies in law students is a glaring omission, particularly because IP research has found significant impostor feelings in other graduate programs. The law student literature indicates a culture likely to create impostor feelings. This omission of IP/law student research was the impetus for this present study's exploration of whether the IP exists in law students, and if so, whether it could be predicted by other variables.

Suggested Additions to the Law Student Research Literature

The law student literature itself offers rich avenues of future research, particularly with the study of whether changing the Langdell method of instruction might be altered slightly to reduce the psychological distress to students without reducing their learning and eventual success, not just in passing the bar, but in becoming leaders in the legal community. Though there is some research in this area currently (Chanen, 2007), this is a research area that could greatly benefit law students and law schools. The present study of the IP in law students might give valuable data for correlating the students' success rates under different teaching methodologies.

In addition to general changes to the teaching methodology, much might be learned through further research into specific consideration of how the different learning styles of law students might beneficially alter the Langdell teaching methodology. The past method of ignoring individual learning styles and requiring the student to learn to think like a lawyer has probably hindered many students unnecessarily. However,

without reliable research in this area no one can say for sure. Such research could have far-reaching implications.

It should be explored whether the Langdellian method's use of intensive case reading and in-class dialogue are necessary to the law school's intention of breaking down the law student so the student begins to think like a lawyer. This pedagogy is intimidating for law students, and might contribute to their impostor feelings, but might also be a necessary part of legal education. It is also a demonstration of the adversarial and highly competitive environment of the legal field. Therefore, the intimidation and competitiveness may serve to alert students how they might feel when they begin legal practice.

One final area suggested for further research is the exploration of how effective the academic assistance programs are in helping students achieve academic success compared to students who do not receive such help. A comparison of schools' differing approaches in the programs might help in creating and planning the programs' curriculum, as well as in the day-to-day assistance for students in need of support.

Suggested Additions to the Impostor Phenomenon Research Literature

Because researchers have been working with the IP for only about 30 years, there are still rich veins of research to mine. The influence of the family on the development of the IP is still unsettled as the distinction between parental influences, particularly any sex-bias, would benefit from further exploration. The areas of overprotection and lack of care are particular ripe for research given the current interest in the influence of overly protective parenting in young persons' lives. It would also be interesting to examine the anecdotal evidence that contemporary young people have a higher sense of entitlement

that might correlate with the IP. Some research has been conducted with such a sense of academic entitlement (AE) (Greenberger, Lessard, Chen, & Farruggia, 2008). Though there was correlation between AE and particular attitudes and parenting styles, there was no significant relationship to grades. A study of AE and IP might be beneficial as these young people enter colleges and the work force, particularly if a correlation were in the research.

The relationships among psychological markers and behaviors and the IP are also ripe for exploration, particularly the self-handicapping issues. Though much work has been done with self-handicapping, it would be interesting to see if societal and cultural changes have altered the prevalence of these behaviors. A more thorough examination of the basics of the Impostor Cycle might also be a valid research subject, again because of the rapid changes in society. In addition, Clance and Imes theories about the development of the IP and the four behaviors that allow it to persist are more than three decades old. Good research could explore whether the shift in cultural values, particular the perception of women in society and the workplace, has affected the IP experience. Because the IP has such a strong role in work-place behaviors, solidifying the research in this area would also be beneficial, not just in understanding the syndrome's effects, but also in helping create solutions for the work environment and the employee.

As discussed earlier, sex-based correlations with the IP were among the first issues explored in IP research. The early findings that males did not experience impostor feelings were quickly countered with research showing the IP is found in both sexes. There have been some conflicting findings about the whether there is a sex-based difference in the IP's presence in males and females, and some researchers believe it is

still not settled what the norm levels are for the IP in male and female populations (Caselman et al., 2006). Settling this area would be a rich area for future research, particularly given the results of the current study that showed females were significantly more likely to suffer from the IP than males.

Previous IP research has not explored possible correlations between the IP and issues of race or ethnicity. The increased calls for diversity in the workplace would seem to suggest a focus on the relationship of demographic issues to the IP. Although the exploration of the relationship of racial variables to the IP has long been an area of research loaded with possibilities, the early work's concentration solely on sex-based differences in IP behavior was to the detriment of other areas of demographic research. The Caucasian and American-focused aspects of the early research have led to a paucity of findings that are definitive in broader cultural contexts. Demographic issues remain have not been fully explored and still offer several avenues of research. The high occurrence of the IP in the "Other" racial category in the present study might give direction for this research into the correlation between ethnicity and the IP.

Among the areas of the IP that most need future research, validation and tightening of the instruments are the most likely candidates. Such testing of the instruments would lend added credence to past research using the instruments, or just as important, reopen areas long thought settled by use of a faulty instrument. Researchers have tested the validity of the HIPS, the CIPS, and the PFS instruments and found them valid for the most part, though further refinement of the instruments is called for. Specifically, factor analysis research suggested further improvement of the instruments by removing all items not contributing sufficiently to the overall instrument. There have

been conflicting findings about the factors and the questions that should be removed, particularly with the tightening the CIPS' items and subscales. Again, further research in the IP instruments would be beneficial.

Similarly, advances in research technology have created improved instruments for measuring the psychological phenomena connected with the IP. Findings that DSM-II-R personality disorders account for 30% of IP score variance suggest that maladaptive styles correlate with IP behavior, and further study should examine this relationship more closely (Ross & Krukowski, 2003). Taking advantage of these improved psychological-based instruments along with improved IP-based instruments could open up new areas of exploration with a concentration in the relationship of the IP to other psychological behaviors and phenomena. Scholarship has noted important correlations between the IP and psychological issues, such as introversion and neuroticism. Future research in this area might draw tighter this wide-ranging area, so as to focus on the multiple relationships between the instruments and retest the validity of the earlier research.

Further research into the possible correlation between the IP and the Langdellian method of legal instruction might be especially helpful for law schools and law students. Because the IP occurred in approximately the same percentage of law students as in other graduate students that have been studied, there is no indication that the intensity of law school contributes to increased rates of the IP. However, the decrease in the IP as upper-level students progress through the program might indicate that the upper-level students are not subjected to the Langdellian method and thus the IP is not as pronounced in these students. This decrease in the IP as upper-level students progress might also be a rich area for research because it initially appears counter to previous research that suggested the IP

is formed early in life and is not easily changed. If future longitudinal research indicates that the IP is fluid, this could have major research implications.

The Impostor Phenomenon still offers several avenues for beneficial research. These research projects can add to the body of knowledge in the abstract sense, but also benefit IP sufferers. The development of therapies to assist sufferers end the Impostor Cycle and regain an innate appreciation of their own abilities is a worthy goal. Regaining appreciation of these abilities would likely allow the individual to achieve successes and find it fulfilling, and aim higher with her next leadership project. By understanding the IP and its attendant research issues, such therapies may be found.

CHAPTER THREE - Research Design and Methodology

“Measure what can be measured, and make measurable what cannot be measured.”

~ Galileo Galilei ~

This chapter provides an overview of the procedures and methodology used to administer and analyze results from the law student impostor phenomenon (IP) survey. The paper also discusses the selection and recruitment of the participants, the development and administration of the survey instrument, and the method for testing statistical correlations between the variables and the IP. The chapter concludes with a discussion of the delimitations and limitations of the study, as well as the anticipated significance of the research.

Selection and Recruitment of the Participants

I administered a web-based and paper-based survey instrument to the student body of the University of San Diego (USD) School of Law in the fall of 2010. USD is a private Roman Catholic university in San Diego, California. I chose USD largely because of convenience: I was a law librarian at that institution, and consequently, could readily access the students and the staff of the career services and academic support programs in the law school. In addition, because there were approximately 1,000 juris doctor (J.D.) students, there was a high likelihood that a satisfactory number of respondents would complete the survey. The law school's J.D. degree program had approximately 820 students in its full-time (3-year) day program, and 180 students enrolled in the part-time (4-year) evening program (USD, 2010a). The survey was administered to the law student body of both the day and evening divisions. While administering the survey to law students who have experienced final exams and the competition for grades was useful,

the experiences of newly admitted first-year students were also valuable for a perspective on the extent impostor feelings occur in new students at the start of the school socialization process.

Approximately 100 USD students were in the law school's Master of Laws (LL. M.) degree, which is an advanced degree one might pursue after completion of a J.D. These LL. M. students did not participate in the survey because their classes were seminar-based, the student body was multinational, and LL. M. students often work as attorneys before pursuing their LL. M. degree. The dissimilar experiences of the LL. M. and J.D. students would muddy the data's generalizability to J.D. students, and therefore, the LL. M. students were not included in the survey.

I recruited students to complete the survey through paper and email solicitations. Because first-year students might not all have had mailboxes or email addresses assigned during orientation, I included a paper informational sheet and paper copy of the survey in their orientation packets. The orientation packets were distributed on August 18, 2010 during the first day of the three-day orientation. I also put paper flyers announcing the survey in all J.D. students mailboxes located in the law school (See Appendix C). I also later posted and distributed flyers in the law school and the law library seeking J.D. student participation (See Appendix D). Finally, I also asked USD's Student Bar Organization and the staff of the career services and academic support programs for their public encouragement of students to complete the instrument.

I initiated the survey on August 18, 2010 by distributing the surveys in the orientation packets. I ceased actively soliciting survey responses and distributed the

incentive prizes on October 8, 2010, though a few survey responses were received through October 28, 2010, when the survey was closed to further responses.

Development and Administration of the Survey Instrument

In order to begin exploring my two research questions, I first selected an IP instrument to determine whether the IP was present in the law student group, and then created a list of demographic variables that might have correlations with the IP. In developing and administering the survey instrument, I relied on previous researchers' work to select the optimal IP instrument with the fewest questions and the most reliability. To create the list of demographic variables, I read the IP literature to assist in the selection of the variables that were the most likely to have correlations with the IP construct. I also read previous studies of law student stress and learning styles in order to create variables that might be particularly important for law students. The following is a discussion of this process for selecting the IP instrument and the process of constructing a list of demographic variables that were likely to have correlations with the IP.

Design of the Survey Instrument

The survey began with an already-existing IP instrument for identifying and quantifying the IP, and then included items about demographic variables, and the instrument ended with a question asking if the participant would be willing to be contacted for further research. Selection of the Clance Impostor Phenomenon Scale (CIPS) instrument was based upon the reported reliability of each of the three survey instruments, the relative parsimony of the items in each survey instrument, and the applicability of each instrument to a law student group. The three instruments are discussed in the next section. Reliability here addresses whether responses to an

instrument's items are internally consistent, stable over time, and whether test administration and scoring were consistent in application (Creswell, 2009).

The demographic variables selected for the instrument were combed from the work of previous researchers, with an eye toward which variables would be the most likely to have correlation with the IP, particularly for law students. The item asking about willingness to be contacted for further research was included to explore interesting data that might occur in the participants' completed surveys. This contact information and permission retained the possibility of qualitative research that would likely not be necessary, but might prove helpful if the quantitative direction of the research did not prove possible. The quantitative focus of the research was sufficient to address the research questions so that pure qualitative exploration of the law student group was not required.

Comparison of the Impostor Phenomenon Instruments

Three instruments have been used to study the IP, each with its own format and threshold score for detecting the phenomenon. Though Clance and Imes identified the IP in 1978, the first instrument for measuring the IP did not develop until 1981. This instrument, the Harvey Impostor Phenomenon Scale (HIPS) had 14 items and used a 7-point Likert scale (Harvey, 1981). Subsequent researchers tried to improve upon the HIPS with the 20-item Clance Impostor Phenomenon Scale (CIPS) in 1985, which used a 5-point Likert scale (Clance). Kolligian and Sternberg created the third instrument, the Perceived Fraudulence Scale (PFS), in 1991. The PFS used 7-point Likert scale in its 51 items. Researchers used the instruments to assign an IP score to the individual completing the instrument, with a higher score indicating a greater intensity of impostor feelings. A

particular threshold was set for each instrument, and those with scores above that threshold were designated as having the IP.

I looked at past research with the three IP instruments to find reliability and internal consistency measures that would help in selecting the most reliable instrument. Past studies with the CIPS (Clance, 1985) instrument showed Cronbach's alpha scores of $\alpha = .84$, $\alpha = .91$, $\alpha = .92$, and $\alpha = .96$ respectively (Prince, 1989; Holmes et al., 1993; Chrisman et al., 1995; Chae et al., 1995). Research using the HIPS has indicated an alpha coefficient of $\alpha = .75$ and of $\alpha = .85$ (Topping & Kimmel, 1985; Harvey & Katz, 1985). Studies of the PFS have returned alpha coefficients ranging from $\alpha = .89$ to $\alpha = .94$ (Bernard et al., 2002; Kolligian & Sternberg, 1991).

Selection of the IP Instrument Used in the Survey (First 20 Items)

Utilizing the CIPS instrument allowed me to answer the first research question concerning the presence of the IP and to fulfill one of the goals of survey research: to explore (Babbie, 1990). The CIPS instrument was selected for this study because of its better alpha coefficients, and the relative parsimony of its 20-item format. The HIPS had the lowest range of reliability scores in previous research and therefore was eliminated. Though the CIPS and PFS had a similar range of alpha coefficients, the CIPS' reliability coefficients were slightly better. The parsimony of the CIPS was also an important factor in its selection, containing approximately a third of the survey items contained in the PFS instrument. The CIPS instrument is the first 20 questions of the survey in Appendix A of this study.

Selection of Variables to Include in Survey Items

Another goal of survey research: to describe (Babbie, 1990), mirrors my second research question's aim to describe correlations between the IP and selected variables. To answer this question, I included survey items in this cross-sectional survey that explored demographic variables likely to have correlations with the IP. I chose the demographic variables by combing the IP literature and relying on previous researchers' conclusions about correlations. In addition, I synthesized several variables from the IP literature and the law student literature that were particularly meaningful for law students. These particular variables were not in IP research before, but the finding of the law student literature made their correlation with the IP likely. Examples of these variables included legal clinic experience and whether a parent was an attorney. In addition to the law student literature, some of the variables emerged through conversations with the law school staff in career services, admissions, academic support, and the legal clinic, as well as in conversations with members of my dissertation committee.

When adding demographic items to the survey, I maintained the CIPS' 5-point Likert scale in order to promote uniformity, where possible. Some demographic variables, such as sex, clinical coursework, and year in school did not have five possibilities for the points in the Likert scale. When deciding whether to include a demographic variable as a survey item, I weighed the possible benefit of inclusion against parsimony in the number of survey items. I tried to "obtain the greatest amount of understanding from the fewest number of variables" (Babbie, 1990, p. 42). I also placed demographic items toward the end of the self-administered survey in order to keep the respondents' interest levels high (Babbie, 1990). The following variables were each

included as demographic items in the survey instrument in order to explore correlations between the variables and the IP construct.

Sex as a variable (Item 21). The initial research into the IP premised on the belief that females alone suffered from the condition (Clance & Imes, 1978). The boldness of this statement led subsequent researchers to see if there was a sex-based difference in the presence of the IP. Several researchers found no significant sex-based difference of IP occurrence. However, some researchers believe the norm levels for the IP in male and female populations are still not settled (Caselman et al., 2006). The nearly equal division in the USD law school of 51% female and 49% male (USD, 2010a), suggested there would be a sufficient number of responses to study whether a sex-based correlation with the IP might be present in the law student group.

Adding to the ambiguity of whether there are sex-based differences in the occurrence of the IP, researchers have found differences in male and female reactions to the stress of law school (Wightman, 1996), and in the amount of time spent studying and attending classes (Edwards, 1997). Also, male and female law students appear to have different levels of self-confidence, which might be relevant for IP research (Curtis, Zanna, & Campbell, 1975). Taken together, this information indicated that sex-based differences would be a valid area for inclusion as a demographic variable in the survey.

Race as a variable (Item 22). Correlation between the occurrence of the IP and racial differences occurred in only one study. However, this singular finding is not surprising because IP research has been limited almost exclusively to samples that lacked sufficient racial variation to generate reliable racial correlations with the IP's occurrence (Chae et al., 1995). Because minorities comprised 28% of the student body in USD's law

school (USD, 2010a), responses from this sample were likely to provide sufficient racial diversity to analyze possible correlations between race and the IP. Survey Item 22 addressed race as a variable issue and it included a 7-point range of racial possibilities from which to choose. Research with law students has specifically indicated that minority or non-white law students have not enjoyed academic achievement at the same levels as white students (Edwards, 1997). Interestingly, this research also found that achievement had no correlation to the amount of time spent studying or attending class (Edwards, 1997).

Age as a variable (Item 23). Impostor phenomenon research has not focused directly on age and its relationship to the IP. However, some researchers have mentioned correlations indirectly derived from comparing educational level or occupation to the IP. For instance, Harvey's 1981 research found the differences in IP scores between one group of students and another decreased as the students advanced in their education and age. He also found a negative correlation between IP scores and the number of years a student had been in school, and the student's age. The younger the students, the higher their IP scores were. Subsequent research seemed to confirm this negative correlation between age and the IP (Chae et al., 1995). Similarly, other research has found that the etiology of the IP occurs before adolescence (Caselman et al., 2006; Cromwell et al., 1990; Stahl et al., 1980).

The age range for the law student sample used in this research was 20 - 46. (USD, 2010a). Though this 27-year span is quite large and establishes a wide parameter for the item's results, there may not be significant correlation between differences in the ages and differences in the IP levels. The main reason the correlation might not be significant

is because the studies just cited in the previous paragraph indicate that the IP is well established before the ages in the law school student range. However, no other researcher has studied such a large range of ages for correlations between the IP and age. Such a question might provide valuable data and therefore was included. Because finesse and significance might have been lost in using categories for the ages, and in order to improve precision, this item was open-ended by asking the participant to enter the age in numerals. When the age data were analyzed, the ages were kept as single years except for a few ages that were outside the norm, which were placed into groups.

Parental education levels as variable (Items 24 & 25). There is no substantial research about the relationship between the IP and the educational achievement of parents, but there has been some indication that choice of law school for the child relates to the parents' education attainment levels (Curtis et al., 1975). This study specifically found a correlation between law school attendance and the father's educational achievement level, but the mother's educational achievement level was insignificant (Curtis et al., 1975). Having a parent who had graduated from law school also positively correlated with the child's law school attendance and might be perceived as indicative of family of origin achievement orientation. Similarly, research with law student psychologies also shows significant correlations between an individual's choice of law school and the achievement orientation of his or her family (Curtis et al., 1975). The educational level of the law students' parents was explored through two items on the survey that asked separately about the mother's and father's highest levels of educational attainment. This Likert-style question set out a law degree as a category in order to

ascertain clearly whether the parents' law school attendance correlated to the IP in the law student sample for this study.

Occupational inheritance as a variable (Item 26). The literature also indicates that a parent's occupation has a powerful correlation to the child's choice of a career, particularly for children of professional parents later becoming professionals themselves (Egerton, 1997). This *occupational inheritance* indeed holds true for the children of attorneys, with some older research indicating that an attorney/parent has more correlation than any other variable with a child's decision to attend law school and to become an attorney (Zelan, 1965). Having an attorney/parent might relate to increased levels of stress in law students, particularly in students who had chosen law school to make their parents happy. Therefore, the survey included an item asking if one of the student's parents was an attorney.

Emotional support from family as a variable (Item 27). Psychological support in attaining one's education goals is very important. Family support in this area can be very important for the law school student. Item 27 asked the respondent to rate the family's support of the student's educational goals. This item developed through discussions with law students about what type of psychological and emotional support was important to them.

Procrastination as a variable (Item 28). The literature indicates a positive correlation between the IP and procrastination; procrastination is also a component of the impostor cycle that was discussed in Chapter Two (Clance & Imes, 1978). Procrastination would be a very dangerous habit for a law student (Beck & Burns, 1979), because each class requires massive case readings and the ability to discourse on any case

selected by the instructor. Not keeping up with daily readings or studying for the end-of-semester exams could ignite impostor feelings in the procrastinating student. An item in this survey asked the student to select from a scale how frequently he or she procrastinates when preparing for class or exams.

Law school enrollment status as a variable (Item 29). Because of the variation in the intense stress that students endure in law school, one's year in school is likely to have a correlation with the impostor feelings and the IP scores. A student's answer for year in school was also determinative of the applicability of other items, such as those dealing with GPA and clinical coursework. Because first-year students do not participate in these activities, first-year students were not given these questions. Instead, the electronic survey bypassed such irrelevant items, and inappropriate answers on the paper instrument were discarded. First-year students did not see Items 30 through 32 because they had not yet experienced these variables.

Academic achievement (GPA) as a variable (Items 30 & 31). On the surface, academic achievement might appear negatively correlated to the IP because a student suffering from the IP would lack self-confidence to achieve academically, particularly in the intensely competitive law school environment. On the other hand, the correlation might be a positive one because a student with intense impostor feelings might study harder and achieve higher grades in order to overcome these feelings of fraudulence. Research has not settled whether the correlation is positive or negative. In fact, research results conflict about whether there is any significant correlation. Because of this ambiguity and because class preparation and academic achievement are major

components of the law school experience, it would be valuable to explore a possible correlation between the IP and academic achievement.

Most researchers assess academic achievement through a student's grade point average (GPA) as a shorthand term for academic ability. This study did not access actual GPAs as recorded by the school because it was unlikely a sufficient number of students would grant access to their grades. In addition, accessing GPAs would have added an enormous layer of difficulty to the research process.

Instead of asking the school for the students' GPAs, a survey item asked the student to select his or her GPA from a Likert range of how it compared to others in the student's class, such as top 10%. I did not confirm these self-reported GPAs with the school. Clearly, differences were possible between a student's self-reported GPA and the actual GPA recorded at the school. Asking how the student's GPA compared to others in the class, rather than asking for the numerical GPA may have reduced this difference. The logic in using this comparison is in a subsequent paragraph.

Though complete accuracy between recorded and self-reported GPAs was not likely, valuable information might still be gained by asking about a student's GPA. This was particularly true because the next survey item asked for a comparison of the GPA received to what the student felt he or she deserved. This comparison of the perceived academic achievement to what the student felt was deserved might relate with the student's self-confidence and possible impostor feelings. Because the student burdened with the IP feels like an impostor who is fooling others, the student's feelings about disparity between GPA achievement and GPA expectation might correlate with the IP. For these reasons, the survey included an item asking second, third, and fourth-year

students about their achieved GPAs, and then a second question asked about what GPA was deserved.

Comparing the student's GPA to others in the class was also appropriate because of the variation in GPAs between class groups. In creating ranges for the survey item asking for a student's GPA, I consulted the school's publication of student grade point averages that determine top 10% GPA, top 20% GPA, etc. (USD, 2010c). There is a substantial variation between the groupings of grades in the full-time day students and the grades in part-time evening student groupings. For instance, the GPA cut off for the top 10% in the daytime students for 2009 was 3.70, but 3.52 for the evening students. Adding to the complexity of using a GPA numeral range was that the cutoff GPA varied from class to class so that a second year top 10% cutoff was substantially different from the cutoff for third-year students.

Though the responses to the year in school and full or part-time student could vary the ranges available in the item, this would muddle the generalizability of data responses. Instead, the GPA item included descriptive wording rather than numerals. Examples of the ranges were "Top 10%" or "Top 50%" among the 5 possibilities. Please see Appendix A, Item 30 for the exact wording used in the survey.

Clinical course enrollment as a variable (Item 32). While law students learn to think like lawyers in school, they often do not learn how to practice law like lawyers (Chanen, 2007). Recent innovations in law school curricula have added clinical courses as a way for students to learn the practice of law while polishing their analytical skills in their regular course work. As mentioned in Chapter Two of this work, stress for law students has been shown to peak during the third year of school with the pressure of

beginning legal practice. If a student is unsure of where to sit in the courtroom, or which motion to file, the student is likely to be highly stressed and to lack confidence.

Research has shown that law school clinical programs increase students' confidence in their ability to practice law (Chanen, 2007). Therefore, enrollment in such elective courses might also be negatively correlated with the presence of the IP, particularly in third-year students. Therefore, an item in the survey asked about clinical classes in order to explore possible correlation between clinical coursework and the IP.

LSAT scores as a variable (Item 33). As mentioned in the discussion of Items 29 through 32, the survey was unable to record academic achievement for first-year law students because they had not yet taken exams or clinical coursework. In order to explore academic achievement as a variable for first-year students, the survey included an item that asked all students about LSAT scores. Scores on the LSAT, or Law School Admission Test, are a strong factor in deciding law school admissions. The survey item had a range of possible LSAT scores given in a Likert-style, in addition to an answer of "I don't know." This item was developed in consultation with my dissertation committee members.

Religion or faith as a variable (Item 34). Psychological support through religious devotion or faith might affect one's impostor feelings. Item 34 asked whether the respondent's religion or faith was a major part of his or her life. The survey item had an added dimension because of the university's religious affiliation. This item developed through consultation with my dissertation committee members.

Romantic relationships as a variable (Item 35). Psychological support might also come from being involved in a positive romantic relationship. Item 35 asked the

respondent about involvement in a positive romantic relationship. This item was worded carefully to avoid other types of relationships, such as familial, physical, or unsupportive. This item developed through discussions with current law students about what type of psychological and emotional support was important to them.

Assessing the Survey Items

After creating the first iteration of the demographic items in the survey, I submitted selected items to instructors in the law school's academic assistance program and staff in the law school's admissions office for suggestions to improve the demographic items. Because the IP reproduced the CIPS instrument, they were not subject to revision, and therefore not presented to the staff. The staff groups were only superficially familiar with the IP concept, but they did have valuable insights and suggestions about the wording and order of the demographic instrument items.

Technological Specifications of the Survey Instrument

In addition to a paper version of the survey distributed to first-year students through their orientation packets, I also created and administered the survey in an electronic format through the SurveyMonkey.com website at <https://surveymonkey.com/s/impostor>. In order to simplify collection and migration of the data into SPSS software, I typed the responses to the paper surveys into the SurveyMonkey website. The completed paper surveys were retained. Of 331 paper surveys distributed in the orientation packets, students returned 12 to collection boxes.

The SurveyMonkey website itself required some alteration when I realized that some respondents were spelling impostor as *imposter* when they went to the website. Approximately ten days into the survey, I realized this problem, and created a redirect so

that all respondents would seamlessly access the same survey. In assessing the survey results, 99 respondents used the *imposter* URL.

In creating the paper and electronic surveys, I followed Babbie's (1990) guidelines for survey creation. When possible, the five-item Likert scale of the CIPS instrument was retained for uniformity in the demographic questions. Some questions, such as sex or year in school, were not amenable to this format. In addition, the demographic items were included at the end of the instrument to retain the respondents' interest for as long as possible. Appendix A includes a reproduction of the survey.

Administration of the Survey Instrument

I tried a number of different paths to publicize the survey and to recruit law student participation. A paper instrument along with information about the instrument and directions for completing it at SurveyMonkey.com, were included in first-year students' orientation packets. A copy of this information flyer is contained in Appendix B. I also distributed paper flyers in all student mailboxes, located in the law school, during the final two weeks of September 2010. A copy of the text of this flyer is in Appendix C. A paper flyer was also posted throughout the law school and law library, and personally distributed to law students. This flyer is in Appendix D.

I used five iPod Shuffles as incentives, as well as pieces of candy attached to the flyers because material incentives typically improve rates of response from survey participants (Dillman, Smyth, & Christian, 2009). If students wanted to enter the drawing for these incentive items, they were required to submit a USD email address. In order to discourage students from submitting multiple surveys to make multiple submissions for the contest, each student's email address was unique and could be used only once. The

use of this email address strategy also allowed me to eliminate non-USD students from taking the survey and to contact the students for subsequent research.

Analysis of the Results from the Instrument

Assessment of Survey Responses

Among the first steps in working with the research findings was to ascertain the response rate and to clean the data. When the survey closed, there were approximately 1,004 University of San Diego (USD) JD students in the population (USD, 2010a). Of these 1,004 students, 349 respondents began the survey, and 342 completed the survey, yielding a response rate of 34.5%. Though the seven incomplete Survey Monkey responses were more than half completed, they were discarded from the data set.

Analysis of CIPS Instrument Results

After the administration of the entire instrument, I collected, explored, and analyzed data in order to answer the first research question about the extent of the IP in the sample of law students studied. I began by exporting the survey responses for the 20-item CIPS instrument into an Excel spreadsheet. I then replaced the Likert scale responses with the numbers 1 through 5, with 1 being for “not at all true” and 5 being for “very true.” An additional column contained each respondent’s total score for these twenty items. Finally, I sorted the responses based on the CIPS score. With 20 survey items and possible scale values of 1 through 5, the possible scores ranged from 20 to 100 for this interval scale variable.

Students who scored above the CIPS’ threshold score were labeled as having the IP. Though the creators of the CIPS instrument initially suggested a base score of 60, later researchers suggested modification to a threshold of 62, and I utilized this more

conservative threshold (Clance, 1981; Holmes et al., 1993). Analyzing the participants' responses to the CIPS instrument allowed me to answer the first research questions posed in Chapter One of this study: Is the Impostor Phenomenon present in a given law school sample? Answering this question was a necessary step before deciphering whether correlations existed and whether predictions could be made about the relationships between the IP and the variables.

Readying Demographic Item Results for Multiple Regression Analysis

I used multiple regression analysis on the responses to the CIPS Score variable and the responses to items 21 – 35 to answer the second research question about predicting the presence of the IP by the presence of the independent variables. I used SPSS (originally, Statistical Package for the Social Sciences) to look at basic statistical points, such as averages and ranges. The results of this basic analysis are in the Findings section of Chapter Four.

The preparatory step for performing multiple regression analysis of the data was to state the question that the analysis attempted to answer. In this case, that question was whether there was significant correlation between variance in the law students' impostor feelings and variance in the demographic variables, which would allow predictions about the presence of the IP? It should be noted here that although the study might refer to the IP, the CIPS scores themselves were used as the dependent variable in the research.

There were several assumptions about multiple regression analysis to consider. The first assumption was that the relationship between the CIPS scores and the demographic variables was linear, though the models are typically robust enough to deal

with minor variations. I utilized the SPSS software to perform scatterplots to ensure the relationships were indeed linear, rather than curvilinear.

In addition, because data outliers and extreme cases can disrupt the interpretation of regression analysis results, the data were plotted to identify any outliers that might bias the regression line and the regression coefficients and adversely affect the analysis. None required further examination or removal.

Next, I carefully analyzed each variable separately to identify its variable type. The following is list of the Nominal Variables (the item number is in parentheses). Nominal Variables were Sex (21), Race (22), Mother's Education (24), Father's Education (25), Parent as Judge or Attorney (26), Emotional Support (27), Procrastination (28), Deserved GPA (31), Legal Clinic (32), Religion (34), and Romantic Relationship (35). The dichotomous nominal variables are Sex, Parent as Judge or Attorney, Legal Clinic, Clerking, Religion, and Romantic Relationship. Dummy variables were used for each of these dichotomous nominal independent variables with a coding of 0 or 1. It was also necessary to leave out one of the levels for the variable so that perfect multicollinearity did not occur. The next type of variables was the Ranked or Ordinal Variables. These variables were School Year (29), Actual GPA (30), and LSAT Score (33). These variables also required conversion into a useful format through dummy variables. The final type of variable was the Measurement or Interval Variable, of which there were two examples: the independent variable of Age (23) and the dependent variable of the CIPS Score (determined from responses to items 1-20).

Multiple regression has requirements for the types of variables that will function properly. The dependent variable, CIPS Score, had to be on an interval scale, which it

was. All independent variables had to be on an interval, ordinal, or ratio scale, which most were. Nominal variables were permissible, but only if they were dichotomous nominal variables. Though several of the independent variables, such as Sex and Clinical Course Enrollment, were dichotomous, a number of the nominal independent variables had to be converted into the dichotomous structure. An example of this was Item 22 dealing with race and ethnicity. This item used a nominal scale with seven possibilities. Each of the seven possible responses was changed into a dichotomous variable so multiple regression analysis could be used. An example of this was the creation of a dichotomous variable for African American or Not African American, with the presence of the characteristic (African American) being coded with a 1 and the absence of the characteristic (Not African American) with a 0. Such recoding allowed the use of nominal scale data, even when the original data were not dichotomous, as required for multiple regression analysis.

Another example of recoding was the open-ended survey item asking for the respondent's age. This yielded responses in an interval variable format that was not appropriate for multiple regression analysis. After examination of the ages given in response to the survey item, I split the ages into ordinal groupings with students under age 22 in one group. Each of the ages from 22 through 29 had a separate group. The final group was for all ages above 29. Converting this interval scale into an ordinal grouping was necessary for me to use multiple regression analysis on the response data set. In addition, there was minimal loss of detail because the number of respondents placed in the multiple-age groups was small.

Items 24 and 25 also required special treatment. These items asked the respondent to select all levels of education the mother and father respectively, had achieved. I cleaned the data to reflect the parent's highest level of achievement. For example, a parent who had completed only high school was included in the high school group, while a parent who had completed college was not included in the high school group, but rather the college group. The respondents selected all completed educational levels rather than highest achieved because of the difficulty in ranking advanced degrees, such as doctoral and medical degrees. As with some other items, I coded Items 24 and 25 as ordinal values. These values ranged from one (less than high school graduation) through a value of eight (law school graduation). This was necessary in order to utilize multiple regression analysis later in the study.

The next step was to screen the relationship between each of the independent variables for multicollinearity because independent variables should not be excessively correlated when running multiple regression analysis. Pearson's r is the most common method used to test for correlations for normally distributed data in interval or ratio scale variables. Pearson's r was the initial test used to test for correlation between the independent variables. The three strongest correlations between independent variables were $-.632$ between Asian and White, $-.560$ between Parent Practicing Law and Father's Education; and $.385$ between year in school and age. None of these correlations was troublesome because a correlation of $.3$ to $.6$ is moderate. These correlations were found using a two-tailed testing model and $N = 342$.

I also used Spearman's r to search for multicollinearity for variables that were in the nominal scale. The strongest correlations were $-.632$ between White and Asian, $-.489$

between Father's Education and a Parent Practicing Law, and .400 between Year in School and Age Group. These correlations were found using a two tailed testing model and $N = 342$.

I also ran the Pearson's r and Spearman's r on the group of 201 upper-class students, the results were very similar with the highest collinearity in the .3 to .6 moderate range. Therefore, multicollinearity did not prevent using multiple regression analysis. I had decided to remove the less valuable item from the model if multicollinearity occurred between independent variables; this was not necessary because multicollinearity did not occur between the independent variables in this study.

Further procedural issues needed resolution. The 141 first-year law students could not complete some of the items, such as those based on law school grades. This necessitated creating two groups for multiple regression analysis. The first group contained only the 201 upper-level students. The analysis for this group accessed all the independent variables because these students completed all the items. The 141 first-year students were removed from the analysis using the exclude cases listwise feature of SPSS. The second group included all 342 respondents, but excluded the three items that first-year students did not complete.

Another primary step for multiple regression analysis was selecting the procedure for developing models that would explain the greatest variance in the dependent variable. Though the Forward, Backward, or Enter methods would each have sufficed, and they were all simple to apply, I used the Stepwise method because it dealt with the data in a more efficient manner and ultimately created the most parsimonious models.

Finally, as with the simple linear regression, what I researched was correlation and not causation. I retained awareness of this, as well as remained on the lookout for any external variables not included in the study that might have been at work in the model.

At this point, I had finished the preliminary work to ensure results of the regression were trustworthy. The next step was to run the actual regression equation by entering the collected data into the SPSS software. After entering and running the data, analysis began.

I began the data analysis with the regression coefficient, which was the average amount of change in the CIPS scores associated with a one-unit increase in the examined independent variable, while all other independent variables held a constant rate. This coefficient was also the slope of the regression line, with a larger slope indicating a more dramatic change in the CIPS score. This association was altered slightly when the independent variables used dummy variables - a change of one unit in the dummy variable was a change from the “absent” description, represented by 0, to the “present” description, represented by a 1.

I next tested the significance of the individual regression coefficients by testing the null hypothesis that the regression coefficient was zero. I tested the statistical significance by running the t-test in SPSS, while using the standard .05 significance level as the threshold significance. I also used the one-tailed test when possible in order to improve probability. Here again, a work around was needed for the independent variables that used dummy variables, though SPSS produced these results automatically. Instead, I used stepwise regression to determine the change in the R^2 each time a dummy independent variable was added to the equation. I also used the F-test for the significance

of the incremental changes of stepwise regression because it was testing the whole model, while the t-test determined the significance of the single relationships. Additionally, after testing the significance of the individual regression coefficients, I used the F-test for the entire model, as with the dummy variables. As in the t-test, I again used the .05 standard as the cutoff for significance under the F-test.

I then examined the goodness of fit issues with the multiple correlation (or R^2), which is the percent of the variance in a dependent variable that is explained by the independent variables, either separately or together. Although R^2 was a good measure of how well the regression line fit the plotted data points, it could be inaccurately maximized when variables were added that were not worthy of inclusion. This might have led to faulty conclusions that included an excessive number of variables or variables lacking real value. Because of this issue, I also examined the Adjusted R^2 , which improved upon R^2 by including a new variable only if the model improved more than would be expected solely by chance. Using both statistics, I gained a broad picture of how well the statistical model fit the observed data collected from the law student group.

In the final step, I explained the practical implications of the predictive value of the multiple regression analysis. To do this, I analyzed the standardized Beta coefficients to explain the relative importance for each independent variable relative to this particular model and to the other independent variables. This allowed me to say how much a given independent variable predicted the variance of CIPS scores, while holding the other variables constant.

One way to improve the final model was to analyze the residuals between the observed values and predicted values in the regression equation. I ran a residual table in

SPSS to identify any variables that might have data outliers that were not appropriate for the model; none were found.

Delimitations, Limitations, and Significance of the Study

The formulation of this research project required multiple decisions and delimitations. Several of these were delimitations imposed because of knowledge gleaned from previous researchers' efforts. An example was the selection of law students as the participant group. The study only focused on law students because no other IP researcher had analyzed the group, though other graduate student groups had been studied. Likewise, economy of effort also drove several of the delimitations to focus the project on research questions that might be definitively answered. While it was initially interesting to explore many of the variables that factor into overall law student success, I chose to focus solely on the IP and variables that might have correlation with the phenomenon. Necessity also drove several of the project's guidelines, such as the acceptance that verifiable grades could not be accessed, and instead deciding to work with perceived and deserved grade survey items. While these various forces guided the study's creation, they also limited the study's power and generalizability when they could not be overcome or the focus of the research redirected. When possible, these restrictions were defused. The limitations section below outlines the circumstances where such surmounting may not have been possible.

Delimitations

The first decision in the research was the selection of the subject matter. I was interested in the IP from past readings and from recognizing impostor feelings in myself and in others. When I described this construct to friends, many of them recognized the

feelings and said that they had experienced similar thoughts. This familiarity with impostor feelings was helpful in explaining the IP construct. However, it seemed this familiarity led some listeners to project the temporal nature of their feelings onto others and not comprehend the seriousness of the construct for those burdened with the IP. This study focused on those students whose CIPS scores indicated the presence of the IP and its recurrent feelings of fraudulence, but then used CIPS scores to look for associations in multiple regression modeling.

Initially, I was interested in researching the presence of the IP in law librarians because their multiple advanced degrees, introverted stereotype, and balanced split of males and females in leadership positions might produce interesting results. In addition, being a law librarian meant that I had access to the thousands of members in law librarian professional organizations. After careful consideration, this avenue seemed overly restrictive and spoke more to working professionals, than to the student population. I was more interested in the law student population because they might benefit from IP research more readily, as the literature indicates that impostor feelings are present well before a person becomes a working professional. This led me to research law students because my research might contribute to the body of IP knowledge and help to identify the phenomenon in a group that might readily benefit from the research information.

I also recalled the impostor feelings I experienced upon starting this doctoral program. One of my professors used Socratic dialogue in some classes. This reminded me of the intensity of my years in law school, and the law school experience of learning to think like a lawyer. I began to wonder about the presence of the IP in law students, particularly with the law school teaching method causing stress and uncertainty in

students. I was surprised to find that no one had researched the IP in law students, though impostor feelings were found in a significant portion of the students in other graduate programs. Again, because of the teaching method used in law schools and the highly competitive nature of the program, law students appeared to be a rich area for IP research. For these reasons, I restricted my research to law students.

I selected my student convenience sample from USD's juris doctor program because my work in the school's law library gave me ready access to the students and staff of the school. The students were in the school's part-time four-year program and the three-year full-time program. The USD law school did offer advanced legal programs for an LL. M. in Taxation and in International and Foreign Law. However, I did not include students from these programs in this study for several reasons. Students in the LL. M. program likely have a very different experience than students in the J.D. program because the LL. M. students already have a law degree, typically several years of professional work experience, and fewer classes that were based in Socratic dialogue. Less than 150 students were in both LL. M. programs, and such a small number of potential respondents limited the generalizability and reliability of results for J.D. students. Finally, a large number of the Foreign and International LL. M. students were from foreign countries, where their juris doctor law school experience might vary significantly from the experience of students at USD.

Limitations

The framework and student group chosen for this research also imposed possible limitations on the study and its usefulness. The following is a discussion of the limitations of which I was aware, and my attempts to reduce the effects of these

limitations when possible. One initial limitation was that by selecting this particular sample group and this particular construct, I ignored other groups and constructs. I think exploration of the IP and its correlations to other variables was sufficiently beneficial to be the sole focus of this study. In addition, the restriction of the study to law students was intentional and purposeful in order to explore the IP construct and its correlations in this particular sample.

I also limited the study to students working toward their J.D. degree although USD also had two advanced degree programs for law. The presence of the IP in these students of advanced legal studies would be an interesting subject for study. However, because of the reasons listed in the Delimitations section above, I chose not to include them in this study. This study worked only with juris doctor students in order to explore the presence of the IP in the traditional law school environment.

Because this study was only for students in the juris doctor program at USD, the USD respondents determined the ranges possible for the variables. For example, the current age range for law students at USD was from 20 to 46 (USD, 2010a). This study did not consider ages outside this range, except concerning research in the literature review that assisted understanding of students 20 to 46 years of age. This might be a possible limitation for the application of the research to students outside this age group.

The selection of the USD law school imposed some conditions that might be limitations. USD is a religious institution with a Roman Catholic identity and history. Though many of the students are Roman Catholic, the Catholic faith is not required to attend the school. In addition, Catholicism do not play a major role in teaching of classes, though Catholicism does play a bigger role in the typical undergraduate experience at the

university. The survey did include a question about religion and faith because of the impact of faith on success and possibly the IP. After consideration, I did not believe the school's religious affiliation would be a major limitation on the administration or results of the study.

At the time of this study, USD's law school was the thirtieth most expensive private law school in the country (U.S. News & World Report, 2010). This large expense might place extra stress on USD students to be academically successful because their education is expensive, and it is clear that financial hardships can influence student stress levels (Davies & Lea, 1995). Though law schools typically are more expensive than undergraduate tuition, this could be a factor in increased stress. The generalizability of this study might be limited because students at less expensive or more expensive schools were not represented by the student sample drawn from USD. However, though the law school's high tuition might place additional stress on USD students, this expense was not an outlier in the spectrum of tuition expense for law schools. Therefore, it was not a strong limitation for generalizing the results from USD's law students to most other law school students. In addition, though USD is a competitive law school, results from the study of USD students might not be as applicable to students at schools that are more or less selective in choosing the students admitted.

A tremendous limitation was the possibility that no significant impostor feelings occurred in the law students studied. Such a possible result was a limitation on the work planned for the study, and yet it would have been a valuable finding for properly conducted research, particularly when compared to the IP research in other graduate

groups. This possible limitation did not occur, as significant impostor feelings occurred in the law student group studied.

Finally, because I was an employee in the law school's library, some of the students might have known me and perhaps altered their responses because of their acquaintance with me. I do not think this was a major problem and might perhaps have been a benefit if the students more readily recognized the value of improving IP research in law students so that assistance could be created to meet their needs. Again, the students may have taken the survey and research more seriously through a familiarity with me, but I do not think they altered their responses to the survey because of this acquaintance.

Significance of the Study

This study attempted to correct the lack of IP research in law students. Law students and legal educators might utilize the study findings to recognize the presence of the IP in the law students studied. Legal educators might analyze whether the Langdellian method affects impostor feelings, and whether impostor feelings are a necessary component of legal education. The previous lack of IP research in law students emphasizes this study's contribution to the body of research knowledge. The myriad research in other academic disciplines highlighted the desirability of such research. While the initial value of the study lay in uncovering the extent of impostor feelings and predicting the IP's existence in law students, the greatest value lies in law schools possibly utilizing this information to ensure their teaching and academic assistance programs are meeting student needs. Such research might also ideally provide information that could lessen an impostor student's "dependence on others' positive evaluations for his or her self-esteem and build a more internalized sense of self-worth,"

and in so doing, improve the impostor student's chances of leadership success and satisfaction (Langford & Clance, 1993, p. 499). Ideally, the study's finding of the IP in approximately a third of the law students surveyed, and the creation of predictor variables will help law students deal with the IP and reduce its effect on attempts at leadership.

These benefits to law students might migrate with the students as they graduate and join the workforce. Just as the intensity and competitiveness of the admissions process is a prelude to law school, the stressfulness and adversarial nature of the law school experience is a precursor for the extremely long hours new associates spend working in law firms. Some law students with powerful impostor feelings might limit their job prospects to unchallenging positions because they do not feel qualified to succeed in a demanding job. Students who chose such unchallenging jobs are likely to experience dissatisfaction later when they realize that, indeed, the jobs offer little challenge or growth opportunity. The IP might keep those dissatisfied attorneys from pursuing other more challenging leadership prospects because of the feelings of inadequacy and fear of being found out.

The IP might also negatively affect performance of new lawyers who do seek out challenging jobs, if the impostor feelings make the employees overly critical about self-performance and unable to accept the positive benefit from the feedback of others (Leonard & Harvey, 2008). Additionally, the IP encourages feelings of inferiority, which are not likely a positive characteristic for successful attorneys (Shneidman, 1984). Such negative behavior might influence the attorney's own well being and leadership potential, as well as that of coworkers and the organization (Leonard & Harvey, 2008).

Interestingly, as with law students, there is no IP research for attorneys though the IP has been found in other highly skilled and stressed professions, such as nursing and university teaching. Because the practice of law centers on the adversarial court system and the idea that the winner takes all, the study of the presence of the IP in attorneys might represent a rich area for future research, particularly if this current study affects the understanding and treatment of the IP in law students.

When the IP creates an inability to internalize and believe in success, it is detrimental to the individual repeatedly denied the enjoyment of hard-won success and the full exploration and harnessing of his or her leadership potential. Although the IP does not necessarily prevent success, it probably does prevent an impostor from achieving all that he or she is capable of achieving. In turn, this makes full success less likely. Such impairment to the full development of leadership capacity deserves reliable and accurate research that might foster effective solutions for alleviation of these detrimental feelings.

CHAPTER FOUR – Research Findings

This study explored the presence of the Impostor Phenomenon (IP) in a group of law school students by posing the two research questions in Chapter One of the study. The first question was: To what extent is the impostor phenomenon present in a law student sample? The second question was: Are there correlations between the impostor phenomenon and other variables, such as age, race, or sex, which would allow predictions about the occurrence of the impostor phenomenon? This chapter presents the research findings generated by the survey instrument and answers the two research questions.

I used the responses to the instrument's first twenty items that came from the Clance Impostor Phenomenon Scale (CIPS) survey to determine the clinical presence of the IP and answer the first research question. After discussion of the findings for these first twenty items, this chapter discusses the finding to the remaining demographic items. The application of multiple regression analysis to the demographic data provided the findings that were used to answer the second research question. The chapter concludes with a summary of the data and research findings as they relate to answering the study's two research questions.

Analysis of Responses for Items 1 to 20 (Research Question One)

Survey items 1 through 20 reproduced the CIPS instrument in order to answer the study's first research question: To what extent is the impostor phenomenon present in a law student sample? The following section of the chapter presents the results of the analysis of data generated by the first twenty items.

With twenty survey items and possible scale values of 1 through 5, the possible scores ranged from 20 to 100 for this interval scale variable. The actual CIPS scores for the law students in this study ranged from a high of 98 to a low of 26. The group's scores had a mean of 58.23 and a median of 57. The score with the highest frequency was 49, with 19 students out of 342 having this score. Though the creators of the CIPS instrument initially suggested that a base score of 60 indicated the presence of the IP, later researchers modified this threshold to a score of 62 (Clance, 1981; Holmes et al., 1993). Using the less conservative CIPS score of 60, 141 of the 342 respondents, or 41.2%, had the IP. Using the more conservative score of 62 on the CIPS instrument, 121 of the 342 respondents, or 35.4%, had the IP and 64.6% did not. This study used the more conservative CIPS score of 62 for analysis purposes and for reporting the study's findings.

Analysis of Responses for Items 21 to 35 (Research Question Two)

The demographic-oriented survey items 21 through 35 centered on the independent variables needed for the regression analysis performed later in the study. The following is the basic statistical information from responses to items 21 to 35, correlations between each independent variable and the CIPS scores, and then an analysis of the correlations among the CIPS scores and the independent demographic variables. The simple correlation data were included for comparison with the multiple regression analysis.

Sex as a Variable (Item 21)

Item 21 asked for the sex of the respondent. Of the 342 respondents 167, or 48.8%, of the respondents were male. Females comprised 175, or 51.2%, of the

respondents. Parsing the responses based on sex, 44 of the male respondents had a CIPS score of 62 or above, and 123 did not. Seventy-seven female respondents scored 62 and above, while 98 did not. Simple statistical data analysis indicated the IP was present in 27.0% of the males and 44% of the female respondents. In addition, of the 121 respondents with the IP, 36% were male and 64% were female.

Race as a Variable (Item 22)

Item 22 asked about race and ethnic identification. The 236 White responses was the largest (69.0% of the total). The second largest group was the 53 students who selected Asian, and comprised 15.5% of the respondents. See Table 1 for a complete description of ethnic data.

The IP was found in 78 (33.1%) of the 236 white respondents. Of the 52 respondents who were Asian, 19 (36.6%) had the IP. Seven of the 22 Hispanic respondents, or 31.8%, had a CIPS score of 62 or higher. Of the 121 respondents with a score of 62 or above, three ethnicities contained the majority of the respondents with 78 (64.5%) being white, 19 (15.7%) being Asian, and seven (5.8%) being Hispanic. The racial groups with single members, such as American Indian and Native Hawaiian, had 100% of sufferers with IP. However, such a singular response rate did not yield data upon which reliable conclusions were drawn. However, of the 24 respondents who chose “Other” as their racial group, 13 or 54.2% suffered from the IP. This statistic is worthy of note and further research. Most racial groups had minor variation between the percentage of members with the IP and the IP in 35.4% of the entire respondent group.

Table 1 - Number and Percentage of Respondents by Race or Ethnicity

Race or Ethnicity	Responses / Percent	IP Sufferers	Percent of Race with IP	Race Percent of 121 IP Sufferers
American Indian or Alaska Native	1 / 00.3	1	100.0	00.8
Asian	52 / 15.2	19	36.5	15.7
Black or African American	6 / 01.8	2	33.3	01.7
Hispanic or Latino	22 / 06.4	7	31.8	05.8
Native Hawaiian	1 / 00.3	1	100.0	00.8
White	236 / 69.0	78	33.1	64.5
Other	24 / 07.0	13	54.2	10.7
Totals (N = 342)	342 / 100.0	121	100.0	100.0

Age as a Variable (Item 23)

Item 23 asked for the respondent's age. The responses ranged from 20 to 53, with a mean of 25.2 years and the median being 25 years. Most of the students were less than 31 years of age, with this group comprising 95.9% of the respondents. In order to use the responses to the open-ended age item in multiple regression analysis, the responses were converted into groups, with the ages from 22 through 29 each being treated as a separate category, and those outside these ages being clustered into large groups with multiple ages in a single group as shown in Table 2.

Table 2 - Age and IP Occurrence in Respondents

Age	Responses / Percent of Responses	IP Sufferers	Percent of Age with IP	Age Percent of 121 IP Sufferers
20	2 / 00.6	2	100.0	01.7
21	8 / 02.3	2	25.0	01.7
22	42 / 12.3	21	50.0	17.4
23	55 / 16.1	20	36.4	16.5
24	62 / 18.1	15	24.2	12.4
25	63 / 18.4	23	36.5	19.0
26	37 / 10.8	14	37.8	11.6
27	20 / 05.5	6	30.0	05.0
28	13 / 03.8	3	23.1	02.5
29	15 / 04.4	4	26.7	03.3
➤ 29	25 / 07.3	6	24.0	05.0
Totals (N = 342)	342 / 100.0	121		100.0

Parental Education Levels as a Variable (Items 24 & 25)

Items 24 and 25 asked about parental educational achievement, with Item 24 for the mother and Item 25 for the father. This study's review of literature suggested that parental law school attendance influenced the child's going to law school. Parental attendance of law school might also place extra stress on the law school student, which might foster impostor feelings. Therefore, the parents' attendance of law school received emphasis in this research.

Three of the eight students (37.5%) whose mothers completed law school had CIPS scores of 62 or higher. Of the 40 students whose fathers had completed law school, 16 of those students (40%) had an IP score of 62 or higher. Also noteworthy was the IP in 60% of the respondents whose mothers had achieved none of the educational levels, and

in 75% of the respondents whose mothers had achieved a medical degree. Although not the research focus of this study, women were more educated than men in particular educational levels, with the exception of medical, doctoral, and legal degrees as set out in Table 3.

Table 3 - Highest Education for Respondents' Mothers (M) and Fathers (F)

Education	M	Percent M	M IP / Percent	F	Percent F	F IP / Percent
None of these	5	01.5	3 / 60.0	11	03.2	4 / 36.4
High School	72	21.1	29 / 40.3	69	20.2	21 / 30.4
Associate's	35	10.2	7 / 20.0	21	06.1	7 / 33.3
Bachelor's	124	36.3	43 / 34.7	82	24.0	30 / 36.6
Master's	80	23.4	24 / 30.0	73	21.3	29 / 39.7
Medical	8	02.3	6 / 75.0	22	06.4	7 / 31.8
Doctoral	10	02.9	6 / 60.0	24	07.0	7 / 29.2
Law	8	02.3	3 / 37.5	40	11.7	16 / 40.0
Total	342	100.0	121 / -	342	100.0	121 / -

Occupational Inheritance as a Variable (Item 26)

Item 26 continued earlier items' exploration of parental factors and the presence of the IP in the law student respondents. Item 26 asked whether a parent worked in the legal profession as either a judge or an attorney. Thirty-four of the respondents (9.9%) had at least one parent who worked as an attorney or judge. Of these 34 students, 12 (35.3%) had a CIPS score of 62 or higher. Approximately 35.4% of the respondents suffered from the IP regardless of whether or not a parent practiced law. Table 4 contains the complete findings for this item.

Table 4 - Parent Practicing Law and IP Occurrence in Respondents

Parent Practices Law	Frequency	Percent of Total	IP Frequency	Percent with IP
Yes	34	09.9	12	35.3
No	308	90.1	109	35.4
Total	342	100.0	121	35.4

Emotional Support from Family as a Variable (Item 27)

Item 27 continued the exploration of parental relationships by asking whether family members had given sufficient emotional support to the student in his or her academic pursuits. This item used a five-point Likert scale with a range from “never” to “almost always.” The responses to this item are set out in Table 5 below. Three respondents felt they had never received the emotional support, and these students all had a CIPS score of 62 or higher. Fifteen respondents rarely received it, and six of them (40.0%) had the IP. Thirty-nine sometimes received support of their educational goals. Of these respondents, 48.7% suffered from the IP. The largest number, 210, almost always experienced this support. This item was included because of the IP literature’s emphasis on the role of family support in the formation of the IP.

Table 5 - Occurrence of Family Support and the IP in Respondents

Level of Family Support	Frequency	Percent	IP Frequency	Percent with IP
Never	3	.9	3	100.0
Rarely	15	4.4	6	40.0
Sometimes	39	11.4	19	48.7
Often	75	21.9	32	42.7
Almost always	210	61.4	61	29.1
Total	342	100.0	121	35.4

Procrastination as a Variable (Item 28)

Item 28 asked the respondent about the frequency of procrastination when preparing for classes or exams, and the data are set out in Table 6. Eight of the respondents never procrastinated, and two of them (25.0%) had CIPS scores of 62 or above. Forty-nine respondents rarely procrastinated, and 13 (26.5%) of these students had a CIPS score of 62 or higher. On the opposite end of the procrastination scale, 56 of the respondents almost always procrastinated when preparing for exams. Of these 57 respondents, 33 (57.9%) had CIPS scores indicating they were suffered from the IP. Again, the respondents at either end of the range were the focus of the correlational analysis later in the study.

Table 6 - Occurrence of Procrastination and the IP in Respondents

Level of Procrastination	Frequency	Percent	IP Frequency	Percent with IP
Never	8	2.3	2	25.0
Rarely	49	14.3	13	26.5
Sometimes	130	38.0	34	26.2
Often	98	28.7	39	39.8
Almost always	57	16.7	33	57.9
Total	342	100.0	121	35.4

Law School Enrollment Status as a Variable (Item 29)

The twenty-ninth item asked about the student's year in the potentially four-year program. This item was included because the IP and law student literature demonstrated a possible positive correlation between the IP and age, gaining of experience, and possibly confidence. However, the literature also indicated that students were most stressed just as they were about to graduate and begin looking for jobs. The data showed that the IP

occurred in 35.5% of first-year students, 32.5% of third-year students, and in 21.4% of the fourth-year students. The IP was highest in second-year students at 39.1%.

In addition to making an interesting variable for possible correlations, the respondent's year in school also acted as a gatekeeper for the next three items, Item 30, Item 31, and Item 32. These three items required law school experience that first-year students did not yet have, such as course grades. Because first-year students did not answer these three items, the items were removed from the data for purposes of regression analysis. This created two groups for regression analysis. The multiple regression section of the paper explains this procedure. Table 7 contains a break down the information on students arranged by year in school.

Table 7 - Respondent's Year in Law School and the Occurrence of the IP

Year in School	Frequency	Percent	IP Frequency	Percent with IP
First year	141	41.2	50	35.5
Second year	110	32.2	43	39.1
Third year	77	22.5	25	32.5
Fourth year	14	4.1	3	21.4
Total	342	100.0	121	35.4

Academic Achievement as a Variable (Items 30 & 31)

Item 30 asked the 201 upper-level students how their current GPAs compared to other students in the cohort. The five possible responses began with the bottom half of the class, which had 47 responses, of which 17 (36.2%), had a CIPS score of 62 or higher. The top half of the class had 59 members, 17 (28.8%) of whom had the IP. The largest percentage of students with the IP was in the top 30% of the class that had 39 members, 18 of whom (46.2%) had the IP. The respondents were comprised of 201 second, third, and fourth-year students, with the 141 first-year students not given access to the item or

considered in the multiple regression analysis of upper-level students. Table 8 sets out these frequencies and percentages.

Table 8 - Respondent's Supposed GPA and IP Occurrence

Supposed GPA	Frequency	Percent	IP Frequency	Percent with IP
Bottom 50%	47	13.7	17	36.2
Top 50%	59	17.3	17	28.8
Top 30%	39	11.4	18	46.2
Top 20%	32	9.4	11	34.4
Top 10%	24	7.0	8	33.3
Total respondents	201	58.8	71	35.3
First year students (missing)	141	41.2	-	-
Total of all students	342	100.0	-	-

Item 31 continued the emphasis on student grades as a possible variable with correlation to the IP. This item asked how the student's GPA compared to the student's effort, ranging from the effort deserved a slightly higher GPA to the effort deserved a slightly lower GPA. The percentage of respondents suffering from the IP was close to 35% except for three of the groups. Seventy-seven of the students who felt their effort was similar to the GPA they had received, with twenty-one (27.2%) of these students having the IP. On the other end of the scale, 16 students felt their effort deserved a slightly lower GPA. Twelve of these 16 respondents, or 75% had CIPS scores of 62 or above. One of the two respondents (50.0%) who felt the effort deserved a much lower GPA suffered from the IP. As with several of the other items, the respondents with the extreme responses may have presented the richest areas for correlational research in the 201 upper class students. See Table 9 for additional information.

Table 9 - Respondent's Deserved GPA and IP Occurrence

Level of Deserved GPA	Frequency	Percent	IP Frequency	Percent with IP
Effort deserves slightly higher	76	22.2	27	35.5
Effort deserves much higher	30	8.8	10	33.3
GPA similar to effort	77	22.5	21	27.2
Effort deserves slightly lower	16	4.7	12	75.0
Effort deserves much lower	2	.6	1	50.0
Total respondents	201	58.8	71	35.3
First year students (missing)	141	41.2	-	-
Total for all students	342	100.0	-	-

Clinical Course Enrollment as a Variable (Item 32)

Item 32 focused on whether the 201 second, third, and fourth-year students had taken a clinical course at the law school. Table 10 contains the full data for clinical course and the IP occurrence. Of the 67 students (33.3%) who had taken such a course, 37.3% of them suffered from the IP. Only 34.3 % of the 134 students who had not taken a clinical course suffered from the IP. The review of literature indicated that clinical course experience might give students confidence as they gained experience in how to conduct themselves in courtrooms, and thus perhaps lower their feelings of fraudulence.

Table 10 - Respondent's Clinical Course Enrollment and IP Occurrence

Clinical Course Enrollment	Frequency	Percent	IP Frequency	Percent with IP
Yes	67	33.3	25	37.3
No	134	66.7	46	34.3
Total	201	58.8	71	35.3
First year students (missing)	141	41.2	-	-
Total for all students	342	100.0	-	-

LSAT Score as a Variable (Item 33)

Beginning with Item 33, all respondents once again had access to survey items. Item 33 asked the students to select the range that contained their highest LSAT scores. The lowest range of 120 to 145 had a single entrant. Forty-two percent of the 144 students who had scores from 146 to 160 had the IP. Of the 183 students with scores from 161 to 170, 31.2% had the IP. Six students said they had received scores from 171 to 180, the maximum range. Two of these six students (33.3%) had a CIPS score of 62 or higher. Though the LSAT is a major part of the law school admissions ritual, the survey assumed some students might have forgotten their scores. Eight of the respondents selected the “I don’t know” option, and two of these (25.0%) had the IP. Table 11 contains more information about the data.

Table 11 - Respondent's LSAT Score and IP Occurrence

LSAT Score	Frequency	Percent	IP Frequency	Percent with IP
120 to 145	1	00.3	0	00.0
146 to 160	144	42.1	60	42.0
161 to 170	183	53.5	57	31.2
171 to 180	6	01.8	2	33.3
I don't know	8	02.3	2	25.0
Total	342	100.0	121	35.4

Religion or Faith as a Variable (Item 34)

Item 34 asked about the role of personal faith or religion in the respondent’s life. These variables were important for 104 of the respondents with 36.5% of them suffering from the IP. Of the 238 respondents who did not feel religion was an important part of their lives, 34.9% suffered from the IP.

Table 12 - Respondent's Religion or Faith and IP Occurrence

Religion or Faith	Frequency	Percent	IP Frequency	Percent with IP
Yes	104	30.4	38	36.5
No	238	69.6	83	34.9
Total	342	100.0	121	35.4

Supportive Romantic Relationship as a Variable (Item 35)

Supportive romantic relationships give emotional support and improve confidence. Two hundred and two of the students said they were currently in such a relationship. Seventy-seven of these students (38.1%) were IP sufferers. Of the 140 students who said they were not in a romantic relationship, 31.4% suffered from the IP. Table 13 contains complete results.

Table 13 - Respondent's Romantic Relationship Status and IP Occurrence

Romantic Relationship	Frequency	Percent	IP Frequency	Percent with IP
Yes	202	59.1	77	38.1
No	140	40.9	44	31.4
Total	342	100.0	121	35.4

Regression Analysis Findings for Items 21 to 35**Simple Correlations between CIPS Score and Independent Variables**

As a first step in analyzing correlations between the CIPS scores and the independent variables, I chose to explore simple correlations, and then to progress to multiple regression analysis for comparison. Pearson's r is the most common method used to test for correlation for normally distributed data in interval or ratio scale variables, such as the CIPS Score data. Pearson's r was the initial test used to test for correlation between the CIPS scores and the independent variables. The three strongest

correlations between the dependent variable and the independent variables were between the CIPS scores and Procrastination (.300), Family Support (-.195), and Sex (.185). None of these correlations was significant, however. These correlations were found using a two-tailed testing model and $N = 342$. Some of these correlations also occurred in the most parsimonious multiple regression models developed later.

Though Pearson's r is the more appropriate test for a coefficient between normally distributed interval or ratio variables, Spearman's r is the preferred test for collinearity for variables that are on an ordinal scale. I ran both Pearson's r and Spearman's r in order to insure that all types of variable scales were covered, and for comparison sake.

The three strongest correlations using Spearman's r were between the IP and .285 with Procrastination; -.215 with Family Support, and .157 with Sex. None of these results was significant. This was a single-tailed t test with $N = 342$. These results were comparable to the Pearson's r results.

Multiple Regression Findings for CIPS Score and Independent Variables

Multiple regression analysis explored the relationships among the CIPS Score variable and the independent variables in order to answer the study's second research question. After initial data screening was completed and simple correlations created, the multiple regression analysis began. Multiple regression was performed on the entire group of respondents and on the upper-level student respondents because of the inability of first-year students to respond to all the survey's items.

Findings for upper-level student group. For the $N=201$ upper-level students, Model 5 was the most parsimonious and predictive model for the variance in the CIPS

Score dependent variable. The Procrastination variable was the most predictive of the independent variables with an Adjusted R Square of .080 when it was the sole predictor in Model 1, and a Standardized Coefficient (Beta) of .305 in Model 5. Model 5 contained four other variables and their Beta coefficients: Family Support (-.239), Year in School (-.214), Sex (.180), and Clinical Coursework (.132). Beta coefficients were used in this study to allow easier comparison of the relative strength of the relative impact each predictor had in the model, as compared to other predictor variables.

As shown in Table 14, the five components of Model 5 had an Adjusted R Square of .182, and thus in total explained 18.2% of the variance in the CIPS Score variable. All the coefficients for the predictor variables were statistically significant. When considering parsimoniousness and predictive power, Model 5 was the best model for predicting the presence of the IP in the upper-level law student group.

Table 14 - Multiple Regression Modeling of Data from Upper-Level Students

Model and Predictors*	R	R Square	Adj. R Square	Stand. Coefficient (Beta)	t	Sig.
Model 1	.291	.084	.080			
Procrastination				.291	4.285	.000
Model 2	.348	.121	.112			
Procrastination				.284	4.260	.000
Family Support				-.192	-2.881	.004
Model 3	.396	.157	.144			
Procrastination				.295	4.500	.000
Family Support				-.224	-3.368	.001
Year in School				-.191	-2.879	.004
Model 4	.430	.185	.169			
Procrastination				.303	4.679	.000
Family Support				-.250	-3.783	.000
Year in School				-.191	-2.920	.004
Sex				.171	2.619	.009
Model 5	.449	.202	.182			
Procrastination				.305	4.757	.000
Family Support				-.239	-3.633	.000
Year in School				-.214	-3.244	.001
Sex				.180	2.771	.006
Clinical Coursework				.132	-2.019	.045

*Predictors used in models:

Model 1 Procrastination

Model 2 Procrastination, Family Support

Model 3 Procrastination, Family Support, Year in School

Model 4 Procrastination, Family Support, Year in School, Sex

Model 5 Procrastination, Family Support, Year in School, Sex, Clinical Coursework

Findings for all respondents. For the multiple regression analysis of all 342 students: Model 4 was the most predictive model, while maintaining the highest level of parsimoniousness. Model 4 had an Adjusted R Squared of .167, and utilized the predictor variables of Procrastination, Family Support, Sex, and LSAT Score. As shown in Table 16, the Beta coefficients for the variables were Procrastination .291; Family Support -.192; Sex .191; and LSAT Score -.121. Table 15 contains more information about the results of this modeling.

As with the analysis of the Beta coefficients for the upper-level student group, I examined the phrasing of the survey items and their relationships to an increase in the CIPS Score dependent variable when deciphering the meaning of the positive or negative signs. The positive Beta for the Procrastination variable indicated that as the student's procrastination increased, the CIPS score also increased. The negative Beta for Family Support indicated that as support increased, the score on the CIPS decreased. The dummy variables used in the Sex variable meant that a male respondent was coded as 0, and a female respondent was coded as 1. Thus, the positive Beta for the Sex variable indicated the positive relationship between females and increased CIPS scores compared to males. The negative Beta for the LSAT Score variable indicated that as the student's LSAT score increased, the student's CIPS score should decrease.

Model 4, with the predictors Procrastination, Family Support, Sex, and LSAT Score, was the most parsimonious model with the highest predictive power. All the predictor variables' coefficients were statistically significant. With an Adjusted R Square of .167, Model 4 can predict 16.7% of the variance in CIPS scores in law students from all grade levels.

Table 15 - Multiple Regression Modeling of Data from All Students

Model and Predictors*	R	R Square	Adj. R Square	Stand. Coefficient (Beta)	t	Sig.
Model 1	.300	.090	.087			
Procrastination				.300	5.799	.000
Model 2	.352	.124	.119			
Procrastination				.294	5.774	.000
Family Support				-.185	-3.634	.000
Model 3	.403	.157	.155			
Procrastination				.290	5.820	.000
Family Support				-.199	-3.989	.000
Sex				.195	3.913	.000
Model 4	.420	.177	.167			
Procrastination				.291	5.882	.000
Family Support				-.192	-3.873	.000
Sex				.191	3.850	.000
LSAT Score				-.121	-2.435	.015

*Predictors used in models:

Model 1 Procrastination

Model 2 Procrastination, Family Support

Model 3 Procrastination, Family Support, Sex

Model 4 Procrastination, Family Support, Sex, LSAT Score

Initial research into the correlations between each independent variable and the CIPS scores variable indicated that procrastination, family support, and sex had the highest correlations. These three variables were also among the most important in the multiple regression analysis models created for predicting the impostor feelings in law students. The model for upper level law students found that procrastination, family support, sex, and LSAT score were the most highly predictive independent variables for

impostor feelings. The model for all law students also found procrastination, family support, and sex as useful in predicting levels of impostor feelings. This model also added the student's year in school and whether the student had taken clinical coursework as important predictors.

CHAPTER FIVE – Research Implications

“Inquiry is fatal to certainty.”

~ Will Durant ~

Overview

This study sought answers to the two research questions initially posed:

- a. To what extent is the impostor phenomenon present in a law student sample?
- b. Are there correlations between the impostor phenomenon and other variables, such as age, race, or sex, which would allow predictions about the occurrence of the impostor phenomenon?

The Clance Impostor Phenomenon Scale (CIPS) instrument was used to find if the Impostor Phenomenon (IP) was present in the law student group surveyed, and to measure this possible presence. Next, simple regression analysis was used to search for simple correlations between the IP and each of the independent variables. Finally, multiple regression analysis helped create and select the model with the highest predictive value for CIPS scores and the most parsimonious formulation. This chapter examines the findings from those processes to reach conclusions and discusses the implications for law students, law schools, legal instructors, and the legal profession, particularly in regard to leadership issues. The chapter concludes with recommendations for action and further study.

Presence of the IP in Law Students

The survey reproduced the CIPS instrument in survey items 1 through 20 in order to ascertain the presence of the IP in the law student respondents and answer the study's first research question. The range of student CIPS scores from 26 to 98 was evidence of

the wide range of impostor feelings in the students surveyed. However, the finding that 35.4% of the student body had CIPS scores of 62 or above was conclusive evidence that the IP was present in the law student group surveyed, and affirmatively answered Research Question One.

Previous CIPS research in other graduate programs found approximately one third of students in those programs scored 62 or higher on the CIPS instrument. This study's finding of the IP in 35.4% of the law students studied aligns closely with this previous graduate student research. The current study's finding of the IP in 27% of males and 44% of females also closely aligned with previous graduate student research findings of the IP in 38 to 41% of females and 22 to 24% of males. Analysis of the 121 respondents in this study with the IP indicated that 36% were male and 64% were female. Though many researchers have tentatively concluded that there is no significant sex-based difference in the presence of the IP, a few studies have found noteworthy sex-based difference. This study's findings suggest that there was such a difference in this group

Correlations between the IP and Dependent Variables

The study used multiple regression analysis to answer the second research question about variables useful in predicting the IP. However, this analysis began with exploration of simple correlations between the dependent variable and each independent variable. This allowed comparison of the independent variables' separate correlations with the multiple regression correlations. Several independent variables with simple correlations were also major predictive variables in the multiple regression correlation models. The multiple regression analysis of the upper-level student group and the entire

group of respondents provided findings for the answer to the study's second research question.

Simple Regression Analysis between the IP and Dependent Variables

The strongest simple correlations between the CIPS Score and the independent variables were found with the Procrastination, Family Support, and Sex variables. The Spearman's r of .285 for the simple correlation between the CIPS Score and the Procrastination variables was also indicative of the strong relationship between the IP and Procrastination that was later found in the multiple regression analysis. The positive relationship indicated that as students' procrastination increased, their impostor feeling increased as well.

While such a finding of correlation between the IP and Procrastination is not surprising, it is useful to find data that support this basic assumption. Though there is no causal relationship that can be interpreted, the positive correlation has implications for a legal education system that utilizes single exams at the end of the semester to determine success.

The study found that family support of educational goals had a -.215 correlation with CIPS scores. This was interesting when taken with other studies' theories about the importance of family support in the creation and maintenance of impostor feelings and the IP. In the current study, the negative value of the -.215 correlation reflected the decreased CIPS scores associated with increased family support. This simple correlation was also found in later multiple regression analysis.

The .157 correlation between the CIPS Score and Sex variables was noteworthy because the earliest IP research stated that the IP was an exclusively female phenomenon.

Though later research has not absolutely stated whether the IP's presence has a sex-based difference, the majority finding is that there is no difference. The current study's initial finding that females were measurably more likely to suffer from the IP than males, along with the strong correlation in the multiple regression models, indicated that further research might settle this issue. The 49% male and 51% female ratio in the respondents aligned perfectly with the ratio for the entire law student body and helped to remove possible criticism that both sexes were not represented equally in the research.

Multiple Regression Analysis among the IP and Dependent Variables

I used multiple regression analysis to create models for predicting the presence of the IP in the law student group using the variables in the study. As explained earlier, it was necessary to use two different groups for the analyses: all respondents, and upper-level students. This bifurcation also allowed the opportunity to discuss the commonalities and differences of the two groups.

Entire group correlations. Multiple regression analysis was performed on the set of all 342 respondents. The fourth formulation of predictors, Model 4, was the most parsimonious and productive model. It had an Adjusted R Square of .167 by utilizing the Procrastination, Family Support, Sex, and LSAT (Law School Aptitude Test) Score predictors sequentially to create this correlation between the CIPS Score and Model 4. The Adjusted R Square of .167 meant that this model's combination of the four variables could predict 16.7% of the variance of the CIPS Score variable. Procrastination, Family Support, and Sex had the highest simple correlations; their inclusion in Model 4 matched this previous delineation.

The signs for the Beta coefficients for the predictor variables indicated the direction of the correlation between the independent variable and the CIPS Score variable. The numerals indicated the change in the standard deviation of the CIPS Score that would be predicted by an increase of one standard deviation in the independent variable. Beta coefficients for the Model 4 predictor variables were Procrastination .291; Family Support -.192; Sex .191; and LSAT Score -.121. The positive Beta for the Procrastination variable indicated that as the student's procrastination increased, the CIPS score also increased. The negative Beta for Family Support indicated that as support increased, the CIPS score would decrease. Likewise as a student's year in school increased, the CIPS score decreased. Dummy variables were used in the Sex variable with a male respondent coded as 0 and a female respondent coded as 1. The positive Beta for the Sex variable indicated the positive relationship between being female and a predicted increase in CIPS scores compared to males. The Clinical Coursework variable also required the use of dummy variables of 0 and 1 for no and yes, respectively. The resulting positive Beta for the Clinical Coursework variable predicted an increased CIPS score for a student who took a clinical course. This particular prediction was noteworthy as law students typically take clinical courses in order to improve their abilities to practice law once they graduate. The negative Beta for the correlation between the LSAT Score variable and CIPS Score would predict an increase in LSAT scores would be associated with a decrease in the CIPS score.

Upper-Level student group correlations. Next, I used listwise exclusion to remove the first-year students from the modeling of multiple regression analysis for the 201 upper-level student group. This analysis refined the modeling through five iterations,

and the fifth model, Model 5, was the most explanatory and parsimonious of the models created in this multiple regression analysis. This model had an Adjusted R Square of .182, and thus explained 18.2% of the variance in the CIPS Score variable in the upper-level student group. In Model 5, Procrastination, Family Support, and Sex were again, among the most important of the predictors, as in the simple regression and the multiple regression for the all respondents group. Year in School and Clinical Course were the other predictors in Model 5 for predicting changes in the CIPS Score variable in the upper-level student group.

Though the amount of the Beta coefficients for Procrastination, Family Support, and Sex changed slightly in this modeling from Model 4 for the all respondents group, the sign for the Beta coefficients remained the same. The negative Beta for the Year in School variable indicated that an increase from second to third, or third to fourth years of law school correlated with decreased CIPS scores. Such information could be useful in advising law students dealing with the IP that the CIPS scores should decrease as the student progresses through law school. Interestingly, it was not a predictor in the most powerful model found in multiple regression analysis of all law student respondents. This was because the CIPS scores increase slightly from first to second year students. The literature review indicated that stress for law students is very high in first-year students and students nearing graduation. One possibility for explaining the lack of the Year in School variable from the modeling for all respondents might be that the relationship with the CIPS score variable was not a linear relationship. Future nonlinear analysis could explore this possibility.

The Sex variable was again a strong predictor in this model for upper-level students as it was in the model for predicting the presence of the IP in all student respondents. The correlation between the CIPS Score and the Sex variable contradicted previous studies that found no correlation between the Sex variable and the presence of the IP.

The correlation between the Clinical Coursework variable and the CIPS Score variable had a positive Beta that indicated enrolling in clinical courses was associated with an increase in CIPS scores and the presence of the IP in this student group. Such a finding has important implications for law students and legal educators wishing to decrease the IP in law students. It is also contradictory to the common expectation that taking a clinical course might help students become more familiar with the practice of law and law school and thus lower their feelings of fraudulence. The following section of the study discusses this further.

Implications and Recommendations for Law Students

The findings of this research have several implications for law students. That a third of the law students in this group experienced the IP is new information because no one had studied the presence of the IP in law students previously. It would be useful for law students to learn about this research as a route for recognizing the IP in others and possible impostor feelings within themselves. Additionally, understanding that impostor feelings are present in other graduate programs to a similar degree might also be of some assistance in dealing with such feelings. The recognition that a third of law students in this group had the IP might be helpful for a student suffering from the IP to deal with impostor feelings and to fulfill leadership potential.

The finding that the Procrastination variable was the strongest predictor of the presence of the IP has implications for law students, particularly because a single exam at the end of the semester often determines the grade for an entire course. These exams may not occur frequently enough for the student to recognize the relationship between procrastination and the impostor feelings experienced. Poor performance on first semester exams might place a first year student on academic probation; the student has only one semester for a dramatic grade improvement. While a student might be able to recognize this relationship between procrastination and impostor feelings over the course of time, an enormous determiner of success or failure occurs at the end of the first semester. A student aware of this study might realize the importance of avoiding procrastination in predicting decreased impostor feelings.

Although the student has some control over procrastination when studying, family support is less within the student's control. The finding that increased family support of a law student's educational goals correlated with decreased CIPS scores was important information for law students and their families. Fundamentally, simply understanding the correlation exists is of some value for the law student. The student might also explain the importance of the support to family members in seeking their support. Another option might be to build on the support that some family members give in order to draw as much support as possible.

A student can do little to change the Sex variable that has strong correlation with CIPS scores. However, simple awareness that females suffered from the IP is of some value as it might suggest alternative strategies for ameliorating with the correlation. In addition to working to reduce one's own impostor feelings, a female student might join a

student organization aimed at helping women succeed in law school and in their eventual careers in the law.

Enrollment in clinical courses was included in the survey because of discussions with law students and law professors. The consensus from these discussions was that clinical courses are a route law students use to gain practical experience, and this practical experience would likely decrease a student's impostor feelings. The correlation between clinical course enrollment and increased CIPS scores was surprising because of these previous discussions. Although clinical courses correlated with increased CIPS scores, the courses are widely regarded as helping familiarize law students with the working of the courts and law firms, which might contribute to future leadership success, such as in leading a team of lawyers in litigation.

It is very important to emphasize the study's finding of correlation between enrollment in clinical courses and increased impostor feelings was only a correlation, and not a finding of causation. Clinical courses are aimed at helping law students understand how to practice law and conduct legal proceedings. Students might take such courses to improve their understanding of legal practice and improve their skills. It would be important for law students taking such courses to understand that they often have adversarial roles, much like legal practice, and that the learning curve may be quite steep. In other words, a student in a clinical course might feel inadequate and have increased impostor feelings. Though the courses are not necessarily the cause of the increased impostor feelings, there is a correlation with increased impostor feelings, and students might benefit from knowing this prior to enrollment in clinical courses.

Because law students already realize the importance of the LSAT in getting into law school, the correlation between lowered CIPS scores and improved LSAT scores is not a workable incentive for law students to increase their LSAT scores. Although the student might gain from knowing about the correlation, the student is unlikely to attempt improving the LSAT score simply in hopes of seeing the predicted correlating decrease in the CIPS score.

Awareness that a decrease in impostor feelings correlates with progression through the second, third, and fourth years of law school has strong implications for law students. Such knowledge would be helpful for the student in planning for the rigors of law school as well as having realistic expectations for the possible variation in impostor feelings as one works through the law school program. Such understanding might provide psychological and emotional support for a law student who realizes that impostor feelings typically decrease as the student advances past the second year. This might also provide support to second year students in counteracting the conventional adage about the first year being the hardest. It would however, provide little consolation to first year students who had a slightly lower CIPS score than second year students.

There were also implications for law students in understanding what variables did not have correlations with the IP in this study. Though the demographic variables were included because the literature review or conversations with law students and law professors thought there would be correlations with the IP, several displayed no significant relationship. Examples include the student's GPA (Grade Point Average) and a parent's law school attendance. The lack of significant correlations might have

implications for law students by removing those variables from the possible list of variables considered for correlation with the IP.

Implications and Recommendations for Law Schools and Instructors

Several of this study's findings have implications for law schools and legal instructors. First is the finding that the IP was present in a third of the law students in this group. Because feeling like a fraud might dissuade a student from seizing leadership opportunities, such as student government or leading a study group, a law school might have an interest in assisting students in dealing with the IP. Finding the IP in a third of law students might also be persuasive evidence for law schools that the IP is not a myth, and that student assistance in dealing with the IP is important. The findings about the predictors used in the models for multiple regression analysis also have implications for law schools. A law school wishing to address the IP issue might rely on these predictor variables as partial guideposts in predicting the occurrence of the IP in the student body.

In addition to the finding that 35.4% of the law students studied had the IP was the similarity of this figure to the occurrence of the IP in the graduate programs previously studied. Although the Langdellian method might appear to increase feelings of inadequacy in its attempts to break down a law student's way of thinking, and then to and the student to think like a lawyer, the IP occurrence was very similar in law students and the graduate programs previously studied. The similarity of the IP rate might in the graduate programs might suggest that the Langdellian method and the law school experience might not significantly contribute to the presence of the IP in the law students studied. However, first and second year courses are the most likely to make use of the large classrooms and Langdellian method. Third and fourth year courses typically are

taught in much small classrooms and they are likely to utilize the seminar method rather than the Langdellian method. The study finding that as second, third, and fourth year students' year in school increased, the CIPS scores decreased might argue that there was a relationship between moving away from the Langdellian method and decreasing CIPS scores.

The finding that procrastination was the strongest predictor for the IP might be an incentive for law schools wishing to assist students suffering from the IP to educate students about the hazard of procrastination. The finding would also be an additional proof of the dangers of procrastination when studying for law school exams or preparing for class. The correlation also has implications for the traditional practice of administering a single exam to determine a course grade. The single law school exam potentially intensifies any effect the IP might have on a procrastinating student's grades. Possibly administering several exams, practice exams, or midterm exams might help students avoid procrastination or to see its potential relationship with increased impostor feelings.

In this study, family support of educational goals proved to have a strong correlation with decreasing CIPS scores. Law schools might incorporate this information into their resource packets for students and their families, particularly those students in need of academic assistance. Law school support programs might also emphasize the importance of family support for a student's educational goals during orientation with the student and invite the student's family to attend orientation as well. The school might demonstrate some of the students' experiences by holding mock classes and demonstrating the in-class dialogue. Such experiences might improve family members'

understanding of the importance of family support for law students. Likewise, the legal instructors who specialize in academic assistance might use discussion of this correlation to assist students in dealing with the IP and impostor feelings. By working to improve the level of support the law student receives, the law school might find a decrease in the student's impostor feelings and improved ability to internalize success. This improved confidence in turn might enable the student to seek out new leadership challenges, such as running for a student government position or joining a student club.

Law schools have successfully increased the number of female law students. The study finding that the IP occurred more frequently in female law students has implications for law schools that wish to support their students who suffer from impostor feelings and the IP. Literature from the law school and academic support programs might include information about the IP and its correlation with female students. The school might even design special support components for educating female law students about the IP and coping mechanisms. Again, making the information available would be a valuable first step.

The finding of correlation between taking clinical courses and increased CIPS scores might lead legal educators because of the theory that the courses help students better understand the mechanics of legal practice. Rather than dissuading students who suffer from the IP not to take clinical courses, law schools might explore alternative methods for teaching the courses and other possible explanations. Fundamentally, the law school might explore whether the structure of clinical courses contributes to increased impostor feelings. Many of the courses are highly adversarial and competitive, and this might increase the students' impostor feelings. In demonstrating how legal practice works, the

courses might increase students' stress and impostor feelings. Though increased impostor feelings and stress are often considered negative factors, their inclusion in clinical courses might be intentional so students gain a realistic perception of the reality of legal practice. There is an implication for legal educators to decide whether increased impostor feelings are an important component of the clinical courses. The legal educators might also explore whether other factors are at play in the correlation, and whether changing these factors might decrease impostor feelings without negatively altering the clinical course experience.

Finally, legal education's use of the Langdellian method's intensive questioning intimidates students in order to rewire their cognitive abilities so the students begin to think like lawyers. This intimidation might increase fraudulent or impostor feelings in some students. Because a third of the law students in this study suffered from the IP, law schools might consider the IP ramifications of continued use of the Langdellian approach. However, breaking down the student's thinking and rebuilding it so that the student thinks like a lawyer may necessarily involve intimidation, stress, and increased impostor feelings. In addition, law school is typically seen as preparation for the highly adversarial arena of legal practice. Thus, it is better for a law student to experience these feelings in the relative safety of law school, rather than in the courtroom. Though this study makes no recommendation for replacement of the Langdellian method of teaching, it does recommend improved understanding of the ramifications of the Langdellian method for the law student body, particularly for those suffering from the IP. The lack of previous IP research in law students discouraged such understanding.

Implications and Recommendations for Society and Leadership

Several of the results from this study have major implications for society and leadership studies. The initial finding that a third of the law student group suffered from the IP was likely the most important result of the study. Assuming that graduation does not significantly affect impostor feelings, the IP may also be in law school graduates and attorneys.

If the IP is present in attorneys in significant numbers, there are several ramifications for society. Initially, law students and attorneys might be less ambitious if they are plagued with near constant feelings of fraudulence and inadequacy. Fraudulent feelings hinder one's leadership initiative as the potential leader is always in doubt about his or her abilities. These feelings of a deficit in one's abilities might also influence productivity for individuals burdened with impostor feelings who spend time worrying about being found out.

In more nebulous terms, such near constant feelings of fraudulence might decrease contentment and happiness for sufferers. As mentioned previously, impostor feelings do not necessarily mean failure, but the feeling like a fraud and fearing failure might shackle attempts at success. An attorney suffering from the IP might avoid litigation practice because of the combative nature of the legal practice. However, successful courtroom practice garners respect from other attorneys, and is valuable when seeking a leadership position, such as partner in a law firm. The IP's symptoms of feeling unworthy hamper a sufferer's leadership attempts in adversarial situations and throttle thoughts of leading other attorneys. Such throttling of leadership should be of concern to society as we train law students how to practice law and to think like lawyers.

Recommendations for Further Study

This study was a basic study of the IP in law students. Future researchers could refine this work and its results in several ways. Future IP research with law students might improve by increasing the number of respondents, increasing the racial-diversity of the respondents, and by including students from a variety of law schools. The school in this study was a small, private, religion-based institution. Although not necessarily a strong limitation of this study, future studies might include students with increased diversity, and from larger public schools. If future studies find significant differences between the IP levels at different schools, the schools with exceptionally low or high rates of the IP might be studied to see what commonalities exist that might explain the difference.

Future qualitative research with law students having similar characteristics and exceptionally high or low IP scores could shed light on independent variables not considered in the current study, and provide suggested mechanisms for dealing with impostor feelings. This qualitative research might also produce suggestions for how changes in law school educational programs might alleviate some of the feelings of fraudulence these students routinely encounter. Schools might then decide whether lowering student impostor feelings is a goal worth pursuing, and if the suggestions warrant further consideration.

In conducting the current study, I collected contact information for the respondents, along with their CIPS scores. The study also requested permission to undertake further qualitative research. I plan to conduct this qualitative research with individuals who scored exceptionally high or low on the CIPS instrument. Though high-

scoring individuals would be the more obvious research subject, individuals with exceptionally low CIPS scores might also have valuable insights to share. Such research might produce suggestions for individuals coping with the IP, as well as suggestions for academic support programs to assist students plagued by the IP.

As mentioned in the literature review of this paper, previous studies postulated that the IP forms before adulthood and does not change significantly over time. However, no longitudinal research has tested this hypothesis. In the present study, the significant correlation between an increase in a student's year in school and a decreased CIPS score appears to indicate that the IP does decrease for students as they progress through the upper levels of law school. Future research might explore whether impostor feelings and the presence of the IP might change over time, particularly for a person in a stressful program, such as law school. In addition, this research might also delve into the issue of whether the Langdellian method has a relationship to IP levels. Because the Langdellian method is used in first and second-year courses, but not typically in third or fourth year courses, a longitudinal study might also explore whether the pedagogy or class size has correlations with the presence of the IP.

I have administered the CIPS instrument to the 342 respondents of this study, and plan to conduct a longitudinal comparison of the CIPS scores in this group. First year students had not yet received any law school grades when they first completed the CIPS instrument in the fall of 2010. Comparing a first-year student's CIPS scores before and after a full semester of law school might answer whether the IP varies over time. Likewise, third and fourth year students preparing for graduation, the bar exam, and finding a job, might also shift their scores and demonstrate a change in the presence of

the IP. Such an exploration might be helpful in understanding whether the IP changes over time, and thus would have implications for IP and leadership studies.

Integrative Summary

This study involved the creation of a survey instrument that included the CIPS instrument as well a number of variables that a literature review suggested might correlate with the IP. Previous studies found the IP was present in approximately one third of the students in other graduate programs, though no IP research had been conducted on law students. Approximately 1004 law students at the University of San Diego were given access to the instrument, and 342 returned their completed surveys.

Statistical analysis of the data from this survey found the IP was present in approximately one third of the law students. Multiple regression analysis checked for the predictive value of a number of demographic variables. One model explained 18.2% of the variance of the CIPS Score variable in the upper-level law students who responded. Another model explained 16.7% of the variance in all the law students who responded. Procrastination was the most powerful predictor for a respondent's impostor feelings in the simple and multiple regression models.

In addition, the finding of the IP in approximately of third of the students aligned with similar findings in other graduate student groups. The implications for law students, legal educators, and society center around the recognition of the presence of the IP in a third of the law students studied and in the predictive ability of the multiple regression models developed. Being able to identify the IP and predict its occurrence is a useful first step in dealing with the IP's effect on law students and their leadership as students and as attorneys.

The law student suffering from the IP feels like a fraud and is unlikely to pursue leadership roles, such as a student government role or leading a student organization. This hindrance of the student's leadership abilities might later evolve into the attorney's leadership choices. The legal profession is an adversarial situation and the IP is likely to be a liability for those attorneys suffering from it. Leadership is a major component of legal practice, most visibly demonstrated by the leadership of a law firm or bar committee. This study should help law students suffering from the IP to recognize impostor feelings within themselves and to recognize that other students have such feelings. The study might also help law schools recognize the IP in law students. The schools might then explore whether impostor feelings are a necessary component of the method of breaking down students to think like lawyers. Some law schools might explore changes to the Langdellian pedagogy that mitigate the impact of strong impostor feelings. Recognition of the IP in the law students studied in this group might be a first step for an individual law student to deal with the student's own impostor feelings and pursue leadership opportunities without the hindrance feeling like a fraud.

References

- American Bar Association. (2010). Standard 304(f). Course of study and academic calendar. Retrieved from <http://www.abanet.org/legaled/standards/2009-2010%20StandardsWebContent/Chapter3.pdf>
- Babbie, E. (1990). *Survey Research Methods*. (2nd ed.). Belmont, CA: Wadsworth Publishing.
- Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis [Electronic version]. *Personnel Psychology*, 44, 1-26. Retrieved from <http://0-search.ebscohost.com.sally.sandiego.edu/login.aspx?direct=true&db=pbh&AN=2302718&site=ehost-live>
- Beck, P. W., & Burns, D. (1979). Anxiety and depression in law students: Cognitive intervention. *Journal of Legal Education*, 30, 270-290.
- Benjamin, G. A. H., Kazniak, A., Sales, B., & Shanfield, S. B. (1986). The role of legal education in producing psychological distress among law students. *American Bar Foundation Research Journal*, 11(2), 225-252.
- Bernard, N. S., Dollinger, S. J., & Ramaniah, N. V. (2002). Applying the big five personality factors to the impostor phenomenon. *Journal of Personality Assessment*, 78(2), 321-333. doi:10.1207/S15327752JPA7802_07
- Bohn, M. (1971). Psychological needs of engineering, pre-law, pre-medical, and undecided college freshmen. *Journal of College Student Personnel*, 12(5), 359-361.

Campbell, R. P. (1986). *The impostor phenomenon: An investigation of two scales*.

Unpublished master's thesis, Georgia State University, Atlanta, Georgia.

Caselman, T. D., Self, P. A., & Self, A. L. (2006). Adolescent attributes contributing to the imposter phenomenon. *Journal of Adolescence*, 29, 395-405.

doi:10.1016/j.adolescence.2005.07.003

Center for Postsecondary Research, School of Education, Indiana University

Bloomington. (2008) *LSSE Law school survey of student engagement*. Retrieved from <http://lsse.iub.edu/>

Chae, J, Piedmont, R. L., Estadt, B. K., & Wicks, R. J. (1995). Personological evaluation of Clance's Imposter Phenomenon Scale in a Korean sample. *Journal of Personality Assessment*, 65(3), 468-485. doi:10.1207/s15327752jpa6503_7

Chanen, J. S. (2007). Re-engineering the J.D. *ABA Journal*, 93 (7), 42 – 67.

Chrisman, S. M., Pieper, W. A., Clance, P. R., Holland, C. L., & Glickauf-Hughes, C. (1995). Validation of the Clance Imposter Phenomenon Scale. *Journal of Personality Assessment*, 65(3), 456-467. doi:10.1207/s15327752jpa6503_6

Christensen, L. M. (2007) Legal reading and success in law school: An empirical study. *Seattle University Law Review*, 30(3), 603-650.

Clance, P. R. (1985). *The impostor phenomenon: Overcoming the fear that haunts your success*. Atlanta, GA: Peachtree.

- Clance, P. R., Dingman, D., Reviere, S. L., Stober, D. R. (1995). Impostor phenomenon in an interpersonal/social context: Origins and treatment. *Women & Therapy*, 16(4), 79-96. Retrieved from <http://proquest.umi.com/pqdweb?index=0&did=6801480&SrchMode=1&sid=1&Fmt=6&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1261084102&clientId=28362>
- Clance, P. R., & Imes, S. (1978). The imposter phenomenon in high achieving women: Dynamics and therapeutic intervention. *Psychotherapy Theory*, 15(3), 241-247.
- Clance, P. R., & O'Toole, M. A. (1987). The imposter phenomenon: An internal barrier to empowerment and achievement. In E. D. Rothblum & E. Cole (Eds.), Special Issue: of *Women & Therapy*, (6)3, titled *Treating women's fear of failure*, New York, NY: Haworth Press.
- Clark, E. J. & Rieker, P. P. (1986). Gender differences in relationships and stress of medical and law students. *Academic Medicine*, 61, 32-40. Retrieved from http://journals.lww.com/academicmedicine/Abstract/1986/01000/Gender_differences_in_relationships_and_stress_of.4.aspx
- Cowman, S. E., & Ferrari J. R. (2002). Am I for real? Predicting impostor tendencies from self-handicapping and affective components [Electronic version]. *Social Behaviour and Personality*, 30, 119-126. Retrieved from <http://0-web.ebscohost.com.sally.sandiego.edu/ehost/pdf?vid=3&hid=105&sid=be32cb38-d919-4bbf-afb3-a178442904fe%40sessionmgr110>
- Cozzarelli, C., & Major, B. (1990). Exploring the validity of the impostor phenomenon. *Journal of Social and Clinical Psychology*, 9, 401-417.

- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Cromwell, B., Brown, N. W., Sanchez-Huceles, J., & Adair, F. L. (1990). The impostor phenomenon and personality characteristics of high school honor students. *Journal of Social Behavior and Personality*, 5, 563-573.
- Crouch, J. G., Grant, C., Posner-Cahill, C., & Rose, A. (1991). Impostor phenomenon and psychological type among banking and higher education professionals. *Journal of Psychological Type*, 20, 34-42.
- Curtis, R. C., Zanna, M. P., & Campbell, W. W. (1975). Sex, fear of success, and the perceptions and performance of law school students. *American Educational Research Journal*, 12, 287-197. doi:10.3102/00028312012003287
- Daicoff, S. (1997). Lawyer, know thyself: A review of empirical research on attorney attributes bearing on professionalism. *The American University Law Review*, 46, 1337-1427.
- Davies, E., & Lea, S. E. G., (1995). Student attitudes to student debt. *Journal of Economic Psychology*, 16, 663-679. doi:10.1016/0167-4870(96)80014-6
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, mail, and mixed-mode survey: The tailored design method* (3rd ed.). Hoboken, NJ: John Wiley & Sons.
- Edwards, P. (1997). The culture of success: Improving the academic success opportunities for multicultural students in law school. *New England Law Review*, 31, 739-767.

- Edwards, P. W., Zeichner, A., Lawler, N., & Kowalski, R. (1987). A validation study of the Harvey Impostor Phenomenon Scale [Electronic version]. *Psychotherapy*, 24(20), 256-259. Retrieved from <http://0-web.ebscohost.com.sally.sandiego.edu/ehost/pdf?vid=3&hid=107&sid=22fa0dad-e198-44e9-b103-6c692257df0f%40sessionmgr104>
- Egerton, M. (1997). Occupational inheritance: The role of cultural capital and gender. *Work Employment Society*, 11, 263-282. doi:10.1177/0950017097112004
- Ferrari, J. R. (1991a). Self-handicapping by procrastinators: Protecting social-esteem, self-esteem, or both? *Journal of Research in Personality*, 25, 245-26.
- Ferrari, J. R. (1991b). A second look at behavioral self-handicapping among women. *Journal of Social Behavior and Personality*, 6, 195-206.
- Ferrari, J. R., & Thompson, T. (2006). Impostor fears: Links with self-presentational concerns and self-handicapping behaviours. *Personality and Individual Differences*, 40, 341-352. doi:10.1016/j.paid.2005.07.012
- Ferrari, J. R., & Tice, D. M. (2000). Procrastination as a self-handicap for men and women: A task avoidance strategy in a laboratory setting. *Journal of Research in Personality*, 34, 73-83. doi:10.1006/jrpe.1999.2261
- Fink, A. (2003). *How to Manage, Analyze, and Interpret Survey Data*. Sage Publishers: Thousand Oaks: CA.
- Flewelling, A. L. (1985). The impostor phenomenon in individuals succeeding in self-perceived atypical professions: the effects of mentoring and longevity. Unpublished master's thesis. Georgia State University, Atlanta.

- French, B. F., Ullrich-French, S. C., & Follman, D. (2008). The psychometric properties of the Clance Impostor Scale. *Personality and Individual Differences, 44*, 1270-1278. doi:10.1016/j.paid.2007.11.023
- Fried-Buchalter, S. (1992). Fear of success, fear of failure, and the imposter phenomenon: A factor analytic approach to convergent and discriminate validity. *Journal of Personality Assessment, 58*(2), 368-379. doi:10.1207/s15327752jpa5802_13
- Fried-Buchalter, S. (1997). Fear of success, fear of failure, and the imposter phenomenon among male and female marketing managers [Electronic version]. *Sex Roles, 37*(11/12), 847-859. Retrieved from <http://0-search.ebscohost.com.sally.sandiego.edu/login.aspx?direct=true&db=sih&AN=77719&site=ehost-live>
- Greenberger, E., Lessard, J., Chen, C., & Farruggia, S. P. (2008). Self-entitled college students: Contributions of personality, parenting, and motivational factors. *Journal of Youth Adolescence, 37*, 1193-1204. doi:10.1007/s10964-008-9284-9
- Grover, S. (2008). Personal integration and outsider status as factors in law student well-being. *Washburn Law Journal, 47*, 419-452.
- Harvey, J. C. (1981). The imposter phenomenon and achievement: A failure to internalize success (Doctoral dissertation, Temple University, Philadelphia, 1981). Dissertation Abstracts International 42, 4969B.
- Harvey, J. C., & Katz, C. (1985). *If I'm so successful, why do I feel like a fake?: The imposter phenomenon*. New York, NY: St. Martin's Press.

- Heins, M., Fahey, S. N., & Henderson, R. C. (1983). Law students and medical students: A comparison of perceived stress. *Journal of Legal Education*, 33, 511-525.
- Hellman, C. M., & Caselman, T. D. (2004). A psychometric evaluation of the Harvey Imposter Phenomenon Scale. *Journal of Personality Assessment*, 83(2), 161-166.
doi:10.1207/s15327752jpa8302_10
- Henning, K., Ey, S., & Shaw, D. (1998) Perfectionism, the impostor phenomenon and psychological adjustment in medical, dental, and nursing and pharmacy students. *Medical Education*, 23, 456-64.
- Hess, G. F. (2002). Heads and hearts: The teaching and learning environment in law school. *Journal of Legal Education*, 52, 75-111.
- Higgins, R., Snyder, C. R., & Berglas, S. (Eds.). (1990). *Self-handicapping: The paradox that isn't*. New York, NY: Plenum.
- Hinkle, D. E., Wiersma, W., & Jurs, S. G. (2003). *Applied statistics for the behavior sciences*. (5th ed.). New York, NY: Houghton Mifflin.
- Hirt, E. R., McCrea, S. M., & Kimble, C. E. (2000). Public self-focus and sex differences in behavioural self-handicapping: Does increasing self-threat still make it “just a man’s game?”. *Personality and Social Psychology Bulletin*, 26, 1131-114.
- Holmes, S. W., Kertay, L., Adamson, L. B., Holland, C. L., & Clance, P. R. (1993). Measuring the impostor phenomenon: A comparison of Clance’s IP Scale and Harvey’s I-P Scale. *Journal of Personality Assessment*, 60(1), 48-59.
doi:10.1207/s15327752jpa6001_3

- Homer, S. & Schwartz, L. (1990). Admitted but not accepted: Outsiders take an inside look at law school. *Berkeley Women's Law Journal*, 5, 1-19 Retrieved from <http://0-www.heinonline.org.sally.sandiego.edu/HOL/PDF?handle=hein.journals/berkwolj5&collection=journals§ion=5&id=5&print=section§ioncount=1&ext=.pdf>
- Hutcheson, G., & Sofroniou, N. (1999). *The multivariate social scientist: Introductory statistics using generalized linear models*. Thousand Oaks, CA: Sage.
- Kertay, L., Clance, P. R., & Holland, C. L. (1991). *A factor study of the Clance Impostor Phenomenon Scale*. Unpublished manuscript, Georgia State University, Atlanta, GA.
- King, J. E., & Cooley, E. L. (1995). Achievement orientation and the impostor phenomenon among college students. *Contemporary Educational Psychology*, 20, 304-312. doi:10.1006/ceps.1995.1019
- Kolligian, J., Jr., & Sternberg, R. J. (1991). Perceived fraudulence in young adults: Is there an "Imposter Syndrome"? *Journal of Personality Assessment*, 56(2), 308-326. doi:10.1207/s15327752jpa5602_10
- Lake, P. F. (2000). When fear knocks: The myths and realities of law school. *Stetson Law Review*, 29, 1015-1056.
- Langford, J., & Clance, P. R. (1993). The impostor phenomenon: Recent research findings regarding dynamics, personality and family patterns and their implications for treatment. *Psychotherapy*, 30(3), 495-501. doi:10.1037/0033-3204.30.3.495

- Lawler, K. N. (1984). The impostor phenomenon in high achieving persons and Jungian personality variables (Doctoral dissertation, Georgia State University, 1984). Dissertation Abstracts International, 45B, 2693B).
- Leary, M. R., Patton, K. M., Orlando, A. E., & Funk, W. W. (2000). The impostor phenomenon: Self-perceptions, reflected appraisals, and interpersonal strategies. *Journal of Personality*, 68, 725-756. doi:10.1111/1467-6494.00114
- Leonard, N. H., & Harvey, M. (2008). Negative perfectionism: Examining negative excessive behavior in the workplace. *Journal of Applied Social Psychology*, 38(3), 585-610. doi:10.1111/j.1559-1816.2007.00318.x
- Lustbader, P. (1997a). Construction sites, building types, and bridging gaps: A cognitive theory of the learning progression of law. *Willamette Law Review*, 33, 315-381.
- Lustbader, P. (1997b). From dreams to reality: The emerging role of law school academic support programs. *University of San Francisco Law Review*, 31, 839-860.
- New Kid on the Hallway. (2009, March 17). Impostor syndrome, redux [Web log post]. Retrieved from http://newkidonthehallway.typepad.com/new_kid_on_the_hallway/2009/03/imposter-syndrome-redux.html
- Oriel, K., Plane, M. B, Mundt, M. (2004). Family medicine residents and the Impostor Phenomenon. *Family Medicine*, 36(4), 248-252.
- Osborn, J. J. (2003). *The Paper Chase*. New Albany, NY: Whitston Publishing.
- Patton, M. J. (1968). The student, the situation, and performance during the first year of law school. *Journal of Legal Education*, 21, 10-51.

- Randozza, S. (2009, April 17). Irvine law school posts lofty numbers in its bid to be the best. *Daily Journal*, p. 4.
- Reich, S. (1976). Profile of a sample of first-year law students. *Psychological Reports*, 39, 871-4.
- Robert, E. R. & Winter, M. F. (1978). Sex-Role and success in law school. *Journal of Legal Education*, 29, 449-458.
- Ross, S. R., & Krukowski, R. A. (2003). The impostor phenomenon and maladaptive personality type trait characteristics. *Personality and Individual Differences*, 34, 477-484. doi:10.1016/20191-8869(02)00067-3
- Ross, S. R., Stewart, J., Mugge, M., & Fultz, B. (2001). The imposter phenomenon, achievement dispositions, and the five factor model. *Personality and Individual Differences*, 31, 1347-1355. doi:10.1016/S0191-8869(00)00228-2
- Rubin, E. (2007). What's wrong with Langdell's method, and what to do about it. *Vanderbilt Law Review*, 60(2), 609-665.
- Saunders, K. M. & Levine, L. (1994). Learning to think like a lawyer. *University of San Francisco Law Review*, 29, 121-195.
- Shanfield, S. B., & Benjamin, G. A. H. (1985). Psychiatric distress in law students. *Journal of Legal Education*. 35, 65-75.
- Shneidman, E. S. (1984). Personality and "success" among a selected group of lawyers. *Journal of Personality Assessment*, 48 (6), 609-616.
doi:10.1027/s15327752jpa4806_6

- Silver, L. (1968). Comment, Anxiety and the first semester of law school. *Wisconsin Law Review*, 1968, 1201-1218. Retrieved from <http://0-www.heinonline.org.sally.sandiego.edu/HOL/Page?handle=hein.journals/wlr1968&id=1&size=2&collection=journals&index=journals/wlr#1217>
- Snyder, C. R. (1990). Self-handicapping processes and sequelae: On the taking of a psychological dive. In R. Higgins, C. R. Snyder, & S. Berglas (Eds.), *Self-handicapping: The paradox that isn't?* (pp, 107-150). New York, NY: Plenum Press.
- Sonnak, C., & Towell, T. (2001). The impostor phenomenon in British university students: Relationships between self-esteem, mental health, parental rearing style and socioeconomic status. *Personality and Individual Differences*, 31, 863-874. doi:10.1016/S0191-8869(00)00184-7
- Soonpaa, N. J. (2003). Stress in law students: A comparative study of first-year, second-year, and third-year students. *Connecticut Law Review*, 36, 353-383.
- Stahl, J. M., Tuner, H. M., Wheeler, A. E., & Elbert, P. B. (1980). *The imposter phenomenon in high school and college science majors*. Paper presented at the meeting of the American Psychological Association, Montreal, Quebec.
- Steele, C. M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist*, 52, 613-629. doi:10.1037/0003-066X.52.6.613
- Steele, C. M. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, 69, 797-811. doi:10.1037/0022-3514.69.5.797

- Stevens, R. (1983). *Law school: Legal education in America from the 1850s to the 1980s*. Chapel Hill, NC: The University of North Carolina Press.
- Thompson, T., Davis, H., & Davidson, J. (1998). Attributional and affective responses of impostors to academic success and failure outcomes. *Personality and Individual Differences*, 25, 381-396. doi:10.1016/S0191-8869(98)00065-8
- Topping, M. E. (1983). The impostor phenomenon: A study of its construct and incidence in university faculty members (Doctoral Dissertation, University of South Florida, 1983). Dissertation Abstracts International, 44, 1948B. (University Microfilms, No. 8316534).
- Topping, M. E., & Kimmel, E. B. (1985). The impostor phenomenon: Feeling phony. *Academic Psychology Bulletin*, 7, 213-226.
- Turow, S. (1977). *One L*. New York: NY, G. P. Putnam's Sons.
- UBC Law Orientation 2009. (2009, June 22). Impostor syndrome [Web log post]. Retrieved from <http://ubclaworientation.blogspot.com/2009/06/imposter-syndrome.html>
- U.S. News & World Report. (2010). *Best Law Schools: What are the priciest private law schools?* Retrieved from http://grad-schools.usnews.rankingsandreviews.com/best-graduate-schools/top-law-schools/private_cost
- USD University of San Diego School of Law. *Admissions: Application Procedure*. Retrieved from http://www.sandiego.edu/law/admissions/application_procedure/jd_applicants/law_school_statistics.php

- USD University of San Diego School of Law. *DRAFT: Proposal for academic rules change: Academic supervision*. Internal communication. April 30, 2010b.
- USD University of San Diego School of Law. *Information for current students: Records and registrar*. Retrieved from <http://www.sandiego.edu/law/current/registrar/rank/>
- Want, J., & Kleitman, S. (2006). Imposter phenomenon and self-handicapping: Links with parenting styles and self-confidence. *Personality and Individual Differences*, 40, 961-971. doi:10.1016/j.paid.2005.10.005
- Wightman, L. F. (1996). *Women in Legal Education: A Comparison of the Law School Performance and Law School Experiences of Women and Men*, LSAC Research Report Series
- Wightman, L. F. (1997). The threat to diversity in legal education: An empirical analysis of the consequences of abandoning race as a factor in law school admissions decision, *New York University Law Review*, 72, 1-53.
- Yerkes, R. M., & Dodson, J. M. (1908). The relation of strength of stimulus to rapidity of habit-formation. *Journal of Comparative Neurology and Psychology*, 18, 459-482.
- Zelan, J. (1965). The role of occupational inheritance. In S. Warkov & J. Zelan (Eds.), *Lawyers in the making* (pp. 42-52). Chicago: Aldine, 1965.

Appendix A - Survey Instrument

This survey has 33 items and will probably take less than 15 minutes to complete. A progress bar will show you how much of the test has been completed. Please complete the contact information at the end of the survey if you would like to be entered for the random drawing for one of the five iPods being randomly awarded to participants who complete the survey.

This first section has 20 questions that will ask about your sense of self-assuredness and use the scale below from 1-5. Please choose the description that best fits your feelings currently. (NOTE: When this instrument was administered electronically, the scale was listed below each question rather than a single time at the top of the instrument as here to simplify the display).

1 (Not true at all) 2 (Rarely) 3 (Sometimes) 4 (Often) 5 (Very true)

1. I have often succeeded on a test or task even though I was afraid that I would not do well before I undertook the task.
2. I can give the impression that I'm more competent than I really am.
3. I avoid evaluations if possible and have a dread of others evaluating me.
4. When people praise me for something I've accomplished, I'm afraid I won't be able to live up to their expectations of me in the future.
5. I sometimes think I obtained my present position or gained my present success because I happened to be in the right place at the right time or knew the right people.

6. I'm afraid people important to me may find out that I'm not as capable as they think I am.
7. I tend to remember the incidents in which I have not done my best more than those times I have done my best.
8. I rarely do a project or task as well as I'd to do it.
9. Sometimes I feel or believe that my success in my life or in my job has been the result of some kind of error.
10. It's hard for me to accept compliments or praise about my intelligence or accomplishments.
11. At times, I feel my success was due to some kind of luck.
12. I'm disappointed at times in my present accomplishments and think I should have accomplished much more.
13. Sometimes I'm afraid others will discover how much knowledge or ability I really lack.
14. I'm often afraid that I may fail at a new assignment or undertaking even though I generally do well at what I attempt.
15. When I've succeeded at something and received recognition for my accomplishments, I have doubts that I can keep repeating that success.
16. If I receive a great deal of praise and recognition for something I've accomplished, I tend to discount the importance of what I have done.
17. I often compare my ability to those around me and think they may be more intelligent than I am.

18. I often worry about not succeeding with a project or on an examination, even though others around me have considerable confidence that I will do well.

19. If I'm going to receive a promotion or gain recognition of some kind, I hesitate to tell others until it is an accomplished fact.

20. I feel bad and discouraged if I'm not "the best" or at least "very special" in situations that involve achievement.

This final section has 15 questions that will ask for information about you. Most, but not all of these questions will use the five-possible responses used in the first set of questions.

21. Are you Male ☐ or Female ☐.

22. What is your racial or ethnic background? (Please select the one that most represents you)

☐ Other

☐ American Indian or Alaskan Native

☐ Asian

☐ Black or African American

☐ Hispanic or Latino

☐ Native Hawaiian or Other Pacific Islander

☐ White

23. Please enter your age: _____

24. Which of the following degrees has your mother achieved? (Select all that apply)

☐ None of the following

- ☐ High school diploma
- ☐ Associate's degree
- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ Medical degree
- ☐ Law degree
- ☐ Doctoral degree

25. Which of the following degrees has your father achieved? (Select all that apply)

- ☐ None of the following
- ☐ High school diploma
- ☐ Associate's degree
- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ Medical degree
- ☐ Law degree
- ☐ Doctoral degree

26. Have either of your parents worked as a judge in the judicial/court system, or as an attorney?

- ☐ Yes
- ☐ No

27. Did your family give you sufficient emotional support to help you attain your educational goals?

1 (Never) 2 (Rarely) 3 (Sometimes) 4 (Often) 5 (Almost always)

28. Do you procrastinate when preparing for either law classes or exams?

1 (Never) 2 (Rarely) 3 (Sometimes) 4 (Often) 5 (Almost always)

29. What year of law school are you in currently?

- ☐ First year
- ☐ Second year
- ☐ Third year
- ☐ Fourth year

30. Which of the following categories most accurately reflects your current law school GPA compared to the other students in your class?

- ☐ Bottom 50% ☐ Top 50% ☐ Top 30% ☐ Top 20% ☐ Top 10%

31. How does your GPA compare with the GPA you feel you deserve?

- ☐ My effort deserves a slightly higher GPA
- ☐ My effort deserves a much higher GPA
- ☐ My GPA is similar to what my effort deserves
- ☐ My effort deserves a slightly lower GPA
- ☐ My effort deserves a much lower GPA

32. Have you participated in one of the legal clinics at USD?

- ☐ Yes ☐ No

33. Which of the following ranges contains your highest LSAT score?

- ☐ 120 to 145
- ☐ 146 to 160

☐ 161 to 170

☐ 171 to 180

34. Is your religion or faith a major part of your life?

☐ Yes ☐ No

35. Are you currently in a romantic relationship that you find emotionally supportive?

☐ Yes ☐ No

36. Please enter the username for your @sandiego.edu email address below. Your email will not be revealed to others, and is only needed to limit the survey to law students, and to notify you if you win one of the iPod shuffles. All such information will be deleted after survey data has been collected.

_____@sandiego.edu.

37. May I contact you to ask follow up questions in addition to the survey items above? I will likely not be contacting everyone who gives permission.

☐ Yes ☐ No

Appendix B – Flyer in First Year Orientation Packet

TO: All USD 1L J.D. Students

FROM: Owen Smith

DATE: August 8, 2010

RE: Research

My name is Owen Smith, and I currently work in the Legal Research Center and am a doctoral student enrolled in USD's School of Leadership and Education Sciences. I am researching whether the Impostor Phenomenon occurs in your school as part of my doctoral dissertation. The Impostor Phenomenon is when a student feels unqualified to be in school all the time and is concerned that others will discover that he or she is a fraud. You may know what these feelings of inadequacy are like. Perhaps they go away after you get used to the program. However, for some students, they are a continual concern. Unfortunately, no one has researched the Impostor Phenomenon in law school students, though significant impostor feelings have been found in 30% of other stressful graduate programs such as medicine, pharmacy, nursing, and engineering.

Would you please take the attached 36 item (15 minutes maximum) survey to help figure out if the IP is a problem for law students that needs to be addressed? You will also be registered for the random drawing for four iPod shuffles once the survey is closed. The survey is also available at SurveyMonkey.com/s/impostor Please include your USD email address so that I can notify you if you win an iPod shuffle, and also so we can limit the study to only J.D. students at USD.

Thank you for your time,

Owen G. Smith J.D. (Ph.D. Spring 2011).

Appendix C - Flyer for Student Mailboxes

Please take a few minutes to complete the Impostor Survey at [SurveyMonkey.com/s/impostor](https://www.surveymonkey.com/s/impostor) for a chance to win one of four iPod shuffles, and a chance to help your fellow USD law students. I am completing my USD doctoral research on whether law students often feel they are fooling others in their abilities and qualifications. The survey will take less than 15 minutes to complete and will fill a gap in research completed for other graduate programs, such as medicine, pharmacy, and nursing students. I am limiting the research to USD's J.D. students.

Thank you so much for your time and assistance, Owen Smith osmith@sandiego.edu

Drawing for the iPod shuffles is October 7!

[SurveyMonkey.com/s/impostor](https://www.surveymonkey.com/s/impostor)

Appendix D - Flyer for Student Mailboxes and Announcement Boards

Please take a few minutes to complete the attached survey or the online survey at [SurveyMonkey.com/s/impostor](https://www.surveymonkey.com/s/impostor) for a chance to win one of four iPod shuffles, and a chance to help your fellow USD law students. I am completing my USD doctoral dissertation research in the presence of impostor feelings in USD J.D. students. These impostor feelings are when you feel unqualified, and concerned that others overestimate your intelligence. The survey will take less than 15 minutes to complete and will fill a gap in research completed for other graduate programs, such as medicine, pharmacy, and nursing students. The research is limited to J.D. students here at USD.

Thank you for your time and assistance,

Owen Smith

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