

PERSONAL COURAGE: A MEASURE CREATION STUDY

By

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Despite the popularity of courage in the popular press and the impressive history of centuries of writing on this topic, little empirical research has adequately addressed the effects of courage in organizations. Accordingly, this study was designed to investigate two questions. First, is courage an individual difference construct that can be measured? Second, what is the role of courage in critical response organizations (e.g., does such a quality influence leadership and task performance)? Using data from MBA students I seek to confirm the definition of the courage construct. Next, using 2 samples of working undergraduate students and their significant others I develop a valid measure of courage (the Personal Courage Scale, or PCS). Various indicators of construct validity (content validity, inter-rater, inter-source, and test-retest reliability, factor structure, nomological network, and empirical validity) are explored. Empirical validity was demonstrated in a sample of Air Force Flight Academy employees where Personal Courage directly predicted leadership and task performance.

Overall, the findings of this dissertation provide evidence to suggest that Personal Courage can be adequately measured and can influence important work criteria. Practical implications of these findings and suggestions for future research are provided.

## CHAPTER 1 INTRODUCTION

Courage is reckoned the greatest of all virtues because, unless a man [or woman] has that virtue, he [she] has no security for preserving any other.

-Samuel Johnson, in Miller, 2000, *The Mystery of Courage*

In today's organizations where employees increasingly enjoy autonomy and discretion in their jobs (National Research Council, 1999) the courageous behaviors of few individuals may be essential to the well-being of many organizational stakeholders. This was well exemplified by the courageous behavior of whistleblower Sharron Watkins who brought to light the accounting fraud in the Enron debacle (Business Week, 2002). Whistle blowing is only one example of how courageous behavior, in the face of likely career-ending consequences, can bring to light organizational wrong-doing (Rothschild & Miethe, 1999). Speaking up against supervisors' abusive behavior requires courage. Protecting peers from the verbal and sometimes physical bullying behaviors of "popular aggressors" also requires courage. Reporting faulty procedures and products in order to save customers from harm may require courage, especially if this means stopping production and causing the organization to lose time and money. Thus, courage in organizations may be needed in many instances and it may help uphold and safeguard organizational stakeholders' rights.

Courage is a basic virtue, and one of our oldest moral values. The concept of courage has captured the imaginations of authors and readers for thousands of years. Indeed, Plato (Trans. 1961) and Aristotle (Trans. 1999) wrote about the topic nearly 2,500 years ago, as did the Chinese philosopher Mencius (see Van Norden, 1997). In the past quarter century, the topic of courage has been increasingly discussed in the social sciences, however, it has received relatively little attention in the organizational literature. For example, it is not clear which organizational variables of interest may be predicted by courage. Is courage an integral part of

leadership? To what extent does courage influence performance? Is it related to people's ability to express new and innovative ideas? Is courage a necessary condition for voice behavior? Could courageous activity protect teams from "group think?" The answer to all these questions intuitively seems to be "yes" but no study to date investigated these questions.

One of the principal reasons that research on courage has staggered is because until recently there was no single agreed-upon definition for the courage construct. Schilpzand, Hekman, and Mitchell (2008) recognized this shortcoming and composed a clear definition of courage based on an extensive review of the literature and qualitative analysis of interviews with 92 executives and military officers. These authors define courage as action toward a worthy goal in a challenging situation that requires the assumption of risk and usually is accompanied by negative emotion (i.e., fear). While these authors' research helps to organize the literature on the topic of courage and to identify those types of courage that are manifested in organizations, we still do not know how to assess it or identify this attribute in individuals. Given this notable gap in the literature, in this dissertation I attempt to develop a measure of courage. In turn, a reliable and valid measure could be used to answer some of the empirical questions raised above.

This dissertation proceeds with Chapter 2, in which I argue that workplace courage is a valued individual behavior that can be predicted by a dispositional propensity that I label "personal courage." In Chapter 3 I seek to outline the challenges that the academic study of courage faces and must overcome to advance research in this important area. I mainly discuss the problems arising from the vague definitions of courage and how Schilpzand et al. (2008) addressed these problems in their qualitative work. I then continue in Chapter 4 with a description of my research agenda that was designed to devise a measure of courage based on Schilpzand et al.'s definition. Special attention is paid to the dispositional correlates that are part

of the nomological network of personal courage, and the predictive validity of this construct. Next, in Chapter 5, I describe two studies that were designed to create the measure of personal courage and to establish the construct validity of this instrument. In Chapter 6 I discuss the linkages between personal courage and leadership and describe a study that seeks to predict military leadership using the newly developed Personal Courage Scale (PCS). I conclude this dissertation in Chapter 7 with a discussion section and an overview of future research directions for the topic of courage in organizational settings.

## CHAPTER 2 COURAGE AS A DISPOSITION

Most social science writings on courage and virtually all the writings on courage in the organizational literature use an attributional approach. The attributional approach takes the bystander perspective and infers courage from observing, hearing, or reading about the behavior of others. These bystanders may make attributions about traits or causal states of the actor, but they do so without real-time and direct access to this information. Some empirical examples of the attributional approach to courage were described by Worline (2004) who compiled hundreds of incidents of courage reported by students and executives. These witnesses then rated the actions for the level of courage enacted and other attributes of the situation. Since almost 90% of the incidents were descriptions of another person rather than self-descriptions her inferences mostly reflect an attributional perspective. Similarly, Rate, Clarke, Lindsay, and Sternberg (2007) discussed the results of four studies using the attributional approach which they termed implicit courage where students listed and rated the behavior of others. Schilpzand et al. (2008) also used the attributional approach in creating their definition of courage, although these authors also collected and interpret data from self-reported incidents of courage.

While the attributional approach may give us important insights into what courage is, it likely provides incomplete and somewhat inaccurate descriptions of courageous behaviors. There are several problems inherent in this ‘observer’ approach to investigating courage. Courageous acts are fairly rare incidents that occur in challenging situations, for example a fire that breaks out, an unethical request that is overheard, or an act of bullying that is observed. Moreover, people typically avoid situations that involve fear and significant personal harm (Worline, 2004). In turn, individuals are rarely confronted with these uncommon challenging episodes. Therefore, most people are not likely to encounter extreme situations that call for courageous behaviors with

frequency. Indeed, in their interviews of executives and military personnel Schilpzand et al. (2008) found that most interviewees had some difficulty identifying recent incidents of courage. In fact, some participants had to report an incident that happened up to 45 years earlier because they could not think about a more recent event. In turn, the reliance on retroactive descriptions of courageous behaviors, sometimes of an act that happened multiple years ago, may create several problems in interpreting these behaviors.

For example, it is well known that in emotionally arousing situations individuals tend to encode only central features of the situation into memory (Easterbrook, 1959). Thus, witness testimonials about the courageous behavior of others may be relatively impoverished and observers may miss important situational cues that contribute to the behavior. Moreover, once witnesses label a behavior as courageous the labeling itself may affect the recall of information about the incident. Indeed, the phenomenon that individuals tend to recall information that is more consistent with labeling than information that is inconsistent with labeling is well documented in cognitive psychology (see Ashcraft, 1994). Accordingly, information that fits the “courage” schemata, after labeling the event as such, is much more likely to be recalled by witnesses than information that is inconsistent with this labeling. These issues are only exacerbated when the incidents reported occur in the distant past. Thus, problems that are related to the recall of details in these emotionally laden courage episodes make their interpretation by witnesses problematic.

But the problems related to the recall of courageous incidents are not the only limitations of the attributional approach. Even if we were able to “catch” witnesses in the act of observing a courageous situation as it unfolds it is not clear if these observations can always be relied upon. For example, in the famous Stanford Prison Experiment (SPE) Zimbardo (2007) describes how

one of the prisoners resisted the abuse by guards by going on a hunger strike. However, none of the other prisoners, guards, or even the observing staff (who were managing the experiment) recognized this extreme act of defiance as being inherently courageous. Instead, the guards and the other prisoners thought this individual to be a “troublemaker” and resented his recalcitrant behavior. Only after the experiment was over did some of the other participants realize his behavior was courageous, as it was non-normative and aimed at resisting the undeserved bullying of all ‘prisoners.’

However, if the attributional approach which essentially relies on others’ reports is problematic, could a self-report approach about courageous activity be used as a more reliable source? In other words, is the “internal approach” to identifying courage better? Not necessarily. Commonly, people who perform courageous acts do not believe that they behave courageously. For example, the ‘whistle blower’ in the Stanford prison experiment who convinced the researchers to terminate the abusive experiment, did not view herself as being courageous. When asked to comment about her actions she reported: “This challenge has been seen by some as a heroic action, but at the time it did not feel especially heroic. To the contrary, it was a very scary and lonely experience being the deviant, doubting my judgment of both situations and people, and maybe even my worth as a research social psychologist” (Christina Maslach in Zimbardo, 2007, p. 458). Hence, even self-reports, taken at the time that the event is unfolding may not provide sufficient or accurate information to fully explain courageous action. Similarly, Miller (2000) conveys that individuals regarded courageous do not always feel that they are courageous. Schilpzand et al. (2008) also reported that it took individuals a longer time to describe personal events than reporting others’ courage. Moreover, in their study often the personal courage stories

were accompanied with disclaimers. Individuals tended to say that they personally did of not really think their actions were actually courageous although others told them they are.

Both the attributional approach and the internal approach to investigating courage view courage as an act in a discrete situation and both approaches are based on the same romantic view of the courageous individual as a “superman.” In both views the courageous person is perceived as an ordinary “Clark Kent” who under the “right conditions” sheds his ordinary clothes, puts on his cape, and acts to save the day. This romantic view of courage is based on two basic assumptions: (1) The situation is the pivotal trigger of the unusual behavior of the actor; and (2) Courageous behavior cannot be identified in people under ordinary circumstances (i.e., when they appear as merely Clark Kent). Indeed, there is a lot of anecdotal evidence about the unlikely hero who acts in unusual circumstances. For example, Wesley Autry, who, when waiting for the subway in Harlem, sees a man fall off the subway platform. Despite the fact that he was with his two young daughters, ages four and six, Wesley Autrey jumped in front of a moving train and risked being seriously hurt or killed to save a complete stranger. Or Sergeant Joseph Darby who spoke out about the Army’s ill treatment of him, after he told military investigators about photos of prisoner abuse at Iraq’s Abu Ghraib prison. In these instances others regard both Wesley Autry and Joseph Darby as unlikely heroes, who a priori were seen as individuals not identifiably different from random others.

In this dissertation I dispute this romantic view of courage and argue that although the circumstances play a role to reveal the courage that lies within, courageous individuals do not act unusually as compared to their own behavioral standards. Indeed, most individuals who act courageously insist that what they did was not unique and that they just acted the way that everyone should have acted in this particular situation (Zimbardo, 2007). In other words, it

seems that these courageous individuals believe that they acted according to accepted standards of behavior; similar to how they and others would ordinarily behave when the situation calls for this behavior. While it is possible that simple modesty causes ‘courageous individuals’ to deny their ‘hero status,’ I suggest that we should take them at their word. That is, I argue that they do not perceive their courageous behavior as extraordinary because it truly is not unusual conduct for them. Furthermore, I argue and present data that show that these behaviors are indeed commonly enacted by these courageous individuals and can be identified and used to predict their behavior in unusual circumstances. In other words, although courage is generally conceived of as memorable and exceptional action (e.g., the young Chinese man who stood his ground while an army tank approached in Tiananmen Square), we are likely to encounter more commonplace manifestations of such behavior over time by individuals who are ‘courageous.’ This view of courage argues that courageous behavior can be commonplace (Sekerka & Bagozzi, 2007) or even an ‘every-day’ type of event (Worline, 2002) that is facilitated by dispositional or personal courage which can be used to predict the enactment of courage in commonplace situations and those rarer notable instances that really matter.

#### **How mundane behaviors can prepare for more substantive acts – the Foot In The Door (FITD) effect**

Social psychologists have demonstrated for over four decades that when individuals are asked to do small favors, the likelihood of them performing larger favors increases. For example, in a study by Freedman and Fraser (1966) homeowners were requested to place an obtrusive sign urging “Drive Carefully” on their front lawns. Not surprisingly, fewer than 20% complied with the request. However, of those homeowners who were asked two weeks prior to place a small sign with this same message in their window and did so, an impressive 75% agreed to place larger sign in their yard and actually did so. Similar results were found in studies that sought to

predict other acts of citizenship. For example, signing a petition predicted monetary donations for a good cause (Schwarzwald, Bizman, & Raz, 1983), and large energy conservation efforts were predicted by previous small conservation initiatives (Katzev & Johnson, 1984). Hence, the ask-small-first-to-obtain-large, also known as the Foot-In-The-Door (FITD) effect, appears to work for many acts of citizenship. I believe that the same type of phenomenon may also predict various acts of courage. John McCain (2004, p.1) agrees that “Courage is like a muscle. The more we exercise it, the stronger it gets.”

The FITD approach can be readily applied to various kinds of courage and is well exemplified by people who work in critical response organizations (CROs) such as the military, the police force, or as fire fighters. Professionals in these organizations are periodically involved in training exercises that expose them to challenging situations in order to prepare them for real-world combat, protection, and rescue events. For example, evidence suggests that specialized military training in parachuting prepared trainee parachutists for increasingly difficult jumps and increased their self-efficacy to perform dangerous jumping assignments from an average of 41% prior to the training to 80% after the training (Rachman, 1983). But if training prepares individuals to perform brave acts such as performing dangerous jumps from an airplane can we still call the enactment of such behaviors – courage? I believe we can.

Imagine that you are standing among a crowd of people watching a fire rage out of control in a building nearby. As a responsible citizen you call 911 to report the fire and now you are waiting for the firefighters to arrive. Suddenly, you see a child standing in the third floor window of the building. As you and all the other people watch helplessly a man rushes from the crowd and runs into the building to emerge a few minutes later carrying the child in his arms. As an observer would you conclude that this person is courageous? Most likely you will. However,

as a social scientist you are interested in this man's unusual behavior in the face of imminent danger. So you let him catch his breath and then you ask him what prompted him to behave in this extraordinary manner. He then tells you that he is a firefighter by profession and that this behavior is not at all unusual for him. In fact, he engages in this type of behavior almost every day on his job. Now you may not consider him a 'superman' because suddenly his behavior does not seem that remarkable. Hence, his behavior now may not invoke the same admiration. When asked, the fire fighter certainly did not believe that his behavior was particularly courageous – he just did what everybody should have done – he took action to save the child. But would the fact that he is trained to perform such acts necessarily change the courageous nature of this act? After all he didn't have his equipment with him and he did not have the backup of other firefighters, so you may still think that he was courageous. The main difference between him and everybody else in the crowd was his FITD. He regularly enacts these types of courageous behaviors, and as such was most prepared to act. Yet his preparedness compared to that of others does not necessarily diminish the fire fighter's courage in a challenging situation. When the challenging situation arose (i.e., raging fire, lack of equipment, no backup) he was more prepared than others to react and therefore he acted, and his action was still courageous.

FITD experiences do not need to possess all the components of actions defined as courageous. Instead, FITD activities may have the risk assumption element, or a noble intention, or the conquest of experienced fear. Not all definitional elements of courageous action need be present for the activity to constitute a FITD experience, one or more of these definitional elements should be present for it to function as a FITD event.

Important to note is that the formalized training that members of CROs experience and the types of small acts of citizenship we discussed, are examples of behavior that individuals are

invited or told to enact by others. However, such FITD experiences may also be initiated by the individuals themselves. For example, Author Tim O'Brien (1990) recounts a challenging situation from his youth in which he regrets not standing up for a fourth grade classmate. The little girl in his class was dying of cancer and wore a scarf to school. Other classmates teased her and pulled her scarf off revealing her bald head. Years later, Tim O'Brien conveys that if he had stood up for the little girl back then, the experience likely would have benefited him being a soldier in Vietnam, preparing him to be courageous, so to speak. In this dissertation I argue that similar to the firefighter described above courageous people are individuals who have their FITD. They act extraordinarily in extreme situations because in less extreme situations they act and have acted in similar ways. Individuals may undertake initiatives or demonstrate behaviors that will effect FITD preparedness to enact eventual courage. Examples of such voluntary and self-initiated FITD actions are the more mundane episodes discussed below.

The FITD individual is the woman who when she sees through her kitchen window that a stranger is driving slowly alongside a child walking down the street, pays attention, and when the child gets into the car, runs out of her house, chases the car, jumps in front to stop it to ask the person who he is. She is embarrassed when she approaches the 'stranger' because she knows that he is most likely the child's father but she still questions him and the child. Others may watch the situation as it unfolds and may tell her afterwards that they also thought the man's behavior was suspicious, yet she was the only one who did something about it. She may also be the passerby who when walking in a hospital corridor and seeing a person faint immediately leaps into action. She is only a visitor and there are many doctors and nurses around, but when they react passively she is the one who takes charge and "orders them around." This FITD individual may also be the individual to confront a group in process of vandalizing property while others merely stand by

and watch. Hence, many mundane events may call for courage-like responses and although we do not call the behaviors of people who deal with these situations “courageous,” these very endeavors prepare them to be these courageous exemplars when the situation demands courage. In other words, I propose that individuals who exhibit these types of responses in daily life with frequency will be more likely to respond courageously in extreme situations that call for it.

Moreover, this FITD individual may be neurotic and nervous about many other aspects of her life, or he may be introverted and shy, she may be not very conscientious, and he may be scrawny and not very athletic. This person may not appear “courageous” at first glance, but he or she is the person with the FITD experiences. Thus, when it comes to exhibiting courageous behavior in situations that call for it this is the person who would respond. Moreover, I believe that this FITD individual knows and can report his or her FITD behavior. Others who do not know him or her well may not be able to identify the “ordinary hero” in them. Thus, their behaviors in the extreme situations may indeed seem extraordinary to onlookers, but it would not likely seem that extraordinary to themselves or to others who know them well.

Thus, unlike all the retroactive investigations of courage, in this dissertation I propose a new approach – a prospective approach to courage and argue that courage can be measured as a dispositional tendency to act in situations requiring it. People who exhibit courage in extreme situations are those individuals who have a FITD. “We are not born with the readiness to be courageous.....we are born with a predisposition to this state, which can be developed” (Shepela, et al., 1999, p. 801). In presenting this new approach I argue that such behavior is not that rare, it can be measured like other dispositional tendencies to behave in certain ways (i.e., conscientious individuals are orderly and punctual), and it should predict future behaviors. Albeit, unlike conscientiousness which is commonly related to daily work behaviors (i.e., task

performance) and can predict them, courage as a tendency would predict mainly behaviors in more extraordinary or challenging situations.

Unfortunately, courageous activity has not been able to be predicted well by extant research that aims to identify courageous individuals. Based on research involving a nationwide sample from a wide variety of professions and industries, Rothschild and Miethe (1999) report that “there are almost no sociodemographic characteristics that distinguish the whistle-blower from the silent observer” (p. 104), furthermore, the differences in personalities and values between these two groups “are not significant enough to qualify as support for a presumed whistle-blowing personality” (p.116). Similarly, Oliner and Oliner (1988) who compared data of 406 rescuers of Jewish persons during WWII to 126 non-rescuers who matched the rescuers on age, gender, educational background, and geographic location during the war, report null findings in their attempt to identify rescuer characteristics. The study revealed that these samples were remarkably similar on sociocultural ‘predictors’ of rescue and psychological and personality variables. More specifically, the four types of rescuer prototypes identified from this data indicated no overlap of traits, values, experiences and contextual variables between any of these rescuer groups.

In his recent book “The Mystery of Courage,” (2000) Ian Miller relates that courage is partly mysterious because it is so poorly forecasted before it happens. In a related vein, Monroe and her colleagues (Monroe, 1991; Monroe, Barton, & Klingemann, 1990) interviewed entrepreneurs, philanthropists, heroes, and rescuers of Jews, and found that the personality variables under investigation (altruism, ethicality, morality, and honesty) were not different in any of these samples and did not consistently explain membership in these groups. Regarding these disappointing empirical findings on a “courageous personality” Shepela and colleagues

(1999) conclude that “It may not be possible to ever predict social [courage] behavior that specifically” (p. 797). In this dissertation I seek to accomplish what existing research has been unsuccessful in doing. In this manuscript I attempt to develop a way to measure and predict courageous behavior.

In the next chapter I describe some of the problems that have prevented researchers from identifying the components of courage and I suggest a way to measure courage as a disposition.

### CHAPTER 3 CHALLENGES TO MOVING FORWARD

Even in light of the importance of and interest in the topic of courage, regrettably only a small number of empirical studies have been conducted on courage. Three major hindrances have contributed to the under-developed state of affairs of courage research. The first hindrance is the divergence in the definition of courage. Many definitions have been proposed for various types of courageous action leaving us with confusion and disagreement regarding the conceptual domain of the courage construct.

The second hindrance is that many different types of courage have been discussed in the literature. However, the similarities and differences among these various types were not explored in this literature. As a result, this body of research invites confusion over how these types are related to one-another. For example, moral courage, physical courage, and vital courage are all discussed as “courage” but how exactly these types are similar to or different from each other is not clear. These types all appear to be forms of courage and as such seem to be related. Yet, they likely are also distinct entities arising in specific situations from idiosyncratic antecedents, display different manifest behaviors and varying accompanying emotions and abilities. Because of the different definitions and various forms of courage, the domain of courage seems disjointed and is difficult to integrate. I will briefly outline the types of courage discussed in the literature and outline where similarities and differences exist to bring more conceptual clarity.

The third hindrance to progress on courage is the fact that no good measures of the courage construct exist, making empirical research more difficult to conduct and compare. Previous courage measure creation efforts suffer from shortcomings that I will identify and improve upon in this dissertation.

Part of my work in this dissertation will be to highlight these 3 major hindrances and using data I collected I hope to bring further definitional clarity, to provide more understanding of how the various types of courage relate to one another, and finally to create a reliable and valid measure of personal courage. In the next sections I will discuss the three major hindrances to empirical and theoretical progress in the courage domain more elaborately. Specifically, in the following sections I will review what we know about the definition of courage, the types of courageous action, and previous courage measure creation efforts in more detail.

### **Hindrance 1 - Definition of Courage**

As noted, courage has been the topic of centuries of intrigue, assessment, and discussion. A robust review of the literature suggests that courage is interpreted quite divergently by authors. These different ways of defining the construct has made the research conducted on the topic of courage and the theorizing about this construct difficult to navigate and integrate. As the definitions of courage vary, so do the behaviors defined as courage, as do the emotions accompanying them, and the motivations underlying courageous action. These differences have hindered our understanding of the general construct of courage and the conditions under which such actions are likely to occur. Nevertheless, substantial intellectual effort has been directed toward providing definitions of courage in its various domains. Rate et al. (2007) provide a table with 29 definitions while Snyder and Lopez (2007) discuss 18 different conceptualizations of courage. There are literally hundreds of quotes pertaining to courage available on the website of quotationsbook.com. These range from relatively short, pithy definitions that one can find in Webster's dictionary such as "courage is that firmness of spirit which meets danger without fear," to longer and more complex definitions, such as the one provided by Shelp (1984: 384), "The disposition to voluntarily act, perhaps fearfully, in a dangerous circumstance, where the

relevant risks are reasonably appraised, in an effort to obtain or preserve some perceived good for oneself or others.”

Recently, Schilpzand et al. (2008) systematically analyzed the many existing definitions of the construct and conveyed that these descriptions usually involve many of the same components. For example, Becker and Eagly (2004: 164) say it is the “conjunction of risk taking and service to a socially valued goal.” Rate et al. (2007) emphasize a voluntary act, overcoming fear, personal risk and a worthy goal. Putman (1997) focuses on voluntary choice, accurate risk assessment and a valued outcome. Worline et al. (2002) summarize their analysis by asserting that the components are - a voluntary choice when faced by a challenging situation accompanied by some sort of risk (adequately appraised) involving worthy actions. They further state that either experienced emotion (e.g. fear) or cognition (e.g. risk assessment) may be present. Although, these definitions diverge to various degrees, Schilpzand et al.’s (2008) analysis reveals convergence and recurrent components of courageous action in many of these frameworks. The main four components are: risk, fear, noble goal, and voluntary action. No other components systematically appear in definitions or descriptions of courage in these domains. Hence, I will base my research on their recent comprehensive general definition of courage that entails risk assumption, potential fear or anxiety, and voluntary overt action or inaction in an attempt to reach a socially valued goal. The reoccurring definitional courage components are explained in more detail below. Of course, not all authors agree on all the recurrent components of courage. Because such disagreements exist, the necessity of each component to the classification of a behavior as courageous has to be tested. In this dissertation I will do exactly that – test whether each component predicts the classification of a behavior as courageous. The five components that would be tested are the following:

**Risk.** Risk is an essential component of courage in the religious, philosophical, military, and organizational literatures (Schilpzand et al, 2008). Without risk there is no courage, merely kindness or activity, while action in the face of too much risk is considered foolhardy (e.g., Kidder, 2003; Woodard, 2004). However, accurate risk assessment is difficult because the actual probability of failure is often uncertain. Courage is often a label attributed post-hoc by individuals to an action taken by someone else, hence the risk assessment made by these others may be inaccurate after an action is taken because the action's outcome influences judgments about risk level involved (Pury et al., 2007; Worline, 2004b). As such, systematic manipulation of risk and analysis of the subsequent effect on courage ascribed may provide us with important insights regarding role of risk on the evaluation of courage. Indeed, whether the risk assumed should be substantive or can be relatively small for action to be regarded as courageous is an open question. Schilpzand et al. (2008) indicate that courage is a rare event that involves notable risk assumption. Alternatively, some authors convey that courage need not be as fundamental an action; it likely is a more commonplace or 'every-day' activity that requires smaller personal risk-taking (e.g., Sekerka and Bagozzi, 2007; Worline, 2002). Hence, even though the inclusion of risk in any definition is essential, the amount of risk required for courage is unknown.

**Fear.** Most authors from a wide domain of literatures suggest that courage involves the conquest of fear (Schilpzand et al., 2008). Evans and White (1981) and Pury et al. (2007) point out that observers label actions as courageous if they think they would personally be afraid if faced with the same circumstances. Some authors have reported that courageous actors do not experience fear (Rachman, 1990; 1983) and other report courageous actors' positive emotions in addition to or in place of fear (Schilpzand et al., 2008). Hence, even though most agree that fear

or at least the reasonableness of fear accompanies courage, determining its necessity would make an import contribution to definitional work in this domain.

**Socially valued goal.** The fourth component in Schilpzand et al.'s (2008) definition involves the objective or intention of the action. Rate et al. (2007) stress a "noble, good purpose" and Becker and Eagly (2004) emphasize the "socially valued goal" of the action. Kidder (2003) argues that self-serving goals are not courageous and Putman (1997) states that courage does not include the desire to boast or to look good. Becker and Eagly (2004) exclude behavior initiated merely for enjoyment or to show off. Hence the purpose of the activity or the motivation driving the action matters; it should primarily be noble rather than self-interested, although personal benefit may be a secondary motivation. Here again, some researchers argue that self-motivated goals could also be valid for courage and such actions are included in a wide variety of courage typologies. For example, the work by Schmidt and Koselka (2007) on general courage and Finfgeld's (1998) writing on vital courage both pertain to overcoming personal illness. As such, confirmation of the 'noble' or primarily other-oriented nature of actions to be labeled courageous needs to be confirmed.

**Action.** Next, courage is an action or deliberate inaction that is overt, observable and voluntary (Deutsch, 1961; Kidder, 2003; Morrison & Milliken, 2003; Pury et al., 2007; Putman, 1997). Hence, the actor must make a stance that is evident and noticed (by oneself or others) for courage to be ascribed. To confirm that deliberate action or inaction is a necessary component of the definition of courage however, the inclusion of this component controlling for the other definitional elements we discussed needs to be tested.

**Outcome.** Finally, one observation stemming from my review of the literature is the role of the action's outcome. Even though this component of courageous action is not part of any

existing definition, it certainly is worthy of note and hence is highlighted in this overview and will be tested as part of the definitional components. One of the interesting problems that the distinction between foolhardy and courageous acts presents is that observers often make this assessment after the outcome is known, constituting a post-hoc assessment of the courage level of the action. I expect that if the outcome is judged as positive or successful (a drowning person is saved, whistle blowing leads to sanctions against a company), the actor is generally deemed courageous. If the rescuer drowns or the whistleblower is fired, the actor may be more likely seen as rash or impetuous or engaging in meaningless self-sacrifice. Because of this potential confounding of the outcome with the definition, I suspect that most behaviors deemed courageous result in positive rather than negative outcomes. Hence, the empirical investigation of the mere alteration of the same event's outcome would allow us to determine whether the outcome indeed influences the perceived courage displayed.

While Schilpzand et al.'s (2008) definitional development is a pivotal first step in bringing clarity to the domain of courage, there were several notable limitations to this research. First, the work by these authors was based on rare incidents of courage; participants typically needed to ponder for some time while searching their memories for a courageous incident they witnessed or enacted (Schilpzand et al., 2008). Thus, their investigation fits into the retroactive approach to investigating courage and as such it is subject to the various information recall problems described in Chapter 2. Hence, even though the data they gathered is very insightful and especially contributes to developing the early stages of research on this topic, the low incident-count of such actions demands that the definition gleaned from such actions be validated. In this dissertation I am using a prospective approach to validate Schilpzand et al findings. Specifically, I will attempt to verify that descriptions of behavioral incidents based on

these five components can be recognized by individuals as exemplifying courage. Second, because of the qualitative nature of their investigation Schilpzand and colleagues could not test how all combined components predict people's judgment of courage. The investigation of which definitional components are confirmed while controlling for other definitional elements will provide insight into the necessary and sufficient components of courage. Third, the current literature does not provide us with adequate tools to understand how courage can be compared to or differentiated from foolhardiness, a construct that has not been systematically empirically assessed yet is frequently mentioned in courage writings. Based on the five component of courage I will investigate whether courage and foolhardiness can be empirically differentiated. Thus, while Schilpzand et al. (2008) performed the exploratory part of the definition development, in this dissertation I seek to build on their fundamental work and conduct the systematic confirmatory portion of the definition development of the courage construct.

### **Hindrance 2 – Types of Courage**

In their review of the literature with a specific focus on workplace courage Schilpzand and colleagues (2008) not only defined courage but also identified the three major types of courage that exist in a wide variety of organizations. The three courage types that were uncovered were (a) physical courage which was especially prevalent in military jobs, (b) social courage which was frequently mentioned by both the executive sample and the military sample, and (c) entrepreneurial courage which was more prevalent in business organizations.

These different types of courage are based on what is placed at risk by the courageous individual. Almost all of the social science writing and research on courage mentions what is usually called physical courage and social courage (e.g. Deutsch, 1961; Larsen & Giles, 1976; Putman, 1997; Kidder, 2003; Rate et al., 2007; Pury et al., 2007). The first type, physical courage, involves undertaking courageous actions that may negatively affect our physical

wellbeing. Obvious examples are people who put themselves in harm's way either as part of their profession such as the members of the military or police force or people who experience a challenging event that prompts them to place themselves in a physically dangerous situation. In office settings such activities may include confronting a bully or aggressive coworker, or helping fight an office fire.

Social courage which has also been called civil courage (Greitemeyer, Ossward, Fischer & Frey, 2007) differs in various ways from physical courage. It involves placing at risk one's career, reputation, status, or valued relationships. Social courage involves jeopardizing one's image in the eyes of others. In contrast to physical courage, social courage often allows and includes cognitive consideration and deliberation before acting and therefore may be incited by different antecedents than physical courage. In the organizational domain, whistle blowing is a good example of social courage.

A third type of courage based on what is at risk is suggested by the work of Pury et al. (2007) and Schilpzand et al. (2006). Both research teams had people describe incidents of courage they experienced or witnessed. Schilpzand et al. (2006) report a small but significant number of incidents described by executives in which they put their financial and economic well-being at risk for some broader, socially valued goal. A good example might be a doctor leaving a lucrative medical practice to become a bush pilot doctor serving Native Americans in Alaska. Pury et al. (2007) also report a small but significant number of stories where the individual leaves a safe and secure position or situation to start something new. This type of courage is labeled entrepreneurial by Schilpzand et al. (2006) and occurs when the employee assumes these risks, not primarily for personal financial gain but for more altruistic goals and values.

There are several other types of courage that were identified in the literature but they are either included in the three-type taxonomy or they are less relevant to organizational courage. One of these courage types is moral courage, which is not based on what is placed at risk for the individual acting courageously like the three previously discussed categories. Sometimes an individual's courageous action is representative of beliefs or feelings that run counter to popular opinion or the norms of their group or organization (Deutsch, 1961; Larsen & Giles, 1976). Under these latter conditions, it is often inferred that some valued principle was violated or needed to be expressed. This type of courage, an action that springs from the threat to, or violation of, a deeply held principle is often called moral courage (Kidder, 2003). When values like freedom, honesty, integrity, duty and justice are challenged, people may act to protect what they believe are integral parts of their self. Important to note is that moral courage refers to a personally-held principle that is being tested and serves as the catalyst for the action. In other words, moral courage focuses on the causal mechanism underlying courageous behavior. As Schilpzand et al. (2008) point out, in most instances of moral courage, individuals take "social" risks. Walton (1986: 107) even argues that "morally courageous acts are those where the difficulty or danger is not so much an immediate threat to one's physical well being as a threat to one's social standing." Thus, moral courage can generally be seen as tantamount to social courage and in this manuscript I will regard moral courage in that way.

Other types of courage mentioned less frequently and less relevant to courage in organizational settings include existential courage (Larsen and Giles, 2004) which deals with making good personal life choices for oneself, vital courage (Finfgeld, 1998) which pertains to overcoming personal illness, and the closely related concept labeled personal courage (Pury, Kowalski, and Spearman, 2007) which concerns overcoming internal obstacles or acting despite

personal limitations. The objective of such actions principally only benefit the ‘courageous’ individual him- or her-self and hence these types of courage do not possess the noble goal that is a component of the definition of the construct as proposed by Schilpzand and colleagues. Given the incompatibility of these courage types and the updated and integrated definition, these types of courage would not be classified as courageous activity.

In this dissertation I seek to overcome this hindrance by investigating how the three main types of courage are related to one another. Although Schilpzand et al. differentiated between these types of courage and highlighted their occurrence in business and critical response contexts, it is not clear empirically if these three types are separate and idiosyncratic manifestations of courage and if, or how, these courage types are related to one another. These open questions cannot be answered with qualitative analysis; this can only be done with confirmatory factor analysis. Hence, to provide more clarity regarding the interrelationships among the three types of courage I will empirically assess these relationships in this dissertation.

### **Hindrance 3 - Measure of Courage**

The third hindrance to empirical progress of courage research is that there are no good measures of the construct. This is unfortunate because employees with the moral fiber who will speak out or stand up in pivotal instances appear in short supply as research indicates that few individuals react courageously to challenging situations. A number of authors have found that although many abuses occur in organizations, most people remain silent and do not report them (Edmondson, 2003). In their research on whistleblowing, Rothschild and Miethe (1999) report that although approximately one third of employees observe illegal or unethical behavior at work, only few become whistleblowers. Raynor and McIvor (2006) convey that a large percentage of employees either are bullied or observe workplace bullying, yet only a small percentage of employees do anything about it. Survey data by the Ethics Resource Center

(Business Week, 2007) conveys that 25% of their sample of nearly 2000 U.S. employees said they had observed their colleagues or their companies lying to customers, suppliers, workers or the public, yet again, few react to curb the behavior. With the ability to measure Personal Courage adequately we may alleviate this problem of silence regarding unethical work practices. A measure of personal courage may allow for the identification of those individuals that will likely address and help curb these harmful behaviors.

My current work is not the first attempt to create a measure of courage, however. The work of Woodard and Pury (2007) and Schmidt and Koselka (2000) have made similar attempts. Woodard and Pury's (2000) work has started with several assumed types of courage and focuses on confirming the existence of various sub-groups of courage. However, Woodard and Pury's (2007) research on courage commenced with a definition of the construct that differs from my view of what courage constitutes. According to Woodard (2004) courage is "the ability to act for a meaningful cause, despite experiencing the fear associated with perceived threat exceeding the available resources" (p.174). Hence, Woodard's (2004) and Woodard and Pury's conception of courage also includes activities undertaken for self-motivated goals, and they include activities such as having dental surgery to save a tooth, or asking for a raise at work, or activities that constitute little risk such as walking across a high bridge. My previous discussion of the definitional domain of courage excludes such primarily self-motivated actions from the courage domain.

Woodard and Pury's (2007) measure creation effort also included domains that cannot be related to workplace acts of courage making this previous work and my current work less comparable. For example, their measure includes actions such as enduring pain for childbirth, receiving painful inoculations for health reasons, and making a fool of oneself on TV (see

Woodard's courage scale). In addition, although this previous measure development effort is valuable and informative, it is of limited use as a measure of workplace courage given that the measure was created using the specific sample of college students. In contrast, my research is grounded in Schilpzand et al.'s (2008) work of personal interviews with a wide range of professional and military participants and a broad investigation of the literature on similar constructs. The sample of working professionals is likely to provide more insights into workplace courage than data obtained from college students might supply. Furthermore, Woodard and Pury asked participants to indicate their willingness to participate in incidents of a courageous nature, leaving their findings potentially more vulnerable to social desirable responding than asking participants about their experiences. Finally, Woodard and Pury's research was not utilized to make predictions of courage propensity or to test the predictive nature of their measure, leaving us to speculate on the predictive validity of their courage instrument.

A second attempt at capturing the propensity to act with courage was undertaken by Schmidt and Koselka (2000). The domain these authors investigated was facing personal phobias by patients with panic disorders. These authors operationalized personal triumph over debilitating mental illness as acts of courage. They sought to empirically capture this zest of spirit and labeled it courage. My previous discussion of the conceptual domain of courage indicates that courage has a necessary component of a socially valued goal, rather than a personal triumph. Thus, the lack of this essential component of courage in Schmidt and Koselka measure makes this measure inadequate. Second, the narrow domain of these authors' conceptualization of courage makes their research problematic in extending the findings to other actions that fit the courage label. A third shortcoming of their work is that the sample used in this study consisted of

only mentally ill individuals, making the findings of this research expectedly less generalizable to ‘normal’ populations. Indeed, the items used to capture courage included panic attack-specific items such as: ‘How courageous are you when it comes to dealing with panic attacks’, and ‘When you have a panic attack, do you behave courageously?’ The remaining 3 items of the scale asked for global assessments of being a courageous individual. This ‘global’ approach to courage masks possible domain differences of courage in physically, socially or financially vulnerable situations. Finally, Schmidt and Koselka’s investigation of courage, although likely important in situations of illness, is not focused on the workplace domain, making the measure potentially a poor fit for courageous workplace action.

In summary, even though valuable courage measure creation efforts have been undertaken, they suffer from a set of notable shortcomings. My research seeks to improve upon Woodard and Pury’s and Schmidt and Koselka’s (2000) methodology by using a more encompassing definition, a working population as samples, the assessment of a broad nomological network, and the assessment of social desirability. Furthermore, this current research employs the newly created measure of personal courage to predict leadership and performance on the job in a military setting. I will use the Schilpzand et al.’s (2008) courage typology and the stories of courageous action these authors gathered to develop items that seek to identify individual courage propensity. Furthermore, in this dissertation, I seek to confirm that individuals indeed can distinguish among the three courage types, and that these three courage varieties indeed belong to a common disposition.

Before I describe the methods used in this dissertation in more detail, I will outline the construct validation processes that would allow me to evaluate the Personal Courage Scale in these terms.

## CHAPTER 4 TOWARD A CONSTRUCT VALID MEASURE

In order to validate the Personal Courage Scale's (PCS) I investigated several necessary conditions for a favorable evaluation of the measure. First, demonstration of construct validity demands that the PCS should be content valid (Schwab, 1980). This requirement stipulates that the domain of courage is accurately reflected in the final measure of the PCS. In the development of the PCS I had to ensure that the PCS adheres to the construct's definition and taps all relevant domains. Hence the purpose of the first study was to validate the five definitional components of courage as proposed by Schilpzand et al. (2008) to determine those necessary aspects of courageous behavior. In addition to testing which of the five components (risk, fear, action, motivation, and outcome) are necessary and most predictive of ascribed courage, I also asked participants to provide foolhardiness ratings. Foolhardiness is frequently mentioned in courage writings as a construct that differs from courageous action. Yet, it is currently unclear how foolhardiness is different from courage; specifically on which definitional components the constructs of courage and foolhardiness diverge. Hence, the validation effort of the definitional components of courage would not be complete without including the assessment of foolhardiness on these same five dimensions.

Second, reliability of the measure is a vital indicator of its construct validity (Pedhauzer & Schmelkin, 1991). In Study 2 I estimate three types of reliability: internal consistency, test-retest (stability), and interrater (Schwab, 1980). Third, if a measure provides a valid and reliable indication of the construct, the factor structure should match theoretical expectations (Schwab, 1980, p.21). Hence, in this case, the PCS is assumed to consist of three factors to indicate the three types of workplace courage – physical, social, and entrepreneurial. Furthermore, I hypothesize that these three factors should indicate a latent higher-order factor of the overall

construct of personal workplace courage. The various manifestations of courage all share a common core and a common definition. All manifestations of courage share risk assumption, reasonableness of fear, a worthy goal, and noticeable voluntary action or inaction. Hence, I hypothesize a common dispositional foundation may predict acts that share these fundamental attributes. In other words, I theorize that the individual who is likely to stand up for others in the face of personal reputation loss is likely to be the individual to rescue another from drowning if the situation arises.

Fourth, another facet of construct validation is the specification of the nomological network (Cronbach & Meehl, 1955), including the assessment of the relationship of the focal construct with similar other constructs. Convergent validity denotes the extent to which alternative measures of the construct are similar to the focal construct and hence share variance with it (Schwab, 1980). In this case, convergent validity can be estimated by correlating the PCS developed in this dissertation with the existing measure of Speaking Up (Premeaux & Bedeian, 2003) and a subscale of the existing measure of General Courage (Schmidt & Koselka, 2000). Speaking up behavior constitutes expressing problems or providing ideas about how to improve things within organizations (Detert & Edmonson, 2005). Generally, such expressions are aimed at noble goals (improvement) and are counter-normative in nature and as such likely include the assumption of risk. Hence, due to the positive mission and generally risky nature, speaking up behavior is expected to be associated with personal courage. General courage, as mentioned previously, is one's overall evaluation of one's courage. This three-item general courage assessment is global in nature and as such is not indicated by specific behaviors. Yet, a global assessment of courage is likely to be associated with my newly created measure of personal courage that is behaviorally oriented.

Another component of the nomological network assessment is to indicate discriminant validity. Discriminant validity is “the requirement that a test not correlate too highly with measures from which it is supposed to differ” (Campbell, 1960, p. 548). Hence, to demonstrate the divergent validity of the PCS, I will introduce a set of personality variables that have been linked to not only courage, but also either found or suggested to relate to constructs that are similar to courage and hence should share variance with courage. The following set of personality characteristics have been linked to courageous or courage-related action and yet they are hypothesized to be separate from courage. Thus, the correlations between the following variables and courage are expected to be moderate in effect size.

**Anxiety.** Overcoming the realistic fear associated with courage is likely facilitated by lower levels of anxiety. Hence, anxiety is expected to be negatively associated with personal courage.

**Optimism.** Although not associated directly with any definition of courage, courageous activity is largely associated with positive outcomes. Hence the personal belief in successful completion likely spurs courageous initiative, while the expectation of failure likely dissuades courageous action.

**Empathetic concern.** Research on rescuers of those in need during WWII have indicated that those who engaged in saving others had significantly more sensitivity to the suffering of others than have mere bystanders (Oliner & Oliner, 1988). Similarly, empathetic concern has been linked with helping behavior in naturalistic situations (e.g., Midlarsky, 1992; Midlarsky & Kahana, 1994). This trait has also been associated with courageous resistance (Becker & Eagley, 2004; Gushee, 1993) and with courageous altruism (Fagin-Jones & Midlarsky, 2007). In a similar vein, Walker and Hennig (2004) investigated whether individuals have prototypical ideas

about moral individuals. Their findings indicate that bravery is such a moral exemplar and the 'brave' exemplar was ascribed to possess a series of personality traits that includes concern for others.

**Moral identity.** Moral reasoning has been associated with prosocial proclivities such as adult volunteer behavior (Midlarsky et al, 1999) and children's helping behavior (Hoffman, 2000). Gross (1994) investigated moral reasoning in individuals who engaged in rescue activities during WWII in France and Holland. His findings indicate that rescuers use higher levels of moral reasoning (i.e. use post-material motivations such as social justice motives). Sekerka and Bagozzi (2007) discuss moral courage and propose that a morally courageous individual consistently makes decisions in light of what is good for others despite personal risk. They further suggest that such courageous individuals use inner moral decision-making principles as a manner of practice. In their search of dispositional underpinnings of courageous behavior Peterson & Seligman (2004) have highlighted a moral or virtuous nature to likely spur courage.

**Self-esteem.** LePine and Van Dyne (1998) found that individuals' self-esteem had a significant and positive influence on their expressive voice behavior. Self-esteem measures not only capture self-beliefs, but also styles and patterns of self-preservation (Baumeister, Tice, & Hutton, 1989). Low self-esteem individuals focus their efforts on self-protection, and as such are less likely than high self-esteem individuals to place themselves in risky and vulnerable situations. Courageous behavior inherently brings with it the assumption of some degree of risk or vulnerability, making low self-esteem employees less likely to act courageously. Similarly, Graham's (1986) conceptual model of principled organizational dissent outlines that high self-confident individuals regard actions of principled organizational dissent as more feasible in bringing about organizational change than employees with low self-confidence do. Pury,

Kowalski, and Spearman (2007) asked undergraduates to recall and write about a time in which they acted courageously. These students indicated feeling more confident than non-courageous others during the episode. Similarly, Finfgeld (1999) investigated courage in dealing with physical illness and proposed that self-confidence is a key individual difference that aids to promote and maintain courageous coping with adversity.

**Locus of control.** Individuals with an internal locus of control (Internals) believe they personally can exercise control over their own lives to effect outcomes, while individuals with an external locus of control orientation (Externals) believe that their fate is largely beyond their own control and instead is determined by fate, chance, or powerful others (Rotter, 1966). Internality has been linked to proactivity, planning, coping, persistence, and other active problem solving strategies, while externality is associated with passivity, accepting the (dissatisfying) status-quo, and learned helplessness (Rotter, 1992). Consistent with these behavioral patterns, internals have been shown to see greater contingencies between what they personally do as employees and what happens to them in their work environment (Mitchell, Smyser, Weed, 1975). As such, internals are expected to take more frequent courageous action to change important outcomes in challenging situations, while externals are expected to predominantly remain immobile. Indeed, Oliner and Oliner (1988) found that those individuals who rescued Jews during WW II had a more internal locus of control orientation than non-rescuers.

**Self-efficacy.** Sitkin and Pablo (1992) demonstrated that individuals with high self-efficacy underestimate the risks associated with courses of action while also overestimate their personal ability to overcome these challenges. Hence, higher self-efficacy is likely associated with courageous action which requires the assumption of risk. Generalized or trait-based self-efficacy has been linked with personal initiative in the workplace (Speier & Frese, 1997). The

assessment of one's personal ability to perform a specific behavior in a particular situation (Bandura, 1982) influences not only the perception of one's skillset, but it also influences what individuals believe they can do with their skills (Chemers, Watson, & May, 2000). These self-efficacious beliefs hence can influence cognitive processes and elicit confidence (Bandura & Wood, 1989). As such, self-efficacy may enhance non-normative courageous behaviors and accordingly, Sekerka and Bagozzi (2007) suggested that self-efficacy is aligned with courage.

The previously mentioned traits, self-esteem, locus of control, and generalized self-efficacy all indicate (along with emotional stability) one higher-order parsimonious construct: core self-evaluations (Judge, Erez, Bono, & Thoresen, 2002). Hence, rather than assessing each of these traits separately, I opted to assess these trait tendencies (which are all proposed to share relationships of identical magnitude and direction with the PCS) at their core. In other words, these constructs will be jointly assessed as core self-evaluations.

**Openness to experience.** Openness to experience is associated with the dispositional tendency to be imaginative, nonconforming, unconventional, and autonomous (Judge, Bono, Ilies, & Gerhardt, 2002). These abilities incite divergent thinking (McCrae, 1987) and creative solutions (Feist, 1998). Given this imaginative skill set, open individuals are likely to identify non-normative behaviors as solutions in challenging situations allowing them to act courageously relative to their non-open counterparts. Furthermore, open individuals are likely to have a sense of personal autonomy to resolve and make a personal difference in challenging situations. As such, in a recent conceptual paper on having a courageous mindset Hannah, Sweeney, and Lester (2007) argue that individuals who are dispositionally open to experience are more likely to act courageously despite risk and fear.

**Conscientiousness.** Conscientious individuals possess a strong sense of duty (McCrae, Costa, & Busch, 1986), personal persistence and tenacity (Goldberg, 1990), and a willingness to anticipate, plan, and expend notable effort to achieve future goals (Judge & Ilies, 2002; McCrae & Costa, 1999). Conscientious individuals have also been shown more likely to both set, and be committed to, goals (Barrick, Mount, & Strauss, 1993). These qualities would presumably make conscientious individuals more likely to respond (courageously) to moral challenges, and implement strategies to reach and persist toward valued ends even in the face of opposition. Hence, conscientious individuals are more likely to feel called to react with courage, and to execute and persist with courageous actions.

Even though I do not have specific hypotheses about the other three traits of the Big Five I will assess the relationship of the PCS with all Big Five traits. I do so because the Big Five is the most widely used and accepted taxonomy of personality and because completeness of the nomological dispositional network of the newly created PCS demands it.

**Impression management.** Courage is publically admired behavior as it is associated with heroism and helpful and noble actions. Given this, there is a socially desirable component to reporting personal courageous propensity. I therefore expect that courage is associated with impression management behavior. Of note, however, is that impression management is not expected to have an overly strong association with reported personal courage. The reason being that the cost of courageous activity is typically high (individuals assume a fair amount of risk) and hence individuals who do not decide to enact courage are generally still able to maintain a positive self-image.

**Impulsivity.** Courage may be perceived as impulsive behavior, however courage does not stem from a lack of behavioral control. Impulsivity is related to sensation seeking behaviors

(Barratt, & Patton, 1983), yet courage is very different from acting for personal enjoyment motives. In fact, courage is probably the opposite of impulsivity, it is generally controlled behavior with a noble purpose that incites apprehension and thus should be negatively related to courage.

In this chapter I have outlined the conditions that would allow us to render judgment on the PCS's construct validity. However, one essential step has remained unaddressed. The final piece of evidence regarding a measure's validity is its ability to predict theoretically relevant constructs of interest.

### **Predictive validity of the PCS**

The final requirement of construct validity is met when predictive validity of the construct is demonstrated. I have chosen leadership as the criterion variable to be predicted from Personal Courage due to the natural linkages between these behaviors. "Leaders should think of themselves as individuals surrounded by mirrors of many kind" (Matusek, 1997, p. 17). This quotation implies that a leader's actions are often mirrored back to them in their followers' behaviors. Leaders via their assigned role, status, and power in the organizational hierarchy are important sources of employee role modeling. Indeed, one of the dominant leadership theories, transformational leadership theory (Burns, 1978) includes as one of its main components the "*idealized influence*" or 'charisma' concept which is described as the extent to which a leader "[is a] role model for followers to emulate," "demonstrates high standards of ethical and moral conduct" and "can be counted on to do the right thing" (Avolio, 1999, p.43). Being a role model, to a great extent implies being courageous in vision and actions. Therefore one of the main characteristics of charismatic leaders and the reason why we are inspired to emulate them is because they are perceived as courageous.

Burns (1978), Bass (1985), and Sergiovanni (1990) furthermore associate transformational leadership with morality and with a purpose beyond individual gain. In addition, the willingness to be vulnerable, to self-sacrifice, or to place something of value at risk has been associated with effective leadership (Avolio, 1999, p.34). These aspects are certainly closely related to acts defined as courageous. Courageous action, as defined previously, also places outcomes at risk and are aimed at socially desirable missions. Similarity between courage and leadership has indeed been noted previously. In a study using Federal Express employees, Hater and Bass (1988) proposed that *inspirational motivation* (another subcomponent of transformational leadership) was associated with willingness to stand up for ideas even if they were unpopular and with willingness to do what is right for the company, rather than what is right for the individual. Hence, it can be expected that courageous actions will affect the perceptions and behaviors of followers which in turn would stimulate the main leadership criteria of leader emergence and leader effectiveness (Lord, De Vader, & Alliger, 1986). Specifically, courage likely makes individuals be perceived as more leader-like which may also facilitate their emergence as natural leaders. Hence, individuals with a courageous nature are expected to both more frequently emerge as natural leaders and be more effective and emulated in leadership roles than their non-courageous counterparts.

A second organizational criterion variable that likely is predicted by personal courage is performance in critical response settings. In critical response organizations risk assumption is a necessary component of the job. This is so because day-to-day task work may expose the employees to danger. Recurrent task activities such as running into a burning building, advancing in a combat setting, or stopping a vehicle transporting potential drug dealers are certainly activities that require the employees to risk getting hurt for the benefit of others. Thus,

in these critical response settings task or in-role performance requires personal courage. Hence, better performers of critical response work are likely to have a courageous nature which facilitates the assumption of risk and manifestation of courage. Indeed, one of the several core values of the U.S. Army is personal courage, indicating that this behavior is integral for success in this critical response organization. Unlike critical response organizations, office or business work settings do not require their employees to enact risky courage-like behavior with frequency or with any predictability. Hence, it is only performance of critical response work that is expected to be facilitated by personal courage.

Courage may affect task performance of critical response work partially because those viewed as courageous are perceived to be the better and more effective leaders. As suggested earlier effective leaders tend to demonstrate courage and those individuals who exhibit courage also tend to emerge as natural leaders in workgroups and organizations. Individuals who demonstrate courage are also likely judged as better role models for others and hence are emulated or followed by their subordinates. Thus, the leaders' (either emergent or assigned) performance should be enhanced by courage. In turn, leadership affects job performance; indeed, the link between performance and leadership has been well demonstrated in the organizational literature (Chen, Kirkman, & Kanfer, Allen, & Rosen, 2007; Colbert, Kristof-Brown, Bradley, & Barrick, 2008; Schaubroeck, La, & Cha, 2007). Thus, I propose that courage, at least partially will influence performance in the critical response organization through perceptions of leadership.

In summary, in this chapter I outlined a series of necessary conditions to support the assessment of the validity of the PCS. These conditions are that the PCS:

1. Is a measure that is content valid and has the right components of the courage definition.

2. Is a reliable measure as indicated by (a) internal consistency, (b) test-retest reliability, and (c) inter-source (self-significant other and self-peers) agreement.
3. Assesses a three-dimensional construct consisting of (a) physical courage, (b) social courage, and (c) entrepreneurial courage factors with a second-order latent structure.
4. Displays moderately strong positive correlations with (a) a measure of general courage and (b) a measure of speaking up.
5. Shows moderate positive correlations with the nomological network constructs including Optimism, Empathy, Moral Identity, Core Self-Evaluations (which include the dimensions of Generalized self-efficacy, Self-esteem, Neuroticism, and Locus of control), Openness, and Impression Management and moderate negative correlation with Anxiety and Impulsivity.
6. Predicts performance of critical response work and leadership as estimated by others.

## CHAPTER 5 METHODS AND RESULTS STUDY 1 AND 2

Next I will describe the research overview consisting of three individual studies which all contribute to the creation of a valid measure of personal courage.

### **Method Study 1**

In study 1 I sought to validate the definitional components of courage while simultaneously controlling for other components. Hence, a within-subject policy capturing design was conducted to determine the possible necessary and sufficient components of the extant definition of courage.

**Participants.** One hundred and twenty four MBA students from a large southeastern university participated in this study. The sample consisted of 73 men (59%) and 44 women (36%) and 7 individuals (5%) who did not indicate their gender, ages ranged from 21 to 44 years ( $M = 25.52$ ,  $SD = 4.15$ ); 65% of the sample indicated their race as Caucasian, and the average tenure was 3.45 years. Participants received extra credit for their participation.

**Procedure and materials.** A policy-capturing within-subjects design permits researchers to infer the relative importance of particular factors that are related to individual assessments of courage and foolhardiness. Five within-subjects factors (risk, fear, action, motivation, and outcome) were completely crossed, which allows the assessment of the independent effects of each of these 5 independent variables on courage and foolhardiness ratings. Crossing the 5 factors resulted in 32 scenarios ( $2 \times 2 \times 2 \times 2 \times 2$ ) which encompassed all the combinations of the independent variables. The scenarios were presented in random order to eliminate the order effects. Each participant was asked to read all 32 brief scenarios and rate every description for courage and foolhardiness.

The vignettes were paragraph long stories that described scenarios of individual behavior that varied the 5 dimensions of: high risk (vs. low risk), action (vs. inaction), experienced much fear (vs. little fear), worthy or other-benefitting goal (vs. self-interested or unworthy goal), and finally positive outcome (vs. negative outcome). The vignettes were developed based on real-world workplace incidents (see Schilpzand et al, 2008) and were adjusted when necessary to fit the dimensions that I studied. Specifically, I sought incidents that fit each of the idiosyncratic conditions and amended courage incident stories to ensure each category fit a scenario description. All vignettes were between 4 and 6 sentences long and only the manipulated dimensions were conveyed in the descriptions. The gender of the individuals was not varied; the protagonist in each scenario was “John”. Finally, the examples of courage consisted of episodes of physical, social and entrepreneurial types of courage to avoid capturing only domain-specific courage dimensions. For example, the following three vignettes were used in this study.

*John became aware that a coworker that he did not like was cheating on his time report card. John decided to report this coworker to management. John was excited about the meeting with his manager and expected that he would be rewarded for his actions. He was rewarded after the meeting.* The dimensions for this example are: no risk, action, no fear, self-interested goal, and positive outcome.

*John’s manager asked him to change the sales targets so that the division would meet their objectives. John knew that this would be dishonest and wanted to refuse the request. John was afraid of probable negative career repercussions of refusing his supervisor so he did not refuse, but changed the numbers as asked. The deception was uncovered and John was fired.* The dimensions for this example are: high risk, no action, fear, self-interested goal, negative outcome.

*John signed up for a Peace Corps project in a dangerous part of the world. John was not afraid and was looking forward to helping those in need even in the face of possible danger. John arrived back home safely several months later.* The dimensions for the third example are: high risk, action, no fear, a noble goal, and a positive outcome.

Participants were directed to an online survey where they read and signed an informed consent document. Next, participants completed the vignette-rating task. Courage was rated on a 7-point scale, ranging from *not courageous at all* (1) to *extremely courageous* (7). The mean of the courage rating collapsed across all subjects and all scenarios was 4.025 (SD = 0.427). Foolhardiness was rated on a 7-point scale, ranging from *not foolhardy at all* (1) to *extremely foolhardy* (7). The mean of the foolhardiness rating collapsed across all subjects and all scenarios was 3.522 (SD = 0.633). All responses were electronically recorded. Finally, participants completed a brief online demographic questionnaire and were then thanked for their participation.

### **Results Study 1**

The data for this study were hierarchical in structure such that the 32 scenarios were clustered within individuals. Because each individual rated multiple scenarios, ratings from one person may be more similar to each other than responses from a different person. This type of clustering in the data may lead to standard error estimates that are too small and may produce spuriously significant findings (Hox, 2002). Therefore, I used hierarchical linear modeling to analyze these data as this statistical technique corrects this clustering error (Bryk & Raudenbush, 1992). At the first level of analysis (i.e., the within-individual level), the specified model was:

$$Y_{ij} = \beta_{0j} + \beta_{1j} (\text{Risk})_{ij} + \beta_{2j} (\text{Action})_{ij} + \beta_{3j} (\text{Fear})_{ij} + \beta_{4j} (\text{Self})_{ij} + \beta_{5j} (\text{Outcome})_{ij} + r_{ij}$$

Where,  $Y_{ij}$  was participant's  $j$  rating of courage exhibited in vignette  $i$ ;  $\beta_{0j}$  (the intercept)

represented the adjusted mean dependent variables (i.e., courage) controlling for the five components (i.e., risk, action);  $\beta_{1j}$  represented influence of risk on the courage ratings of participant j, controlling for all other variable (i.e., action, fear); (Risk)<sub>ij</sub> was the amount of risk (0=little risk, 1=high risk) described in each scenario;  $\beta_{2j}$  represented influence of action on the courage ratings of participant j, controlling for all other variable (i.e., risk, fear); Action<sub>ij</sub> represented whether “John” the actor in scenarios i chose to act (1) or not to act (0) in the situation described;  $\beta_{3j}$  represented the influence of “John’s fear” on the courage ratings of participant j, controlling for all other variables (i.e., risk, action); (Fear)<sub>ij</sub> was the amount of felt fear (0=no fear, 1= fear) described in each scenario;  $\beta_{4j}$  represented influence of motives on the courage ratings of participant j, controlling for all other variables (i.e., risk, fear); Self<sub>ij</sub> represented whether the actor “John” in scenarios i chose to act (or not to act) in the situation describes because of selfish motives (1) or because of altruistic motives (0);  $\beta_{5j}$  represented the influence of the outcome of the scenario on the courage ratings of participant j, controlling for all other variables (i.e., risk, fear); Outcome<sub>ij</sub> represented whether the situation described in the scenario ended well (1) or ended badly (0); and  $r_{ij}$  represented the unique effect associated with scenario i for person j.

HLM incorporates a second-level modeling (i.e., between-individuals level) in which the within-individual level intercepts ( $\beta_{0j}$ ) and slopes ( $\beta_{1j}$ ) are simultaneously regressed on variables of interest. In this model I ran a Random Coefficient Regression model for each outcome variable (courage and foolhardiness). The random coefficient regression model has no predictors at the second level and investigates “whether there is significant variance in the slopes and intercepts” across individuals (Hofmann, 1997, p. 734). Thus, the model at level 2 was:

$$\text{Level 2: } \beta_{0j} = \gamma_{00} + U_{0j}$$

$$\beta_{1j} = \gamma_{10} + U_{1j}$$

$$\beta_{2j} = \gamma_{20} + U_{2j}$$

$$\beta_{3j} = \gamma_{30} + U_{3j}$$

$$\beta_{4j} = \gamma_{40} + U_{4j}$$

$$\beta_{5j} = \gamma_{50} + U_{5j}$$

Where,  $\gamma_{00}$  represented the average adjusted mean of courage ratings (i.e., courage or foolhardiness) across individuals;  $U_{0j}$  represented the unique effect of participant  $j$  on his or her mean courage ratings;  $\gamma_{10}$  coefficient represented the average risk – courage rating coefficients across individuals; and  $U_{1j}$  represented the unique effect of person  $j$  on the risk – courage rating coefficients coefficients. Similarly,  $\gamma_{20}$  coefficient represented the average action – courage rating coefficients across individuals;  $\gamma_{30}$  represented the average fear – courage rating coefficients across individuals;  $\gamma_{40}$  represented the average self – courage rating coefficients across individuals; and  $\gamma_{50}$  represented the average outcome – courage rating coefficients across individuals.

To test the influence of the five hypothesized components of courage on courage ratings I used a t-test on the  $\gamma$  parameters, where  $\gamma$  represents the mean of the slopes of the relationship between each component (i.e., risk, action) and either courage or foolhardiness across participants. Hoffman (1997) notes that “this test is actually assessing whether the pooled level-1 slope” between each component and either courage or foolhardiness “differs significantly from zero” (p. 734). The HLM regression results are presented in Table 5-1 and show that Risk was not significant in influencing ratings of courage ( $G = .04$  [ns]) but it was significant in influencing the ratings of foolhardiness ( $G = .68$  [ $p < .01$ ]). In other words, it seems that a great

deal of risk was not required for the courage scenarios to be rated as courageous acts but a high risk level was required in order to rate the behavior in the scenarios as foolhardy. Action was significant in influencing ratings of both courage ( $G = 2.12 [p < .01]$ ) and foolhardiness ( $G = .50 [p < .01]$ ) suggesting that the actor in the scenario had to act in order to be rated as either courageous or foolhardy. Fear was a factor influencing ratings of courage ( $G = .13 [p < .01]$ ) and the coefficient was positive indicating that an integral part of courage is exhibiting action despite of fear. In contrast, the foolhardy behavior required the person in the scenario not to feel fear ( $G = -.50 [p < .01]$ ). To be rated as a courageous act the scenario also had to include a description of a person acting for altruistic motives ( $G = -.53 [p < .01]$ ). In contrast, no such requirement (or the opposite of it – acting selfishly) was required from a scenario to be rated as foolhardy. To be rated as a courageous act a scenario had to have a positive outcome ( $G = .25 [p < .01]$ ) and to be rated as foolhardy it had to include a negative outcome ( $G = -.51 [p < .01]$ ). Thus, four of the five hypothesized components of courage seem to be essential to describe an act as courageous. Furthermore, it seems that courage and foolhardiness have different non-opposite profiles and that individuals clearly distinguish between them.

Given the large congruence of the definition of courage with my study 1 findings, I continue my construct development efforts with item creation and subsequent confirmatory factor analyses of these items. The construct development and validation steps are outlined in study 2.

### **Method Study 2**

In study 2 I sought to outline the measure creation steps I conducted including item development and scale construction in phase one, the assessment and report of the psychometric properties of the scale in stage two, the convergent and discriminant validity of the scale in stage three. Two studies were conducted to adhere to these three objectives. My empirical approach

and the results of each study are described in these three stages. First, however, I will describe the two samples used in these efforts.

**Participants.** Sample one and Sample 2 were obtained by asking working undergraduate students to respond to the courage items, and to complete a questionnaire of constructs that belong to the nomological network of personal courage. In addition, I asked participants to identify a person that knows him or her well. I contacted these significant others and asked them to respond to the same items about the focal participants. For Study 1 I obtained 213 self-reported and 177 other-reported scores of personal courage and its nomological network. The participant sample was 57% female, 70% Caucasian, with ages ranging from 18 to 51 years old with an average age of 23 (mean 22.71, sd. 5.30). The significant others were 59% female, 69% Caucasian, with ages ranging from 18 to 62 years old and a mean age of 29 years old (mean 29.13, sd. 12.13). The significant others noted how long they have known the individuals for whom they are completing the personality questionnaires. The significant others have known the participants from 6 months to 35 years, with an average of ten years (mean 9.71, sd. 8.26). The individuals identified themselves to be friends, boy or girlfriends, parents, coworkers, fiancés, siblings, and mentors.

Sample 2 was obtained four months later from a different sample of working undergraduate students. Sample 2 consisted of 236 working undergraduate students and their 190 significant others. This participant sample was 55% female, 76% Caucasian, with ages ranging from 18 to 57 years old with an average age of 24 (mean 24.26, sd. 7.54). The significant others were 60% female, 78% Caucasian, with ages ranging from 15 to 66 years old and a mean age of 29 years old (mean 29.26, sd. 12.51). The significant others noted how long they have known the individuals for whom they are completing the personality questionnaires. The significant others

have known the participants from 1 year to 43 years, with an average of ten years (mean 9.85, sd. 9.11). The individuals identified themselves to be a friend, boy or girlfriend, parent, daughter, cousin, niece, coworker, fiancé, sibling, or sorority sisters of the participants.

## **Measures**

**Big five.** Conscientiousness was measured with the 9-item Conscientiousness sub-scale from the Big Five Inventory (John & Srivastava, 1999). Example items included, “I make plans and follow through” and the reverse-worded item “I tend to be disorganized.” In the present study, the reliability of the Conscientiousness scale was  $\alpha=.81$ . The 10-item Openness sub-scale from the Big Five Inventory (John & Srivastava, 1999) had a reliability of  $\alpha=.79$ . Example items include “I am original, come up with new ideas” and “I am curious about many different things.” Although I do not have specific hypotheses about the remaining three traits of the Big Five Personality Inventory, I have included all five traits in the current study. The Big Five is the most widely used taxonomy of personality and including all five traits should achieve completeness of the dispositional nomological network of personal courage. In the present study, reliabilities for the 9-item Agreeableness scale was  $\alpha=.78$ , for the 8-item Neuroticism scale  $\alpha=.81$ , and for the 8-item Extraversion scale  $\alpha=.86$ .

**Core self-valuations.** Core self-evaluations were measured using the 12-item Core Self-Evaluation Scale (Judge, Erez, Bono, & Thoresen, 2003). Example items included, “I am confident I get the success I deserve in life” and the reverse-worded “I am filled with doubts about my competence.” In the present study, the reliability of the core self-evaluation scale was  $\alpha=.84$ . This measure encapsulates the personality traits of neuroticism, self-esteem, generalized self-efficacy, and locus of control.

**Optimism.** Optimism was measured with the 8-item Hope and Optimism sub-scale of the International Pool of Itemized Personality (Goldberg, 1999). Example items included, “Look on the bright side” and “Think about what is good in my life when I feel down.” In the present study, the reliability of the Optimism scale was  $\alpha=.75$ .

**Impulsivity.** Impulsivity was measured with the 17-item Impulsivity sub-scale of the International Pool of Itemized Personality (Goldberg, 1999). Example items included, “Am able to control my cravings and the reverse-worded “Blurt out whatever comes into my mind.” In the present study, the reliability of the impulsivity scale was  $\alpha=.87$ .

**Anxiety.** Anxiety was measured with the 10-item anxiety sub-scale of the International Pool of Itemized Personality (Goldberg, 1999). Example items included, “Am afraid of many things” and “Get caught up in my problems.” In the present study, the reliability of the anxiety scale was  $\alpha=.89$ .

**Moral identity.** Moral identity was measured using the 10-item Moral Identity scale by Aquino & Reed (2002) indicating the 5-item subscale of Symbolization and the 5-item subscale of Identification of Moral Identity. The scale instructions ask the participant to consider the following human characteristics: Caring, Compassionate, Fair, Friendly, Generous, Helpful, Hardworking, Honest, and Kind. The scale asks the participant the following example items “It would make me feel good to be a person who has these characteristics” and “The types of things I do in my spare time (e.g., hobbies) clearly identify me as having these characteristics.” In the present study, the scales were combined into 1 Moral Identity subscale with reliability  $\alpha=.79$ .

**Empathetic concern.** Empathetic concern was measured using the 10-item empathetic concern scale (Barchard, 2001). Example items included, “Feel sympathy for those who are

worse off than me” and the reverse-worded “Look down on any weakness.” In the present study, the reliability of the Empathetic Concern scale was  $\alpha=.74$ .

**Impression management.** Impression Management was measured using the 20-item Impression Management scale (Paulhus, 1984). Example items included, “I never take things that don’t belong to me” and the reverse-worded “I have some pretty awful habits.” In the present study, the reliability of the Impression Management scale was  $\alpha=.75$ .

### **Stage 1: Item Development and Scale Construction**

In constructing the Personal Courage Scale (PCS) I developed a pool of 72 items. These were written based on the results of the courage interviews Schilpzand et al. (2008) conducted as well as the results of Study 1. Furthermore, consistent with previous research in the courage domain (Woodard & Pury, 2007; Schmidt and Koselka, 2000) and courage-related constructs (Speaking Up, Detert & Edmondson, 2005), I also closely examined the items of these existing measures and, where possible, based my item development on these existing scale items. The items I generated aimed to cover the range of workplace courage types as indicated by Schilpzand et al.’s (2008) interviews with military officers and executives. These authors found that the types of courage that occur in office and critical response organizations were physical courage, social courage, and entrepreneurial courage. Accordingly, items were written that involved physical courage (e.g., “I would do what I could to save a stranger’s life, even if I were to risk an injury to myself”), social courage (e.g., I am likely to remain silent about a peer’s ethics violation”), and entrepreneurial courage (e.g., “In the workplace, I pursue promising new ideas, even though they may not work out”). The items were targeted to reflect the definitional components of the courage construct in order to maintain conceptual mapping between the

construct's definition and the content captured in the construct's measure. As the above examples reveal, both positively and negatively worded items were generated.

In this study several criteria were used to choose the Personal Courage Scale (PCS) final items from the list of 72 originally created items. First, the personal courage items needed to adequately sample the content domain of workplace courage. Thus, the items generated covered one of the three types of workplace courage. To ensure that the factor scales were reliable, the generated items had to be significantly correlated with each other within the factors. Since the factors presumably indicate a higher-order latent variable, the factors themselves, had to be moderately inter-correlated. Third, I examined the correlations between the self-reported items and the significant-other reports of these same items. Items that had unexpected or very weak correlations between the self-reports and significant-other reports were excluded. Finally, the personal courage scale had to be brief enough to be useful in selection processes. In all, I found 15 items that corresponded to these four criteria. Of the 15 items, 12 were positively worded, and 3 were negatively worded (reverse-scored). These items are provided in Table 5-2.

### **Stage 2: Psychometric Properties and Evidence of a General Factor**

The purpose of this stage of the study was to investigate the conditions necessary to establish the construct validity of the PCS. Construct validity is established via several indicators, such as the reliability of the scale, its distributional properties, and its factor structure. The reliability estimates I assessed included the reliability of the PCS scale in samples one, two, and three<sup>1</sup>. Also, test-retest reliability of the scale was determined for sample one and sample two. The two assessments of personal courage occurred 8 months apart. Finally, inter-source reliability estimates are available for samples one, two, and three. For samples one and two, the

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<sup>1</sup> The specifics of sample three will be reported in Study 3.

courage scale was completed by a significant other about our focal participant. In sample three, courage was assessed by three team members of the sample of Air Force officer trainees. The descriptive statistics and the reliability estimates for the three samples are reported in Table 5-3. As shown in Table 5-3, the distribution of the PCS was similar across the three samples. The means ranged from 3.56 to 4.03 with an average of 3.87 and the standard deviations ranged from .34 to .63 with an average of .49. None of the means were significantly different from each other. Across the six measurements, all coefficient alpha reliability estimates were above .80 with an average of reliability of .85. An examination of the six measurements of the PCS items revealed that all PCS items are positively correlated once the negatively worded items were reverse-scored. The alpha reliability estimates, the item-total correlations, and the inter-item correlations all indicate a high level of internal consistency of the PCS. Test-retest reliability after 8 months was  $r = .65$  in sample 1 and  $r = .66$  in sample 2 with a combined sample test-retest correlation of  $\bar{r} = .67$ , which indicates good stability of the PCS. The ICC1 value of .44 in Study one, .50 in Study 2, and .79 in Study 3 showed reasonable inter-rater reliability in all assessments. The ICC1 values are close to but even higher than the average self-peer ICC1 value ( $\bar{r} = .43$ ) reported by Costa and McCrae (1992, Table 8) for the NEO PI-R big five personality scale. Together, these results show that the PCS is reliable, and as such meets one necessary condition for the construct validity of the measure.

For the confirmatory factor analyses, I used LISREL 8.52 (Jöreskog & Sörbom, 2002) to test the underlying structure of this scale. I tested 2 competing nested models using a variance-covariance matrix as input into this program. Using the covariance matrix provides accurate estimates of the 'true' relations among the variables as LISREL corrects the estimates for unreliability. Since some fit statistics are more sensitive to sample size, multiple fit statistics are

reported. I report the following fit statistics: minimum fit function chi-square with corresponding degrees of freedom, Bentler's Comparative Fit Index (CFI; Bentler, 1990), Non-Normed Fit Index (NNFI; Tucker & Lewis, 1973), the Standardized Root Mean Square Residual (SRMR), and the Root-Mean-Square Error of Approximation (RMSEA) (Kline, 2005). The CFI indicates how much the fit improves going from the null model to the target model. The NNFI penalizes for complexity of the model by adjusting the proportion of explained variance. The SRMR is a measure based on the standardized average covariance residuals of the model. Finally, RMSEA is a population-based index that corrects for model complexity. Good model fit is typically ascribed when  $\chi^2/df$  falls below 3; when the CFI and NNFI rise above .90; and when SRMR and RMSEA fall near .05 (Kline, 2005). The combination of these statistics provides a good indication of overall model fit.

I loaded the courage-type specific items on their respective factor representing one of the 3 main types of workplace courage to test the 3-factor model. The competing model consisted of a 1-factor model on which all courage items load. Finally, I tested whether the 3 factors load onto a latent second-order factor. As my underlying assumption is that all courage items indicate one latent construct, the hypothesized model was that the 15 items would indicate 3 factors which in turn would load onto 1 higher or second-order courage factor. This model was created by allowing the LISREL program to freely estimate all relationships between the three factors and the higher order construct in addition to allowing the program to estimate all relationships among the indicators and the factors. Figure 5-1 represent the hypothesized model. As the figure shows, overall courage is indicated by the three types of workplace courage (physical, social, and entrepreneurial). In turn, these courage factors are indicated by several broad behaviors. For physically courageous acts, protecting and saving others are the behaviors. Others can be

employees with less power or status or they can be customers who do not have the amount of knowledge that insiders may have. For socially courageous activity, speaking up and resisting unethically are manifest behaviors. Either speaking up to highlight wrongful behavior or taking a stance to resist such behavior as requested by powerful others (e.g., supervisors, more senior employees). Finally for entrepreneurial courage, business innovation and pursuing novel ideas are the manifest behaviors. Taking the initiative to improve things for others in the organizational realm (intrapreneurship) or venturing and engaging in entrepreneurial activities for primarily socially desirable reasons can be classified as business innovation or pursuing non-normative ideas while risking personal funds or potential future earnings are examples.

In the confirmatory factor analyses, three models were investigated including two first-order models (Models 1, and 2) and one second-order model (Model 3). Table 5-4 reports the results of each model and corresponding fit statistics. First, a confirmatory factor analysis was conducted where physical courage, social courage and entrepreneurial courage represented three separate first-order factors (Model 2). Results of the average confirmatory factor analyses across the six samples revealed the following fit statistics:  $\chi^2 (87, N = 1905) = 162.59, p < .01; \chi^2/df = 1.87; CFI = .96; NNFI = .95; SRMR = .06; RMSEA = .07$ . Next, this three factor model of courage (Model 2) was compared to the one-factor courage scale (Model 1). The one-factor model was used as a “straw model”, or baseline, in order to determine how much fit improved by using the other models. The average fit indices of Model 1 across the six samples were as follows:  $\chi^2 (90, N = 1905) = 294.94, p < .01; \chi^2/df = 3.48; CFI = .89; NNFI = .87; SRMR = .09; RMSEA = .13$ . Compared to Model 1, the three-factor Model 2 demonstrated better fit to the data. Furthermore, the 3-factor model statistics indicate good fit while the 1-factor model cannot be indicated as such.

The correlations among the three courage dimensions were strong. Specifically, the average correlation of all samples between physical courage and entrepreneurial courage ( $\bar{r} = .66$ ) was the strongest, followed by social courage and entrepreneurial courage ( $\bar{r} = .65$ ), and physical courage and social courage ( $\bar{r} = .57$ ). In addition, the average correlation for the three factors was strong ( $\bar{r} = .63$ ). The strong intercorrelations among the three factors of courage signal that they are likely dimensions of one second-order construct.

Next, I investigated potential structural relations between higher- and lower-order latent variables, since second-order factors may account for correlated errors that are very common in “first-order” confirmatory factor analysis (Gerbing & Anderson, 1984). Results indicated that the fit statistics of the three-factor model across the six samples were identical to latent higher-level construct model. These results, in addition to the moderately strong interfactor correlations suggests that the three factors indeed load onto a higher level latent courage construct.

### **Stage 3: Convergent and Discriminant Validity**

To demonstrate the construct validity of a new scale, its convergent and discriminant validity need to be assessed. This is accomplished by investigating the pattern of relationships between the focal concept and measures of other constructs determining whether these relationships conform to theoretical propositions (Campbell, Trapnell, Heine, Katz, Lavallee, & Lehman, 1996). Hence, in the third stage of the study, I investigated the nomological network of the PCS and determined the extent to which the pattern of correlations adhered to theory-based expectations.

Table 5-5 reports the means, standard deviations, and zero-order correlations among each of the study variables, and the coefficient alpha reliabilities along the diagonal for sample 1. Table 5-6 reports these statistics for sample 2. As predicted, the PCS showed good convergent validity as it correlates strongly with general courage ( $\bar{r} = .54$ ), and speaking up ( $\bar{r} = .66$ ). I also

tested discriminant validity with personality constructs that belong to the nomological network of courage and found the expected moderate correlations of personal courage with conscientiousness ( $\bar{r} = .32$ ), openness ( $\bar{r} = .28$ ), core self evaluations ( $\bar{r} = .38$ ), optimism ( $r = .37$ ), empathy ( $\bar{r} = .22$ ), moral identity ( $\bar{r} = .35$ ), and impression management ( $\bar{r} = .19$ ), and the expected moderate negative correlations with neuroticism ( $\bar{r} = -.25$ ), impulsivity ( $\bar{r} = -.27$ ), and anxiety ( $\bar{r} = -.24$ ) in both samples. Furthermore, the correlations were the same in direction and very similar in effect size between the two samples. Overall, the PCS showed significant convergence with the similar constructs of general courage and speaking up behavior and discriminant validity from various distinct, yet related, personality constructs in the nomological network of personal courage.

Table 5-1. HLM results predicting courage and foolhardiness using courage components.

	Outcomes	
	Courage	Foolhardiness
Intercept ( $\gamma_{00}$ )	3.02**	3.51**
Risk ( $\gamma_{10}$ )	.04	.68**
Action ( $\gamma_{20}$ )	2.12**	.50**
Fear ( $\gamma_{30}$ )	.13**	-.50**
Self ( $\gamma_{40}$ )	-.53**	.02
Outcome ( $\gamma_{50}$ )	.25**	-.51**

Notes: Coefficients estimates are unstandardized hierarchical linear modeling (HLM) coefficients. \*  $p < .05$  (two-tailed). \*\*  $p < .01$  (two-tailed).

Table 5-2. The Personal Courage Scale (PCS)

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**Instructions:** Below are several statements about you with which you may agree or disagree. Using the response scale below, indicate your agreement or disagreement with each statement by placing the appropriate number on the line preceding that statement.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

---

**Physical Courage**

1. I would do what I could to save a stranger's life, even if I was to risk an injury to myself.
2. I would risk getting hurt to save somebody else from getting hurt.
3. I am more likely than others to make personal physical (in the form of risking safety) sacrifices to help others.
4. I believe that risking my own safety to save somebody else is better than not acting and risking somebody else getting hurt.
5. If somebody needed to be rescued, I would act immediately even though I may feel some fear.
6. I would take a stance to help physically protect others if they were in danger.

**Social Courage**

7. I would not tolerate behavior by someone, even a friend, that hurts others and would confront the person about the behavior.
8. I am likely to remain silent about a peer's ethics violation. (**r**)
9. I would stand up to a supervisor or higher level manager if they asked me to do something I was not sure was ethical.
10. I speak up when workplace happenings conflict with my sense of what is appropriate.
11. When I see somebody act unethically, I confront the person with what they have done.
12. I do not address unethical behavior, even though I have noticed it. (**r**)

**Entrepreneurial Courage**

13. I believe that acting on a good idea for a business innovation while risking my own money is better than not acting on the idea and risking the jobs of others.
  14. I cannot see myself undertaking a promising but risky new business venture. (**r**)
  15. In the workplace, I pursue promising new ideas, even though they may not work out.
- 

Notes: r = reverse scored. This measure is nonproprietary (free) and may be used without permission.

Table 5-3. Distributional properties and reliability estimates of the Personal Courage Scale

Distributional properties and reliability estimates				
	Mean (SD)	Internal consistency reliability ( $\alpha$ )	Test-retest reliability	Intersource reliability (ICC1)
<i>Sample 1</i>				
Self time 1	3.56 (.34)	.84	.65	.44**
Self time 2	3.75 (.48)	.82		
Significant other	3.99 (.63)	.89		
<i>Sample 2</i>				
Self time 1	3.93 (.46)	.82	.66	.50**
Self time 2	4.04 (.46)	.85		
Significant other	4.03 (.56)	.87		
<i>Sample 3</i>				
Self time 1	4.00 (.50)	.83	.66	.79**
Self time 2	4.01 (.59)	.87		
Peers – time 2	3.95 (.60)	.82		

*Notes: Internal consistency estimates are coefficient alpha ( $\alpha$ ) reliability estimates. Test-retest estimates are correlations at Time 1 and Time 2. Peers – self = the intraclass correlation between self and average peer rating. The peer ratings are supplied by 3 peers.*

*Sample sizes for internal consistency are N=210 for sample 1, N=233 for sample 2, and N=185 for sample 3.*

*Sample sizes for test-retest are N=61 for sample 1, N=69 for sample 2, and N=160 for sample 3.*

*Sample sizes for intersource reliability are N=176 for sample 1, N=187 for sample 2, and N=143 for sample 3. The time 2 sample for study 1 is N=63 and N=65 for study 2. The significant other sample in study 1 is N=177 and N=188 for sample 2. The Peers time 2 statistics are averages of the statistics for peer1, peer2, and peer3.*

Table 5-4. Fit statistics from confirmatory factor analysis of the Personal Courage Scale

Fit Statistics	Sample 1 – Self		Sample 1 - Other		Sample 2 - Self	
	<u>One</u>	<u>Three</u>	<u>One</u>	<u>Three</u>	<u>One</u>	<u>Three</u>
Number of factors in model						
Degrees of Freedom	90	87	90	87	90	87
$\chi^2$	378.44	169.49	310.57	151.27	447.27	193.14
$\chi^2/df$	4.20	1.95	3.45	1.74	4.97	2.22
CFI	.84	.95	.92	.98	.81	.94
NNFI	.81	.94	.90	.97	.78	.93
SRMR	.11	.06	.09	.06	.12	.06
RMSEA	.14	.06	.14	.07	.16	.07

Fit Statistics	Sample 2 – Other		Sample 3 – Self		Sample 3 – Peers	
	<u>One</u>	<u>Three</u>	<u>One</u>	<u>Three</u>	<u>One</u>	<u>Three</u>
Number of factors in model						
Degrees of Freedom	90	87	90	87	90	87
$\chi^2$	371.06	182.65	274.04	172.90	224.49	147.81
$\chi^2/df$	4.12	2.10	3.04	1.99	2.94	1.70
CFI	.88	.96	.90	.96	.92	.96
NNFI	.86	.95	.88	.95	.91	.96
SRMR	.10	.06	.09	.07	.08	.06
RMSEA	.16	.08	.12	.08	.11	.07

Notes. N sample 1 self-reports = 212, N sample 1 other-reports = 177, N sample 2 self-reports = 229, N sample 2 other-reports = 188. N sample 3 self time 1 = 155, N sample 3 self time 2 = 144. Sample 3 peers' statistics are weighted averages of time 1 and 2 for peers 1, 2, and 3 of 255 peers. All  $\chi^2$  values are significant at  $p < .01$ . CFI = comparative fit index; NNFI = non-normed fit index; SRMR = standardized root mean square residual; RMSEA = root mean square error of approximation.

Table 5-5. Means (M), Standard Deviations (SD), and Intercorrelations among study variables for sample 1, study 2

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Courage (self rated)	3.77	.51	(.84)														
2. General courage	3.56	.83	.56	(.84)													
3. Speaking Up	3.86	.60	.67	.40	(.76)												
4. Conscientiousness	3.86	.66	.34	.29	.23	(.84)											
5. Agreeableness	3.82	.57	.25	.25	.11	.33	(.77)										
6. Neuroticism	2.80	.77	-.25	-.30	-.18	-.10	-.34	(.84)									
7. Extraversion	3.61	.74	.31	.35	.24	.13	.19	-.26	(.86)								
8. Openness	3.69	.57	.28	.18	.24	.08	.12	-.06	.17	(.77)							
9. Core Self Evaluations	3.86	.59	.42	.43	.33	.41	.35	-.58	.38	.15	(.83)						
10.. Impulsivity	2.52	.57	-.33	-.23	-.29	-.54	-.42	.34	.00	-.14	-.46	(.85)					
11. Optimism	4.01	.59	.39	.36	.31	.36	.37	-.41	.35	.08	.54	-.46	(.76)				
12. Empathy	3.45	.57	.20	.05	.18	.05	.15	.19	.07	.15	-.03	-.05	.21	(.76)			
13. Anxiety	2.83	.81	-.27	-.29	-.26	-.05	-.28	.80	-.25	-.04	-.52	.45	-.49	.10	(.89)		
14. Moral Identity	4.01	.56	.39	.36	.24	.36	.27	-.08	.23	.06	.24	-.36	.43	.24	-.14	(.80)	
15. Impression Mgt.	2.98	.51	.20	.21	.13	.45	.39	-.16	.11	.05	.33	-.50	.30	.09	-.21	.27	(.78)

Notes: N = 196-209. Correlations greater than .19 are significant at  $p < .01$  level, correlations greater than .15 are significant at  $p < .05$  level. Scale reliabilities are on the diagonal in parentheses.

Table 5-6. Means (M), Standard Deviations (SD), and Intercorrelations among study variables for sample 2, study 2

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Courage (self rated)	3.85	.47	(.82)														
2. General courage	3.63	.79	.53	(.81)													
3. Speaking up	3.92	.61	.66	.36	(.78)												
4. Conscientiousness	3.92	.63	.30	.23	.20	(.81)											
5. Agreeableness	3.82	.61	.18	.01	.02	.32	(.79)										
6. Neuroticism	2.71	.70	-.25	-.22	-.17	-.24	-.35	(.79)									
7. Extraversion	3.53	.74	.16	.19	.26	.13	.12	-.10	(.86)								
8. Openness	3.64	.63	.28	.14	.38	.17	.20	-.13	.26	(.80)							
9. Core Self Evaluations	3.91	.61	.34	.18	.30	.49	.39	-.60	.26	.19	(.85)						
10. Impulsivity	2.50	.64	-.22	-.15	-.05	-.34	-.37	.40	.20	-.02	-.39	(.88)					
11. Optimism	4.03	.59	.36	.28	.28	.37	.33	-.30	.14	.22	.54	-.37	(.75)				
12. Empathy	3.55	.56	.23	.19	.18	.12	.26	.02	.13	.29	.13	-.15	.32	(.72)			
13. Anxiety	2.78	.79	-.23	-.23	-.09	-.10	-.21	.71	-.04	-.07	-.47	.47	-.43	-.08	(.89)		
14. Moral Identity	3.97	.54	.33	.20	.17	.29	.30	-.01	.13	.06	.17	-.18	.30	.23	.04	(.79)	
15. Impression Mgt.	3.01	.48	.18	.01	.10	.36	.31	-.19	.01	.05	.23	-.39	.16	.10	-.19	.19	(.73)

Notes: N = 225-235. Correlations greater than .17 are significant at  $p < .01$  level, correlations greater than .14 are significant at  $p < .05$  level. Scale reliabilities are on the diagonal in parentheses.

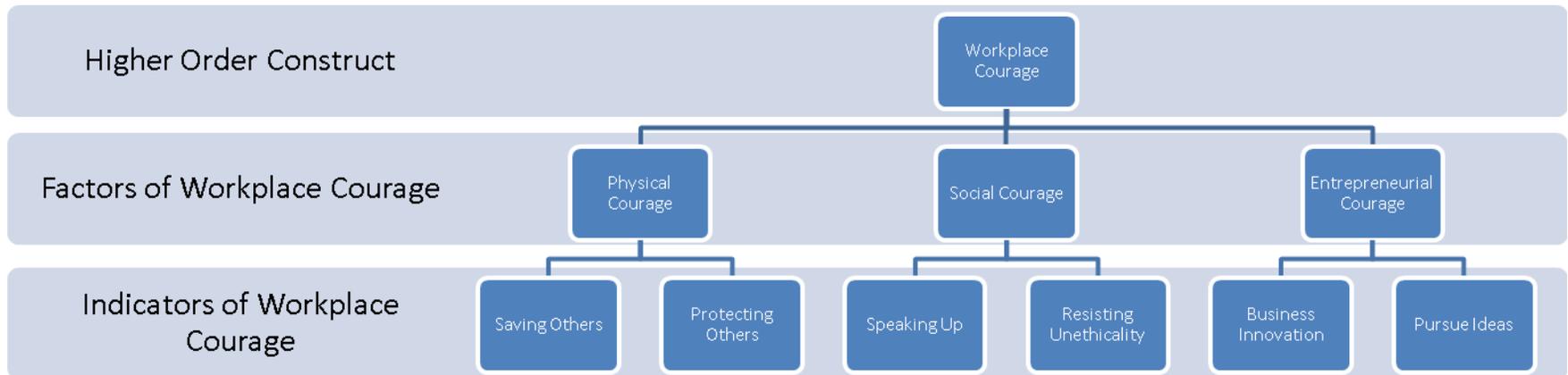


Figure 5-1. Factor structure of workplace courage

## CHAPTER 6 METHOD STUDY 3

I used a sample of military officers attending the AirForce Squadron Officer School for the predictive validity portion of the study. I chose leadership as rated by peers as criterion variables. Peers and the flight instructor also provided votes of endorsement for those officers they believe are outstanding leaders. Additionally, I used various performance indicators including test scores as a proxy for mental ability, fitness score as a proxy for physical ability, and overall rank, stratified rank within the flight as performance indicators as additional dependent variables.

The Air Force Squadron Officer School is a military leadership development program that provided training using a variety of experiential learning activities (e.g., team problem solving and athletic competitions) including various war-game simulation tasks, a paintball match, as well as traditional in-class leadership education.

Two notable war-game exercises were executed during the 6-week program. The first is an outdoor problem solving exercise in which the flight teams are required to complete a physical obstacle course. In this first exercise, the teams try to successfully beat a series of built structures. For instance, one of the challenges requires them to save the entire team from a building by transporting each member to safety on the other side of a heavily guarded fence, while using only an 8-foot piece of rope and a 55 gallon drum. Executing this series of tasks requires cognitive and physical skills, and serves as an exercise in which leadership and courage can be displayed and identified. The second exercise is similar to the first, except it is conducted in the flight simulation room rather than outdoors. This second exercise involves a great amount of team communication constraints and poses the teams to tackle unique decision-making scenarios in challenging and threatening flight situations. This exercise again allows for the

display and identification of leadership and courage behaviors. These team exercises were completed late in the 3<sup>rd</sup> week and early in the 4<sup>th</sup> week of the program respectively.

During the six-week curriculum the military recruits lived together in dormitories. The Personal Courage instrument was administered to all participants as a pretest at the beginning of the third week of the leadership development program and as a posttest at the end of the 4<sup>th</sup> week of the program. Three of each of the student's Flight team members with whom they trained completed the courage instrument about them at both times. Each participant was randomly assigned to provide ratings for three others. Thus, I obtained 3 peer scores for each participant. Specifically, I obtained pre war game simulations and post simulations self-reported courage scores as well as 3 pre-and post-peer-reported courage scores for each individual. During the post test, the peers also completed a comprehensive leadership questionnaire about the 3 others they were assigned to rate. The participants were not informed who were the individuals rating them reducing possible individually targeted impression management techniques. The comprehensive leadership questionnaire included questions about their communication abilities, motivational skills, teamwork, and their planning and adaptability behaviors. All peers in the 12-13 member flights, not just the 3 assigned peers, at the conclusion of the 6<sup>th</sup> week of the program, voted for those peers whose leadership ability they deemed exceptional. Hence, a cumulative peer-supplied leadership endorsement score (vote score) was obtained for each officer.

Flight instructors oversaw flights of 12-13 members and rated each flight member's leadership ability. Additionally, the flight instructors endorsed a sub-set of students (20%) for leadership distinction upon their graduation. Furthermore performance ratings of class rank, fitness, and academic performance were obtained.

**Participants.** Participants were 191 military students and the sample consisted of 17% female, 81% male, and 2% did not list their gender. Eighty percent were Caucasians, with ages ranging from 25 to 56 years old (mean 33, sd. 4.87). All participants held the rank of Captain. All participants had their Bachelors degree, 28% had a Masters degree, and 2% held a Doctoral degree.

**Measures.**

**Peer leadership** was assessed by a comprehensive 72-item Azimuth Multi-Rater 6007 Leadership scale developed by the U.S. Army that assesses leadership ability on the dimensions of communication, decision-making, motivating, developing others, integrity, stability, building relationships, learning and adapting, planning, executing, assessing situations accurately, respecting others, and being service-oriented toward others. The reliability coefficients were  $\alpha=.97$  for the Peer1 ratings,  $\alpha=.97$  for the Peer2 ratings, and  $\alpha=.97$  for the Peer3 ratings.

**Peer endorsement votes** was measured by the number of peer votes each officer received from the members of their flight crew. Each students was allowed to vote for four of his/her classmates based on who they think are deserving of Distinguished Graduate (DG) recognition. The variable is a sum total of the votes received. Scores ranged from 0-13 votes, with an average of 4.09 votes per individual.

**Academic performance** was assessed with the academic test performance during the leadership course. The test performance was the average test score on 2 academic military leadership tests that were held midway through the course and at the conclusion of the course. Scores could range from 0-100. The minimum score was 44, and the maximum was 100, with a mean of 85.29.

**Physical ability** was measured using an objective fitness score in the 4<sup>th</sup> week of the course. The fitness score was determined by the completion of physical obstacle and endurance tasks. Scores could range from 0-10. The minimum score was 5 and the maximum score was 10, with a mean of 9.67.

**Class rank** was assessed using an overall ranking order of the larger 405 officer program. Each officer was rank-ordered relative to all other recruits in the leadership program. The ranking was based on classroom performance and instructors' ratings of each individual.

**Flight instructor endorsement for distinguished graduate.** This indicator was a performance measure of the flight instructor's confidence in the officer's exceptional performance. Only 20 percent of the officers received the flight instructor's endorsement for distinguished graduate.

**Performance stratification within the flight.** This measure indicates top third, middle third, or bottom third performance ranking within each flight of 12 individuals. The scores range from 1 to 3, with 36% ranked as top one-third, 53% ranked in the middle group, and 11 % ranked as bottom third performers.

### **Results study 3**

In this dissertation I argued that a prospective approach to courage is warranted and that individuals who score high on "personal courage" should behave more courageously. Because courageous behaviors occur infrequently observers may not be able to identify courageous individuals in the early phases of acquaintanceship. However, after a situation that requires courageous behavior to be manifested, "observers" should be able to identify the courageous individual(s) in the group. Thus, if the prospective approach is correct, the dispositional measure of "personal courage" should predict these others' ratings of courage after such a challenging situation occurs but not before. The first assessment of courage was completed by the air force

officers early in the third week of the course. At this point they had lived together for two weeks and had spent all their waking hours together in classroom activities (50% of the time) and physical fitness activities (10% of their time)<sup>1</sup>. However, they were not involved in activities that required the enactment of courage.

In week three and four the officers participated in the two team exercises described in the procedure section. Thus, I predicted that observers would not be able to reach an agreement about the courage of the focal person before the war game exercises but will be able to agree after the war simulation exercises. In order to test this hypothesis I estimated “peer agreement” about the courage of the focal officer pre-and post- war simulation exercises using intra-class correlations (ICC1). The ICC1 of the pre-exercise was .047 which according to Bliese (2000) is considered quite low and probably does not permit aggregation across raters. In contrast, the ICC1 post-exercises (.16) was acceptable in magnitude. These combined findings suggest that the homogeneity of courage rating by peers increased from pre to post team exercise having given peers the opportunity to observe the focal officer’s behavior in two ‘strong’ situations that required the enactment of courageous behavior.

The main research question posed and investigated in this dissertation is whether courage is a disposition that can be measured by self-report and can predict courageous actions. In this sample peers observed the focal officer behave in two war simulations that allowed the enactment of courage. The post-war games ICC1s suggested that peers could reach an agreement about the courage of the focal person after observing him or her behave in these war simulations. Thus, what I investigated next is whether pre-simulation self-reported courage could predict the peers’ ratings of courage after the peers had had the opportunity to observe their fellow flight

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<sup>1</sup> The rest of the time they spent in general activities such as attending flight guest speaker presentations, lectures, or mass briefings in the school auditorium.

officers in the war game simulations. In this analysis I also controlled for the officers' academic performance and physical ability. I used hierarchical linear modeling (HLM, Bryk & Raudenbush, 2002) to analyze these data as this method allows for the simultaneous estimation of within and between group-level regression equations. At the first level of analysis (i.e., the individual-level model), the specified model for each officer was:

$$Y_{ij} = \beta_{0j} + r_{ij}$$

Where,  $Y_{ij}$  was the post-simulations peers' i rating of officer j's courage;  $\beta_{0j}$  (the intercept) represented the average post-simulation courage rating of officer j; and  $r_{ij}$  represented the peer rating error term. HLM incorporates a second-level modeling (i.e., between-level model) in which the officer intercepts ( $\beta_{0j}$ ) are simultaneously regressed on the between-individuals (officers) variables:

$$\beta_{0j} = \gamma_{00} + \gamma_{01}W_{1j} + \gamma_{02}W_{2j} + \gamma_{03}W_{3j} + U_{0j}$$

Where,  $W$  represented officer variables (pre-simulation self-report courage, academic performance, fitness performance) for officer j,  $\gamma$  represented the relationship (i.e., slope) of these officer variables with peer courage ratings for officer j, and  $U_{0j}$  represented the officer between-level error term.

The results of the analysis regarding the relationship between the officers' self-report of courage before the war simulations and peers' ratings of officers' courage after the war simulation tasks are represented in Table 6-1 (see "Model 1") and indicate that officers' dispositional courage was positively associated ( $\gamma_{01}=.14, p <.05$ ) with peers' rating of his or her courage. In contrast, officers' academic performance and physical ability were not significantly related to peers' ratings of officers courage.

While it appears that dispositional courage assessed by the self-report Personal Courage

Scale predicted peers' ratings of officers' courage, an alternative explanation exist to these findings. It is possible that the courage ratings by peers was simply a proxy for leadership ability and as such was not a measure of courage per se. In other words, officers that exhibited leadership during the war games were perceived as more courageous not because they exhibited courage but because they exhibited leadership. To control for this alternative explanation in Model 2 I tested the exact same variables tested at the second level of analysis in Model 1 but also controlled for peers' rating of leadership at the first level. Thus, at the first level of analysis the model was:

$$Y_{ij} = \beta_{0j} + \beta_{1j}X_{ij} + r_{ij}$$

Where,  $Y_{ij}$  was the post-simulations peer's  $i$  rating of the officer  $j$  courage;  $\beta_{0j}$  (the intercept) represented the average post-simulation courage rating of officer  $j$  controlling for peers' leadership ratings;  $\beta_{1j}$  represented the average relationship between peers' ratings of officers  $j$ 's leadership ability and courage;  $X_{ij}$  represented the peers'  $i$  ratings of officer  $j$ 's leadership ability, and  $r_{ij}$  represented the peer rating error term. The results are presented in Table 6-1 (Model 2) and show that peer leadership ratings of the officer were indeed related to their ratings of his or her courage ( $\gamma_{10}=.92, p <.01$ ). However, even controlling for leadership the relationship between the PCS self-report dispositional measure was still significant and in fact did not change in magnitude ( $\gamma_{01}=.14, p <.05$ ). Thus, it seems that although courage is related to leadership it is not equivalent to leadership. As such, peers can identify courage in others after having spent time with them in situations that would allow for the display of courage and the disposition to be courageous predicts this peer assessment.

The second question that I posed was whether courage predicts performance and leadership in the critical response organization. To test the mediating effect of leadership ability on

the relationship between personal courage and performance, I specified a structural model using LISREL 8.52 (Jöreskog & Sörbom, 2002). In this model the personal courage rating of pre and post simulations were loaded on a personal courage construct. The three peers' post simulation ratings of leadership ability were loaded on the leadership construct. Peers endorsement vote, instructor endorsement vote, class rank, and performance stratification within flight were all loaded on the performance construct. All the loadings were statistically significant. LISREL estimates of the hypothesized model are presented in Figure 6-1. Only significant paths are represented in the Figure. Results show that personal courage, academic performance, and physical ability were all significantly related to leadership. In turn, leadership was significantly related to performance. Academic performance and physical ability were also directly related to performance while personal courage had no significant direct relations with performance. The indirect path from personal courage to performance was .04 ( $p < .05$ ). The indirect path from academic performance to performance was .20 ( $p < .01$ ) and the total effect was .67 ( $p < .01$ ). The indirect path from physical ability to performance was .16 ( $p < .01$ ) and the total effect was .35 ( $p < .01$ ). Fit statistics for the structural model were as follows:  $\chi^2$  (42; N = 160) = 70.91  $p < .01$ ;  $\chi^2/df = 1.68$ ; CFI = .97; NNFI = .95; SRMR = .08; RMSEA = .07. These results show that personal courage had modest but significant relationship with both leadership and performance in the critical response organization.

Table 6-1. Officer courage disposition's influence on peers' ratings of officer's courage

	Model 1	Model 2
<u>Intercept (<math>\beta_0</math>)</u>		
1. Intercept - $\gamma_{00}$	2.99**	2.97**
2. Officer courage self-report - $\gamma_{01}$	.14*	.14*
3. Officer academic performance - $\gamma_{02}$	.00	.00
4. Officer physical ability - $\gamma_{03}$	.03	.04
<u>Slope (<math>\beta_1</math>)</u>		
5. Intercept - peers leadership ratings - $\gamma_{10}$	---	.92**

Notes:  $\beta$  represents first-level intercept coefficient;  $\gamma$ 's represent second level coefficients. \*\*p < .01, \*p < .05

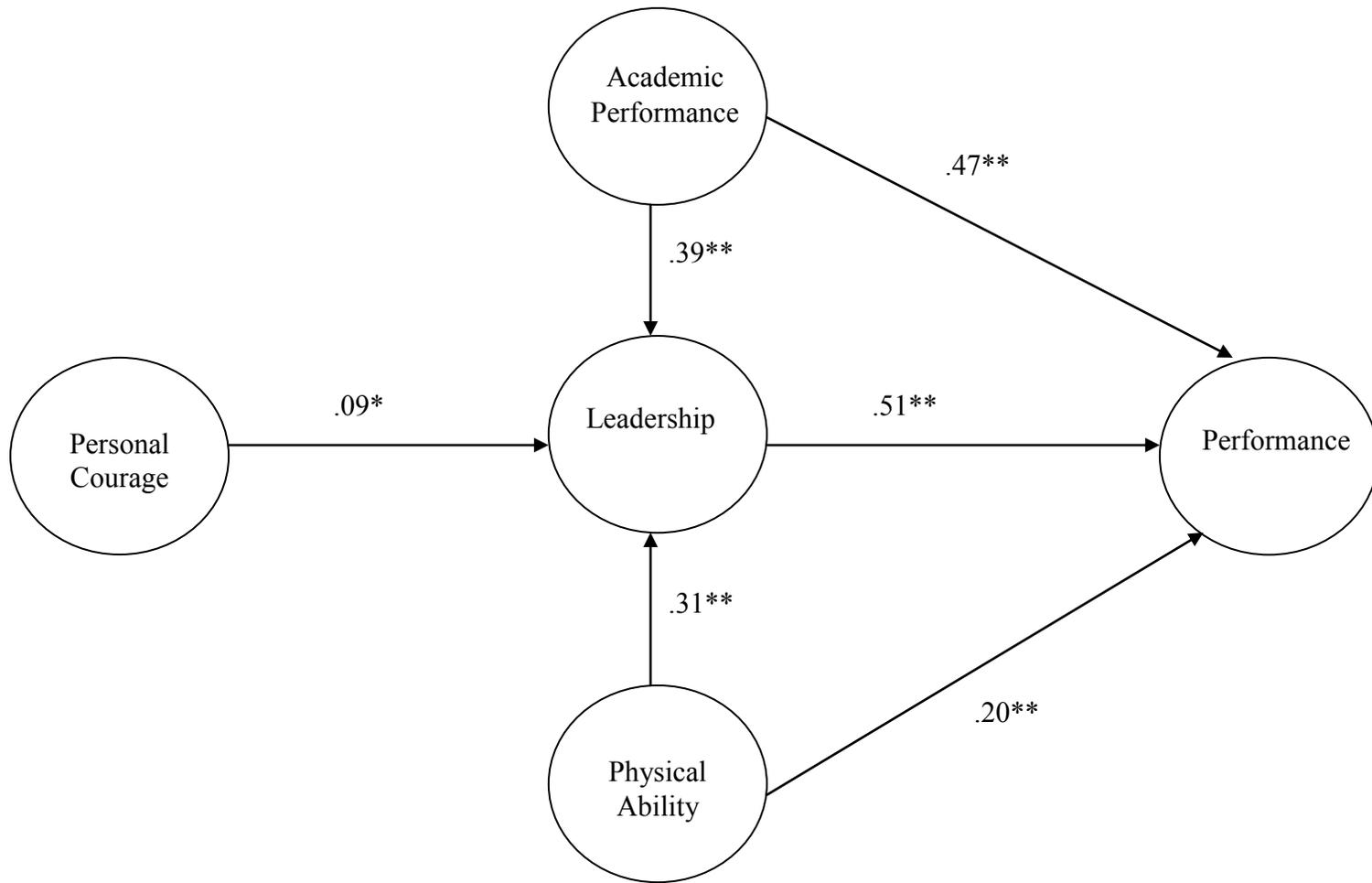


Figure 6-1 Model of workplace courage

## CHAPTER 7 GENERAL DISCUSSION

In this dissertation I aimed to develop the Personal Courage Scale (PCS) a reliable and valid measure of the courage construct that adhered to its comprehensive definition. In the first study I sought to confirm the definition of the construct as composed by Schilpzand and colleagues (2008) that was based on interviews with executives and military officers and a review of the courage definition in various domains (e.g., philosophy, religion, military science, and psychology). Study 1 employed a policy capturing design which systematically varied the absence and presence of the definitional components of courage.

The findings from Study 1 suggest that the definition proposed by Schilpzand et al. (2008) was largely confirmed. Courage is ascribed when the actor overcomes fear and takes action for a worthy goal. Furthermore, the success of the outcome does influence ratings of courage such that a positive outcome makes actions be perceived as more courageous. These findings also suggest that the level of risk does not significantly influence ratings of courage. Courage ratings are independent of whether the risk assumed by the actor is great or small. Of course the presence of some amount of risk is indisputable. Without some personal risk assumption, courage is nonexistent; instead we are left with charitable or helpful action, perhaps OCB-type of behavior. Hence, the policy capturing results suggest that grave risks are not required for acts to be labeled courageous and provide some initial evidence that courageous activity may be less risky in nature than suggested by Schilpzand et al. (2008). Given the lesser requirement for large risk assumption, courage may hence be a more commonplace activity as suggested by Sekerka and Bagozzi (2007) or even an 'every-day' type of event (Worline, 2002).

My findings suggest that foolhardiness differs from courage and that foolhardiness is not the opposite of courage, but a separate construct that can be differentiated using the same

definitional elements. Foolhardiness is characterized by action, high risk rather than low risk, and no fearful emotions. Furthermore, the motivation for the activity, either self-motivated or other-motivated is not associated with foolhardiness, while the outcome is significantly negative. As such, foolhardiness is directly opposite from courage on a number of the courage dimensions (fear, outcome), while both activities denote action, and can be differentiated on other dimensions (risk and motivation).

I began this paper by arguing that courage can be measured and likely has a dispositional nature that is facilitated by FITD experiences. A series of two studies were designed to test these bold claims. Results from three independent samples supported the validity of the measure – the Personal Courage Scale (PCS). Results of these studies in concert indicate that the PCS is a useful measurement tool to assessing personal courage. The validity of the PCS was demonstrated partly by the reliability of the scale. Indeed, the 15-item PCS displayed good levels of internal consistency, test-retest reliability, and inter-source reliability. The level of self-peer agreement of the PCS was  $r = .47$ , and is stronger than that of other personality measures such as the Big Five (Costa and McCrae, 1992). Furthermore, as expected the items of the PCS all loaded on a single higher-order three-dimensional courage construct.

The indicators of peers' courage ratings after an intensive 6-week leadership training program displayed high agreement with self-assessments of courage both before and after the leadership development program. As expected, shared challenging situations aided the recruits in identifying the courageous individuals among them. This finding corroborates the claim that others' personal courage can be assessed if individuals are able to observe them in situations that allow FITD manifest behavior.

Beyond reliability, several indicators provide support for the validity of the PCS. First, it displayed convergent validity as evidenced by the strong correlations with measures of general courage and speaking up behavior. Both these behaviors are conceptually closely aligned with personal courage, and speaking up behavior has been suggested to be one of the manifestations of courage in organizational settings (Schilpzand et al., 2008). Second, the PCS was moderately correlated with dispositional constructs in its nomological network in two independent samples. Third, the PCS showed significant prediction of leadership behavior and job performance in a critical response organization, which provides initial evidence of the measure's predictive validity. The personal courage construct displayed incremental validity in predicting job performance controlling for cognitive and physical ability. Furthermore, mediation analyses revealed that the relationship between self-rated personal courage and performance was mediated by peer perceptions of leadership. Thus, personal courage also seems to have important predictive validity properties.

A particularly interesting implication of the current research is that personal courage may be developed via FITD activities. The training exercises of the curriculum allowed for the demonstration of such behavior, and allowed for the recognition of one's courage by others. Various indicators demonstrate the developmental nature of physical courage. Military personnel complete combat training, police officers and fire fighters participate in professional training to prepare them to enact physical courage. Schilpzand et al.'s (2008) data certainly reflects that the vast majority of the military participants that were interviewed, reported that they drew courage from such previous training experiences. Social courage is recently flagged as developmental as many business programs include in their curriculum ethics classes that provide students with ethical dilemmas to exercise and develop their moral muscles. These FITD ethics initiatives aim

to provide students with the courageous preparation to enact such behavior when the situation demands it. Although the jury is still out on the benefit of such preparatory ethics training, the principle of courageous development may function similarly to physical courage. Indicators signal that courage may indeed benefit from such training, even though the processes affected by these experiences are still unclear. Speculation that such an effect does exist has been expressed previously by Jawaharlal Nehru the first Prime Minister of India. He conveyed that “To be in good moral condition requires at least as much training as to be in good physical condition.” Personal efficacy, concern for others, or merely awareness of courageous behavioral options may be likely psychological processes affected by such experience.

### **Future Research**

In the introduction I mentioned that courage is an important organizational construct that may be able to predict a series of other organizational behaviors. I will briefly highlight other important organizational behaviors that may be predicted by personal courage in future research endeavors. First, employee voice and speaking up behaviors may be facilitated by personal courage. Van Dyne and LePine (1998) define voice behavior as promotive (proactive, encouraging) behavior that emphasizes the expression of constructive challenge intended to improve rather than merely criticize. Voice is similar to speaking up behavior (Detert, 2002) which is defined as “speaking up inside organizations about problems or with observations, questions, or ideas about how to improve things” although voice is generally more referent to group domains while speaking up pertains to any organizational domain. Such voice or speaking up behavior may be facilitated by personal courage, especially if such prosocial activity requires risk assumption and the reasonableness of fear.

Second, creativity may also be encouraged by personal courage. Employees are credited with creativity when they propose useful ideas or demonstrate behaviors that are different than

what is already known or common practice (Mumford & Gustafson, 1988; Woodman, Sawyer, & Griffin, 1993). Spending one's time and effort on creative endeavors that are non-normative often requires a healthy dose of personal risk-taking. Such extra-role activity may take away from in-role work and may negatively affect the perception by others of one's productivity and contribution to the work unit. Expressing one's creative ideas to others furthermore requires the assumption of interpersonal risk, as the creative suggestions frequently run counter to the status quo. Others may reject the creative ideas and consider them futile or disruptive. As such, the assumption of risk and both the activities of spending resources on beneficial creative endeavors and sharing such helpful ideas represent situations that can be facilitated by personal courage.

Third, entrepreneurship likely has a dispositional nature that is partly comprised of courage. Lumpkin and Dess (1996) outline factors that constitute an organization's entrepreneurial orientation and include that autonomy, innovativeness, risk-taking, proactivity, and competitive aggressiveness need to be enacted. Entrepreneurial activity, or the creation of new products and markets, involves risking resources as effort, money, and time must be invested prior to knowing what the returns will be (Knight, 1921). What is known about successful individual entrepreneurs is that they are moderate rather than high risk-takers (e.g., Brockhaus, 1980). In this sense entrepreneurship can be based on courage which requires a moderate degree of risk assumption. When the risk is too high, we would not label the behavior courageous or entrepreneurial, but foolhardy instead (see results Study 1). Indeed, Schilpzand et al. (2008) found that entrepreneurship was described on several occasions as a courageous exemplar by the executives they interviewed.

Fourth, personal courage may predict ethical decision making. An ethical decision is one that is morally acceptable to the larger community and is legal (Jones, 1991). Rest (1986) argues

that ethical decision making follows if the individual (a) recognizes the moral issue(s) of the decision, (b) makes a moral judgment, (c) places moral concerns ahead of other concerns (e.g., monetary issues, relationships, career progress), and (d) acts on the moral concerns. In the courage research realm, those who behave in a courageous manner are often adhering to personal moral principles (moral courage, Kidder, 2003). Hence, it seems that the guidance of decision making by moral or ethical principles (Kohlberg, 1969; Trevino, 1986) and moral courage flow from the same well: one's moral fiber or disposition. Courage is the behavioral manifestation of this moral fiber in challenging situations while ethical decision making is the choice in more mundane decision circumstances. Thus, a courageous disposition likely contributes to ethical decision making.

Given the wide array of important organizational activities spurred by personal courage, the future of the role of personal courage in organizational life looks promising and is currently largely unexplored. The notion that courage widely contributes to organizational success may indeed be true and seems worthy of further investigation. In sum, this research offers some new insights and has provided a tool, the PCS, that can be employed to make further contributions.

### **Limitations**

Two limitations of my research should be noted. The courage I assessed in study 3 using the Air Force sample in effect is 'simulated courage' as a training program is merely an indication of how individuals would behave in real situations. As such, the recruits may have been subject to courage-like or FITD activity. Hence, although the training encompassed war-like activities, it is unknown how these trainees would function under real fire. Ameliorating this concern however, is the fact that social courage likely occurs in training and real-war situations alike. Similarly, entrepreneurial courage exemplified by novel ideas or initiatives is also independent of simulated versus real war activity. The only way to really assess physical courage

is by using an experimental design which should capture participants' reactions when they perceive the threat to be real. This is certainly an important next step in this research domain to help us understand the phenomenon that is courage more completely.

The second limitation of the current research is that the work context pertains to a military setting. Leadership and performance in 'office' work contexts may be vastly different from these two criteria in a critical response organization such as the military. Hence, the current findings should be replicated in more mundane work settings before we can assume generalizability of these relationships to non-military contexts.

### **Conclusion**

I started this dissertation by suggesting that courage has a dispositional nature which can be measured. Furthermore, I argued that such a courageous disposition would predict leadership and performance in critical response settings. As such, the purpose of this dissertation was to develop a reliable and valid measure of this construct and to test it in a work setting. The Personal Courage scale (PSC) adhered to construct validation requirements and predicted leadership and performance of military Flight Squadron School employees. Hence, this dissertation is a pivotal first step in indicating the usefulness of personal courage in the workplace. This new courage instrument may be used in future research endeavors to further explore the role of personal courage in the modern workplace.

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## BIOGRAPHICAL SKETCH

Pauline Schilpzand was born on September 11th, 1977 in Leiden, The Netherlands. Her family, including mom and dad, sister, and brother moved to LaGrange, GA in 1995. Here Pauline completed high school and subsequently completed a Bachelors of Business at Emory University. Next, she started a job as a project manager with IBM Global Services in Atlanta, GA. With IBM she learned a great deal about managing people and cooperating in team settings. After three and half successful and enjoyable years with the organization she left to start an MBA education at the University of Florida. It was in this program that Pauline studied organizational behavior under Dr. Amir Erez. She was excited to learn about the subject and was intrigued with research practices and with Dr. Erez's research on positive affect in the workplace. Pauline volunteered to help gather data and run experiments to learn more about academic research. Upon completing her MBA degree Pauline was offered and accepted a position in the Ph.D. program in the Management department at the University of Florida. Her current assignment at the University of Florida in the Department of Management allowed her the opportunity to earn her Ph.D. in Management.

Upon completion of her Ph.D. program, Pauline will apply for academic positions in the United States and abroad. Pauline is engaged to University of Washington Ph.D. candidate in Management Keith Leavitt. Together they look forward to the job recruitment process to find academic positions.