Integrity Matters: Construction and Validation of an Instrument to Assess Ethical Integrity as an Attitudinal Phenomenon

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Integrity Matters: Construction and Validation of an Instrument to Assess
Ethical Integrity as an Attitudinal Phenomenon

Marc-Charles Ingerson

A dissertation submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of
Doctor of Philosophy

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July 2014

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ABSTRACT

Integrity Matters: Construction and Validation of an Instrument to Assess Ethical Integrity as an Attitudinal Phenomenon

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This research reviews theoretical and operational concepts of integrity. After this review, an alternative theoretical and operational definition of integrity is proposed. This alternative is one that conceives of integrity in terms of high ethical concern and positive ethical consistency among thoughts, feelings, and behavioral intentions, and which conceives of integrity as more attitude-like than trait- or state-like. Utilizing this alternative conceptualization of integrity, a new label was applied (i.e. ethical integrity) and a new psychometric instrument was developed (i.e. the Ethical Integrity Scale). This dissertation reports on the initial development of the Ethical Integrity Scale and two studies aimed at validation of this instrument. Strengths, limitations, and future directions of this approach to integrity research are then discussed.

Key words: integrity, scale, ethics, negotiation, power, moral identity, resilience, deception
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Integrity Matters

In most societies, integrity is seen as a basic principle of decent human interaction (Dunn, 2009; Moorman & Grover, 2009; Veríssimo & Lacerda, 2014). Prominent ethicists Tom Donaldson and Thomas Dunfee address this idea when they point out that “…there exist principles so fundamental that they command our allegiance. These include the principles of fairness, of respect for other people, and of the value of integrity” (Donaldson & Dunfee, 1999, p. viii). Integrity, although taken to be fundamental to what many believe to be at the heart of what it means to be a good person and to have good relationships, seems in some sense to be an implicit assumption (Slife & Williams, 1995). What this means is that integrity is often assumed in such a way that leads us to believe that we should be able to “count on one another” regardless of the contexts that we are thrust into (Schlenker, 2008, p. 1082). Yet, this assumption is not without danger because despite a seemingly universal valuing of integrity, both personally and relationally, “it’s simply unrealistic to expect everything that people think, say, and do to be wholly coherent” (Cribb, 2011, p. 121). Hence, there seems to be something interesting going on here, i.e., most of us both simultaneously assume that integrity is important and fail to behave with integrity. This disconnect leaves the thoughtful individual to ponder several questions. Two of the most interesting questions that can arise are: 1) “What is integrity?” and, 2) “When does integrity actually predict behavior?”

As such, in this dissertation, the author will do the following: 1) review the literature on integrity and review how integrity has been theoretically defined; 2) review the most common integrity measurements (or operationalizations) and discuss the characteristics of these select instruments, scales, measures, and surveys; 3) propose an alternative theoretical conception of integrity and why this alternative might contribute to an understanding of the concept, grounded
in the idea that integrity is best understood as an attitude-like construct; 4) report on the creation of a new operationalization of integrity based on this alternative conception; 5) present the results of two empirical studies which were conducted as initial attempts at validation of this new approach to integrity measurement; 6) discuss the strengths, limitations, and future directions that might be pursued utilizing this alternative theoretical definition and empirical measure of integrity; and, 7) conclude with a brief discussion of the theoretical implications for ethical behavior when taking up this approach to integrity.

**Literature Review**

A review of the intellectual history of integrity reveals that the research literature on the topic is wide-ranging and diversified in its definitions and approaches (Bauman, 2013; Bies, 2014; Leroy, Palanski, & Simons, 2012; Moorman, Darnold, & Priesemuth, 2013; Pearlman, Bottrell, Altemose, Foglia, & Fox, 2013, Veríssimo, & Lacerda, 2014; Vogelgesang, Leroy, & Avolio, 2013). This diversity of perspectives and opinions is likely due to the widespread interest in integrity across disciplines (Dix, Emery, & Le, 2014; Lee, 2013; Markovits, 2013; Woods, 2014). Complicating things further, for those who are interested in pinning down the history of the idea of integrity, this general interest not only spans academic disciplines and practical industries, but also societal generations (Hemingway, 2013; Sorenson, 2013). Hence, one of the primary goals of this dissertation is to sort out some of the most common approaches to integrity in terms of their theoretical contribution and practical usefulness. To do so, contextualization is important.

This dissertation is written largely with the context of organizational behavior in mind. Organizational behavior is a hybrid, contemporary academic discipline that brings together the traditional academic disciplines of psychology and business (Colquitt, Lepine, & Wesson, 2009;
Thompson, 2008). The reason contextualizing this dissertation within the domain of organizational behavior is important because there is an increasing interest and expanding need to examine integrity and how it affects behavior both between and within organizations. Behavioral ethicists Shao, Aquino, & Freeman (2008) suggest that this is a good research direction when they write “for researchers interested in advancing social and organizational welfare through the practice of ethics, we believe the most exciting opportunities to do so lie in describing how core concepts from psychology can be applied to perennial questions of right and wrong” (p. 534). Thus, after surveying the literature on integrity within the context of organizational behavior, one can quickly discover that business is a domain which can be particularly interesting when it comes to the understanding of individual ethical decision making and prediction of pro-social behavior (Ford & Richardson, 1994; Jennings, Mitchell, & Hannah, 2014; Jones, 1991; O’Fallon & Butterfield, 2005; Tenbrunsel & Smith-Crowe, 2008; Trevino, 1986; Trevino, den Nieuwenboer, & Kish-Gephart, 2014; Trevino, Weaver, & Reynolds, 2006).

**Integrity, Organizations, and Individuals**

It has been argued that business is a core institution of society (de Tocqueville, Bradley, Reeve, & Bowen, 1972). One of the core features of business is the organization (Colquitt et al., 2009; Thompson, 2008). Every organization is composed of individuals (Colquitt et al., 2009; Thompson, 2008). Unfortunately, business in society today has received a great deal of negative press over the past decade due to the perceived (and real) lack of integrity both between organizations at the firm level and within organizations at the individual level (Macey, 2013; Stevens, 2013).

For example, integrity was prominently touted by the Former Fortune 500 Company, Enron in its code of values. Yet, Enron, and its traders and executives, became synonymous with
corporate fraud and personal deception (or, in other words, a lack of integrity). The result was that “while Enron had a wonderful values statement and comprehensive ethics policy, with widespread unethical behavior rife, these became of no value” (Thoms, 2008, p. 428).

Subsequently, Enron focused on what was legal, taking a generous interpretation of the law, completely unrestrained by a higher-order ethical thinking. Even when using questionable ethics and legal principles, employees learnt to bend to praise and reward from leaders. Enron’s maverick cultural manner failed to take account of ethical ramifications of its decision making or evaluation of those decisions by the public and environment in which it operated. The core of corporate corruption was hidden by a façade of good behavior, but this was not able to be maintained in the long run. An ethical organization’s relationship with its stakeholders and the public is demonstrated by having its integrity as the essence of its interests. Enron’s management was blinded to this essential balance of interests by their arrogance (Thoms, 2008, p. 428).

As a direct result of this ethical arrogance (or lack of integrity), on both an organizational and an individual level, Enron publicly failed its stakeholders and spectacularly fell into bankruptcy with several of its leaders jailed or fined by the federal government of the United States.

Cautionary examples like the rise and fall of Enron and its unethical traders and executives continue to occur in the business world today. In fact, the negative public opinion of business has gotten so bad in the past quarter century thatbusinesspersons continually rank lower in trust polls than any other professional position other than politicians and business ethics is
often thought of as an oxymoron (Alzola, 2011; Collins, 1994; Duska, 2000; Shepard, Shepard, & Wokutch, 1992; Sonnenberg & Goldberg, 1992; Stevens, 2013; Stevenson & Wolfers, 2011).

Despite this damaging press and harmful public opinion there can be no doubting that integrity was, is, and will continue to be highly prized in business and industry (Dunn, 2009; McCann & Holt, 2009; Veríssimo & Lacerda, 2014). Consider the fact that in business and industry today, over 70% of the Fortune 100 Corporations list integrity as their number one value (February 26, 2014, personal communication with Bill O’Rourke).

There are a variety of definitions within business and across other disciplines as well (Becker, 1998; Belvaev, 2011; Edgar & Pattison, 2011; Parry & Proctor-Thomson, 2002; Palanski & Yammarino, 2009). Lack of a consensual definition, means lack of consensual understanding. Common sense suggests that such lack of consensus will make teaching and internalizing more difficult. One of the main purposes of this dissertation is to contribute to theoretical understanding and empirical study of integrity.

Michael Palanski and Francis Yammarino (2009) observe that “in spite of its popularity as a normative descriptor, there is actually little extant theory about integrity in the management and leadership literatures” (p. 405). Furthermore, due to this lack of theoretical clarity, integrity has often been used (in both academic and applied contexts of business and psychology) interchangeably with several other related terms such as honesty, morality, and ethics (Bauman, 2013; Palanski & Yammarino, 2009; Tang & Liu, 2012). This conflation of the terms integrity, honesty, ethics, and morality has led not just to theoretical confusion but to inconsistent practices as well (Lasthuizen, Huberts, & Heres, 2011).

For example, in the late 1980s there was a movement in by scholars in organizational behavior to create and validate *integrity tests* (Camara, & Schneider, 1994; Oliver, Shafiro,
Bullard, & Thomas, 2012; Ones, & Viswesvaran, 2001; Ones, Viswesvaran, & Schmidt, 1993; Ones, Viswesvaran, & Schmidt, 2012; Sacket, Burris, & Callahan, 1989; Van Iddekinge, Roth, Raymark, & Odle-Dusseau, 2012). The idea was if an integrity measure could be created that predicted unethical behavior, it could be used in business and industry as a talent management tool for hiring, promoting, reprimanding, and firing (Ones et al., 1993; Ones et al., 2012; Sacket et al., 1989). One of the problems with this was that these integrity tests were either too obvious, leading to socially desirable answers and lessening predictive power, or they were too opaque, leading to inconsistency in answers and lessening predictive power, or they were or too confusing conceptually, leading to questions of validity (Becker, 1998; Berry, Sackett, & Wiemann, 2007; Camara & Schneider, 1994; Cunningham, Wong, & Barbee, 1994; Hogan & Brinkmeyer, 1997; Wanek, Sackett, & Ones, 2003).

The intent here is not to be critical of the intent of these scholars and practitioners who are trying to improve business by creating companies wherein the leaders, cultures, and employees all value and behave with integrity (Bies, 2014; Leroy et al., 2012; Pearlman et al, 2013). Instead, the intent is to call for greater theoretical work on integrity, as well as for better measures of integrity with established internal and external validity and predictive power. Palanski & Yammarino (2009) lend support to this call when they note in their well-cited review of the integrity literature that there is theoretical fragmentation, which in turn leads to continuing “considerable difficulty when trying to operationalize, measure, and test integrity” (p. 405). Thus, there is a need for both further theoretical work and additional empirical work on integrity. Consequently, this dissertation will report on a nascent research program undertaken to address both of these needs, i.e. of a more focused theoretical definition of integrity and of a theoretically-driven empirical definition as well.
It is important to note here that while this dissertation examines integrity at the individual (or micro-) level, there is work to be done regarding the investigation of integrity at the team (or meso-) and organizational (or macro-) levels as well (Leroy et al., 2012; Palanski & Yammarino, 2009; White & Lean, 2008). For example, questions such as “How does an individual’s integrity affect a team’s effectiveness or productiveness?” and “How does a team’s integrity affect an organization’s firm performance?” are interesting and worth pursuing (Leroy et al., 2012; Palanski, & Yammarino, 2009). However, this dissertation focuses on addressing the principal research questions of: 1) How has personal integrity been defined theoretically?, 2) How has it been measured empirically?, 3) What might a unifying alternative theoretical definition be?, 4) What might an empirical operational definition of this alternative look like?, all of which are individual- or micro-level questions. Also, the dissertation reports on the development of a new measure based on this theoretical definition and two studies which were carried out to explore the potential validation of this new measure, which is also at the individual- or micro-level. Attention will now turn to the first issue of how integrity has been defined theoretically.

**Defining Integrity**

According to the online Oxford Dictionary (n.d.) integrity comes from the Latin word *integritas*. This has the same root as the English word *integer* meaning 'intact' or ‘whole’. This definition of integrity can be used in reference to persons; and more specifically to the wholeness of personal character. That is, a person of integrity can be thought of as an individual who is not fragmented in the way that s/he approaches various aspects and situations in his or her life. Integrity scholars have associated this notion of wholeness with markers of integrity such as keeping one’s word (Erhard, Jensen, & Zaffron, 2009). Pushing integrity further, still other
scholars have indicated that there is something about integrity that involves behaving in such a way that “exceeds the moral minimum” (Jacobs, 2004, p. 216).

Although it is acknowledged that that there are very important commonalities and differences between *ethics* and *morality*, for this dissertation the terms *ethics* and *morality* will be used interchangeably, since differentiating requires making some philosophical distinctions that are not relevant for this project (Levinas, 1960; Levinas, 1981). Certainly in common every day conversations both *morality* and *ethics* deal with questions of right and wrong in interpersonal interaction (Thoms, 2008). The second important basic definition of integrity makes connection with its relation to ethics (Thoms, 2008).

**Ethics and Integrity**

The online Oxford Dictionary (n.d.) defines ethics as a set of moral principles that govern or drive behavior. Furthermore, ethics can be thought of as consisting of both knowing and teaching. This connectedness between knowing and teaching is very ancient; “the philosopher Socrates argued almost 2,500 years ago that ethics consists of knowing what we ought to do and that such knowledge can be taught” (Tang & Liu, 2012, p. 306). This connectedness between ethical knowing and teaching has led integrity scholars to conjecture that ethical role-modeling is vital in the initiation and promotion of moral character which is centered on a life of integrity (Brown, & Trevino, 2006; Sosik & Lee, 2002; van den Akker, Heres, Lasthuizen, & Six, 2009; Weaver, Trevino, & Agle, 2005). This development of moral character or a life of integrity has been at the heart of the concept of leading a virtuous life (Hosmer & Hosmer, 1987; Kupperman, 2001; Moore, 2005a, 2005b; Palanski & Yammarino, 2007, Solomon, 2003).

Indeed, integrity has been called an internal *supervirtue* (Solomon, 1992, italics added). That is, integrity can be thought of as a quality of personal character that can be acquired and
leads one to behave according to virtue in varied ways and contexts. Therefore, integrity is “inherently valuable” in society, but “not necessarily normative” (Schlenker, 2008, p. 1083).

Subjectivist and Objectivist Integrity

Some approaches to integrity in the literature, see integrity as something that invariably helps to promote good individual behaviors and societal outcomes, but is not something that could, or perhaps should, be ethically or legally required (Goodin, 2010; McFall, 1987; Palanski & Yammarino, 2007). Respected business ethicist Richard DeGeorge (1993) elaborates on this notion of integrity as a freely chosen virtue that enhances both personal character and relational outcomes when he writes “although integrity requires norms to be self-imposed and self-accepted, they cannot be entirely arbitrary and self-serving” (p. 6). Thus, integrity benefits the possessor, but ideally it should also benefit those with whom the possessor interacts. David Jacobs (2004) proposes that integrity researchers of this mindset usually link “integrity with an altruism that exceeds a calculated and strategic benevolence” (p. 217). This notion that integrity which is based on personal moral norms and leads to compassion, empathy, and care which in turn leads to a kind of selfless, altruistic behavior falls under what some scholars refer to as a subjectivistic perspective on integrity (Becker, 1998; Locke & Becker, 1998; Palanski & Yammarino, 2007; Vandekerckhove, 2007).

On the other hand, other scholars hold to what can be labeled as an objectivistic perspective of integrity (Becker, 1998; Locke & Becker, 1998; Palanski & Yammarino, 2007; Vandekerckhove, 2007). An objectivistic perspective of integrity is founded on three bases other than personal moral predilection, and it does not need to be understood as either empathetic or altruistic (Becker, 1998; Locke & Becker, 1998; Palanski & Yammarino, 2007; Vandekerckhove, 2007). These three bases are: “metaphysics (including the axiom that there is
an external reality), epistemology (individual reason is the only valid source of knowledge), and ethics (founded on rational self-interest)” (Jacobs, 2004, p. 217). This objectivistic perspective alternatively interprets and understands individuals’ integrity, or pro-social behavior, as grounded in morally universal realities instead of in morally relativistic norms (Becker, 1998; Locke & Becker, 1998; Palanski & Yammarino, 2007; Vandekerckhove, 2007).

Regardless of the definition and perspective (subjective or objective) on integrity that one chooses to take up, scholars are in agreement with the idea that integrity matters--that it is necessary for optimal ethical outcomes individually and interpersonally (Becker, 1998; Locke & Becker, 1998; Palanski & Yammarino, 2007; Thoms, 2008; Vandekerckhove, 2007). However, this dissertation seeks to develop a conceptual definition of integrity that offers some more particular theoretical insight into the nature of integrity that might offer an understanding of its general positive effects across a variety of ethical settings. It is also hoped, although it is beyond the scope of this dissertation to explore it, that this approach can contribute to a model of human beings as agentic moral beings. The nature of this approach will be developed in subsequent sections. Part of laying the groundwork to the alternative theoretical definition of integrity that will be proposed in this dissertation is reviewing how integrity has been defined, and also how it has been operationalized. The review will call attention to a range of concepts that have been associated with integrity, and to the possibility of distinguishing integrity from other particular ethically relevant constructs.

The Variegated Conceptual Landscape of Integrity

As mentioned above, integrity has historically been related to, and in some cases conflated with, numerous other positive attributes of character or character virtues (Peterson & Seligman, 2004). Highly regarded positive organizational scholars Christopher Peterson and
Martin Seligman note in their review of the integrity literature that of all the character strengths that integrity has been related to, they can generally be distilled down into four primary ones (2004). This dissertation agrees with that line of thinking. As such, for both Peterson and Seligman (and this dissertation) the character strengths that integrity has been most closely aligned with, that also require a more critical examination as to their true relationship with integrity, are authenticity, honesty, consistency, and conscientiousness (Peterson & Seligman, 2004).

Starting first with authenticity, there are scholars who have defined authenticity as being true to oneself. These same scholars explain that authenticity can be morally neutral as revealed in the case of a sadistic serial killer who may be “true to self” in torturing others (Schlenker, 2008, p. 1105). Furthermore, this notion of authenticity can be extended by including “emotional genuineness and…psychological depth” (Peterson & Seligman, 2004, p. 250). But, it seems that if integrity is truly to be ethical then any conceptualization of it ought to include of general ethical concern for the other, or some positive orientation toward the ethical in general.

Pushing this issue further, another concern with understanding integrity simply and wholly as authenticity is that such would imply that a lack of integrity is simply inauthenticity (Peterson & Seligman, 2004). This simple equation seems to obscure the essentially ethical character of integrity. Just as being true to oneself (or authentic) does not guarantee that one will care for others and behave honestly, failing to be true to oneself (or being inauthentic) would not necessarily be revealed as clearly unethical behavior. Think of the sadistic serial killer who chooses to keep the laws by day, but then breaks them by night. The serial killer is being inauthentic by day, but is not clearly behaving unethically. So, it seems that whatever we may take integrity to be, it is not simply co-extensive with authenticity.
Other scholars have defined integrity as essentially honesty. This definition is problematic because there are individuals who can be completely honest in living a lie. One example of this seeming contradiction has to do with the possibility of self-deception, or self-betrayal (Arbinger, 2000; Caldwell, 2009; Warner, 1982; Warner, 2001; Warner & Olson, 1981; Warner & Olson, 1984; Williams, 2005). While in self-betrayal, a person is living an untruth hidden to him- or herself, and inaccessible, so that unkindness or hurtful or dishonest treatment of another is a sincere (honest) falsity (Arbinger, 2000; Caldwell, 2009; Warner, 1982; Warner, 2001; Warner & Olson, 1981; Warner & Olson, 1984; Williams, 2005).

One example of this might be that of a charismatic leader in an organization who is successful in his manipulations of others either by behaving nicely or meanly to get what he wants. His manipulations depend on capitalizing on the good will of well-meaning people who set out to show him that he is not as bad as he says he is – that he has a streak of good in him – while he quite straightforwardly and charmingly says that he really is a bad guy, but a great leader. One might describe this charismatic leader as telling the truth, but lacking the integrity to act truthfully, to be kind regardless of the behavioral outcomes of his employees. So, as this example suggests, integrity should not be defined solely as being honest.

Still others have defined integrity as consistency or as being consistently whole in one’s thoughts, words, intentions, and actions. But one might argue that individuals can be consistently whole in their thoughts, words, intentions, and actions in a dysfunctional and anti-social manner like the sadistic serial killer mentioned above (Calhoun, 1995; Verhezen, 2008). So, if this is the case then integrity should not be defined as being solely composed of consistent wholeness, or being consistently whole.
Finally, there have been scholars who have defined integrity as being conscientious and loyal to one’s values by exhibiting the “the will or willingness to do what one knows ought to be done” no matter what (Audi & Murphy, 2006, p. 6). This conception of integrity moves the concept closer to the conception of integrity that informs this dissertation. The most important aspect of this way of understanding integrity is that it brings together different psychological attributes and activities and suggests that integrity is a matter of the consistency of these components of principled action. The emphasis is on a correspondence of the will to knowledge and of knowledge and will to action. This approach by Audi and Murphy (2006) emphasizes an additional component of action that will also be emphasized in the research reported in this dissertation, the component of ethical courage.

Again, this research seeks to make salient several components of moral action and the importance of consistent interrelationships among them. So, while ethical courage is not co-extensive with integrity this work suggests it is important along with integration of various components of a moral act (Woods, 2014). Audi and Murphy (2006) also introduce into the discussion of integrity a cognitive or knowledge component, and the importance of consistency between knowledge and action. While the view of integrity presented here also gives importance to a cognitive component of integrity and integrated action, it suggests that there is more to integrity than merely reasoned action. Knowing does not dominate the will, and cognitive considerations will not always take precedence. Put simply, cognitive confidence does not drive the bus of integrity. This point will be revisited in later sections of the dissertation.

From this section, it is can be seen that while integrity is very much related to authenticity, honesty, consistency, and conscientiousness, it is not, nor should it be, reduced to any of these character strengths.
Measures of Integrity

With the above more general review of various approaches to understanding integrity in mind, attention will now shift to a more specific review of how integrity has been measured empirically. This narrowing of the aperture on integrity will look at how the concept has been operationalized but will not cover every explicitly-labelled integrity measure or all integrity-related measures. The reason for this selective narrowing is because of the numerous measures out there which aim to get at conceptions of integrity that fall into the conflations and concerns already mentioned. Thus, only those measures that seem to best lay the groundwork for the alternative forwarded in this dissertation are reviewed. Those measures are: 1) Craig and Gustafson’s (1998) Perceived Leader Integrity Scale [PLIS], 2) Olson’s (1998) Moral Integrity Scale [MIS], 3) Dineen, Lewicki, and Tomlinson’s (2006) Behavioral Integrity Scale [BIS], and, 4) Tang and Liu’s (2012) Authenticity of Supervisor’s Personal Integrity and Character Scale [ASPIRE].

**Perceived Leader Integrity Scale [PLIS].** Craig and Gustafson’s (1998) was the first widely-used and well-validated psychometric instrument in organizational behavior constructed to directly get at the construct of integrity. Craig and Gustafson asserted that explicitly and implicitly significance had been given to ethics and ethical leadership in the workplace but that it had not been well researched empirically. Craig and Gustafson were explicit that the intellectual grounding of their PLIS scale was a “rule-based utilitarian approach” stemming from the utilitarian philosopher, Jeremy Bentham’s (1789/1970) work (Craig & Gustafson, 1998, p. 129).

Craig and Gustafson held that this “rule-based utilitarianism” view can either explicitly or implicitly function as a guideline for behavior according to the norms within the organization (1998, p. 129). In turn, those who make utilitarian decisions end up being able to commit
Supererogatory acts. Supererogatory acts, for Craig and Gustafson, are actions that are “morally commendable, but not morally required” and are the way that others can perceive the integrity of a leader (1998, p. 129). Therefore, Craig and Gustafson saw a need for an instrument that could help measure this.

Subsequently, Craig and Gustafson identified seven main behavioral domains as a framework for item generation consistent with their construct of integrity. These seven domains were: training and development, maliciousness, resource/workload allocation, self-protection, truth telling, procedure and policy compliance, and unlawful discrimination (Craig & Gustafson, 1998).

Craig and Gustafson’s (1998) study employed a scale consisting of 77 items. Craig and Gustafson employed an initial of 78 psychology undergraduate students. The PLIS was also validated against the Balanced Inventory of Desirable Responding [BIDR], the Praxis Business Ethics Inventory, and the Neo-Personality Inventory Revised [NEOPI-R], and the Organizational Climate Questionnaire. The end result of this research was the production of two versions of the PLIS, a 43-item scale and a 31-item scale (Craig & Gustafson, 1998). Additionally, Craig and Gustafson (1998) found that integrity perceptions among supervisors were “strongly related to subordinate job satisfaction and to the employees’ desire to leave their jobs” (Craig & Gustafson, 1998, p. 143).

The PLIS is important to the empirical research on integrity because their scale measures the subordinates’ perspective on congruous and incongruous leadership behavior which can offer insights on organizational climate (Craig & Gustafson, 1998). Furthermore, their findings indicated that the relationship between the perceived integrity of the supervisor and the respondent was not mediated by co-worker perception (Craig & Gustafson, 1998). Thus, the two
chief strengths of this scale are that it sought to evaluate the integrity of another and predicted unethical behavior. However, Palanski and Yammarino (2007) have pointed out that, although Craig and Gustafson’s (1998) scale was innovative, it failed in a critical way. That is, while the PLIS was predictive of unethical behavior, it was not designed to identify ethical behavior.

**Moral Integrity Scale [MIS].** Olson’s (1998) MIS was a first-of-its-kind measure of integrity in either psychology or business insofar as it was specifically designed to measure integrity as directly related to ethical thoughts, feelings, and behaviors. In other words, Olson used the scale to specifically look at the congruence between cognitive, affective, and behavioral elements as related to moral integrity. Olson defined moral integrity as being composed of a tripartite model including public justification, moral discernment, and consistent behavior. Olson developed the scale using Carter’s (1996) three part definition of integrity: moral discernment, consistent behavior, and public justification. Moral discernment was defined by Olson as “moral discernment of a moral conviction, consistent behavior regarding the conviction, and public justification of the moral conviction” (1998, p. v).

The MIS’ reported overall and specific reliability was very high. The overall Cronbach’s alpha for the entire instrument was 0.95. The specific Cronbach’s alpha for factor one (with 30 items) was reported at 0.94 with the specific Cronbach’s alpha reported for factor 2 (with 25 items) at 0.92 (Olson, 1998). With this high reliability, Olson confidently undertook to validate it in an empirical study wherein the chief independent variable was moral integrity and the chief dependent variables were psychological well-being and anxiety (Olson, 1998).

Olson found that moral integrity was positively correlated with well-being and negatively correlated with anxiety. Additionally, through factor analysis, Olson discovered that “two
correlated factors underlie the construct of moral integrity”, i.e. the cognitive and the affective/behavioral (1998, p. v-vi).

Thus, two chief strengths of Olson’s (1998) MIS are that individuals can predictably self-report in such a way that their personal moral integrity can be measured and used as a predictor of behavior and that the scale is based on a conceptually interesting understanding of its core construct, integrity. Olson’s conceptual approach is similar to that developed in this dissertation, i.e., congruence between cognition and affect.

There were some concerns related to the development and validation of Olson’s instrument. First, the sample size in Olson’s study was small (1998, p. 77). Second, sampling bias was present as the participants were from a highly religious community, which has been shown to self-evaluate higher along moral dimensions reducing the external validity of the scale and bringing into question the results (Hardy & Carlo, 2013). Third, and finally, the instrument is over 50 questions long and is not scalar. Thus, the MIS is faced with the two challenging criticisms: 1) uncertain generalizability based on the homogenous and limited sample; and, 2) less than optimal utility for researchers due to its great length and difficulty in scoring.

**Behavioral Integrity Scale [BIS].** Dineen et al. (2006) based their scale on Bandura’s Social Learning Theory (1977). Their main research question was why employees emulate supervisors. To investigate what they thought was one of the main reasons for supervisor emulation, Dineen et al. (2006) made use of Simons (2002) definition of behavioral integrity. That is, “[b]ehavioral integrity refers to ‘the perceived pattern of alignment between an actor’s words and deeds’ (Simons, 2002, p. 19) and captures the extent to which supervisors are role models of desirable behaviors through their own actions” (Dineen et al., 2006, p. 623).
Dineen et al. (2006) designed the BIS to measure the relationship of supervisor integrity to employee organizational citizenship behaviors in a bank setting, specifically looking at individual and organizationally directed deviance. To be clear, Dineen et al.’s (2006) core understanding of integrity consisted of the idea that managers words and actions are in harmony.

A pilot study was conducted with a sample of 27 executive MBA students and convergent validity was measured against Simons and McLean-Park’s (2000) behavioral integrity scale (Dineen et al., 2006). Next Dineen et al. (2006) conducted two field surveys among full- and part-time retail bank employees, with a wide variety of job descriptions. In the first group, 838 usable responses from one large bankcard organization completed a 35-item questionnaire; and in the second group, 271 usable responses from 28 retail bank branches completed a 38-item questionnaire (Dineen et al., 2006). The overall Cronbach’s alpha for the first group was 0.82 and for the second group was 0.86 (Dineen et al., 2006). Dineen et al. (2006) found that “relationships between supervisory guidance and the outcomes varied as a function of the degree to which supervisors were perceived to exhibit behavioral integrity… [the] pattern was consistent across two independent samples” (p. 631).

Dineen et al.’s (2006) work is important to empirical integrity research because they validated another measure of integrity and found that integrity once again can predict (un)ethical workplace behaviors. The concept of integrity underlying their work was based on consistency between words and deeds. This approach is also consistent with the concept of integrity developed in this dissertation, which focuses on congruity among thoughts, feelings, and actions. Two chief weaknesses of the BIS are that: 1) it is a report on the perceived integrity of another and not the actual integrity of the individual responding to the scale; and, 2) that it is not directly
linked with the ethical or moral component of another individual’s integrity, but only to their consistency, \textit{per se}.

\textbf{Authenticity of Supervisor’s Personal Integrity and Character (2012) [ASPIRE].}

The ASPIRE scale by Tang and Liu (2012) was created to predict the behavior of individuals based on the perceived integrity of their supervisors. Tang and Liu (2012) designed ASPIRE to consist of “three inter-related sub-constructs: Supervisors who (1) show honesty, fairness, and integrity (Honesty and Integrity), (2) care about others’ work and provide services to subordinates as servants (Caring Servant), and (3) are friendly and offer transparent decision making and professional development” (p. 298). ASPIRE assess these three factors with nine items on each. Each item is scored on a five point Likert-style scale. Tang and Liu’s (2012) dependent variables were self-interest and unethical behavioral intention. Participants in the study consisted of 266 business students with part-time employment, and they were asked to either review the Ten Commandments or sign an honor code. Afterwards participants were placed in a gambling environment where cheating was possible; Tang and Liu (2012) then collected and analyzed the data as to whether or not participants cheated.

ASPIRE’s overall Cronbach’s alpha in this study was 0.95. Findings in Tang and Liu’s (2012) ASPIRE showed: 1) low perceived supervisor integrity was related to high self-interest and low unethical behavioral intention; and, 2) unethical behavior was significantly related to low self-esteem, high Machiavellianism, and low intrinsic religiosity. The main interpretation is that perceiving one’s supervisor as low on integrity can predict unethical behavioral intention among individuals with high self-interest, but not among individuals with low self-interest (Tang & Liu, 2012).
Tang and Liu identified areas for further research. First, future studies dealing with integrity should include both full-time workers as well as part-time workers. Second, there were no measures of attitude or personality collected. Third, the data was collected only over the course of one academic semester. And, fourth, ASPIRE treats honesty and integrity as the same when they might be different constructs.

This section has reviewed a number of scales designed to measure the concept of integrity. Within this review a variety of definitions for integrity can be seen to be used in the literature. Again, the scales reviewed here are not exhaustive of the many various attempts that have been undertaken to operationalize integrity. Instead, only those measures that gave the most emphasis, in one form or another, to some form of congruity assumed to be part of integrity were included. This congruity of sorts plays an essential role in integrity as defined and measured in the research described in this dissertation. Finally, each of the reviewed scales was evaluated also in terms of the utility of the scales and the ways in which integrity is operationalized. Thus, these reviewed scales can further set the stage for the research presented here, which seeks to build on and improve the measurement process, and clarify and sharpen the conceptual understanding of integrity.

**An Alternative Approach to Integrity**

**Ethical Integrity**

Audi and Murphy (2006) point out that any good definition of integrity is going to take account of integrity as both integral and integrational regardless of the particular moral theory one espouses. For example, dishonesty would indicate a lack of the integral and insincerity would indicate a lack of the integrational in the face of either utilitarianism or deontology because “honesty and sincerity are goods in themselves” (Audi & Murphy, 2006, p. 11).
Likewise with courage, loyalty, and conscientiousness; these can each be thought of as universal virtues independent of particular moral theories. What this all means is that for Audi & Murphy (2006) perhaps the best way to understand and define integrity is to conceive of it as “morally sound character” where these universal virtues are manifestations or “facets” of integrity (p. 15).

Put differently, integrity could be understood as honesty in a particular situation. But using honesty as a definition of integrity does not go far enough because it assumes that integrity is more trait-like than state-like thereby ignoring the deeply relational element in integrity. Verhezen (2008) clarifies this issue when he writes

> Although integrity could be considered an individual virtue, it only gains respect in concrete situations in relationship with others and within organizations.…

Integrity carries a relational component that is too often ignored. Personal integrity transcends the autonomous self and is expanded to viewing oneself as a member of an evaluating organization or a caring community. In other words, personal integrity needs to be embedded in a social context to become relevant for an organization and society. Integrity intrinsically embodies a reference to others that entails a social component relevant for organizations (p. 136).

Thus, any new alternative definition needs to take into account and validate both the personal and the relational aspects of integrity.

Finally, any worthwhile alternative conception of integrity needs to contribute to ethical behavior. This requirement is important because it considers both the hypocrisy gap and credibility gap. For many scholars who study behavioral ethics, this question of how to eliminate the gap between intentions and behaviors is their most vexing research question. The source of this vexation is because “being a person of integrity does not guarantee that one will
automatically prove to be ethical under pressure in an organization” (Verhezen, 2008, p. 136).

The reason for this is that there is a difference between behavioral integrity and ethical integrity. People who behave with integrity as integration are likely to come at life in such a way such that what they think, feel, and intend is consistent. People with ethical integrity are those who come at life in such a way that what they morally think about, feel towards, and intend is both ethical and consistent. So, at the center of ethical integrity is this notion of ethical consistency which can be thought of as attitude-like in nature.

Again, one of the principal problems in behavioral ethics research today is that avowed positive ethical principles often do not lead to obvious pro-social ethical behaviors (Ford & Richardson, 1994; Jones, 1991; O’Fallon & Butterfield, 2005; Tenbrunsel & Smith-Crowe, 2008; Trevino, 1986; Trevino et al., 2006). The lack of positive ethical principles not leading to pro-social ethical behaviors is a problem of behavioral prediction. Some behavioral ethicists have argued that researchers ought to be paying less attention to traits and pay more attention to attitudes thereby improving behavioral predictions (Harman, 2000; Jennings et al., 2014; Trevino et al., 2014; Trevino et al., 2006). The chief reason is that there is malleability (i.e. something that can be changed and changed from within) in an attitude that does not seem to exist in traits. The research in this dissertation squares with that line of thinking.

**Attitudes, Consistency, and Integrity**

Historically behavioral and social scientists have employed explanatory strategies which have located causal influence on behavior in factors characterized as rather stable internal qualities (traits) or in transient situational factors (states) (Deci & Ryan, 2000; Deci & Ryan, 2010; Dweck, 2000). This dissertation presents and defends the proposition that there is something about integrity that is more active and intentional then passive and simply given as
traits are often taken to be (Ajzen, 2005). But for those others who would classify integrity as a state, that is as a product of or response to circumstances, this dissertation would maintain that it is not that either, because it is not a spontaneous or reactive process. In other words, it is argued here that integrity is neither trait nor state. Rather, integrity, like other moral attributes, is innately evaluative in nature. According to the model proposed here, integrity is tied to intentions and thus has implications for behaviors. The model of integrity developed here is most closely related to the concept of attitude.

Attitudes. The history of attitudes in the behavioral and social sciences is long and the body of literature is large (Ajzen, 2005). In the early attitude research, attitudes were seen as a single-component – an affective response, positive or negative (Ajzen, 2005). Early researchers took a simple measure of affect to be a sufficient measure of attitude, even though there are references made to two or three dimensional approaches to the concept of attitude (Ajzen, 2005).

For example, Cropanzano, James, and Konovsky (1993) sought to determine if positive affect could predict attitude regarding work performance. The findings of Cropanzano, et al. (1993) were that when positive affect is combined with high job status, a positive attitude toward job performance was predicted. However, the model being developed here, unlike the study by Cropanzano et al. (1993), approaches the concept of attitude not as affect only but in a multi-dimensional way. The multidimensional nature of attitude has been employed in previous literature.

Generally, Gordon Allport (1935, 1954) is given credit for originating a tri-partite distinction in the attitude literature (Ajzen, 2005). Following up on the seminal work of Allport, Fishbein and Ajzen (1975) are typically given credit for popularizing and solidifying this approach in their widely cited Theory of Reasoned Action. Fishbein and Ajzen’s (1975) Theory
of Reasoned Action approached attitudes in terms of a tri-partite conception and a tri-partite measure which measure includes a cognitive (or thinking) component, an affective (or feeling) component, and a conative (or intending) component.

Interestingly enough, however, in much of the literature on attitudes, although many authors agreed on the tri-partite definition of attitude, as noted above, they rarely used all three components when measuring it (Ajzen, 2005; Carlson, 1985). Thus, the project reported here sought to eliminate this inconsistency of having a theoretical definition and an operational definition in conflict. Instead, the development of this new integrity instrument followed the example of the Carlson (1985) in the construction of an attitude instrument and in the research question by taking seriously “Triandis’ (1967) notion of attitude component relations and interactions in order to demonstrate that looking at component consistency can increase the correlation between attitude (as measured by attitude scales) and measurements of behavior” (p. 13).

What this means is that the present research in this dissertation, like Carlson’s (1985), sought to do two things as it relates to attitudes: 1) preserve the classical tri-partite definition of an attitude; and, 2) pursue an approach to measuring attitude that assesses the cognitive, affective, and conative components. The validation studies concentrate on the consistency among the components rather than merely deriving summative or intensity measure of the affect, cognition, and behavioral intention (or conation). This notion of consistency is a critical piece of both the alternative theoretical definition and empirical operationalization of integrity that is the focus of this dissertation.
**Consistency.** In this research, consistency can be thought of as the extent to which the components of attitude—cognition, affect, and conation—are consistent with each other (Carlson, 1985). Carlson (1985) explains how consistency relates to an attitude.

Additionally, Fishbein and Ajzen have used the notion of ‘consistency’ in that 1) if a person has a favorable attitude (high affect component) and positive subjective norm (high conative and cognitive components) then the person will display the behavior in question; 2) if a person has an unfavorable attitude (low affective component) along with a negative subjective norm (low conative and cognitive components) then the person will not display the behavior in question; and 3) if a person’s attitude and subjective norm are not in similar directions, sometimes a person will put more emphasis on their attitude, while other times putting more emphasis on their subjective norms—thus, sometimes they will display the behavior in question and sometimes they will not (Carlson, 1985, p. 31).

The idea of consistency can be understood in ethical situations as well. A person’s ethical consistency will be manifest in the intensity and extent to which a person’s ethical feelings, ethical cognitions, and ethical intentions are at similar levels. Any person may be given to more or less careful thinking about the same moral issues. At the same time a person may have stronger or weaker feelings about ethical or moral issues. Additionally, the same person may to a greater or lesser extent intend to act, or customarily may act, in certain moral or ethical ways, in general or in a particular situation.

A person may be relatively ethically consistent in the extent in which their ethical thoughts, feelings, and intentions are of similar valence and intensity (or frequency). Or a person
may be inconsistent. In other words, ethical consistency can be thought of as how congruent an individual’s cognitions, affects, and conations are relative to ethical matters, or in ethical situations. It should be noted here that this congruency (or ethical consistency) could be positive or negative depending on whether their ethical concern is high or low. Furthermore, it is proposed that ethical consistency, defined as consistency among the attitude components, mediates practice in particular ethical situations. This attitude approach suggests that integrity is neither a trait nor a state (Berleant, 1982).

Again, what is important to understand here is that integrity might best be understood as attitude-like in nature and manifested as ethical consistency. With this background laid, this dissertation will move to an assessment of those measures that have sought to assess consistency is in order.

**Attitudinal Consistency Measures**

**Kothandapani’s (1971) Attitude Measure.** In Kothandapani’s (1971) research, attitude is defined as feeling, belief, and intention to act based on Ostrom’s (1969) attitude studies. “Four verbal measures of each component were independently constructed using the techniques of Thurstone equal-appearing intervals, Likert summated ratings, Guttman scalogram analysis, and Guilford self-rating” (Kothandapani, 1971, p. 321). There were nine alternatives and the scales each had identical formats.

Kothandapani (1971) set out to measure intention-to-act, belief, and feeling as it related to contraceptive usage among low-income African American women in North Carolina. There were 468 participants black women ages 15-45. No Cronbach’s alpha was reported. A multi-trait/multi-method matrix 12x12 was employed using convergent and discriminant validity measures. Sensitivity was best in Thurstone and lowest in the Guilford model.
Kothandapani (1971) found that “within each component...[a shared] set of determinants distinct from ... other components” could be identified (p. 331). Intention-to-act was a stronger predictor of behavior than both verbalized feelings and beliefs. This research was innovative for the time and is related to research on integrity insofar as it “demonstrates the feasibility of conceptual separation of the conditioned stimulus (feeling) and discriminate stimulus (belief and intention to act) functions of attitude objects” (Kothandapani, 1971, p. 332).

Carlson’s (1985) Attitude Questionnaire. In Carlson’s (1985) research he designed a questionnaire to measure attitude according to cognition, affect, and conation of 83 undergraduate psychology students--61% male and 39% female. He designed his own theory based on Fishbein and Ajzen’s Theory of Reasoned Action (1975) in which an attitude should be viewed as an independent variable or isolatable feature of behavior (Carlson, 1985). Carlson (1985), like Kothandapani (1971), defined an attitude as a composite of affective (feelings), cognitive (beliefs), and conative (intentional) components. Thus, Carlson (1985) used the Theory of Reasoned Action to explain the predictive power of attitudes in that the consistency of the components is paramount. Components referred to are based on the tri-component model of attitude: cognition, conation, and affective components (Fishbein & Ajzen, 1975).

With no power analysis conducted, and a sample size that was fewer than the questions, it remains to be seen whether his instrument would satisfy current requests for adequacy.

Still, Carlson’s (1985) questionnaire is very important theoretically and measurement-wise relating to the study of integrity, and in particular to the present research in this dissertation. Carlson (1985) expanded the possible understanding of integrity by acknowledging the multifaceted and multidimensional understanding of virtues less as traits and more like attitudes. A goal of Carlson’s (1985) study, which is also part of the present research in this
dissertation, is to test this concept of consistency among the three components. In other words, besides providing an innovative theoretical framework based on attitudes instead of traits or states, Carlson (1985) introduced a new way of scoring the data using the standard deviation between z-scores of the component scores as an index of component consistency.

Kristensen, Pedersen, and Williams (2001) Religious Attitude Questionnaire.

Kristensen, Pedersen, and Williams (2001) created a questionnaire which sought to investigate the relationship between mature religiosity and religious attitudes. Similar to both Kothandapani’s (1971) Attitude Measure and Carlson’s (1985) Attitude Scale, Kristensen et al. (2001) defined attitudes as consisting of three constructs, i.e. affect, cognition, and conation.

Religiosity measures of the Ends, Means, and Quest orientation and the Religious Attitude Questionnaire were administered to students (Kristensen et al., 2001; Baston, Schoenrade, & Ventis, 1993). It was found that these various religious orientations were associated with different patterns of consistency among the three components of participants’ religious attitudes. They reported, for example, that “compared to the Quest and Means orientations, a high Ends orientation is characterized by substantial feeling attached to religious beliefs and practice and, as might be expected when religion forms a master motive, high levels of activity or intention to act upon religious beliefs and feelings” (Kristensen et al., 2001, p. 84).

In other words, Kristensen et al.’s (2001) Religious Attitude Questionnaire once again demonstrated that if social scientists seek to predict real behaviors based on complex decisions then all three dimensions of an attitude including cognition, affect, and conation can allow assessment of the element of consistency in attitude components.
Ethical Integrity from an Attitudinal Perspective

This specific review of the instruments that have been used to assess an individual’s consistency has been helpful insofar as it furthers sets the stage for how a new instrument on integrity which includes an element of consistency might be designed. Furthermore, the general theoretical review on integrity and proposed alternatives (wherein integrity is conceptualized as attitude-like in nature and composed of high ethical concern plus ethical courage and positive ethical consistency) indicates that, although there has been progress in understanding the construct of integrity, more work is called for, and an attitudinal perspective holds some promise.

Thus, for the purposes of advancing this work this dissertation seeks to offer a theoretically simple, empirically measureable, and behaviorally predictive definition of integrity. That is, in this dissertation, ethical integrity is high ethical concern combined with positive ethical consistency. As already discussed, ethical concern can be thought of as consisting of ethical thinking, ethical feeling, and ethical intending. Similarly, ethical consistency can be thought of as the extent to which an individual’s cognitions, affect, and conations are congruent with each other, as the individual contemplates and confronts ethical situations.

It should be noted here that ethical integrity needs to include an element of ethical courage as well. The reason for this is because it is conceivable that an individual could think a lot about ethics, feel strongly about ethics, intend to be ethical, be ethically consistent and still fail to behave ethically because s/he is unwilling to stand alone to do the right thing especially where there are cost of doing so. Thus, the definition of ethical concern will be augmented by including the concept of ethical courage. This alternative theoretical definition of integrity merits further examination especially in relation to behavioral outcomes which is the purpose of this dissertation. However, prior to reporting on the subsequent operationalization of ethical
integrity in this theoretical light and on reporting on the work of creating a new instrument and the two studies which attempted to validate this instrument, a brief description of other constructs that seem relevant in evaluating how the validity and utility of this new instrument is in order. These constructs will be included in Studies 2 and 3 as part of the validational procedures.

**Constructs of Interest Related to Ethical Integrity**

**Power.** Power is well researched in simple and complex ethical decision making contexts, especially as it relates to behavior (Galinsky, Gruenfeld, & Magee, 2003; Galinsky, Magee, Gruenfeld, Whitson, & Liljenquist, 2008). In many of these studies, power, defined as asymmetric control over valued resources in social relations (Emerson, 1962; Magee & Galinsky, 2008) has been shown to have strong psychological and behavioral effects.

Kuzma & Besley (2008) shared a situational vignette to increase understanding of the relationship between ethical integrity and power. A company which they observed, (Biotechnology Industrial Organization [BIO]) had issued a press release on Bt corn assuring that there was no risk to monarch butterflies, before a meeting with stakeholders. However, the issue of Bt corn as a risk to monarch butterflies was still controversial and leading scientists disagreed with the press release and the meeting did not end well (Kuzma & Besley, 2008).

At least two fundamental ethical principles address this situation. Integrity—‘a narrative totality, wholeness, completeness’ and ‘a virtue of uncorrupted character, expressing uprightness, honesty and good character—is affected by how risk assessment results are generated and communicated. Integrity can also affect the principle of autonomy. Autonomy can be violated when scientific
information is represented in a way to support the interests of the information holder (Kuzma & Besley, 2008, p. 153).

BIO’s exertion of control over what information is the made public without involving the other stakeholders is an example of the unethical exertion of power. The misrepresentation of the results not only compromises BIO’s integrity but also threatens autonomy by omitting information that could benefit citizens and experts as to informed decisions on the use of the Bt corn (Kuzma & Besley, 2008, p. 153).

The negotiation, persuasion, and consideration of information are part of what defines a deliberative process. Not only is analytic process important in appraising information, but deliberative processes also are key to evaluating risk analyses (Kuzma & Besley, 2008). Thus, in the case of BIO, the deliberation process was unjustly skewed which leads to a blurring of “utilitarian and non-utilitarian ethical issues” (Kuzma & Besley, 2008, p. 153).

What this example shows is that power is a personal stewardship with relational impact due to the asymmetric control over valued resources in social relations. Individuals in power will ideally behave with ethical integrity when given that stewardship.

Accordingly, power has always been thought to have a tense relationship with ethical integrity. In fact, most assume that power has a corrosive effect on ethical integrity, recall Lord Acton’s famous quote. But this folk psychology perspective on the relationship between power and integrity need not be the only way that they relate (DeCelles, DeRue, Margolis, & Ceranic, 2013).

Additionally, integrity has been conceptualized as “non-manipulation of subordinates, salience of self over role, and accountability” and was correlated with greater trust-building and “more effective workplace relationships” (Peterson & Seligman, 2004, p. 263). Thus, it could be
conjectured that ethical integrity is immune to the influence of power. All of this points to the idea that the relationship between ethical integrity and power could be fruitfully explored. One research question, appropriate to the evaluation of any instrument aimed at the assessment of integrity, might be whether people with high integrity are able to withstand the situational effects of power in morally relevant situations. This question was explored in Studies 2 and 3.

Moral Identity. Another potential concept relevant to ethical integrity is moral identity. “An identity is a self-conception or a self-definition (Erikson, 1964). A moral identity is a specific kind of identity that revolves around the moral aspects of oneself” (Reynolds & Ceranic, 2007, p. 1611). Hardy and Carlo (2011) point out that moral identity finds its roots in Tajfel and Turner’s (1979) Social Identity Theory and has since been investigated extensively by developmental and social psychologists.

According to Hardy and Carlo (2011), the research of these moral identity scholars can be placed in under two broad categories, the character perspective and the social cognitive perspective. The character perspective deals with moral identity in a trait-based manner and was heavily influenced by contributions from Augusto Blasi (Blasi, 1983; Blasi, 1984; Blasi 1995; Hardy & Carlo, 2011). The social cognitive perspective views moral identity in a manner more consistent with “personality as a dynamic system with the cognitive-affective processes” in interaction “with situational influences” (Hardy & Carlo, 2011, p. 498). The most widely used instrument in assessing moral identity, i.e. Aquino & Reed’s (2002) moral identity scale, which emerged from this social cognitive perspective (Hardy & Carlo, 2011).

Moral identity has been widely held to be an important source of moral motivation which would then be expected to affect moral behaviors (Aquino & Becker, 2005; Hardy & Carlo, 2011; Reynolds & Ceranic, 2007). However, there have only been a few experimental studies
done on moral identity (Hardy & Carlo, 2011). Only one of those studies looked directly at the
effect of moral identity on negotiation behaviors (Aquino & Becker, 2005). Negotiation is
relevant to the context of organizational behavior because it is a very common, nearly ubiquitous
behavior by individuals in organizations and involves complex ethical decision making. All of
this points to the idea that the relationship between ethical integrity and moral identity could be
fruitfully explored. One research question that was addressed in Studies 2 and 3 is that of the
relationship between ethical integrity and moral identity. Specifically, a good measure of ethical
integrity should correlate with a measure of moral identity, but it should also account for unique
variance beyond that accounted for by the Moral Identity Scale.

Resilience. Another potential factor relevant to individuals behaving with ethical
integrity is resilience. Resilience is a complex phenomenon both theoretically and behaviorally.
It has been investigated by a variety of researchers from different disciplines. However,
although it is a relatively simple concept to understand, it has been widely acknowledged to be
difficult to define (Windle, 2011).

For example, for many researchers, resilience is a multi-faceted phenomenon (Metzl,
2009 or Tjeltveit & Gottlieb, 2010). While for other researchers resilience is conceptualized as a
trait or a state (Luthar, Cicchetti, & Becker, 2000). What researchers do agree on is that
resilience is “characterized by the ability to overcome, steer through, and bounce back from
adversity” (Ong, Zautra, & Reid, 2010, p.2) by correctly “identifying opportunities [and]
adapting to constraints” in a holistically healthy manner (Cohn, Fredrickson, Brown, Mikels, &
Conway, 2009, p. 2). In other words, researchers tend to focus primarily on the importance of
resilience in accounting “for the adaptive ways in which life stressors are encountered, managed,
and transformed” (Ong, et al., 2010, p. 2).
In the earlier resilience literature, it was principally investigated theoretically and practically by developmental and clinical psychologists (Garmezy, 1993; Tjeltveit & Gottlieb, 2010). These pioneers into the research on resilience sought to understand why traumatic experiences would have such devastating effects on the overall quality of life for some individuals but not for others. Some of these pioneering resilience researchers investigated its effects on child and adolescent populations (Benard, 1995; Garmezy, 1993; McDonald & Hayes, 2001; Pryjmachuk, 2000; Radke-Yarrow & Brown, 1993; Todis, Bullis, Waintrup, Schultz, D’Ambrosio, 2001; Westfall & Pisapia 1994), but eventually expanded the research into adult populations as well (Martinez-Torteya, Bogat, von Eye, & Levendosky, 2009). In so doing, it was discovered that resilience is more important to improved life outcomes than positive emotions such as optimism (Martinez-Torteya, et al., 2009). Put another way, “although positive emotions and ego resilience are interrelated in multiple ways, ego resilience provides benefits in negative situations as well as positive situations” (Cohn, et al., 2009, p. 3). The overall significance of the developmental and clinical psychological body of research is that resilience is of worth no matter what the age and level of development of the individual (Tjeltveit & Gottlieb, 2010).

Martinez-Torteya, et al. (2009) sum up this developmental and clinical psychological research conclusion on resilience as follows,

Resilience [is] the maintenance of healthy/successful functioning or adaptation within the context of a significant adversity or threat…Thus, two elements must co-occur for resilience to be present: a circumstance that has the potential to disrupt [an individual’s] development and reasonably successful adaptation (p. 563).
Although it is not known why resilient individuals fare better in the presence of significant adverse life experiences than those who are less resilient; it has been conjectured that one of the main reasons that resilient individuals fare better is because they engage in more positive behaviors in interactions over time than do less resilient individuals.

Despite these generally agreed upon conclusions in the psychological body of research on resilience, disagreements regarding the definition of resilience persisted which led to a lack of closure as to what resilience actually is (Martinez-Torteya, et al., 2009; Rutter, 2006). Yet these definitional and conceptual disagreements did not inhibit research interest from spreading into other disciplines such as nursing and medicine.

Nursing and medical scholars grew interested in resilience mainly due to the fact that all individuals experience trauma (Ong, et al., 2010). And trauma has both psychological causes and effects and physiological causes and effects (Ong, et al., 2010). These health care researchers made the significant connection between resilience and overcoming stress. For example, it was discovered that resilient patients enjoyed better physiological outcomes by accessing positive emotions than did non-resilient patients (Ong, et al., 2010). The primary commonality in this succession of scholarly research from developmental and clinical psychology to nursing and medicine is based on resilience as a strategy that can be learned (Benard, 1995; Garmezy, 1993; McDonald & Hayes, 2001; Pryjmachuk, 2000; Radke-Yarrow & Brown, 1993; Todis, et al., 2001; Westfall & Pisapia, 1994). In other words, resilience is something that ought to be fostered in individuals because it has a connection with their emotions and it affects their overall quality of life.

It is important to note here that this observation is of particular importance to integrity scholars and practitioners because emotions affect decision-making (Bazerman & Moore, 2009).
In particular, positive emotions are tremendously significant to decision-making in human relationships because the “[e]vidence confirms that positive emotions broaden thought–action repertoires: Induced positive emotions produce wider visual search patterns, novel and creative thoughts and actions, more inclusive social groups, and more flexible goals and mindsets” (Cohn, et al., 2009, p. 2).

Yet, there is more to resilience than its catalytic affect in the mere creation of positive emotions because “[a]dditional empirical evidence suggests that there may be individual differences in individuals' abilities to capitalize on positive emotions during times of stress” (Ong, et al., 2010, p. 2). In other words, and as mentioned above, resilience though related somehow is not to be conflated with constructs such as optimism/hopefulness or the mere absence of negative psychological symptoms like depression and PTSD. Thus, for the purposes of this dissertation, Tjeltveit & Gottlieb (2010) offer the most useful description of what resilience is when they write “resilience is multidimensional and can mean the ability to respond well to challenging situations by drawing in an integrated fashion on coping skills, virtues, and social support networks” (p. 101).

It is important to point out here that optimism and resilience are different. “[O]ptimism refers to the degree to which an individual holds positive expectancies for his or her future… [one study] found that optimistic college students experienced less stress adapting to college life than pessimistic college students” (Utsey, Hook, Fischer, & Belvet, 2008, p. 203). On the other hand, resilience shows flexibility and adaptability to external or internal stressors (Block & Kremen, 1996). In other words, optimism involves positive expectations for the future whereas resilience involves flexible and resourceful adaptation in the face of present adversity.
Integrity scholar Peter Verhezen (2008) further strengthens the connection between ethical integrity and resilience when he argued that moral consistency in uncomplicated situations does not prove personal integrity. Looked at inversely, it is mainly in difficult situations that integrity is proven and moral consistency can be seen. Indeed, integrity is most likely only to be on display in cases of adversity.

In other words, the litmus test of ethical integrity can be thought of as coming “only when doing the right thing entails a significant cost… that is, in cases of physical, financial, or mental adversity” (Verhezen, 2008, p. 135). Hence, integrity researchers need to pay closer attention to resilience because as Spector (2006) observes “if individuals have the capacity to bounce back from adversity in their personal lives, then they should also be able to mobilize this capacity to bounce back from [adversity] in their professional lives” (p. 280).

Despite this plain and powerful observation about an enormously important factor in overcoming adversity over half a decade ago, resilience has still not yet been empirically studied in relation to personal integrity. Thus, all of this points to the idea that the relationship between ethical integrity and resilience could be fruitfully explored. Studies 2 and 3 were designed to assess the relationship between ethical integrity and resilience. Specifically, if integrity entails consistency of thought feeling and action, such consistency might be expected to foster steadiness and, thus, confidence in the future. Particularly when the measure of integrity consists of high ethical courage, it is predicted that persons with high integrity (including courage) would also exhibit high resilience.

**Negotiation.** Studies 2 and 3, designed to validate the Ethical Integrity Scale created in Study 1, employed a negotiation task as the scenario in which the effects of ethical integrity in relation to the other variables could be observed. As mentioned above, in today’s society it’s
nearly axiomatic that everybody negotiates. However, just because negotiation is a “ubiquitous social activity” doesn’t mean that it has become an uninteresting subject (Thompson, Wang, & Gunia, 2010, p. 492). In fact, a cursory search of the literature will demonstrate that the theoretical and scientific study of negotiation is expanding impressively with each passing decade (Bazerman, Curhan, Moore, & Valley, 2000; Carnevale & Pruitt, 1992; Thompson, et al., 2010).

Negotiation scholars come from a variety of academic disciplines such as “mathematics, management, organizational behavior, social psychology, cognitive psychology, economics, communication studies, sociology, and political science” (Thompson et al., p. 492). Despite this multi- and inter-disciplinary nature of negotiation research, thoroughly surveying the literature reveals a major commonality, i.e. there are two main negotiation “paradigms” (Hopman, 1995). These two paradigms (the distributive approach and the integrative approach) affect nearly all of the definitions, strategies, tactics, and outcomes investigated and practiced in negotiations today (Bazerman, et al., 2000; Craver, 2005; Fisher & Ury, 1981; Lewicki, Saunders, & Minton, 1999; Menkel-Meadow, 1983; Murray, Rau, & Sherman, 1996; Nelken, 2007; Raiffa, 1982; Thompson, 2006; Thompson, 2012; Thompson et al., 2010).

Approaching a negotiation distributively sets it up as a competition between opposing interests, in regards to a limited set of resources, the accumulation of which is the ultimate goal of negotiation and the criterion by which there is always one decisive winner in the negotiation (Bazerman, et al., 2000; Craver, 2005; Fisher & Ury, 1981; Lewicki, et al., 1999; Menkel-Meadow, 1983; Murray, et al., 1996; Nelken, 2007; Raiffa, 1982; Thompson, 2006; Thompson, 2012; Thompson et al., 2010). Negotiations of this type are generally referred to as “competitive” or “win-lose” negotiations.
In contrast, approaching a negotiation integratively sets it up as collaboration that is undertaken in a context of common interests that can be cooperatively explored and shared (Bazerman, et al., 2000; Craver, 2005; Fisher & Ury, 1981; Lewicki, et al., 1999; Menkel-Meadow, 1983; Murray, et al., 1996; Nelken, 2007; Raiffa, 1982; Thompson, 2006; Thompson, 2012; Thompson et al., 2010). Negotiations of this type are generally referred to as “cooperative” or “win-win” negotiations.

Early negotiation scholars assumed that these two approaches were mutually-exclusive (Bazerman & Neale, 1992; Thompson et al., 2010; Weingart, Brett, Olekalns, & Smith, 2007). Thus, there was a great deal of research comparing and contrasting the approaches (Bazerman & Neale, 1992; Thompson et al., 2010; Weingart et al., 2007). However, since that early period several respected negotiation scholars shifted away from the assumption that competition and cooperation are mutually-exclusive (Bazerman & Neale, 1992; Thompson et al., 2010; Weingart et al., 2007). Instead, these respected scholars advocate the idea that a negotiator can alternate between, or simultaneously use, both approaches in the same negotiation (Bazerman & Neale, 1992; Thompson et al., 2010; Weingart et al., 2007). This assumption, that the two main approaches can be alternated between or simultaneously used in the same negotiation, has been labeled as a “mixed-motive interaction” or approach (Bazerman & Neale, 1992; Thompson et al., 2010, p. 491; Weingart et al., 2007).

Independent of this expanding interest in conceptualizing how the two main approaches combine and interact, almost all of the research historically, and up to the present, deals with how taking on an approach affects the motivation, cognition, and emotions of the individual negotiators which thereby affects the processes and outcomes of a negotiation (Pruitt & Rubin, 1986; Thompson et al., 2010). The research has repeatedly demonstrated that the approach a
negotiator chooses significantly affects the entire process of a negotiation, and by continuation, the eventual outcomes as well (Bazerman et al., 2000; Thompson, 2012). The primary reason for this is that approaches, whether distributive, integrative or mixed, affect an individual’s framing of the negotiation in certain, limiting ways (Bazerman & Moore, 2009; Thompson, 2012). Subsequently, these limiting framing effects have been shown to dramatically influence that same individual’s decision-making process in the negotiation (Bazerman & Moore, 2009; Bazerman & Neale, 1992; Neale & Bazerman, 1991).

Although decision-making at both the macro- and micro-levels has always been of particular interest to negotiation scholars, overall assumptions about the phenomena of decision-making in negotiations have changed over time (Bazerman & Moore, 2009). Initially, negotiation research was carried out by neoclassical economists who assumed that decision-making in human behavior (including bargaining) would and should be conducted in a way that is fundamentally conscious, rational, and self-interested, i.e. *homo economicus* (Bazerman & Moore, 2009; Luce & Raiffa, 1957; Nash, 1950; Sebenius, 1992; Von Neumann & Morgenstern, 1945; Young, 1975). However, subsequent research by social psychologists demonstrated that although decision-making in human interactions (including negotiation) can be conscious, rational, and self-interested, it is also greatly affected by unconscious and perhaps irrational factors such as biases, schemas, and heuristics, i.e. *homo psychologicus* (Bazerman & Moore, 2009; Bazerman & Neale, 1992; Druckman, 1977; Neale & Bazerman, 1991; Pruitt, 1981; Rubin & Brown, 1975; Walton & McKersie, 1965). As a result, most negotiation scholars today theorize that decision-making in negotiation has both rational and emotional components (Bazerman & Moore, 2009; Thompson, 2006 & 2012; Thompson et al., 2010). This feature alone makes negotiation an interesting task for investigating the possible effects of integrity.
understood to be characterized by a harmony of affective (emotional) and cognitive (rational) components.

In review, how individuals approach a negotiation affects their framing of the negotiation. And their framing of the negotiation affects their decision-making throughout the negotiation. And decision-making affects behaviors, including in negotiations (Bazerman et al., 2000; Bazerman & Moore, 2009; Pruitt, 1981). Now, although this chain of connectedness from general approaches to common behaviors in negotiations is well-researched, what promotes ethical integrity and particular ethical behaviors and prevents a lack of ethical integrity and particular unethical behaviors in negotiations still needs to be addressed in further research (Aquino, 1998; Aquino & Becker, 2005; Stawiski, Tindale, & Dykema-Engblade, 2009). Thus, negotiation provides an interesting and appropriate scenario for the validation of an integrity scale.

**Self-interested behavior in negotiation.** One way to drill down into the relationship between ethical integrity and individual behavior in negotiations is to examine self-interested behavior in regards to others (Decelles et al., 2012). Aquino and Reed (2002) saw variance in how negotiators perceived others’ versus their own needs based on the self-interested behavior. Decelles et al. (2012) notes that in the self-interested behavior research, studies have focused on situational factors but have not explained how moral identity moderates the self-interested behavior in such situation. Self-interested behavior can quickly lead to unethical practice, such as deception in negotiation. For example, Zong, Bohns, and Gino (2010) found that self-interested behavior increased as darkness (e.g. wearing sunglasses or dimmed lighting) produced an illusion of anonymity among participants and resulted in more cheating. Similarly, Poon, Chen, and DeWall (2013) identified a positive correlation between ostracism and entitlement, a
form of self-interested behavior, which leads to more unethical action. All of this points to the idea that the relationship between ethical integrity and self-interested behavior in negotiation could be fruitfully explored. Self-interested behavior provides an appropriate dependent variable (DV) through which the effects of integrity can be manifested. Self-interested behavior is also easily integrated into a negotiation scenario. Study 2 employed self-interested behavior as the DV measure in the validation of the Ethical Integrity Scale (EIS) created in Study 1.

**Deception in negotiation.** Deception is the most common kind of unethical behavior that easily enters into negotiations (Aquino, 1998; Aquino & Becker, 2005; Dees & Cramton, 1991; Dees & Cramton, 1995; Giordano, Stoner, Brouer, & George, 2007; Provis, 2000; Stawiski et al., 2009; Thompson, 2012). Yet, despite the ease with which deception enters into negotiations, and although there has been a great deal of research into deception in negotiation by legal scholars, noteworthy behavioral ethicist, Karl Aquino (1998) that there is a surprisingly small body of empirical research on the topic deception in business negotiation contexts. At the writing of this dissertation little experimental research utilizing the variable of integrity has been added to the literature. Some background on deception in negotiation is in order here.

Deception can be defined as “a deliberate attempt by one party to present incorrect information to the other party…and/or to conceal or misrepresent information vital to the transaction” (Aquino, 1998, p. 204). It is important to point out that the moral legitimacy of several behaviors, including deception in negotiations, have been intensely disputed (Aquino, 1998; Aquino & Becker, 2005; Beckman, 1977; Carr, 1968; Carson, 1993; Cramton & Dees, 1993; Dees & Cramton, 1991, 1995; Lax & Sebenius, 1986; Lewicki & Litterer; 1985; Rubin & Brown, 1975; Strudler, 1995; Wokutch & Carson, 1993). The main reason for this unsettled
state in the literature is due to the fact that “reasonable individuals often disagree about ethical standards” (Aquino, 1998, p. 205; Bazerman, et al., 2000).

Yet, despite this often heated historical discussion regarding what specifically constitutes ethical behavior in negotiations and what does not, scholars agree that most individuals primarily deceive for self-interested reasons. Thus far, scholars have found that the most common self-interested reasons for individuals’ engaging in deception in negotiation include, but are not limited to, the following: 1. Greed, or in other words the individual stands to gain significantly economically; and, 2. Self-preservation or in other words the individual is unprepared and is thereby caught off-guard by the economic and psychological demands in the negotiation process (Aquino, 1998; Aquino & Becker, 2005; Carson, 1993; Cramton & Dees, 1993; Dees & Cramton, 1991, 1995; Lax & Sebenius, 1986; Lewicki, 1983; Lewicki & Robinson, 1998; O’Connor & Carnevale, 1997; Rubin & Brown, 1975; Schweitzer & Croson, 1999; Shapiro & Bies, 1994; Strudler, 1995; Thompson, 2012; Wokutch & Carson, 1993). Regardless of whether these common self-interested reasons exist for most individuals in negotiation, scholars and practitioners still generally consider deception to be a strategy to be avoided due to the high economic and relational costs that individuals incur when they are eventually caught in their deceptions (Aquino, 1998; Aquino & Becker, 2005; Cramton & Dees, 1993; Dees & Cramton, 1991, 1995; Fisher & Ury, 1981; Lewicki, 1983; Raiffa, 1982; Provis, 2000; Shapiro, 1991; Shapiro & Bies, 1994; Stawiski et al., 2009; Thompson, 2012). Gulcimen Yurtsever (2001) shares a good explanation as to how these costs come about when he observes,

Such misinterpretation [due to the inherently ambiguous and stressful nature of negotiations] may influence the exchange of information and the parties to a negotiation may deliver intentionally wrong information to support their position.
The misrepresentation of information may increase the difficulty of identifying alternatives which are acceptable for both sides. It reduces the chances of negotiators reaching mutually beneficial agreements. Further, once people have started intentionally misrepresenting factual information to protect discussions, they may find it difficult to generate novel ideas for their benefits (p. 62).

Schweitzer, Brodt, and Croson (2002) sum up the general consensus of recent scholarly opinion on deception in negotiation, “curtailing deception [in negotiations] represents an important and practical challenge for both organizations and individuals” (p. 271). Therefore, further scientific investigation into the factors that affect deception in negotiations is in order. In turn, all of this points to the idea that the relationship between ethical integrity and self-interested behavior in negotiation could be fruitfully explored. Deception in negotiation provides an appropriate DV through which the effects of integrity can be manifested. Study 3 employed deception in negotiation as the DV measure in the validation of the Ethical Integrity Scale (EIS) created in Study 1.

**Research Overview**

In review, integrity has been defined in many ways theoretically and operationally. For the purposes of this research ethical integrity is defined conceptually or theoretically as a positive attitude toward ethical matters (ethical concern), entailing consistency among ethical thoughts (cognition), feelings (affect) and behavioral intentions (conation) as well as ethical courage. This alternative approach builds on the notion that integrity is both personal relational in an ethical sense. It also grounds ethical integrity in research on attitudes. Finally, it reconciles different schools of thought regarding integrity in that it includes elements of both consistency and wholeness with the goal of improving behavioral predictability. Thus, with this alternative
definition of integrity it is possible that an individual can have personal integrity and not have ethical integrity. This project will pay closer attention to what is understood as ethical integrity. The main reason for selecting the term ethical integrity is because of the desire to distinguish between a consistency merely at the level of moral principles and a positive consistency of ethically relevant thoughts, feelings, behavioral intentions, and courage. In this vein then the following three studies were undertaken to create and validate the abovementioned theoretical and operational definition of ethical integrity.

Study 1 describes the creation and development of the “Ethical Integrity Scale” (EIS). This process involved creating the items, classifying the items, and selecting (or eliminating) items using correlation matrices and exploratory factor analyses, and evaluating the inter item reliability. In these exploratory factor analyses statistical adequacy and convergent validity were evaluated.

**Study 1: Creating the Ethical Integrity Scale (EIS)**

This study consisted of the development of an attitude-like scale to assess ethical integrity. Drawing upon attitude theory and the tri-component model in which attitudes are taken to consist of a cognitive, an affective, and a conative component, integrity is operationally defined in part as the level of consistency among those three components. The scale had as its target ethical matters, i.e. ethically relevant thinking, feeling, and behavioral intentions. Thus, the complete Ethical Integrity Scale (EIS) consisted of items relevant to thinking, items relevant to feeling, and items reflecting behavioral intentions or activities, in regard to ethical matters. During the conceptual development of the scale, it was decided to include a fourth attitudinal factor, ethical courage. At both the pragmatic and conceptual levels, courage seemed to be an important factor to consider, since, in many ethical situations in real settings there are potential
risks in taking certain ethical courses of action. Thus, in its final form, the EIS is designed to
assess the level of ethical concern and ethical courage (as measured by the numerical value of the
scores on the four EIS subscales, i.e., cognition, affect, conation, and courage) and the degree of
consistency among the scores of cognition, affect, conation, and courage subscales. Such
contern and consistency are taken not to be traits of persons, but rather to be more like attitudes
towards (or an approach to) ethical situations and actions.

There were five main steps that went into the process of this scale development. The first
step involved the generation of items that were related to ethical cognition, affect, behavioral
intention, and courage. The second step comprised the judging and categorizing of 120 items by
fourteen faculty and staff members of Brigham Young University. The third step involved
reducing the 120 initial items to 62 subsequent items through based on the judges’
responses. The fourth step consisted of a statistical analysis of the 62 scale items based on
responses of 426 undergraduate students at Brigham Young University to the 62-item scale. The
fifth step included the use of exploratory factor analyses in SPSS 21 to create the final 12 item
scale.

Again, one of the goals of this research was to create an instrument that can assess a
person’s level of what might be termed ethical concern when such concern consists of ethical
feeling, thinking, behavioral intention, and courage and of ethical consistency. Thus the scale,
when administered properly yields scores on both ethical concern and ethical consistency, which
when combined roughly assesses ethical integrity. The ethical concern dimension reflects the
attitude-like nature of integrity and reflects the sort of virtue, or supervirtue traditionally
associated with integrity. The ethical consistency dimension reflects the plain sense of integrity;
that is, the congruency between an individual’s positive thoughts, feelings, behavioral intentions,
and courage towards situations that call for ethical behavior. *Ethical integrity* can then be thought of theoretically (and operationalized empirically) as a combination of high moral concern and positive ethical consistency.

**Method**

**Participants.** Three persons participated in the item generation phase of the research, the author of the dissertation, the faculty dissertation advisor, and an undergraduate research assistant. The initial assignment of items to components was performed by 15 faculty and staff members of BYU who participated on a voluntary basis. Participants in the initial administration of the 62-item instrument were 426 business and psychology undergraduate students from BYU who participated for extra-credit.

**Procedures.** Participants in the first phase generated possible items for the EIS focusing on first, the categories of cognition, affect, behavioral intention, and courage regarding ethical matters. This phase created an initial pool of 120 potential scale items (see Appendix A).

Second, the 120 items generated were given to 15 faculty and staff members at BYU who were invited to be judges of the 120 question survey. Each judge was asked to evaluate each item by assigning it to one of the attitude component categories of cognition, affect, conation, or courage. They could also indicate any ambiguities or other problems with any of the items. The six sorting categories were *Affect, Cognition, Conation, Ethical Courage, Not Sure,* and *Concerned about Item.*

Based on the item sorting, the 120 initial items were then reduced to a pool of 62 items based on an 80% or better agreement rate between the judges’ evaluations. Items that did not meet this criterion or that were felt to be redundant with clearer or more highly evaluated items were eliminated from the item pool. This elimination process resulted in an initial EIS consisting
of 62 items broken down in the following groupings -- 16 cognition items, 16 affect items, 15 behavioral intention items, and 15 ethical courage items (see Appendix B).

This initial 62-item EIS was administered to a sample of 426 undergraduate students at Brigham Young University and each participant completed the scale during a fifteen-minute segment of a class which fulfilled an extra-credit opportunity option. The EIS was administered in paper-and-pencil format consisting of 62 ethical cognition, affect, behavioral intention, and courage items. The items were not labeled as to the attitude component or courage and were presented in a randomized order. Each participant was given the opportunity to read and rate the items independently using a Likert-type scale. The Likert-type scale ranged from 1-9 with the anchor points being: 1 = *I strongly disagree; this item does not describe me well*, 5 = *I am not sure if I agree or not; this item may or may not describe me*, and 9 = *I strongly agree; this item describes me well*. As data from the EIS were recorded anonymity was preserved so that no score could be matched to any particular student.

**Results**

**Factor structure.** The theoretical approach on which this research is based defines integrity in terms of a consistency among the attitude components affect, cognition, and conation and also courage. In fact, a major motivation for creating the EIS was to assess the degree of consistency among these four ethically relevant factors. Therefore, it was hypothesized that there would be correlations among all of the four factors. This was expected in part based on the results of prior studies taking this same approach and our theoretical assumption about the nature of integrity (Carlson, 1985). It was also expected that cognition, affect, and conation would be related to courage as a component that seems by nature tied to the choice to behave in ethical
situations, and because of the prior research indicating that integrity consists of a harmony between a person’s attitudes and behaviors (Carlson, 1985).

Data analysis. Using the guidance of David Howell’s (2012) widely-respected statistics textbook and Anna Costello and Jason Osborne’s (2005) widely-cited factor analysis piece the collected data were analyzed by means of an exploratory factor analysis in SPSS 21 employing the following adequacy criteria: 1) a KMO and Bartlett’s test of sphericity, 2) a Principal Axis Factoring extraction method, 3) a Direct Oblimin rotation method, and 4) Coefficient Display Format which sorted the correlation coefficients by size and suppressed small coefficients with an absolute value below .300.

The Direct Oblimin rotation method was employed instead of Maximum Likelihood rotation method to focus on the bivariate correlations rather than semipartial correlations despite the concern of shared variance because of our theoretical perspective that all four components of ethical integrity are oblique and inter-dependent as opposed to orthogonal and independent (Costello & Osborne, 2005). In doing this EFA, it was discovered that there were initially more natural factors, i.e. based on eigenvalue alone, than the four expected. Therefore, the EFA was rerun ignoring natural factors and the number of factors was fixed at four. Using this output, items were then eliminated if they had a loading coefficient of less than .300. Once all of the remaining items had a value of at least .300 then the EFA was rerun using the same rotation method as above. This analysis showed that there were still more than four natural factors and still real adequacy concerns. However, the scree plot indicated that there was a significant turn that began after the fourth factor (see Figure 1). Additionally, the eigenvalues indicated a drop off after four factors insofar as after the fourth factor the eigenvalues dropped below 1.000 (see Table 1).
Therefore, all subsequent EFAs and the accompanying selection of items were performed on each of the subscales independently. This decision was made because of concern for the internal convergent validity of each subscale rather than for the overall factor structure of the EIS (Howell, 2012).

After using an extensive iterative EFA process, each subscale was narrowed down to five items. Each of these subscales were then combined into a single scale consisting of twenty items and the same iterative EFA process was used to select the final items for each subscale in order to generate the final grand scale.
Table 1.

*Initial Eigenvalues and Total Variance Explained*

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<th>Total % of Variance</th>
<th>Cumulative %</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Cumulative %</th>
<th>Total Sums of Squared Loadings</th>
<th>Cumulative %</th>
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<td></td>
</tr>
<tr>
<td>24</td>
<td>.290</td>
<td>1.160</td>
<td>99.067</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>.233</td>
<td>.933</td>
<td>100.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Extraction Method: Principal Axis Factoring.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

The final grand scale consisted of 12 items and 4 subscales; 3 items for cognition, 3 for affect, 3 for conation, and 3 for courage (see Appendix C) for the final 12-item scale as demonstrated in Table 1 for the factor structure matrix and loadings when the Direct Oblimin
rotation and Principal Axis Factoring extraction was used). The analysis was deemed a success because the generally used statistical criteria for adequacy for the final grand scale were finally satisfied (see Table 3) with the Cronbach’s alpha for each of these sub-scales being .635 for cognition, .714 for affect, .708 for conation, and .814 for courage, respectively.

Table 2.

Factor Loadings and Cross Loadings* from Exploratory Factor Analysis of EIS Employing the Oblique Rotation Method

<table>
<thead>
<tr>
<th>Pattern Matrix</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courage 02_54</td>
<td>.849</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Courage 01_34</td>
<td>.671</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Courage 05_43</td>
<td>.403</td>
<td></td>
<td>-.330*</td>
<td></td>
</tr>
<tr>
<td>Cognition 05_50</td>
<td></td>
<td>.764</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognition 01_03</td>
<td></td>
<td>.658</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognition 02_56</td>
<td></td>
<td>.330</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conation 02_25</td>
<td></td>
<td>-.707</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conation 04_59</td>
<td></td>
<td>-.682</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conation 01_08</td>
<td></td>
<td>-.547</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affect 05_62</td>
<td></td>
<td></td>
<td>-.774</td>
<td></td>
</tr>
<tr>
<td>Affect 01_13</td>
<td></td>
<td></td>
<td>-.669</td>
<td></td>
</tr>
<tr>
<td>Affect 03_44</td>
<td></td>
<td></td>
<td>-.508</td>
<td></td>
</tr>
</tbody>
</table>

*Cross Loadings

Table 3.

Adequacy Statistics from Factor Loadings and Cross Loadings from Exploratory Factor Analysis of EIS Employing the Oblique Rotation Method

<table>
<thead>
<tr>
<th>Adequacy</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>KMO =</td>
<td>.853</td>
</tr>
<tr>
<td>Sig =</td>
<td>.000</td>
</tr>
<tr>
<td>Communualities =</td>
<td>All above .300</td>
</tr>
<tr>
<td>Cumulative Variance =</td>
<td>51.23</td>
</tr>
<tr>
<td>Goodness of Fit =</td>
<td>none</td>
</tr>
<tr>
<td>Error Residuals =</td>
<td>3.0%</td>
</tr>
<tr>
<td>Pattern =</td>
<td>All above .300</td>
</tr>
<tr>
<td>Correlation Matrix =</td>
<td>All below .700</td>
</tr>
</tbody>
</table>

After conducting this extensive exploratory factor analysis process under an oblique rotation using a Direct Oblimin rotation and a Principal Axis Factoring extraction method, a second exploratory factor analysis process was also conducted on the same overall data set under
an orthogonal rotation using a Promax rotation and a Maximum Likelihood extraction. This was
done purely out of scientific curiosity to see how the items might load and hang together
differently. Using a similar iterative process to the one described above, this factor analysis
indicated that regardless of the rotation method used, i.e. oblique or orthogonal, the final twelve
items hang together in a four factor structure that satisfies the psychometric requirements for
both adequacy and reliability (see Tables 4 and 5 for the orthogonal rotation results).

Table 4.

Factor Loadings and Cross Loadings* from Exploratory Factor Analysis of EIS Employing the
Orthogonal Rotation Method

<table>
<thead>
<tr>
<th>Pattern Matrix</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courage 0214_54</td>
<td>.932</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Courage 0109_34</td>
<td>.706</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Courage 0510_43</td>
<td>.416</td>
<td>.313*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affect 0516_62</td>
<td></td>
<td>.807</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affect 0103_13</td>
<td></td>
<td>.716</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affect 0313_44</td>
<td></td>
<td>.549</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conation 0207_25</td>
<td></td>
<td></td>
<td>.752</td>
<td></td>
</tr>
<tr>
<td>Conation 0416_59</td>
<td></td>
<td></td>
<td>.717</td>
<td></td>
</tr>
<tr>
<td>Conation 0104_08</td>
<td></td>
<td></td>
<td>.551</td>
<td></td>
</tr>
<tr>
<td>Cognition 10511_50</td>
<td></td>
<td></td>
<td></td>
<td>.774</td>
</tr>
<tr>
<td>Cognition 10101_3</td>
<td></td>
<td></td>
<td></td>
<td>.668</td>
</tr>
<tr>
<td>Cognition 10213_56</td>
<td></td>
<td></td>
<td></td>
<td>.330</td>
</tr>
</tbody>
</table>

*Note. Extraction Method: Maximum Likelihood. Rotation Method: Promax with Kaiser Normalization
*Cross Loadings

Table 5.

Adequacy Statistics from Factor Loadings and Cross Loadings from Exploratory Factor
Analysis of EIS Employing the Orthogonal Rotation Method

<table>
<thead>
<tr>
<th>Adequacy</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>KMO =</td>
<td>.853</td>
</tr>
<tr>
<td>Sig =</td>
<td>.000</td>
</tr>
<tr>
<td>Communalities =</td>
<td>All above .300</td>
</tr>
<tr>
<td>Cumulative Variance =</td>
<td>51.359</td>
</tr>
<tr>
<td>Goodness of Fit =</td>
<td>53.345/24 = 2.26</td>
</tr>
<tr>
<td>Error Residuals =</td>
<td>3.0%</td>
</tr>
<tr>
<td>Pattern = cross loading on Courage 05</td>
<td></td>
</tr>
<tr>
<td>Correlation Matrix =</td>
<td>One above .700</td>
</tr>
</tbody>
</table>
Once this statistical knowledge was finally in hand, the theoretical research questions as to how ethical concern, ethical consistency and ethical integrity related with the independent constructs of power, moral identity, and resilience and the dependent constructs of self-interested and deceptive behavior in a negotiation could then be operationalized, turned into research hypotheses, and tested empirically. That is what was done in Studies 2 and 3.

**Study 2: Ethical Concern, Ethical Consistency, Ethical Integrity, and Self-interested Behavior in a Negotiation**

Study 2 evaluated the predictive validity of the Ethical Integrity Scale (EIS), as developed in Study 1, using a variation of the Ultimatum Game (see Appendix D). The predictor variables were scores from the Ethical Integrity Scale (EIS), moral identity (MIS), resilience (CD-RISC), and power. The dependent variable was self-interested behavior. It was hypothesized that ethical concern, ethical consistency, ethical integrity (from the EIS), moral identity, resilience, and power would predict self-interested behavior in a negotiation context. The design of this study also permitted a test of construct validity of the EIS as it was predicted that scores on ethical concern, ethical consistency, and ethical integrity derived from the EIS which should positively correlate with moral identity and with resilience.

**Method**

**Participants.** Participants were 265 adults, with 136 females and 129 males. Participants were recruited online through Amazon Mechanical Turk [AMT]. An advertisement was placed online through AMT and participants self-enrolled by completing the consent form. The age range of the participants was 16-79 years ($M = 33.0$, $SD = 12.5$). Consent was obtained from each subject (see Appendix E). Upon finishing the online task and survey, participants were compensated financially ($1.00 per person) through AMT.
Procedures. Qualtrics was used as the host study 2 and AMT was used as the gateway for this study to deliver a variation of the Ultimatum Game and a series of instruments and demographic questions. The experiment consisted of two phases. In the first phase, participants individually completed an allocation task, i.e. a variation of the Ultimatum Game. In the second phase, participants filled out a series of scales and answered a series of standard demographic questions. Participants took an average time of 17 minutes and 2 seconds to complete both phases.

After completing an informed consent, participants engaged in a negotiation task better known as an Ultimatum Game (Thaler, 1988). The Ultimatum Game is a traditional, simple operationalization of a negotiation used primarily to investigate irrational decision-making behaviors (Thaler, 1988). The Ultimatum Game typically consists of two participants, an Offerer and a Respondent. In the Ultimatum Game task, the Offerer and the Respondent decide how they will divide up a sum of money which has been allocated to them by the experimenter (Güth, Schmittberger, & Schwarze, 1982). To start the game, one of the two participants is randomly chosen to be the Offerer. The Offerer is the party that controls the total amount of money initially allocated for division (e.g. $10) between the two participants. The Offerer is required to offer a portion of that money (e.g. $3) to the Respondent, who can either accept or reject the offer (Pillutla & Murnighan, 1995). If the Respondent accepts the offer from the Offerer, then both receive the amount of money according to the split proposed by the Offerer (e.g. $3 to the Respondent and $7 to the Offerer). However, if the Respondent rejects the offer, then neither of the two participants gets any of the money (Güth et al., 1982).

In Study 2, the amount of money allocated totaled $1. This amount was used in order to reduce costs and because previous research suggested that any differences in amounts ranging
from $1 - $10 contributed little variation to the results (Pillutla & Murnighan, 1995). In this experiment, the $1 total amount assigned for allocation equaled the total online participation amount. This matching of the two amounts was done deliberately because it meant that participants assigned to be the role of Offerer were being given the opportunity to literally double their money if they were completely selfish in their allocation decision. Thus, there was a real element of pressure to be selfish despite the relatively small amounts of money being used in the exercise.

In Study 2, this variation of the Ultimatum Game was performed both via computer and online, as has been done in other research (Bolton & Ockenfels, 2005). However, in this study, all participants in the experiment were assigned to be Offerers. There were no participants that were assigned to be Respondents. This fact was not known by the participants.

After logging into the experiment through AMT (and electronically completing the informed consent form), the online participant was directed to a new screen. On the new screen each participant was congratulated on being selected to participate in an online exercise with another online participant with real monetary consequences, to join all they needed to do was to click next. After clicking next, each participant was directed to a new screen which informed them that they needed to wait to be matched with another online participant. No actual such assignment was made.

After being presented with a spooling clock icon on the screen and waiting seven seconds, each participant was directed to a new screen to engage in the Ultimatum Game task. After reading the instructions, each participant was given the opportunity to decide how much to allocate to themselves, how much to allocate to the other party, and then input the two amounts on the screen and into the computer system. After entering the divided allocation amounts and
clicking next the participant was then informed that they would learn the outcome of the other party’s decision by the total amount that showed up in their compensation. Finally, the participants were moved on to a new screen and started phase two of the experiment, which consisted of completing a series of scales (i.e. the EIS, the MIS, and the CD-RISC) and demographic questions.

Since there was no other online participant playing the role of Receiver, the computer automatically accepted whatever was offered and the total initial allocation amount was automatically added to the participants’ total compensation. In other words, no matter what the allocation was every participant doubled their money. Each participant received their total compensation within 48 hours of completing the online study.

**Independent variables and manipulations.**

**Power.** Utilizing the prompts from Galinsky et al. (2003) power was manipulated by inviting the participants to engage in one of the following two exercises.

1. Please recall a particular incident in which you had power over another individual or individuals. By power, we mean a situation in which you controlled the ability of another person or persons to get something they wanted, or were in a position to evaluate those individuals. In three to five sentences, please describe this situation in which you had power—what happened, how you felt, etc. (p. 458)

or

2. Please recall a particular incident in which someone else had power over you. By power, we mean a situation in which someone had control over your ability to get something you wanted, or was in a position to evaluate you. In three to five sentences,
please describe this situation in which you did not have power—what happened, how you felt, etc. (p. 458)

**Resilience.** The Connor-Davidson (2003) Resilience Scale was administered to each participant.

**Moral identity.** The Aquino and Reed (2002) Moral Identity Scale was administered to each participant.

**Ethical concern.** Ethical concern was measured using the 12-item EIS. Ethical concern scores consisted of a combination of thinking, feeling, intending, and acting with courage to do the right thing. Ethical concern scores were created for each participant by creating a mean for each of the three items from each category (i.e. cognition, affect, conation, and courage). For example, \((\text{cognition item 1} + \text{cognition item 2} + \text{cognition item 3})/3 = \text{cognition mean}\). Following this procedure on the three items for each category, these means were then combined to create a new grand mean. For example, \((\text{cognition mean} + \text{affect mean} + \text{conation mean} + \text{courage mean})/4 = \text{ethical concern mean}\).

**Ethical consistency.** Ethical consistency was also measured using the EIS. Ethical consistency scores consisted of a combination of thinking, feeling, intending, and acting with courage to do the right thing. Ethical consistency scores were created for each participant by converting their individual mean scores for each category into Z scores (i.e. cognition, affect, conation, and courage). Then, the standard deviation for each of the category mean Z scores was derived. For example, the code in SPSS 21 would look like “StDev (ZCog mean, ZAff mean, ZCon mean, ZCour mean).”

**Ethical integrity.** Finally, ethical integrity was measured using the EIS. Ethical integrity scores were created from of a combination of ethical concern scores and ethical consistency
scores. This combination was done in SPSS 21 by creating two categories for each variable, i.e. high and low for both ethical concern and ethical consistency. High and low categorizations were assigned based on a numeric split that created two equal groups for both ethical concern and ethical consistency. After this forced split was done on each scalar variable, and the new categorical variables were created, a new combined variable was created from combining the two categorical variables in four different combinations. These four combinations formed the basis of a first attempt to create a single score for ethical integrity. Thus, ethical integrity scores for the initial analyses consisted of three levels: high ethical integrity (or high ethical concern, high ethical consistency); mixed ethical integrity (or high ethical concern, low ethical; consistency or low ethical concern, high ethical consistency); and, low ethical integrity (low ethical concern, low ethical consistency).

**Dependent variables and manipulations.**

**Self-interested behavior in a negotiation.** Self-interested behavior was assessed based on the number of dimes (out of the total of ten allocated by the experimenter) that the participants allocated to themselves minus the number of dimes that they allocated to the other party in the variation of the Ultimatum Game. Participants on scores ranged from 10 through -10 ($M = 0.679, SD = 2.906$).

**Hypotheses**

H2a: Ethical concern will be significantly and positively correlated with moral identity and resilience.

H2b: Ethical consistency will be significantly and positively correlated with moral identity and resilience.
H2c: Ethical integrity will be significantly and positively correlated with moral identity and resilience.

H2d: Ethical concern will be negatively associated with self-interested behavior in a negotiation.

H2e: Ethical consistency will be negatively associated with self-interested behavior in a negotiation.

H2f: Ethical integrity will be negatively associated with self-interested behavior in a negotiation.

H2g: Moral identity will be negatively associated with self-interested behavior in a negotiation.

H2h: Resilience will be negatively associated with self-interested behavior in a negotiation.

H2i: Power will be positively associated with self-interested behavior in a negotiation.

Results

Data analysis. All data analyses were carried out in SPSS 21. Analysis was carried out through the utilization of correlations matrices and regressions.

Evaluation of the correlation coefficients revealed the following findings (see Appendix F for the Study 2 correlation matrix). Hypotheses 2a was supported in that ethical concern was positively correlated with moral identity ($r(263) = .637, p = .000$) and resilience ($r(263) = .508, p = .000$). Hypothesis 2b was not supported. Hypothesis 2c was supported in that ethical integrity was positively correlated with moral identity ($r(263) = .290, p = .000$) and resilience ($r(263) = .332, p = .000$).
Regression analyses revealed the following findings. Hypothesis 2d was supported in that ethical concern significantly predicted self-interest scores, \( b = -0.225 \), \( t(263) = 3.748 \), \( p = 0.000 \); ethical concern also explained a significant proportion of variance in self-interest scores, \( R^2 = 0.051 \), \( F(1, 113) = 14.044 \), \( p = 0.000 \). Hypothesis 2e and 2f were not supported. Hypothesis 2g was supported in that moral identity significantly predicted self-interest scores, \( b = -0.202 \), \( t(263) = -3.337 \), \( p = 0.001 \); moral identity also explained a significant proportion of variance in self-interest scores, \( R^2 = 0.041 \), \( F(1, 90) = 11.133 \), \( p = 0.001 \). Hypothesis 2h and 2i were not supported.

**Study 3: Ethical Concern, Ethical Consistency, Ethical Integrity, and Deception in a Negotiation**

Study 3 evaluated the predictive validity of the Ethical Integrity Scale (EIS), as developed in Study 1, using a variation of the Ultimatum Game called an Honesty Task (see Appendix G). The predictor variables were scores from the Ethical Integrity Scale (EIS), moral identity (MIS), resilience (CD-RISC), and power. The dependent variable was deceptive behavior. It was hypothesized that ethical concern, ethical consistency, ethical integrity (from the EIS), moral identity, resilience, and power would predict deceptive behavior in a negotiation context. The design of this study also permitted a test of construct validity of the EIS as it was predicted that ethical concern, ethical consistency, and ethical integrity derived from the EIS which should positively correlate with moral identity and with resilience.

**Method**

**Participants.** Participants were 167 adults, with 97 females and 70 males. Participants were recruited online through Amazon Mechanical Turk [AMT]. An advertisement was placed online through AMT and participants self-enrolled by completing the consent form. The age
range of the participants was 18-73 years (\(M = 32.0, SD = 13.3\)). Consent was obtained from each subject (see Appendix E). Upon finishing the online task and survey, participants were compensated financially ($1.00 per person) through AMT.

**Procedures.** Qualtrics was used as the host for Study 3 and AMT was used as the gateway for this study to deliver a variation of the Ultimatum Game and a series of instruments and demographic questions. The experiment consisted of two phases. In the first phase, participants individually completed a message task, i.e. a variation of the Ultimatum Game. In the second phase, participants filled out a series of scales and answered a series of standard demographic questions. Participants took an average time of 17 minutes and 5 seconds to complete both phases.

After completing an informed consent, participants engaged in a negotiation task that is a specialized version of the Ultimatum Game (Thaler, 1998) which was developed by behavioral ethicist Chen Bo Zhong (2007). The Ultimatum Game is a traditional, simple operationalization of a negotiation used primarily to investigate irrational decision-making behaviors (Thaler, 1988). The Ultimatum Game typically consists of two participants that need to make a decision with real monetary consequences and this variation is no different (Zhong, 2007).

In this exercise, there are two possible roles, the Sender and the Receiver. The Sender’s goal is to persuade the Receiver to make a choice. This choice is set up such that the honesty/dishonesty of the Sender can be assessed; hence the label of Honesty Task in this dissertation.

The Sender is informed that that there are two possible monetary payments (option A and option B) that have been made available to both the Sender and the Receiver. The two payment options (A and B) are then made known to the Sender. If option A is selected by the Receiver
then this decision will lead to less money for the Sender. If option B is selected by the Receiver then this decision will lead to more money for the Sender.

The Sender is then informed that only s/he gets to see the monetary breakdowns for option A and option B. The Sender then has to make a choice between which of the two messages to send (i.e. message 1 or message 2). Message 1 about option A and option B is true and message 2 about option A and option B is a lie. The Sender is then informed that the message is the only information that the Receiver has to guide his/her choice. The Sender is then immediately reassured that the truthfulness of the message is only known to the Sender.

The Sender is finally given the further assurance that the Receiver will never know either the identity of the Sender or the truthfulness of the message. In other words, the key to this exercise is that the truthful message leads to the Sender getting less money whereas the untruthful message leads to the Sender getting more money. The Sender is left at the end of the instructions with the choice to send either the truthful or the untruthful message.

In Study 3, the amount of money that was impacted by the Sender’s message decision totaled $1. This amount was used in order to reduce costs and because previous research suggested that any differences in amounts ranging from $1 - $10 contributed little variation to the results (Pillutla & Murnighan, 1995). In this experiment, the $1 total amount impacted by the sent message equaled the total online participation amount. This matching of the two amounts was done deliberately because it meant that participants assigned to be the role of Sender were being given the opportunity to nearly double their money if they were decided to send the untruthful message. Thus, there was a real element of pressure to be dishonest despite the relatively small amounts of money being used in the exercise.
In Study 3, the Honesty Task was performed both via computer and online, as has been done in other research (Bolton & Ockenfels, 2005). However, in this study, all participants in the experiment were assigned to be Senders. There were no participants that were assigned to be Receivers. This fact was not known by the participants.

After logging into the experiment through AMT (and electronically completing the informed consent form), the online participant was directed to a new screen. On the new screen each participant was congratulated on being selected to participate in an online exercise with another online participant with real monetary consequences, to join all they needed to do was to click next. After clicking next, each participant was directed to a new screen which informed them that they needed to wait to be matched with another online participant. No actual such assignment was made.

After being presented with a spooling clock icon on the screen and waiting seven seconds, each participant was directed to a new screen to engage in the Honesty Task. After reading the instructions, each participant was given the opportunity to decide which message to send and then select that message on the screen and into the computer system. After selecting the message and clicking next the participant was then informed that they would learn the outcome of the other party’s decision by the total amount that showed up in their compensation. Finally, the participants were moved on to a new screen and started phase two of the experiment, which consisted of completing a series of scales (i.e. the EIS, the MIS, and the CD-RISC) and demographic questions.

Since there was no other online participant playing the role of Receiver, the computer automatically accepted the advice in whatever message was sent and the total allocation amount was automatically added to the participants’ total compensation. In other words, no matter what
message the Sender selected every participant doubled their money. Each participant received their total compensation within 48 hours of completing the online study.

**Measures and manipulations.** All measures and manipulations used in Study 3 were the same as Study 2 except for the dependent measure, i.e. deception in a negotiation (or the Honesty Task).

**Deception in a negotiation.** Deceptive behavior in a negotiation was assessed based on the message, either truthful or untruthful, that the participant chose to send to the other party in the Honesty Task.

**Hypotheses**

H3a: Ethical concern will be significantly and positively correlated with moral identity and resilience.

H3b: Ethical consistency will be significantly and positively correlated with moral identity and resilience.

H3c: Ethical integrity will be significantly and positively correlated with moral identity and resilience.

H3d: Ethical concern will be negatively associated with deceptive behavior in a negotiation.

H3e: Ethical consistency will be negatively associated with deceptive behavior in a negotiation.

H3f: Ethical integrity will be negatively associated with deceptive behavior in a negotiation.

H3g: Moral identity will be negatively associated with deceptive behavior in a negotiation.
H3h: Resilience will be negatively associated with deceptive behavior in a negotiation.

H3i: Power will be positively associated with deceptive behavior in a negotiation.

Results

Data analysis. All data analyses were carried out in SPSS 21. Analysis was carried out through the utilization of correlations matrixes and regressions.

Evaluation of the correlation coefficients revealed the following findings (see the Study 3 correlation matrix in Appendix H). Hypotheses 3a was supported in that ethical concern was positively correlated with moral identity \((r (165) = .688, \ p = .000)\) and resilience \((r (165) = .442, \ p = .000 \) for resilience). Hypothesis 3b was not supported. Hypothesis 3c was supported in that ethical integrity was positively correlated with moral identity \((r (165) = .443, \ p = .000)\) and resilience \((r (165) = .278, \ p = .000)\).

Regression analyses revealed the following findings. Hypothesis 3d was supported wherein ethical concern both significantly predicted deception scores and explained a significant proportion of the variance in deception scores, Wald statistic equal to 7.899 which is significant at the .005 level. The overall model is significant at the .004 level according to the Model chi-square statistic. The model predicts 60.5% of the responses correctly. The Cox & Snell \(R^2\) Square is .049. Hypothesis 3e and 3f were not supported. Hypothesis 3g was supported wherein moral identity both significantly predicted deception scores and explained a significant proportion of the variance in deception scores, Wald statistic equal to 4.165 which is significant at the .041 level. The overall model is significant at the .038 level according to the Model chi-square statistic. The model predicts 57.5% of the responses correctly. The Cox & Snell \(R^2\) Square is .026. Hypothesis 3h and 3i were not supported.
Supplemental Analyses of Study 2 and Study 3

In addition to the hypotheses tested and reported above, data from these two studies made several supplemental analyses possible. These supplemental analyses were carried out to examine several important conceptual/empirical questions related to the constructs of ethical concern, ethical consistency, and ethical integrity. These analyses suggested that ethical concern is the most important predictor of ethical behavior. These analyses also suggested that ethical consistency makes a difference in the patterns in which ethical concern will be expressed. Lastly, these analyses suggested that a single index of ethical integrity that is more predictive of behavior might be created by combining ethical concern and ethical consistency differently than done so initially.

The data in Study 2 allowed for a direct comparison of the EIS with the MIS as predictors of behaviors. A multiple linear regression analysis was used in SPSS 21 in order to develop a model for predicting self-interested behavior from these predictors of moral identity ($M = 6.135$, $SD = 0.931$) and ethical concern ($M = 7.594$, $SD = 1.025$).

Each of the predictor variables had a significant ($p < .05$) zero-order correlation with self-interested behavior, but only the ethical concern predictor had significant partial effects ($p = 0.037$) in the full model. The two predictor model was able to account for 5.6% of the variance in self-interested behavior, $F(2, 263) = 7.828$, $p< .000$, $R^2 = .056$, 95% CI. These results suggest that the EIS accounted for more variance in behavior scores than the MIS, in that it significantly accounted for unique variance in the regression from Study 2. Thus, in Study 2 the EIS predicted (un)ethical behavior better (and accounted for more of the variance) than the MIS, which is a well-established scale in the field of behavioral ethics.
Counter to what was hypothesized, the construct of ethical consistency by itself failed to predict (un)ethical behavior in either Study 2 or Study 3. In consideration of these results, and a reconsideration of the nature of ethical concern and ethical integrity, it seems reasonable that ethical consistency alone (i.e., a person’s being consistent in their “level” of cognition, affect, conation, and courage in regards to ethical matters) would not be a good predictor of behavior since if consistency is the only consideration, both high and low consistency groups would be composed of participants with either positive ethical concern (relatively and consistently high scores on cognition, affect, conation, and courage) or negative ethical concern (relatively and consistently low scores on cognition, affect, conation, and courage). Thus, the high consistency group could be composed of people having positive ethical concern and people having negative ethical concern. Therefore, any effect of high ethical consistency on behavior would be expected to be cancelled out between the groups. As such, it is important to note that there can be two types of high ethical consistency, i.e. positive and negative.

This theoretical perspective can be traced back to the Theory of Planned Behavior, which itself can be traced back to Fishbein and Ajzen’s (1975) Theory of Reasoned Action, which indicates that a person’s attitude can be either positive or negative regarding the behavior in question (Ajzen, 1991). Thus, for ethical consistency to be predictive it needs to be matched with ethical concern in order to assess whether the individual is high positive ethical consistency or high negative ethical consistency. Following this line of analysis, it is proposed that the construct of ethical integrity involves a combination of ethical concern and ethical consistency.

The prediction that ethical consistency might be predictive of ethical behavior was based on results from other studies employing this same attitude-like scaling technique in regards to other behaviors (Carlson, 1985; Kristensen et al., 2001). However, as was noted above, there
was reason to doubt that these hypotheses were reasonable because mere consistency resulted in participants at every level of ethical concern being regarded similarly in consistency. It appears that ethics, as the object for an attitude-like scale might be different from other objects, such as academic performance or religious behavior. Regardless, ethical concern, including courage, was predictive of behavior and ethical consistency was not.

The data from Study 2 permitted a secondary analysis involving the possible role of the dimension of ethical consistency on ethical concern. A two-way, independent groups Analysis of Variance (ANOVA) was performed to check for possible interaction effects of ethical concern and ethical consistency in the prediction of ethical behaviors on the data of Study 2. The analysis was a 2 (high vs. low ethical concern) by 2 (high vs. low ethical consistency). A graph of the interaction means from the analysis can be found in Figure 2.

Figure 2.
For both of these factors the high vs. low split was made by dividing the scores such that it created two roughly equal size groups on the ethical concern and ethical consistency scores, respectively. The dependent measure for the analysis was the score on self-interested behavior. Results of the ANOVA are given in Tables 9, 10, and 11 (see Appendix I).

The main effect for ethical concern on self-interested behavior was significant and the main effect for ethical consistency on self-interested behavior was not significant (see Table 10). The interaction effect between ethical concern and ethical consistency on self-interested behavior from the ANOVA was marginally significant at the $p = .05$ level, rounded to two-digits (see Table 10). Examination of the four cell means show that the highest level of self-interested behavior was in the group with high ethical consistency but low ethical concern (see Table 11). These are participants who reported low ethical concern across the cognitive, affective, conative, and courageous components, and did so consistently across the components. Contrastingly, the participants with high ethical consistency and high ethical concern had the lowest self-interest scores (see Table 11). The difference in the level of self-interested behavior between these two groups was statistically significant at below a .01 level (see Table 11). These results are supportive of the theoretical understanding of integrity proposed in this dissertation.

One implication of this analysis is that a single numerical index of ethical integrity would be more predictive of behavior if it somehow combed ethical concern and ethical consistency. Given the results of the initial attempt to produce and test such an index in Studies 2 and 3, it would need to be done differently than in Studies 2 and 3. Utilizing the pattern of results from the Two-Way ANOVA described above, a score for ethical integrity could be created from that pattern. The interaction term consists of four combinations of levels of ethical concern and ethical consistency: 1) high ethical concern, high ethical consistency; 2) high ethical concern,
low ethical consistency; 3) low ethical concern, low ethical consistency; and 4) low ethical concern, high ethical consistency. These four combinations of concern and consistency were ranked in order of the mean self-interested behavior scores to which they correspond. Thus participants in the “high concern-high consistency” condition were assigned the rank of 4, indicating the highest level of integrity, participants in the high concern-low consistency condition a rank of 3, participants in the low concern- low consistency a rank of 2, and participants in the low concern-high consistency condition, a rank of 1. These scores represent one way of creating a single index of integrity. It is acknowledged that assigning the ranks according to the outcome of a single study is arbitrary and it is done here in the interests of exploratory data analyses of certainly needs to be refined on the basis of future research, but which might have come heuristic value as an illustrative example.

Using this new and different ranking of the single index scores of ethical integrity, the correlations and regressions from Study 2 were rerun and reanalyzed. The following results were observed. Hypothesis 2c was again supported, although more strongly, insofar that ethical integrity was positively correlated with moral identity ($r (263) = .401$, $p = .000$) and resilience ($r (263) = .422$, $p = .000$). Hypothesis 2f from Study 2 was supported insofar that ethical integrity significantly predicted self-interest scores, $b = -.202$, $t(263) = 3.341$, $p = .001$; ethical integrity also explained a significant proportion of variance in self-interest scores, $R^2 = .041$, $F(1, 90) = 11.161$, $p = .000$. Hypothesis 3c from Study 3 was again supported, although more strongly, insofar that ethical integrity was positively correlated with moral identity ($r (165) = .443$, $p = .000$) and resilience ($r (165) = .278$, $p = .000$). Hypothesis 3f from Study 3 went from being unsupported to being supported wherein ethical integrity both significantly predicted deception scores and explained a significant proportion of the variance in deception scores (Wald
statistic equal to 7.424 which is significant at the .006 level. The overall model is significant at the .005 level according to the Model chi-square statistic. The model predicts 62.3% of the responses correctly. The Cox & Snell $R^2$ is .045).

One additional exploratory analysis was performed, this time on the deception data from Study 3. Since the deception measure was a binary variable, the data lend themselves to a Chi Square ($\chi^2$) analysis. The four combinations of ethical concern and ethical consistency constitute a 2X2 contingency table with the number of participants in each condition who deceived during the Honesty Game providing the data for each cell. In the data, 21 participants in the high concern-high consistency deceived, 7 in the high concern-low consistency condition did so, 16 deceived in the low concern-high consistency condition, and 33 of the participants in the low concern-low consistency deceived. Chi Square analysis on this contingency table produced a significant result ($\chi^2 = 12.800, df = 1, p < .000$), supporting the proposition that ethical concern and ethical consistency were significantly related in their relationship with deceptive behavior in Study 3. This gives further support the possibility that a single measure of ethical integrity which takes account of both ethical concern and ethical consistency might be predictive of ethical behavior.

In summary, the additional analyses presented here supported, as did the original analyses of Study 2 and Study 3, the proposition that ethical concern is the most important predictor of ethical behavior and that ethical consistency makes a difference in the pattern in which ethical concern will be expressed. Lastly, these analyses suggested that a single index of ethical integrity that is more predictive of behavior might be created by combining ethical concern and ethical consistency in some meaningful way.
General Discussion

This dissertation introduces to the scholarly literature a new theoretical conception of integrity (i.e. ethical integrity) and a new scale for the assessment of ethical integrity derived from work in attitude theory. Ethical integrity is conceptualized in terms of two dimensions, ethical concern and ethical consistency. Ethical concern is conceptualized in terms of four components, affect, cognition, conation and courage. The first three components have been found to be at the heart of theories and models of attitude (Azjen, 2005) and important for the project of predicting behavior from attitudes (Azjen, 2005). Ethical consistency is conceptualized in terms of the level of congruence among the four components of ethical concern.

The Ethical Integrity Scale (EIS) assesses the extent to which persons report thinking positively about ethics and ethical matters, the extent to which persons report feeling positively towards such matters, and the extent to which persons intend to act affirmatively toward ethical matters. These are the classical components of attitude, and in this case the attitude of integrity. However, ethical action is often required in the face of reasons and pressures against it. Thus, the EIS adds an additional component to the attitude-like nature of integrity, i.e. ethical courage. Ethical courage is conceptualized in terms of the extent to which persons report recognizing the importance of and actually acting ethically even in situations where it might be hard. The mean score across these four dimensions is described as ethical concern.

In line with some of the literature on the topic (Olson, 1998), this conceptualization of ethical integrity also includes an element of consistency among these four components of ethical concern. This assessment of ethical consistency is undertaken because of the aforementioned
theoretical background that indicates that attitude-behavior predictability is enhanced when consistency between the attitude components is also taken into account.

This dissertation then, documents the creation of an instrument (i.e. the EIS) that assesses both ethical concern and ethical consistency. This dissertation also presents the results of two studies designed to test the predictive validity of the EIS. Study 2 involved predicting self-interested behavior in a modified Ultimatum Game task. Study 3 involved predicting deception in a highly specialized and modified version of the Ultimatum Game (called an Honesty Task in this dissertation). Studies 2 and 3 produced data comprising scores on an already established measure of a construct that should be related to ethical concern and ethical consistency (or ethical integrity), the Moral Identity Scale (MIS). The studies also included a measure of Resilience (the CD-RISC) which has been linked in the literature to ethics (Caza, Barker, & Cameron, 2004; Tjeltveit & Gottlieb, 2010). It should be noted here that although the EIS, as a measure of ethical integrity, was expected to correlate with moral identity as a construct, it would be important to the development of this new conceptualization of integrity that it demonstrate some differentiation. Thus, the MIS provided an opportunity for a first assessment of convergent construct validity. The CD-RISC provided an opportunity for a first assessment of divergent or discriminant validity in that the cognitive, affective, and conative components of the EIS should not be reducible to just confidence in one’s ability to bounce back from adverse circumstances. In other words, while a positive correlation might be expected, it should not be as strong a relationship as that between the EIS and the MIS. Additionally, the EIS should be a better predictor of behavior than the CD-RISC. This was indeed the case.

Results showed that the attitude-like construct of ethical concern was the strongest predictor of (un)ethical behavior in Study 2 and Study 3. The construct of ethical consistency
failed to predict (un)ethical behavior in either Study 2 or Study 3. Power and resilience also failed to predict (un)ethical behavior in either Study 2 or Study 3.

These findings indicate that of the two dimensions of ethical integrity, i.e. concern and consistency, ethical concern is the better predictor. It is interesting to note, however, that the differences between the low ethical concern, high ethical consistency participant scores, and the low ethical concern, low consistency participant scores were significant. This difference can be attributed to the level of ethical consistency. All of these findings suggest that, as was reported in previous studies employing this sort of attitude-like scale (Carlson, 1985; Kristensen et al., 2001), people who are highly consistent in their cognitive, affective, conative, and courage-related engagement with ethical matters are more predictable in regard to their ethical behavior than participants who are inconsistent across these attitude components (including courage). This effect is worthy of further investigation.

**Strengths, Limitations, and Directions for Future Research**

**Strengths**

One of the strengths of this research project was that it began with a theoretical perspective on an important and useful construct (integrity) and developed a scale to assess the construct with acceptable psychometric properties. The scale is different from other approaches to measuring integrity, in that it is grounded largely in the concept of attitude, rather than pursuing integrity in terms of a trait or state. The scale makes a contribution by bringing research and theory in attitudes to the study of integrity. The study also succeeded in providing the first evidence of construct and predictive validity for the scale.

Another strength of this work is that the samples from which the validational data were calculated were diverse. The predictive validity studies employed behavioral criterion variable
that really did have clear ethical relevance, and included a manipulation of power, a variable that has demonstrated relevance for the study of ethics.

Perhaps the chief strength of the study is its heuristic potential, including possible subsequent research on the virtue of taking an attitudinal perspective on both the theory and measurement of ethical integrity, and perhaps even other ethically relevant constructs. More research might also be carried out to clarify what this study suggests is the two-dimensional nature of integrity, ethical concern and ethical consistency. There is some reason to suppose that the EIS can generate profiles of ethical integrity by assessing various patterns of scores on the cognitive, affective, conative, and courage subscales, which subscales might be useful in the prediction of ethical behavior.

Limitations

This research manifests some of the standard weaknesses of empirical research on ethics and behavior. First, the sample size is comparatively small which might, in part, account for the small $R^2$ in both Study 2 and Study 3, and the generally weaker findings in Study 3. Second, the dependent measures for Studies 2 and 3 were both variations of an Ultimatum Game, played via computer and online, at participants’ convenience, and without any real human contact or serious or salient ethical ramifications that would be expected to be more salient in a real encounter with another person. Although the results employing the Ultimatum Game variations were promising it is important to pursue validational studies employing real human interactions and negotiations with clearer and more salient ethical import. Third, the EIS does not produce a clear, compelling single numerical index of ethical integrity. Results suggest that both ethical concern and ethical consistency are important; however, they do not definitively show how these two dimensions interact. Fourth, the experimental design of the studies was simple and the statistical analyses
basic. Thus, larger samples and better dependent measures would be expected to produce more finely grained information about the topics that were studied.

**Directions for Future Research**

Possible and promising directions for further research arise from both the theoretical perspectives underlying the approach to integrity and ethics developed in this dissertation and the methodological approach and empirical results of the studies undertaken. The theoretically relevant possible directions will be dealt with first.

The EIS developed out of a perspective that regards ethical integrity to be more like an attitude than a trait or a state. Attitudes, by their nature, are evaluative, relatively stable over time, but amenable to change. They are intentional (as in directed at an object), and composed of several key components (at least cognition, affect, and conation). By most accounts attitudes are more what people do – an evaluative stance toward their world and their own actions – than what people have – a fact of their nature or their circumstances. Attitudes do not, by themselves, establish the agentic nature of human behaviors, but they do provide a theoretical alternative path through the conceptual landscape which has been dominated by consensual emphasis on the more static and traditionally deterministic traits and states. Future research on ethical integrity as attitudinal could explore and expand the literature on integrity as well as evaluating the extent which attitudinal concepts might enhance behavioral prediction.

Two other lines of theoretical research follow on the idea that ethical integrity might be rightly characterized as an attitude rather than as a trait or state. The first has to do with the possibility of educational or change strategies for ethical integrity. If ethical integrity is attitudinal, consisting of evaluative and intentional components of cognition, affect, conation, and courage, and if these are subject the change, the strategies for influencing integrity have
multiple targets at which they can be aimed. There is a large literature on attitude change which might have some utility in the field of ethics, particularly applied ethics.

The second line of research has more to do with research methods and measurement theory. If ethical integrity is attitudinal – composed of persons’ evaluations, assessments, and intentions, then a good attitude measure provides an opportunity for people to express those thoughts, feelings, and intentions as currently experienced. Building scales to assess integrity of this sort is rather more like creating a language for self-expression than a measuring rod to find out how much integrity a particular person has got. This may seem like too subtle a distinction, but it is the difference between a measurement strategy that essentially says please share what you are thinking, feeling, and what you plan to do regarding ethical matters as opposed to supposing that certain questions in certain combinations can unmask, in a sense, how much of a trait of integrity is actually in there. The relative merits of these two measurement approaches is worthy of research.

On the practical level, the desirable psychometric properties of an attitude-based measure of integrity might be quite different from those of a trait-based measure. This issue was manifest in the preference in Study 1 for employing an oblique, rather than an orthogonal, rotation strategy in the exploratory factor analysis on which the reduction of items and the refinement of the EIS were based.

The EIS was developed as a fairly general scale aimed at assessing ethical integrity. By nature attitudes always have an attitude object; that is, they are attitudes toward something. The attitude object of the EIS was, by design, and as a first effort, very general. It was essentially “ethics” or ethical matters, situations, and behaviors. A potentially profitable line of research could investigate whether a general attitudinal scale of integrity is sufficient for predicting
ethical behaviors, or whether more specific scales might perform better. For example, an experiment could be designed where a scale could be aimed at ethical integrity with lying as a more specific attitude object. Such a scale might be more effective in settings where truth-telling is really the topic of interest. This possible approach raises the question as to whether integrity, as an attitude – intentional, evaluative, expressive – is topically and situationally specific. If it is specific in this way, this does not necessarily mean that it is simply a state in the way that word is commonly used, but only that integrity, like most human thoughts, feelings, and behaviors, are expressed differently in different situations and contexts, and are subject to change. Put simply, it might still be the case that attitudinal measures provide the best predictability.

There are also possible empirical directions for subsequent research that arise from the methods and results of the research reported in this dissertation. The first potentially useful line of research would extend the project of predictive validation of the EIS. Since Studies 2 and 3 involved only computer-mediated “negotiations” (adapted from the Ultimatum Game) the next set of validational studies should employ as dependent measures behaviors from real negotiations, in more obviously and clearly ethically relevant situations. This would entail more elaborate experimental scenarios.

Another line of research arises from the type of information derived from the EIS. The instrument provides an index of both ethical concern and ethical consistency. The results of Studies 2 suggested that consistency information can enhance predictability, i.e. high-consistency participants with low ethical concern were clearly distinguishable from high-consistency participants with high ethical concern. However, participants with low consistency and high ethical concern were not statistically distinguishable from low consistency and low ethical concern participants. In other words, in this study, at least, it seems that participants with
low ethical concern were distinguishable from participants with high ethical concern only if they had high ethical consistency in the former case, and participants with low ethical consistency could not be distinguished on the basis of ethical concern. In this sense, high ethical consistency enhanced discrimination or predictability of ethically relevant behavior.

Future research studies could be carried out to see whether this finding continues to hold. If it does, then ethical consistency (among the attitude components) will be an important factor in behavioral prediction, and the proposition that ethical integrity consists of both an ethical concern component and an ethical consistency component will be validated. Along this line too, it is noted that although this dissertation suggests that ethical integrity has two dimensions, it only proposes one way that these two dimensions might be assessed and combined somehow into a single index of integrity. Future research might determine more clearly and compellingly whether or how such an index might be created.

This dissertation included in Study 2 and Study 3 other factors (i.e., power, moral identity, and resilience) that have been hypothesized or shown in the literature to affect or predict ethical behavior. In these studies power and resilience were shown to have no main effect on either self-interested behavior or deception. It is unclear whether this has to do with the nature of the dependent measure and the particular scenario employed in the studies (modifications of an Ultimatum Game carried out online via computer), or whether something else is going on in these two studies. Multiple regression analysis indicated that, although moral identity was a significant factor in the prediction of behavior, ethical concern accounted for unique variance beyond that which could be attributed to moral identity. One obvious possible line of research would be to carry out validational studies of the EIS paired with other constructs of interest that have been shown in the literature to be importantly related to ethical behavior.
One example of such research that makes contact with a growing body of current research would be to investigate the empirical relationship and interactions of ethical integrity and trustworthiness. The “integrational” component of ethical integrity as measured by the EIS seems, at a common-sense level to be a sort of consistency (among thoughts, feelings, intentions, and courage), which consistency seems also to be related to ethically relevant behavior. A common sense interpretation of trustworthiness might be that a trustworthy person is trustworthy to a considerable degree because there is a reliable consistency between what they say and what they actually do. The relationship between ethical integrity as conceived in, and assessed by, the EIS and trustworthiness in ethical situations appears to be a potentially fruitful line of research.

One final line of research seems to arise from the concept of ethical integrity as having both ethical concern and ethical consistency as components, and from the idea that ethical concern is composed of cognition-, affect-, conation-, and courage-related components has to do with the possibility that there might be different styles or profiles of ethical integrity based on the pattern or relationships among the four components/subscales of the EIS. Different patterns of relationship among the components of ethical concern and ethical integrity might be differentially predictive across situations, or in particular situations, and in combination with other ethically relevant variables and situations.

If there are such identifiable patterns, and if they are reliably predictive, then, as noted above, since attitudes (including ethical integrity) are by nature changeable, then different intervention strategies might be aimed at people whose ethical attitude reflects a certain profile of integrity. One could intervene in the ethical dimension, the cognitive dimension, the affective dimension, the conative dimension, or one could intervene in a way aimed at courage issues. Future research might be able to reveal whether there are general patterns of integrity that are
more predictive. Further research might also be able to reveal whether patterns of relationship among attitude components, even though highly individualized, nonetheless provide a foundation for ethical integrity that is effective in predicting ethical behavior because, ultimately, “Flowery words expressing adherence to the highest standards of integrity are relatively easy to write, but it is deeds, not words, that count (Breeden, 2003, p. 138).

**Conclusion**

In sum, integrity is a fascinating phenomenon historically, theoretically, and behaviorally. It has been discussed by practitioners from many different industries and investigated by researchers from many different disciplines. Yet, despite this widespread interest coming from both academia and industry, and although it is generally agreed upon to be vital to flourishing human professional and personal relationships of any sort, integrity is continually acknowledged to be very difficult to operationally define and empirically measure.

What must be done then is for both practitioners and researchers to work together to get at the sources of this incredible ability to think, feel, intend, and act in a morally concerned and courageous manner with positive ethical consistency in challenging ethical situations. It is the hunch of this particular practitioner/researcher that one of the main sources of ethical integrity has less to do with traits and/or states and more to do with the foundational assumptions and framing perspectives that an embodied, meaning making, moral agent embedded in a lived world and thrust into relating with other embodied, meaning making, moral agents takes up in a systematic manner.

In other words, “if, as W. H. Hindman quipped, ‘Integrity is doing the right thing when no one is looking,’ integrity apparently also requires doing the right thing” in spite of the press of the situation and the inclinations of the disposition because the Other matters just as much as I do
(Audi & Murphy, 2006, p.4). It would seem then that some people develop different *modus operandi* in the way that they come at decision making in ethical situations. That is, they are not driven to make decisions, but are the drivers of their decisions. In that light, may we all drive safely.
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Appendix A

Study 1. Ethical Integrity Scale: The Judge’s Questionnaire

Instructions: Please choose the item that mostly closely represents one of the following categories using the definitions given:

Affect – The affective component of ethics or morality consists of a person’s ethical or moral feelings and sentiments, including feelings about ethical or moral issues and behaviors.

Cognition – The cognitive component of ethics or morality consists of how a person thinks or reasons about ethics or morality, including the amount of thought a person gives to ethical or moral matters and the importance or emphasis one gives to moral reasoning.

Conation – The conative component of ethics or morality consists of a person’s tendency or intention to act ethically or morally, including the effort and importance a person gives to acting in an ethical or moral manner.

Ethical Courage – The ethical courage component of ethics or morality consists of a person’s willingness to do what is right regardless of the consequences, even if it means standing alone or even if there are personal costs.

Not Sure – I am not sure how to categorize this item because it’s strongly represented by more than one category.

Concerned about Item – I have major concern about how this item is constructed or how this item will be interpreted.

For your information, each item will be presented for response on the following 9-point scale: Respond to each item based on the extent to which you agree with it, or to the extent which it describes you.

1 2 3 4 5 6 7 8 9

1 5 9

I strongly disagree/this item does not describe I am not sure whether I agree or disagree/I am not sure whether or not this describes I strongly agree/this item describes me very well at all. I am not sure whether or not this describes me. I strongly agree/this item describes me very well.
<table>
<thead>
<tr>
<th>ITEM</th>
<th>AFFECT</th>
<th>COGNITION</th>
<th>CONATION</th>
<th>ETHICAL COURAGE</th>
<th>Concerned about Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am at peace when I do the right thing.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>It is very hard for me to decide between right and wrong.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>It's hard to know what is right in complex situations.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I find it easy to rationalize my dishonest actions.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>A person's thoughts, feelings and actions should be on the same page about what is right and wrong.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Values are needed to live a happy life.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>When there is a choice between what's right and what benefits me, I always choose what's right.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>The truest indicator of morality is how we act.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Moral courage is often more important than moral sensitivity.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I get a feeling in my gut that tells me when I'm doing something wrong.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>It's worth paying the price to do what is right.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Lying is okay because I know everyone else lies.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>ITEM</td>
<td>AFFECT</td>
<td>COGNITION</td>
<td>CONATION</td>
<td>ETHICAL COURAGE</td>
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<tr>
<td>Being virtuous is good when it is the rational thing to do.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Trusting my conscience helps me avoid feeling bad about my decisions.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I always try to act consistently with my beliefs.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I don't mind standing alone, if I think I'm doing what's right.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>It's never appropriate to do what's wrong to fit in.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I think a lot about ethics.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Peace of mind only comes from living up to my standards.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I can usually rely on my gut reaction to know what's right.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I can't live with myself if I don't follow my conscience.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>It's often hard for me to get a clear feeling about what is right or wrong.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>When it comes down to it, what I do is the real measure of my character.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>ITEM</td>
<td>AFFECT</td>
<td>COGNITION</td>
<td>CONATION</td>
<td>ETHICAL COURAGE</td>
<td>Concerned about Item</td>
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<tr>
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</tr>
<tr>
<td>I feel terrible when I do not do what is right.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>It's hard to judge between right and wrong</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>because life is complicated.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Concerned about Item</td>
</tr>
<tr>
<td>It is very important that I listen to my conscience</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>People should be judged by their intentions and not their actions.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I weigh things carefully when making moral decisions.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>It's important to do what's right even if you stand alone.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>What's right is what's right even if it's difficult.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Often the right thing to do is clear.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Making the right choice is important even if no one else thinks so.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Feelings are the best guide for knowing what is right.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I have strong feeling about my ethical principles.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>People can see what I value by watching what I do.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Behaving ethically just makes sense.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>ITEM</td>
<td>AFFECT</td>
<td>COGNITION</td>
<td>CCTION</td>
<td>ETHICAL COURAGE</td>
<td>Concerned about Item</td>
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</tr>
<tr>
<td>One of my goals in life is to live ethically.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Acting with integrity depends a lot on the situation.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>True moral principles will show up in how we treat others.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I try to always live up to my ethical standards.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Having a clear conscience is very important to me.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>It rarely makes sense to do what's unethical.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I try to let my actions speak louder than my words.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>A good person always acts ethically.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I can recognize when I should tell the truth.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Moral actions are the surest sign of an ethical person.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>It is important to tell the truth even if I pay a price for it.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I never entertain thoughts of doing what is wrong.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>It is important to tell the truth even if others are lying.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>ITEM</td>
<td>AFFECT</td>
<td>COGNITION</td>
<td>CONATON</td>
<td>ETHICAL COURAGE</td>
<td>Concerned about Item</td>
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</tr>
<tr>
<td>Sometimes the right path is the lonely one.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>The right thing to do in a situation usually comes to mind pretty quickly.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Acting with integrity is important to me.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>A person's ethical thoughts feelings and actions should be consistent with each other.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>It is easier to think of ways to lie than to think of how to tell the truth.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>It is important for me to have good reasons for my ethical principles.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Doing what is right can mean accepting negative consequences.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Being able to feel what's right and wrong is important to me.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Lying is okay when no one will get hurt.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I always try to do the right thing.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>It's important for me to know the reasons behind ethical principles.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>The ethical standards I set for myself are more important than the standards others place upon me.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>ITEM</td>
<td>AFFECT</td>
<td>COGNITION</td>
<td>CONATION</td>
<td>ETHICAL COURAGE</td>
<td>Concerned about Item</td>
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</tr>
<tr>
<td>My level of honesty depends a lot on the people around me.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>The more a person thinks about a situation, the more ethical their decision will be.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I lie to others when I see that I can get away with it.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>The personal cost of violating my principles outweighs any gains.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I tend to think about why the right thing to do is the right thing to do.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I think it is important to be a moral example.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Ethical principles have no value if we do not put them into practice.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I pride myself on having good reasons for moral decisions.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>We should always treat others as we would want to be treated.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Ethical actions speak louder than words.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>My values change with my mood.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I try to let my ethical actions speak louder than my words.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>ITEM</td>
<td>AFFECT</td>
<td>COGNITION</td>
<td>CONATION</td>
<td>ETHICAL COURAGE</td>
<td>Concerned about Item</td>
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</tr>
<tr>
<td>I feel bad when I get away with being dishonest.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Acting with integrity makes me feel good about myself.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>The right thing to do always makes sense.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Concerned about Item</td>
</tr>
<tr>
<td>I always try to carefully think about the right thing to do in each situation.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Concerned about Item</td>
</tr>
<tr>
<td>I believe in the motto, 'do as I say not as I do', when it comes to ethical behavior.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Concerned about Item</td>
</tr>
<tr>
<td>Telling the truth to everyone is important.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Concerned about Item</td>
</tr>
<tr>
<td>Too many people seem to live by the motto 'do as I say, not as I do'.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Concerned about Item</td>
</tr>
<tr>
<td>Moral correctness is more important than efficiency.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Concerned about Item</td>
</tr>
<tr>
<td>Sometimes taking the right path means being ridiculed.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Concerned about Item</td>
</tr>
<tr>
<td>I feel good when I am honest.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Concerned about Item</td>
</tr>
<tr>
<td>I strive to have the courage to act ethically in every situation.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Concerned about Item</td>
</tr>
<tr>
<td>I feel like I should tell the truth in every situation.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Concerned about Item</td>
</tr>
<tr>
<td>ITEM</td>
<td>AFFECT</td>
<td>COGNITION</td>
<td>CONATION</td>
<td>ETHICAL COURAGE</td>
<td>Concerned about Item</td>
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</tr>
<tr>
<td>People should think more carefully about the moral decisions in their lives.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>What's easy is not a very good guide to what's right.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I try to be fair to others in my actions.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I always feel better when I keep my promises.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>You cannot be ethical and be on top.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I just get a good feeling when I do what is ethical.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I think that people should always have their actions meet their ethical standards.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Ethical principles have no value if we do not put them into practice.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Doing what is right is better than knowing what is right.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I act ethically to avoid feeling bad about myself.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Following through with what you think and feel is right is very important.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Talk is cheap, when it comes to being ethical.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I keep my promises to others.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>ITEM</td>
<td>AFFECT</td>
<td>COGNITION</td>
<td>CONATION</td>
<td>ETHICAL COURAGE</td>
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</tr>
<tr>
<td>When I trust my conscience, things tend to work out.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Doing the right thing often means doing difficult things.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>What's ethical today will be what's ethical everyday.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I would rather stand alone than lower my standards.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I frequently ignore my conscience.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>You cannot call yourself ethical unless you act ethically.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>It's often hard for me to see the reasons behind ethical principles.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I feel uneasy when I lie.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Thinking about being dishonest is harmless.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I would rather stand alone than do what I know is wrong.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I am aware when I am being unjust to others.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>There is no peace in doing what is wrong.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>It is important to me that I live up to my promises.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>ITEM</td>
<td>AFFECT</td>
<td>COGNITION</td>
<td>CONATION</td>
<td>ETHICAL COURAGE</td>
<td>Comment</td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>--------</td>
<td>-----------</td>
<td>----------</td>
<td>----------------</td>
<td>---------</td>
</tr>
<tr>
<td>A person should trust their conscience to know what's right.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I know when it is important to tell the truth.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I am honest with others in most situations.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Every person has an inner sense of what's right and wrong.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I feel weighed down when I break my promises to others.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Doing the right thing is important to identity.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Sometimes there is a cost to doing what's right.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>It is easy for me to feel the right thing to do.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I think it is terrible when people do not live up to their ethical standards.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I trust my conscience to help me do what is right.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I often get a feeling about the right thing to do.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I think it is important to be trustworthy.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>Personal integrity is less important than personal loyalty.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>ITEM</td>
<td>AFFECT</td>
<td>COGNITION</td>
<td>CONATION</td>
<td>ETHICAL COURAGE</td>
<td>Annotation</td>
</tr>
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<td>--------</td>
<td>-----------</td>
<td>----------</td>
<td>-----------------</td>
<td>------------</td>
</tr>
<tr>
<td>Moral decisions are most often very complicated.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
<tr>
<td>It is important to really think about the moral choices I make.</td>
<td>A</td>
<td>CG</td>
<td>CN</td>
<td>EC</td>
<td>Not Sure</td>
</tr>
</tbody>
</table>
Appendix B

Study 1. Ethical Integrity Scale: 62-Item

**Instructions:** Respond to each item based on the extent to which you agree with it, or to the extent which it describes you. Circle the item that most clearly represents your judgment about each item.

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I strongly disagree; this item does not describe me well</td>
<td>I am not sure whether I agree or disagree</td>
<td>I am not sure whether this describes me or not</td>
<td>I strongly agree; this item describes me well</td>
<td></td>
<td></td>
<td></td>
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<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>

1. It is important to tell the truth even if I pay a price for it.
2. Moral actions are the surest sign of an ethical person.
3. It is important for me to have good reasons for my ethical principles.
4. The truest indicator of morality is how we act.
5. I am at peace when I do the right thing.
6. People can see what I value by watching what I do.
7. Trusting my conscience helps me avoid feeling bad about my decisions.
8. When it comes down to it, what I do is the real measure of my character.
9. It is important to tell the truth even if others are lying.
10. The right thing to do in a situation usually comes to mind pretty quickly.
11. Ethical principles have no value if we do not put them into practice.
12. It's hard to know what is right in complex situations.
13. I feel uneasy when I lie.
15. I get a feeling in my gut that tells me when I'm doing something wrong.
16. It is very hard for me to decide between right and wrong.
17. Acting with integrity depends a lot on the situation.
18. It's hard to judge between right and wrong because life is complicated.
19. Sometimes taking the right path means being ridiculed.
20. I feel bad when I get away with being dishonest.
21. Acting with integrity is important to me.
22. Behaving ethically just makes sense.
23. I can usually rely on my gut reaction to know what's right.
24. It's never appropriate to do what's wrong to fit in.
25. You cannot call yourself ethical unless you act ethically.
26. I often get a feeling about the right thing to do.
27. What's right is what's right even if it's difficult.
28. I can tell a lot about a person's values through their actions.
29. Sometimes the right path is the lonely one.
30. I have strong feelings about my ethical principles.
31. I strive to have the courage to act ethically in every situation.
32. It is easy for me to feel the right thing to do.
33. I always try to act consistently with my beliefs.
34. I would rather stand alone than lower my standards.
35. I think a lot about ethics.
36. I feel weighed down when I break my promises to others.
37. I tend to think about why the right thing to do is the right thing to do.
38. I keep my promises to others.
39. Being able to feel what's right and wrong is important to me.  
40. Doing the right thing is important to my identity.  
41. I just get a good feeling when I do what is ethical.  
42. The more a person thinks about a situation, the more ethical their decision will be.  
43. It's worth paying the price to do what is right.  
44. I always feel better when I keep my promises.  
45. A good person always acts ethically.  
46. Doing what is right can mean accepting negative consequences.  
47. I feel terrible when I do not do what is right.  
48. True moral principles will show up in how we treat others.  
49. Doing the right thing often means doing difficult things.  
50. It's important for me to know the reasons behind ethical principles.  
51. I don't mind standing alone, if I think I'm doing what's right.  
52. I try to always live up to my ethical standards.  
53. It's often hard for me to see the reasons behind ethical principles.  
54. It's important to do what's right even if you stand alone.  
55. One of my goals in life is to live ethically.  
56. I always try to carefully think about the right thing to do in each situation.  
57. There is no peace in doing what is wrong.  
58. I weigh things carefully when making decisions.  
59. Ethical actions speak louder than words.  
60. When there is a choice between what's right and what benefits me, I always choose what's right.  
61. People should think more carefully about the moral decisions in their lives.  
62. I feel good when I am honest.  

Extra Question: Gender? Female Male
Appendix C

Study 1. Ethical Integrity Scale: 12-Item

**Instructions:** Respond to each item based on the extent to which you agree with it, or to the extent which it describes you. Circle the item that most clearly represents your judgment about each item.

1 (Cog 1). It's important for me to know the reasons behind ethical principles.
2 (Cog 2). It is important for me to have good reasons for my ethical principles.
3 (Cog 3). I always try to carefully think about the right thing to do in each situation.
4 (Aff 1). I feel good when I am honest.
5 (Aff 2). I feel uneasy when I lie.
6 (Aff 3). I always feel better when I keep my promises.
7 (Con 1). You cannot call yourself ethical unless you act ethically.
8 (Con 2). Ethical actions speak louder than words.
9 (Con 3). When it comes down to it, what I do is the real measure of my character.
10 (Cour 1). I would rather stand alone than lower my standards.
11 (Cour 2). It's important to do what's right even if you stand alone.
12 (Cour 3). It's worth paying the price to do what is right.

<table>
<thead>
<tr>
<th>I strongly disagree; this item does not describe me well.</th>
<th>I am not sure whether I agree or disagree.</th>
<th>I strongly agree; this item describes me well.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4</td>
<td>5 6 7 8 9</td>
<td></td>
</tr>
<tr>
<td>1 2 3 4</td>
<td>5 6 7 8 9</td>
<td></td>
</tr>
<tr>
<td>1 2 3 4</td>
<td>5 6 7 8 9</td>
<td></td>
</tr>
<tr>
<td>1 2 3 4</td>
<td>5 6 7 8 9</td>
<td></td>
</tr>
</tbody>
</table>
Appendix D
Study 2. Ultimatum Game Task

Please read the following task instructions carefully:

There are two parties in this task: you and another person. You have been randomly assigned the role of allocator. As such, you have been given 10 dimes.

As the allocator, you must decide how many dimes you will get and how many dimes the other person will get.

Your allocation cannot total more than ten, but it can total less than ten.

If the other person accepts your allocation, then you will both leave the task with the accepted split of money. (Also, any difference in your offer will default to you if accepted.) However, if the other person rejects your allocation, no matter what the total, then you will both leave with nothing.

You will find out the decision of the other party within the 48 hours of the completion of this entire survey. If s/he decides to accept your allocation, then you will receive whatever amount of money was not allocated to your partner (in addition to your survey participation compensation). If s/he rejects your allocation then you will receive only your survey participation compensation amount.

<table>
<thead>
<tr>
<th>Participants</th>
<th># of dimes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount for You</td>
<td></td>
</tr>
<tr>
<td>Amount for Other</td>
<td></td>
</tr>
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</table>
Appendix E

Studies 2 & 3. Informed Consent

This research study is being conducted by M-C Ingerson, Research Associate of the Wheatley Institution at Brigham Young University, to investigate individual decision making and action.

You have been invited to participate because of the unique diversity that you bring to this study.

The study consists of a series of surveys and measures that will take approximately 15-30 minutes to complete.

There are no known risks for participation in this study beyond those of life in a safe academic setting.

There are no direct benefits for taking part in this study. However, we hope the knowledge that we learn from this study may help us develop a greater understanding of the differences in individual decision making and action.

Involvement in this research is voluntary. You may withdraw at any time without penalty or refuse to participate entirely. There will be no reference to your identity at any point in the research.

If you have questions regarding this study you may contact M-C Ingerson at 801.422.8259 or ingerson@byu.edu or you may contact my mentor Dr. Katie Liljenquist at 801.422.1484 or katieliljenquist@byu.edu. If you have questions regarding your rights as a participant in research projects you may contact:

IRB Administrator
A-285 ASB
Brigham Young University
Provo UT 84602
(801) 422-1461
irb@byu.edu

Approved BYU IRB Protocol: X130252

Please enter your MTurk Worker ID:
### Appendix F

Table 6.

#### Study 2 Correlation Matrix

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<thead>
<tr>
<th></th>
<th>Self-Interested Behavior</th>
<th>Power</th>
<th>Moral Identity</th>
<th>Resilience</th>
<th>Ethical Concern</th>
<th>Ethical Consistency</th>
<th>Ethical Integrity v1</th>
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<td>.062</td>
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<td>.637**</td>
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<td>.000</td>
<td>.262**</td>
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<td>.508**</td>
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<td>.998</td>
<td>.000</td>
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<tr>
<td><strong>Ethical Concern</strong></td>
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<td><strong>Ethical Consistency</strong></td>
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</tr>
</tbody>
</table>

**Note.**

**. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).
Appendix G

Study 3. Honesty Task

Please read the following instructions carefully as there are real monetary consequences to your decision.

We are interested in how people make decisions in different social situations.

Two possible monetary payments are available to you and the other participant.

The two real payment options are (only you get to see the monetary breakdown that corresponds with each option):

Option A: $0.10 to you and $1.00 to the other participant

Option B: $1.00 to you and $0.10 to the other participant

The other participant will have to choose between Option A or Option B. Since they don’t get to see any information about the monetary breakdown of the two options, they will have to make their decision solely based on a message that you will send to them. You can choose between these two messages to send to the other participant:

Message 1: “Option A will earn you more money than Option B.”

Message 2: “Option B will earn you more money than Option A.”

After they receive the message that you decide to send them, they will make their choice of either Option A or B. (Previous research has shown that the other party will make their choice based on the message you send them 90% of the time.)

To summarize, the other participant’s choice between Option A or Option B will determine the amount that you are paid in the task. They will never know the monetary payments associated with Options A & B (that is, they will never know whether your message was true or not). Moreover, they will never know the amounts to be paid to you according to the different options.

Which message do you want to send to the other participant?

- Message 1: “Option A will earn you more money than Option B.”
- Message 2: “Option B will earn you more money than Option A.”
## Appendix H

Table 7.

### Study 3 Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>Deception</th>
<th>Power</th>
<th>Moral Identity</th>
<th>Resilience</th>
<th>Ethical Concern</th>
<th>Ethical Consistency</th>
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</thead>
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<td>-0.223**</td>
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<td>Sig. (2-tailed)</td>
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<td>0.445**</td>
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<td>-0.194*</td>
<td>-0.464**</td>
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<td></td>
<td>N</td>
<td>167</td>
<td>167</td>
<td>167</td>
<td>167</td>
<td>167</td>
<td>167</td>
</tr>
<tr>
<td><strong>Ethical Integrity v2</strong></td>
<td>Pearson Correlation</td>
<td>-0.214**</td>
<td>0.011</td>
<td>0.443**</td>
<td>0.278**</td>
<td>0.746**</td>
<td>-0.377**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.006</td>
<td>0.886</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>167</td>
<td>167</td>
<td>167</td>
<td>167</td>
<td>167</td>
<td>167</td>
</tr>
</tbody>
</table>

* Correlation is significant at the .05 level (2-tailed).
** Correlation is significant at the .01 level (2-tailed).


## Appendix I

Supplementary Analyses for Study 2 and Study 3. Two-Way Factorial ANOVA Tables

Table 8.

**Study 2. Two-way Factorial ANOVA Descriptives**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>Lower Bound Mean</th>
<th>Upper Bound Mean</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>LoEthConc, HiEthCons</td>
<td>46</td>
<td>1.957</td>
<td>3.7592</td>
<td>.5543</td>
<td>.84</td>
<td>3.073</td>
<td>-6</td>
<td>10</td>
</tr>
<tr>
<td>LoEthConc, LoEthCons</td>
<td>86</td>
<td>.744</td>
<td>2.8125</td>
<td>.3033</td>
<td>.141</td>
<td>1.347</td>
<td>-10</td>
<td>10</td>
</tr>
<tr>
<td>HiEthConc, LoEthCons</td>
<td>47</td>
<td>.34</td>
<td>2.4072</td>
<td>.3511</td>
<td>-.366</td>
<td>1.047</td>
<td>-10</td>
<td>8</td>
</tr>
<tr>
<td>HiEthConc, HiEthCons</td>
<td>86</td>
<td>.116</td>
<td>2.5364</td>
<td>.2735</td>
<td>-.428</td>
<td>.66</td>
<td>-10</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>265</td>
<td>.679</td>
<td>2.9062</td>
<td>.1785</td>
<td>.328</td>
<td>1.031</td>
<td>-10</td>
<td>10</td>
</tr>
</tbody>
</table>

Model

<table>
<thead>
<tr>
<th>Fixed Effects</th>
<th>Random Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.851</td>
<td>.3857</td>
</tr>
<tr>
<td>.1751</td>
<td>-.548</td>
</tr>
<tr>
<td>1.024</td>
<td>1.907</td>
</tr>
</tbody>
</table>
Table 9.

Study 2. Two-Way Factorial ANOVA Tests of Between-Subjects Effects

Dependent Variable:
Self-Interested Behavior

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>108.060 *</td>
<td>3</td>
<td>36.02</td>
<td>4.431</td>
<td>.005</td>
</tr>
<tr>
<td>Intercept</td>
<td>150.43</td>
<td>1</td>
<td>150.43</td>
<td>18.505</td>
<td>0</td>
</tr>
<tr>
<td>Ethical Concern HiLo</td>
<td>75.984</td>
<td>1</td>
<td>75.984</td>
<td>9.347</td>
<td>.002</td>
</tr>
<tr>
<td>Ethical Consistency HiLo</td>
<td>14.735</td>
<td>1</td>
<td>14.735</td>
<td>1.813</td>
<td>.179</td>
</tr>
<tr>
<td>Ethical Concern HiLo * Ethical Consistency HiLo</td>
<td>31.137</td>
<td>1</td>
<td>31.137</td>
<td>3.83</td>
<td>.051</td>
</tr>
<tr>
<td>Error</td>
<td>2121.676</td>
<td>261</td>
<td>8.129</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2352</td>
<td>265</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>2229.736</td>
<td>264</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. a. R Squared = .048 (Adjusted R Squared = .038)*
Table 10.

*Study 2. Two-Way Factorial ANOVA Multiple Comparisons*

Dependent Variable: Self-Interested Behavior
Post Hoc Analysis: Tukey HSD

<table>
<thead>
<tr>
<th>(IV) Ethical Integrity</th>
<th>Mean Difference</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td><strong>LoEthConc,LoEthCons</strong></td>
<td>1.2123</td>
<td>.5208</td>
<td>.094</td>
<td>-.134</td>
</tr>
<tr>
<td><strong>HiEthConc,LoEthCons</strong></td>
<td>1.6161*</td>
<td>.5913</td>
<td>.034</td>
<td>.087</td>
</tr>
<tr>
<td><strong>HiEthConc,HiEthCons</strong></td>
<td>1.8402*</td>
<td>.5208</td>
<td>.003</td>
<td>.494</td>
</tr>
<tr>
<td><strong>LoEthConc,HiEthCons</strong></td>
<td>-1.2123</td>
<td>.5208</td>
<td>.094</td>
<td>-2.559</td>
</tr>
<tr>
<td><strong>LoEthConc,LoEthCons</strong></td>
<td>0.4038</td>
<td>.5172</td>
<td>.863</td>
<td>-0.934</td>
</tr>
<tr>
<td><strong>HiEthConc,HiEthCons</strong></td>
<td>0.6279</td>
<td>.4348</td>
<td>.473</td>
<td>-.496</td>
</tr>
<tr>
<td><strong>LoEthConc,HiEthCons</strong></td>
<td>-1.6161*</td>
<td>.5913</td>
<td>.034</td>
<td>-3.145</td>
</tr>
<tr>
<td><strong>HiEthConc,LoEthCons</strong></td>
<td>-0.4038</td>
<td>.5172</td>
<td>.863</td>
<td>-1.741</td>
</tr>
<tr>
<td><strong>HiEthConc,HiEthCons</strong></td>
<td>0.2241</td>
<td>.5172</td>
<td>.973</td>
<td>-1.113</td>
</tr>
<tr>
<td><strong>LoEthConc,HiEthCons</strong></td>
<td>-1.8402*</td>
<td>.5208</td>
<td>.003</td>
<td>-3.187</td>
</tr>
<tr>
<td><strong>HiEthConc,HiEthCons</strong></td>
<td>-0.6279</td>
<td>.4348</td>
<td>.473</td>
<td>-1.752</td>
</tr>
<tr>
<td><strong>HiEthConc,LoEthCons</strong></td>
<td>-0.2241</td>
<td>.5172</td>
<td>.973</td>
<td>-1.561</td>
</tr>
</tbody>
</table>

*Note.* *. The mean difference is significant at the 0.05 level.*