UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

AN INVESTIGATION INTO THE EFFECTS OF BIRTH ORDER, SEX, AND PERSONALITY ON THE LIKELIHOOD OF ENGAGING IN UNETHICAL BEHAVIOR

A Dissertation

SUBMITTED TO THE GRADUATE FACULTY

In partial fulfillment of the requirements for the

Degree of

Doctor of Philosophy

By

JOSEPH M. STAUFFER
Norman, Oklahoma
2003

Downloaded from SHAREOK. Persistent Handle URL: https://hdl.handle.net/11244/628

UMI Number: 3096338

UMI®

UMI Microform 3096338

Copyright 2003 by ProQuest Information and Learning Company.

All rights reserved. This microform edition is protected against unauthorized copying under Title 17, United States Code.

ProQuest Information and Learning Company
300 North Zeeb Road
P.O. Box 1346
Ann Arbor, MI 48106-1346

© Copyright by JOSEPH M. STAUFFER 2003
All Rights Reserved.

AN INVESTIGATION INTO THE EFFECTS OF BIRTH ORDER, SEX, AND PERSONALITY ON THE LIKELIHOOD OF ENGAGING IN UNETHICAL BEHAVIOR

A Dissertation APPROVED FOR THE
MICHAEL F. PRICE COLLEGE OF BUSINESS

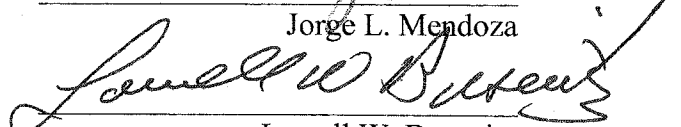
BY



Michael R. Buckley



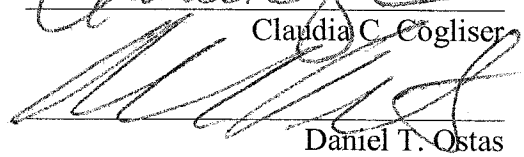
Jorge L. Mendoza



Lowell W. Busenitz



Claudia C. Cogliser



Daniel T. Ostas

TABLE OF CONTENTS

CHAPTER PAGE		START
Table of Contents		iv
Abstract		v
Chapter One	Introduction	1
Chapter Two	Literature Review	9
	Evolutionary Psychology	9
	Five-Factor Model	16
	Conscientiousness	19
	Conscientiousness and Integrity	24
	Summary	28
Chapter Three	Methodology	30
	Research Questions	30
	Hypotheses	31
	Subjects	33
	Procedure	33
	Criterion Measures	34
	Predictor Measures	35
	Analyses	36
Chapter Four	Results	37
	Main Hypotheses	37
	Secondary Hypotheses	42
	Associations with Personality and OCB	46
	Summary	49
Chapter Five	Discussion	52
	Main Effects	52
	Supplementary Results	55
	Implications for Theory and Future Research	58
	Organizational Implications	63
	Conclusion	65
Literature Cited		67
Appendix		73

ABSTRACT

Recently revived interest in the role of birth order in the development of personality has resulted in research investigating the relationship between birth order and the five-factor model (FFM) of personality. One particularly intriguing finding is that firstborns are expected to be higher in conscientiousness. Taking this result and its theoretical rationale from developmental and evolutionary psychology and combining it with growing speculation among human resource management scholars that conscientiousness is a measure of integrity, we would expect to find that firstborns are less likely to engage in unethical behavior. Theory would also suggest that when firstborns do engage in unethical behavior, it would most likely be for personal benefit, while laterborns would be more likely to engage in unethical behavior for the benefit of a group with whom they identify. Additionally, it was hypothesized that men would be more likely than women to engage in unethical behavior. Results show that, contrary to expectations, firstborns are actually more likely to engage in unethical behavior regardless of whom the action benefits. As expected, men reported being more likely to engage in unethical behavior. The findings here failed to confirm previous findings that firstborns are significantly higher in conscientiousness than laterborns. In fact, there were no significant differences according to either birth order or sex, but some personality traits—namely conscientiousness, agreeableness, and openness—were found to correlate negatively with the likelihood of engaging in unethical behavior. Results suggest that differences in the way boys and girls, firstborns and laterborns develop could lend insights into how ethical orientations are formed, but differences in ethical orientation do not appear to be the result of differences in personality.

CHAPTER 1

Introduction

Whether or not American business is actually undergoing an ethical crisis, it is hardly disputable that many Americans hold that perception. Many currently believe that business is, at best, amoral if not outright immoral. Investor confidence is eroding in the wake of corporate financial scandals and business failures blamed on unethical and illegal activities within American corporations. The impact is felt throughout the economy. Many CEOs report anticipating slower growth as the result of this backlash, but few report doing much to try to clean house within their own companies ("CEOs See Slower Growth", 2002).

While some speak of a CEO crisis, as opposed to a general ethical crisis, 69 percent of the CEOs polled by TEC, the world's largest association of corporate CEOs, prefer to blame chief financial officers, accounting firms, or even the Securities and Exchange Commission (SEC) rather than CEOs themselves ("CEOs Held Responsible" 2002). What few CEOs they do concede have done wrong are seen as anomalies. Despite all of this, 93 percent believe that it is the integrity and values of the company's leadership that make a company ethical and behave ethically.

A Washington Post/ABC poll ("Post/ABC Poll", 2002) reports that Americans are demanding stricter government regulation, reflecting a lack of confidence on the part of the public that business can police itself. Sixty-three percent believe that government oversight is necessary to protect the public from the greed and general immorality of corporate America. Even the Academy of Management has convened a

presidential panel to address these issues, referring to themselves as the AoM Presidential Panel on the Current Crisis in Corporate Confidence (Adler, 2002).

So whether or not America is experiencing an actual ethics crisis, there is always a need for more ethical management. From within the walls of corporate America, there is a cry for more ethical employees in general, and the search for ways of training and selecting them has begun in earnest.

Jones (1996) offers ten strategies or steps in achieving high ethical standards in an organization. One of those strategies is a call for ways to identify and select ethical employees in the hiring process. While selection research in human resource management does not currently see widespread use of any explicit ethics selection tools, it does make widespread use of integrity tests (Murphy, 1993; Ones, 1993; Schmidt, Ones, & Hunter, 1993; Hogan & Ones, 1997). Formally known as honesty tests, integrity tests are paper-and-pencil replacements for polygraphs, which were outlawed by the Employee Polygraph Protection Act of 1988. These integrity tests purport to measure a wide range of predispositions toward dishonest behavior (Murphy, 1993). Some look for predispositions for more specific behavior such as drug abuse and potential for theft (Ash, 1991).

Despite their growing popularity, like most psychological tests used in educational and employment selection, integrity tests find themselves the subject of much scrutiny and controversy (Camara & Schneider, 1994; Ones, Viswesvaran, & Schmidt, 1995; Rieke & Guastello, 1995). A good deal of this controversy revolves around questions of what precisely these tests are measuring. Several investigations and reviews have attempted to take the discussion beyond simple matters of

predicting dishonest behavior to understanding the motivation behind such behavior (e.g., O'Bannon, Goldfinger, & Appleby, 1989; Sackett & Wanek, 1996).

There are two general types of paper and pencil integrity tests: overt and personality. With overt tests it is more or less clear to the examinee what the test is looking for. Sackett, Burris, and Callahan (1989) referred to them as clear purpose tests. Personality tests of integrity are known as veiled tests, because their purpose is much less obvious. In their review, O'Bannon et al. (1989) referred to them as obvious and subtle tests. Overt tests ask respondents their opinions about dishonest behavior and whether or not they themselves have engaged in dishonest behavior. The difficulty is in the fact that many dishonest people have trouble gauging the extent to which others engage in dishonest behavior and end up admitting too much. Personality-based tests mask their intentions and rely instead on an ability to tap into less overt correlates of dishonest behavior.

Surprisingly, it is the overt type of test that tends to correlate more highly with other measures of personality. Ones (1993), for example, finds that overt integrity tests correlate nearly .6 with conscientiousness as measured by a typical five-factor model, or Big Five, personality test. Establishing links between counterproductive behavior and personal traits helps human resource management researchers in two important ways. First, and more immediately, it helps speed the development of selection devices designed to identify applicants who would be more likely to behave ethically, or at least not be as likely to engage in counterproductive behaviors. Second, it helps us to understand how ethical mien is developed and provides clues as

to how we might be able to positively intervene in that development, perhaps for children, college students, or adult employees.

The question of how ethics and integrity develop is closely associated with the omnipresent question of how humans develop their personalities. One area that might shed some light on how ethical standards, particularly business ethics, are developed is in the area of child development. Recently, there has been a resurgence in what is called birth-order research, thanks to recent works by researchers like Sulloway (1996) and Rodgers, Cleveland, van den Oord, and Rowe (2000). The idea is that one's birth order determines the strategies one adopts to compete for scarce family resources. Older siblings have the advantage, with the firstborn child holding the greatest advantage. So the firstborn is more likely to pursue traditional paths to success and prefer more dominating and conservative strategies for dealing with conflict within the family unit. This strategy selection is strongly reflected in the child's personality and personality development. Sulloway (1996) sees strong ties to Darwinian evolution in the struggles within the family constellation. Children, rather than compete head on for limited resources, instead look for niches and roles to fill within the family. The concept is analogous to that of different species competing within a specific ecosystem. The optimal solution is not for various species to vie for the same limited resources but to develop survival strategies that have them seeking out sustenance from a variety of different resources.

Sulloway (1996) and other evolutionary psychologists see the family unit as the basic training grounds for the development of the strategy sets children will carry with them out into the extrafamilial world. A substantial portion of those strategies is

thought to reside in the child's developing personality. Just as birth order determines what resource advantages a child will have, birth order will largely determine the basic strategies the child will explore and adopt. Consequently, birth order determines to a large extent one's basic personality type. Firstborn children are found to be more conscientious, achievement oriented, and conservative than their laterborn counterparts. Laterborns are more liberal, open to experience, and agreeable than firstborns. Each personality set reflects the past experiences, successes, failures, and strategies of the child.

Contemporary birth order researchers like Sulloway (1996) and Paulhus, Trapnell, and Chen (1999) are beginning to frame their investigations in terms of the five-factor model of personality. In this context, we see that firstborns, by virtue of their being more conscientious, would also be expected to score more highly on integrity. In terms of the five-factor model, laterborns are more open to experience, due to their need to explore more niche options than their dominating firstborn counterparts, who arrive at their choice primarily as the result of discerning parental preference (Sulloway, 1996). This means that laterborns might score lower on integrity tests, which might reflect a need growing up to be more calculating in one's dealings with older siblings to make up for a lack of size and paternal attention. But the laterborn's agreeableness and its larger correlation with integrity might make up for openness's lack of correlation with integrity.

It may be that firstborns and lastborns behave ethically in different ways. Research in organizational citizenship behavior (Smith, Organ, & Near, 1983) finds that the firstborn attribute of compliance is distinct from that of altruism, which is a

laterborn trait. The implication is that each can engage in organizational citizenship, but for different instrumentalities. This opens up the possibility that firstborns and laterborns can behave ethically but in different ways and for different reasons. For example, firstborns tend to exhibit traditionally masculine traits while laterborns tend to exhibit more feminine traits. In terms of femininity and masculinity, organizational citizenship behaviors based on compliance would be characterized as masculine while those based on altruism would be characterized as feminine. A similar sort of difference is found in discussions of the differences between men and women in ethical orientation (Gillian, 1992). Men tend to view ethics as a duty, while women view it as caring. Some believe that the reason men fail to behave ethically is precisely because of this view (Martin, 1994). They believe that men have forgotten what it is like to care for someone or what it was like to be cared for. So they rely on this vague notion of duty to serve as their moral compass.

The ethics of duty, in addition to being a masculine orientation toward ethics, can be seen as compatible with the firstborn's personality. As the conscientious, planful, organized, dependable, compliant member of the family, the firstborn is the dutiful one. It can be expected to rely on codes, standards, and norms as guides for behavior. On the other hand, the firstborn uses a domineering style when threatened and can come off as angry and defensive (Sulloway, 1996). The firstborn is more confrontational. The laterborn tries to avoid conflict, thanks to its experiences as the smaller, weaker, and less well connected sibling. So it can be expected to be more devious and surreptitious in resolving conflict. By the same token, the laterborn is

more sociable and has learned to cope by forming alliances, cooperating, and engaging in altruistic behavior.

The result is that either sibling can be expected to engage in ethical behavior, and each could be expected to engage in unethical behavior. They just go about it in different ways. This leads to the expectation that each might establish thresholds where they would seriously consider unethical behavior depending on the situation and what gains could be made and for whom. For example, a firstborn is both risk averse and achievement oriented. If there is something to be gained for itself, something that helps it achieve some sort of performance goal perhaps, the firstborn may set its risk aversion aside and go for it. In contrast, the laterborn might be more likely to risk getting caught engaging in unethical behavior if it perceived that some larger, more altruistic goal were at stake, a risk the firstborn might not be willing to take.

This research seeks to explore the possibility that birth order and gender might lead not only to the development of different personalities and worldviews but also different ethical orientations, leading to differences in what risks one would be willing to take and for what purpose. Specifically, different birth order-gender combinations are expected to lead ultimately to differences in behavioral limens under a variety of ethical situations. Male firstborns would be expected to be more willing to risk getting caught if there were some sort of personal achievement goal at stake. Female firstborns would be expected to share that same tendency but to a lesser degree. Female laterborns would be more willing to risk getting caught for what they

see as a more altruistic purpose. Male laterborns would be so inclined but to a lesser degree.

CHAPTER 2

Literature Review

EVOLUTIONARY PSYCHOLOGY

Modern interest in the development of personal characteristics as part of one's standing in his or her family constellation (i.e., the distribution of family members in terms of age and birth order) has its origins in the individual psychological theories of Adler (1927, 1931). Adler saw the child's struggle to find its place within the family as one of the more basic, formative experiences in the child's psychological development. Adler theorized that the child could assume one of a handful of familial roles dictated by its birth order. Four of these prototypical roles are that of the first or oldest child, the middle child, the youngest child, and the only child.

According to Adler, the first child tends to assume roles that exhibit authority or leadership. It finds favor with the parents by fulfilling traditional expectations and prefers order and structure. It is an achiever, and as first-born, it gets first pick of the areas of interest in which it wants to excel, which typically conforms to that of the parents. The middle child tends to feel left out, even neglected or abandoned by the parents. It suffers from low self esteem and becomes discouraged easily. It does, however, strive to do better, to wrest attention and parental affection away from older siblings. The bright side to being the middle child is that it is more cooperative, less overbearing and controlling, and, if the child can somehow overcome these feelings of rejection and neglect, it generally emerges as well adjusted with high levels of self esteem (Pepper, 1971). The youngest child learns to manipulate others to get what it

wants and learns to avoid direct competition and comparison with its older siblings. It learns important social skills and becomes more outgoing and generally more socially popular than its siblings (Stewart, Stewart, & Campbell, 2001). The only child has on balance more negative experiences, much like the middle child. The only child experiences too much attention and even overprotection from its parents. It tends to feel controlled and scrutinized too closely. Only children crave autonomy but often find it hard to break away from the close dependency they have established with their parents.

Stewart et al. (2001) claim that Adler's prototypical roles dovetail well with more modern conceptualizations under role theory (McCall & Simmons, 1978; Stryker & Stathan, 1985). What role theory emphasizes, however, is the individual's *perceived* role or position within the family. It is that perception that influences further perceptions of the child's experience within the family unit. It is within this context that the child's personality is formed.

Contemporary proponents of the importance of birth order in the development of the child take a more Darwinian approach. The child's intellectual and personality development result from the strategies that it adopts in order to compete with both parents and siblings within the family. At the heart of Darwinian evolutionary theory is the idea of conflict. An organism evolves in response to competition it encounters in its environment. For the child, it is a matter of competing for familial resources such as parental investment (Sulloway, 1996). Even an only child is in competition for parental investment; it competes with the parents themselves, a principle known as *parent-offspring conflict* (Trivers, 1974). A simple example of parent-offspring

conflict is found among mammals when the mother believes it is time to wean the child. Obviously, the child is reluctant to do so, since it sees it in its best interest to keep feeding from the mother. The mother, however, sees it in her best interest to reproduce or engage in other more beneficial pursuits. And so, the parent and offspring find themselves pitted one against the other for the ability to pursue each one's personal interest.

Proponents of this Darwinian view see a commonality in the basic conflicts that lead human children to compete for their mother's attention and those that lead parents and siblings of other species to kill their own kind (Mock, 1984). Infanticide and siblicide are not as uncommon as we once thought. Sometimes this killing can be in the interest of the species or comes about as the result of a conflict between the parents' desire to reproduce and the sibling or siblings' desire to reduce the competition (Angier, 1994). Similarly, the conflicts within human families and the resulting strategies employed by parents and children are not seen as fundamentally different from those more gruesome habits employed by other species. In fact, some human families tend to exhibit some rather gruesome behaviors themselves. For example, younger children in large families in developing countries tend to experience more nutritional neglect and higher infant mortality (Shrimshaw, 1984). Mothers in such families frequently express relief at the death of a new burden on the family's meager resources (Scheper-Hughes, 1992). Cultures throughout history have tended to favor the firstborn for a variety of social and economic reasons. Even today, where the family's wealth and status are tied to land ownership, the family's wealth is passed on through the first born, typically the first-born male (Hardy, 1987).

Historically, this left the younger males essentially unfit for marriage and parents relying on inducements such as dowries to marry off their daughters.

So for the evolutionary psychologist, sibling rivalry and other manifestations of interfamily conflict are essentially Darwinian in nature. In its quest to effect parental investment, a child employs a host of strategies and is compelled to seek out and fulfill a role within the family. These roles and strategies are necessary coping mechanisms and ultimately influence the child's psychological development. Evolutionary psychologists such as Sulloway (1995, 1996) and Pallhus, Trapnell, and Chen (1999) see birth order as an important determinant in the child's choice of coping mechanisms and, in turn, its psychological development. These authors find significant relationships between birth order and personality.

Sulloway (1995) reexamined the work by Ernst and Angst (1983) criticizing birth-order research. Framing his findings in terms of the five-factor model of personality, Sulloway (1995) used meta-analysis to examine whether claims for the importance of birth-order effects were, as Ernst and Angst (1983) claimed, the result of methodological artifacts. What he found was that firstborns were, as expected, more conscientious. They were also found to be more neurotic. Laterborns were found to be more open to experience and agreeable. The findings on extraversion were inconclusive. The strongest conclusions were that firstborns were higher in conscientiousness and lastborns higher in openness to experience, which fit well with the Darwinian view of child development. Paulhus et al. (1999) came to similar conclusions. They found that firstborns were higher in conscientiousness and were

more conservative in terms of their openness to experience. Laterborns were found to be more liberal (i.e., more open to experience), agreeable, and rebellious.

Sulloway (1996) goes beyond these main effects to point out that interaction effects are often overlooked. He cites an important and well-constructed series of studies by Helen Koch (Koch, 1955, 1955, 1956, 1957, 1960). Working out of the University of Chicago, Koch found 384 white five- and six-year-olds from surrounding school districts that came from intact, two-child families. In addition to controlling for race, family size, and subject age, she grouped subjects according to the age gap between the two siblings in their family. She then had these subjects' teachers evaluate them on 58 different psychological measures. Koch found a number of interaction effects, which Sulloway offers as manifestations or consequences of sibling coping strategies. For example, firstborn males were thought by their teachers to be more angry and vengeful. Firstborn females, however, were found to be less vicious but quarrelsome. In other words, male and female firstborns tended to pursue a dominant and confrontational strategy, but the girls were less physical and more verbal in their confrontation (Koch, 1956). Sulloway (1996) notes that domination and cooperation serve as the two principle ways for an organism to acquire resources. He points out that interactions involving gender and birth-order occur as much as they do because males tend to prefer the domination route to acquiring resources, which is the firstborn tendency. Females tend to prefer cooperation, which is the laterborn tendency. So although a firstborn female is inherently inclined to dominate, she is less so than her male counterpart. Likewise, the male laterborn is inclined to cooperate. But he is less inclined than is his female counterpart.

At the heart of the sibling strategies unboweled by these statistical interactions is the Darwinian *principle of divergence*. Organisms competing for scarce resources cannot all pursue the same strategies. They must diversify. They must consume and subsist on different resources to prevent head-on competition that leads to inefficiencies in the use of available resources. Darwin noted this tendency in nature as species evolved to specialize. He considered it a fundamental operational concept of evolutionary adaptation, as important as that of natural selection itself (Sulloway, 1996). Interestingly, when biologists find species that appear on the face of it to be morphologically identical but actually pursue different ecological resources, they refer to them as *sibling species*. This is the result of the fundamental Darwinian principle that species cannot coexist where they possess the same resource requirements (Lack, 1947). The classic example of this is that of Darwin's finches (Sulloway, 1996). In his visits to the Galapagos Islands, he was intrigued by the variety of finches he encountered on the island. They all seemed to be closely related in a biological sense, but their manners of subsistence varied greatly. For example, he recorded four kinds of finches that dwelt primarily on the ground and ate seeds. Two types subsisted primarily on cactus. One ate leaves, and six others lived off insects. Because of this diversity, the islands could support far more finches than would otherwise be possible given the islands' resources.

For the evolutionary psychologist, it is the same for human siblings. There are limited resources within the familial environment, and the siblings must adopt coping strategies in order to coexist. Diversification is an important strategy. Just as finches on Galapagos settled into different environmental niches, siblings struggle find their

niche in order to coexist successfully within the familial environment. This helps to explain why laterborns are more open to experience. They must be open to new ideas in order to explore various niches. Firstborns, on the other hand, get first pick and, therefore, tend to follow immediate parental cues. That is, firstborns tend to take the conservative route and go with more traditional areas of specialization, including such standards as academic achievement (Paulhus et al., 1999). Sulloway (1996) then defines personality in the Darwinian sense as "the repertoire of strategies that each individual develops in an effort to survive childhood." (p. 86)

Sulloway points out that differences are inevitable simply due to the siblings' genetic coding, since, on average, they only share half of each other's genetic code. So for the evolutionary psychologist, children are programmed to have different personalities from the very beginning. Even given the amount of genetic coding they share, siblings tend to exhibit substantially different personalities. This is in part due to the fact that humans' genetic makeup is designed for learning from and, therefore, adapting to their environment (Mayr, 1976). Coping strategies are tested and reinforced by the environment, particularly by the child's parents. For the environmental psychologist, openness to experience represents this human tendency to partner with the environment in discovering suitable coping strategies.

And so it is that the child seeks to differentiate itself from its siblings, to find its niche within the familial environment. Stark differences in personality can emerge because children seek to distinguish themselves from their siblings. To the extent that a laterborn can distinguish itself from its sibling, it does not have to compete with the sibling. The firstborn emerges as more conscientious and conservative because it gets

first pick. The laterborn children must challenge the firstborn for the firstborn's niche or find their own. In competition, the firstborn has the advantages. It is older, bigger, more experienced, and knows more. Plus, the firstborn may have the additional advantage of parental support, since they have invested heavily in encouraging and establishing the firstborn in developing its niche. There are skills that go along with a niche, and the firstborn is the more accomplished in the skills necessary for its niche. The laterborn lags behind, so it cannot compete. Not only does the laterborn find itself unable to compete, it runs the risk of actually losing face in the eyes of its parents. Additionally, the parents might help the firstborn protect its turf against laterborns, since it is in the interest of the family, and therefore the parents, to discourage duplication of skills and encourage the development of diverse skills and skill sets within the family. So the basic strategy of the firstborn is defensive, while that of the laterborn is offensive. Again, this provides theoretical support for the finding that laterborns are more liberal and open to experience, even rebellious, while firstborns are more conservative and conscientious.

THE FIVE-FACTOR MODEL

Much like birth-order research, personality research was recently revived following a period of criticism and decline. In the 1960s, influential works by Guion and Gottier (1965) and Mischel (1968) raised serious concerns over the viability of personality as an important determinant of human behavior. Guion and Gottier reviewed research conducted during the previous decade and found that fewer than 12% of the validities were statistically significantly different from zero. Mischel's

concerns were a little more fundamental. Mischel noted a lack of evidence for the consistency of human behavior over time and wondered if we were warranted to speak of personality as an important factor in human behavior in the face of such inconsistency. Mischel also pointed out that personality's validity, when it was found to be significant, rarely exceeded .30, thus accounting for less than 10 percent of the variance in the criterion.

Since then, personality's proponents have been able to address critics' concerns sufficiently so that personality research has enjoyed a tremendous resurgence. One of the outcomes of this renewed activity is the emergence of the five-factor model (FFM) of personality, known more colloquially as "the Big Five". The FFM is a product of trait theory based on what is known as the *lexical hypothesis* (Goldberg, 1993). The idea is that to the extent that a trait is an important basis for individual differences among humans, it will show up in the lexicons of many human cultures throughout the world. In this approach, the investigator would compile massive lists of adjectives and ask subjects to describe some target, themselves or another, in terms of those adjectives. Various clustering and eigenanalysis-based techniques (i.e., principal components and factor analysis) would be used to collapse scores on the adjective dimensions into a much smaller number of what were held to be trait dimensions. This approach to divining human traits and trait structures goes back to Galton (1884). The lexical hypothesis was employed by various researchers in the early 20th century (e.g., Allport & Odbert, 1936; Fiske, 1949; Thurstone, 1934). For example, Cattell (1943) used 4500 adjectives and oblique factor analysis to arrive at his well-known 16-factor personality instrument, the 16PF. Today, the

lexical hypothesis is the basis for the development of most personality instruments used for employment testing.

Although the FFM had been proposed by earlier researchers such as Fiske (1943) and Tupes and Chrystal (1961), it wasn't until Norman (1963) that the FFM settled into its current taxonomy. Norman gave the FFM's five dimension's the names by which personality researchers know them today. Norman named the first factor *extraversion*. Extraversion comprises a number of social traits such as sociability, gregariousness, assertiveness, and loquaciousness. The second dimension, *emotional stability*, is the positive counterpart to the earlier concept of neuroticism. An emotionally stable person is seen to be free from neurotic tendencies such as anxiety, depression, insecurity, and anger. *Agreeableness* is the third dimension and characterizes a person who is good-natured, kind, cooperative, courteous, and tolerant of others. The fourth dimension is *conscientiousness*. Conscientious people are hardworking, responsible, and organized and often plan out their activities. The last dimension is *openness to experience*, which characterizes a person who is broad-minded, curious, and cultured.

To a large extent the FFM represents a meeting of the minds regarding the best way to characterize the diversity of traits underlying human behavior. Clearly, there is some room for disagreement regarding the appropriate number of factors. Prominent psychometrician Hans Eysenck, for example, argued for a three-factor most of his life (e.g., Eysenck, 1947, 1967), an argument carried on for him up until the end of the century by his colleague Paul Kline (Kline, 1994, 1999). Cattell, another prominent psychometrician of the 20th Century, of course, argued for 16

dimensions. It was not until the 1980s and 90s that personality researchers such as Goldberg (1981), McCrae and Costa (1985), Digman (1990), and Barrick and Mount (1991) were able to establish the primacy of the FFM. In their meta-analysis, Barrick and Mount (1991) were able to demonstrate the robustness of the FFM. They also demonstrated its stability and the validity of some of its dimensions across situations. Other researchers provided strong evidence for the stability of the FFM's five dimensions across different cultures (Noller, Law, & Comrey, 1997), rating sources (McCrae & Costa, 1987), and theoretical frameworks (Goldberg, 1981). Some were even able to demonstrate that the FFM held in other popular, extant personality measures such as the Myers-Briggs Type Indicator (McCrae & Costa, 1989) and even the 16PF (Byravan & Ramanaiah, 1995).

CONSCIENTIOUSNESS

In human resource management research, the fourth dimension has emerged as the premier dimension among the Big Five. Hogan and Ones (1997) make the case for the primacy of conscientiousness and its ultimate relationship to integrity by declaring it the product of the Freudian superego. Interestingly, they see it as the result of the child's conflict resolution experiences. The superego plays an important role in determining how ethically the child will interact with parents and other authority figures. They speak of role-taking and how counterproductive behaviors are the result of failures to anticipate social expectations and role fulfillment.

This theme of conforming to the expectations of authority figures, anticipating and assuming one's roles, and, ultimately, achieving success is echoed throughout

much of the personality research of the last century, whether it specifically supports the FFM or not. Fiske (1943) found a conformity factor characterized by cooperativeness, seriousness, and trustworthiness. Hogan's (1983) conformity factor saw the conformist as conservative and cautious, risk averse, and planful. Conley (1985) called it impulse control. This type of person is dependable, persistent, punctual, resourceful, and sincere. Lorr and Manning (1978) expressed it as a controlled personality as opposed to a spontaneous type. The controlled type is orderly, persistent, rule-bound, and achievement-oriented. Achievement orientation forms the basis of Digman and Takemoto-Chock's (1981) will to achieve dimension, which includes the specific attributes of responsibility, perseverance, planfullness, and neatness.

Despite the fact that conscientious, or at least vestiges of it, have been almost universally found in lexical personality inventories, it was the work of meta-analysts examining its relationship with work behaviors that revealed its importance as a determinant of human behavior. It has proven to be the only factor from the FFM whose validity generalizes across jobs and situations. Moreover, these validities are stronger than those of other FFM factors. Barrick and Mount (1991) combined 117 organizational studies comprising 162 samples and a total sample size of almost 24,000. They systematically examined five occupational groups (management, professional, police, sales, and skilled and semi-skilled labor) against performance criteria such as training performance, job performance, and other outcomes derived from personnel data. Their first analysis combined performance measures and found that conscientiousness correlated just over .20 for all five occupational groups: .22

for the management group, .20 for professional, .22 for police, .23 for sales, and .21 for the labor group. A second analysis combined all five occupational groups and examined conscientiousness's validity across the three criterion groups. Conscientiousness was found to generalize with validities of .23 for job performance, .20 for training performance, and .20 for other personnel data.

Tett, Rothstein, and Jackson (1991) conducted a meta-analysis of 86 studies comprising 97 samples and a total sample size over 13,000. Like Barrick and Mount (1991), Tett et al. framed these studies' personality measures in terms of the FFM. What they deemed did not fit within the FFM, they categorized as belonging to one of three other personality constructs: locus of control, Type A, and other. Tett et al. used supervisory ratings and "objective" productivity measures as their criteria. They found an average validity of .18 between conscientiousness and overall job performance. And that validity was not found to generalize, with a lower bound of -.11 (based on a 95 percent credibility interval).

Salgado (1997) compiled European studies for meta-analysis. He compiled 36 studies comprising 130 samples and a total sample size of just over 17,000. Salgado (1997) used four of Barrick and Mount's (1991) occupational categories (managerial, police, sales, and skilled labor) and employed the same three criteria (job performance, training performance, and other personnel data). He found an average validity of .15 for conscientiousness and job performance across all groups and criteria. He found conscientiousness to correlate .10 with overall managerial performance, .24 with police performance, .11 for sales, and .14 for skilled labor. Similarly, he found lower correlations than did Barrick and Mount (1991) with the

three criteria across occupational groups: .10 for job performance, .15 for training performance, and a scant .05 for other personnel data.

Barrick and Mount have continued to report validities comparable to those found in their original meta-analysis (Mount, Barrick, & Stewart, 1998), while Salgado continued to find lower validities in Europe (Salgado, 1998). Other meta-analyses conducted on U.S. samples tend to corroborate the Barrick and Mount (1991) findings (Anderson & Viswesvaran, 1998; Hurtz & Donovan, 2000).

Once conscientiousness had established its primacy within the FFM in terms of predicting performance, researchers began finding interesting relationships with nonperformance measures. Organ and his colleagues, for example, have shown great interest in conscientiousness as a correlate of organizational citizenship behaviors (OCBs) (Konovsky& Organ, 1996; Organ & Ryan, 1995; Neuman & Kickul, 1998). In relation to birth-order research, one OCB inventory developed by Smith, Organ, and Near (1983) is of particular interest. This inventory measures two distinct OCB constructs: altruism and compliance. According to birth-order theory, altruism would be a characteristic of laterborns while compliance would be characteristic of firstborns. Conscientiousness, being a firstborn trait itself, would be expected to correlate more highly with compliance under birth-order theory. In their meta-analysis of 55 studies, Organ and Ryan (1995) found that conscientiousness did correlate more highly with compliance (.30) than with altruism (.22), but the differences were perhaps not as stark as birth-order theory might suggest. Konovsky and Organ (1996) expanded the construct of OCB to include three more factors: courtesy, civic virtue, and sportsmanship. The result of their initial study was that

conscientiousness correlated much less with compliance (.15) and altruism (.08) than it had in the Organ and Ryan (1995) meta-analysis. Here, the gap between conscientiousness's correlation with compliance and its correlation with altruism is greater, in accordance with the expectations of birth-order theory, but the relationship is much weaker.

The relatively strong correlation conscientiousness has with performance measures comports with birth-order theory's conceptualization of the firstborn as an achiever. The personality traits constituting conscientiousness reflect the strategy firstborns tend to adopt in establishing their niche. As part of their first mover advantage, they establish themselves as the successful achievers in whatever areas of performance their parents happen to take an interest in. As Barrick and Mount (1991) note, "it is difficult to conceive of a job in which the traits associated with conscientiousness dimension would not contribute to job success" (pp. 21-22). While it may not be true that conscientiousness universally leads to success in all performance areas (Le Pine, Colquitt, & Erez, 2000; Tett et al., 1991), it does seem to serve as an important component of success in many, if not most. Hence, its popularity as part of a comprehensive coping strategy for firstborns. It works. Also of interest to birth-order theory advocates is the relatively large correlation conscientiousness has with compliance, another component in the firstborn's comprehensive coping strategy. What is of immense interest to this study is the seemingly growing consensus and body of literature in human resource management and related fields of psychology supporting the notion that conscientiousness is the primary operational component of integrity.

CONSCIENTIOUSNESS AND INTEGRITY

Recent studies involving conscientiousness have turned researchers attention away from productive behaviors to counterproductive behaviors. Kolz et al. (1998) looked at the relationship between conscientiousness and five indicators of counterproductive behavior: incident reports, lack of cooperation, excessive breaks, socializing, and loafing. They found strong correlations with all five behavior sets, ranging from -.36 with loafing to -.51 with socializing. Neuman and Baydoun (1998) examined conscientiousness's correlations with theft, substance abuse, arguing, poor work habits, and vandalism. Conscientiousness correlated -.19 with theft and -.10 with a composite measure of the remaining counterproductive behaviors. Fallon et al. (2000) found that conscientiousness predicted job performance better than it predicted counterproductive behaviors.

Perhaps the strongest proponent of the notion that conscientiousness serves as an important component of integrity is Deniz Ones. Ones's initial work in this area (Ones, 1993) examined the correlations between each of the five factors of the FFM with a composite of overt integrity tests. She found that conscientiousness correlated .58 with integrity. Agreeableness, emotional stability, and extraversion correlated .40, .28, and .15 with integrity respectively. The laterborn trait of openness to experience correlated a mere .06. Other research by Ones and her colleagues has corroborated this finding (Hogan & Ones, 1997; Ones, Viswesvaran, & Schmidt, 1993a; Ones, Schmidt, & Viswesvaran, 1993b). Most of the validities Ones et al. (1993b) examined were from overt tests. For personality-based tests, the correlation between

conscientiousness and integrity was about half that of the correlation with overt integrity.

For human resource management researchers, there are two competing ways to interpret the relationship between conscientiousness and integrity. The first claims that integrity is a more fundamental component of the larger conscientiousness construct (Murphy, 1993). The second states that it is conscientiousness that is a component of the broader integrity construct. Among those who hold the latter view, there is further disagreement as to whether the underlying construct is actually conscientiousness or self control (Hogan & Brinkmeyer, 1997; Wanek, 1995).

Murphy proposed that integrity is a lower-level construct subsumed by the broader conscientiousness construct. Murphy and Lee (1994a) saw integrity as a distinct peer component construct along with dependability, perseverance, and achievement orientation in defining conscientiousness. As evidence of conscientiousness's breadth, they point to the apparent robustness of its association with a variety of performance measures across a variety of settings. It must be broad, they argue, in order to correlate as highly as it does with such disparate measures as traditional and contextual performance as well as counterproductive behaviors.

Ones's reasoning that integrity is the broader construct follows from the finding in her meta-analytic work that integrity also correlates with other FFM factors, which are in principle orthogonal to conscientiousness. As part of her analysis, she computed partial correlations between integrity and performance with the influence of conscientiousness removed from both variables. The correlation fell from .46 to only .41 when conscientiousness was removed. This served to indicate

that there was more to integrity than conscientiousness as measured under the FFM. When she reversed the situation, partialling integrity from conscientiousness and performance, the correlation between conscientiousness and performance fell from .23 to .05. Murphy and Lee (1994b) likewise partialled integrity from conscientiousness and performance in their analysis and found only a slight drop in the correlation, much like that found in Ones's analysis of the correlation between integrity and performance. Hogan and Brinkmeyer (1997) used confirmatory factor analysis to examine the factor structure of overt and personality-based integrity tests. They found an underlying integrity factor and labeled it conscientiousness. Hogan and Ones (1997) argued that integrity is the broader construct by virtue of the way measures for the two are developed. Integrity tests were historically developed empirically, trying to predict a whole host of counterproductive behaviors. This means that the resulting construct if necessarily broad and multifaceted, one facet of which is conscientiousness. Conscientiousness, on the other hand, comes to us as the result of factor analytic methods, a construct squeezed out from among a number of competing and typically orthogonal constructs. The result is that conscientiousness is a necessarily narrow construct.

Among proponents of the view that integrity is the broader construct with a more narrow construct underlying it, there is disagreement over what the underlying construct is. Wanek (1995) argues that it is self control, not conscientiousness. This idea served as the basic rationale for why Sackett and Wanek (1996) found that integrity tests possessed incremental validity over conscientiousness in predicting job performance. What integrity was able to predict over and above conscientiousness

was attributed to self control. Whereas Ones conducted her analyses of integrity tests at the test level using primarily meta-analyses, Wanek conducted his analysis of overt integrity tests at the individual item level using factor analyses. As a result of these analyses, Wanek found strong evidence for a self control factor distinct from conscientiousness.

The good news for birth-order theorists is that both self control and conscientiousness are thought to be characteristics of firstborns. So theoretically, if conscientiousness and self control underlie integrity, firstborns would be expected to show higher integrity and, therefore, be less likely to engage in counterproductive behaviors. If integrity underlies conscientiousness, the firstborn would still be expected to be less likely to engage in counterproductive behaviors by virtue of conscientiousness's strong correlation, and perforce overlap, with integrity.

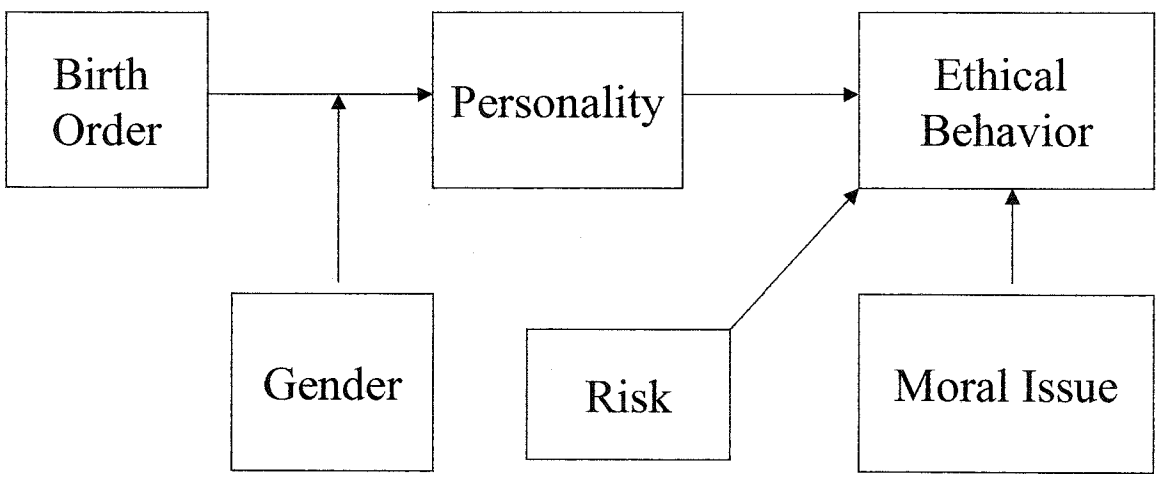


Figure 1

SUMMARY

The child's experience within the family constellation can be viewed as fundamentally economic. It competes for scarce resources such as the parents' attention and other familial commodities, not to mention actual physical resources owned or controlled by the family. It positions itself in a conceptual market in order to gain advantages. The only child behaves much as a monopoly while siblings from larger families engage in a form of perfect competition. It has to learn when to go it alone and when to band together with other family members to achieve common goals. It learns to optimize its benefits while minimizing costs the way it can. There are different strategies for accomplishing this for different family members. Given all of this economic activity, it is not unreasonable to expect that much of what a child learns in that environment indicates how it will behave in a business context. Economic strategies that worked growing up will be expected to work, or at least are worth a try, when the child enters the business world. The ethical orientation that it develops as part of that familial experience can be expected to carry over into its business experience.

The firstborn is the traditionalist and an achiever. It conforms more readily to parents wishes and those of other authority figures. It will develop a conscientious personality with a high need for achievement. It will also be relatively higher in integrity and will be risk averse. When it does decide to risk engaging in unethical behavior, it will risk it for personal gain, something that will sate its appetite for personal achievement in traditional performance areas (Sulloway, 1996).

The laterborn will tend to develop a personality high in openness to experience and agreeableness. It will not be as high on integrity but will exhibit a more feminine orientation in its approach to ethics. It is more naturally a risk taker, so in general will be expected to risk getting caught performing an unethical behavior. Moreover, it will tend to take a risk when a more altruistic goal is at stake (Sulloway, 1996).

These fundamental predictions are expected to be modified by gender (See Figure 1 above). The tendencies exhibited by firstborn, or at least as anticipated by theory, are considered masculine. The expectation then is that male firstborns will fall out higher on conscientiousness and achievement orientation than will female firstborns, who in turn will generally rank higher than male and female laterborns. The interaction between gender and birth order then establishes a continuum for each of the relevant personality dimensions.

CHAPTER 3

Methodology

RESEARCH QUESTIONS

Based on the review of literature presented in the previous chapter, the following research questions were formulated. The first set of questions contains the primary questions and serves as the impetus for this study. They basically address the effects of birth order and sex. Secondary research questions address issues of when we would expect various groups (firstborns, laterborns, men, and women) to engage in unethical behavior. The remaining questions (supplementary questions) are more specific and address how personality and OCB constructs relate to the propensity to engage in unethical behavior.

Primary Questions

R1: Are laterborns more likely than firstborns to engage in unethical behavior?

R2: Are men more likely than women to engage in unethical behavior?

Secondary Hypotheses

R3: If firstborns do engage in unethical behavior, are they more likely to do so for personal gain than for the benefit of others?

R4: If laterborns engage in unethical behavior, are they more likely to do so for the benefit of others than for personal gain?

R5: Are men more likely to engage in unethical behavior for personal gain than for the benefit of others?

R6: Are women more likely to engage in unethical behavior for the benefit of others than for personal gain?

Supplementary Questions

R7: Is conscientiousness related to the propensity to engage in unethical behavior?

R8: Is agreeableness related to the propensity to engage in unethical behavior?

R9: Is organizational citizenship behavior related to the propensity to engage in unethical behavior?

HYPOTHESES

From these research questions, the following hypotheses were formulated:

Primary Hypotheses

H-BO: Laterborns will report being more likely to engage in unethical behavior than will firstborns.

H-SEX: Men will report being more likely to engage in unethical behavior than will women.

Secondary Hypotheses

H-FB: Firstborns will be more likely to engage in unethical behavior for personal gain than for organizational or societal benefit.

H-LB: Laterborns will be more likely to engage in unethical behavior for organizational and societal benefit than for personal gain.

H-MALE: Men will be more likely to engage in unethical behavior for personal gain than for organizational or societal benefit.

H-FEMALE: Women will be more likely to engage in unethical behavior for organizational and societal benefit than for personal gain.

Supplementary Hypotheses

H-CON: Conscientiousness (FFM) will be inversely related to the likelihood of engaging in unethical behavior.

H-COM: General compliance (OCB) will be inversely related to the likelihood of engaging in unethical behavior.

H-AGREE: Agreeableness (FFM) will be inversely related to the likelihood of engaging in unethical behavior.

H-ALT: Altruism (OCB) will be inversely related to the likelihood of engaging in unethical behavior.

H-OCB: Organizational citizenship behavior will be inversely related to the likelihood of engaging in unethical behavior.

H-BOC: Firstborns will score higher than laterborns on general compliance.

H-SEXC: Men will score higher than women on general compliance.

H-BOA: Laterborns will score higher than firstborns on altruism.

H-SEXA: Men will score higher than women on altruism.

SUBJECTS

The subjects for this study were 220 undergraduate students enrolled in an upper-level management course. All 220 students included in the study were from the United States. Students from other countries were excluded in order to control for cross-cultural effects. Additionally, only children (i.e., people who grew up with no siblings in the household) were excluded. The resulting sample consisted of 137 men (62%) and 83 women (38%). The subjects' ages ranged from 19 to 45 with a mean age of 22.81. In terms of academic majors, 62.7 percent of the subjects were business majors—12 accounting majors, 10 energy management, 34 management, 41 marketing, and 41 management information systems.

PROCEDURE

The subjects completed two surveys in class. Participation was voluntary and extra credit was extended to those who participated. Everyone in class was given an opportunity to complete these surveys, even if their responses were not used (e.g., only children and international students). The first survey asked for demographic type of data (age, citizenship, college major, and birth order) and presented a set of ethical situations. The second survey presented the subject with instruments to measure the subjects' standing on the components of the five-factor model (FFM) of personality. In addition, a social desirability scale was included as part of the FFM survey, and for about half the subjects a measure of organizational citizenship behavior (OCB) was included. The order in which the surveys were administered varied to control for

order effects. That is, half the subjects completed the ethics survey first. The other half completed the personality survey first.

CRITERION MEASURES

The dependent measures were the subjects' self-reported likelihoods (probabilities) that he or she would engage in an unethical behavior—the propensity to engage in unethical behavior. The subjects were presented with a variety of ethical situations. In order to sample a broad range of ethical concerns, these situations varied in terms of the setting (school or a business setting), the type of benefit from behaving unethically (personal, organizational, or societal), the degree of benefit (low or high), and the chances of being caught and penalized (low or high). Each subject was presented with all 24 combinations of these situational factors and responded with the likelihood that he or she would engage in unethical behavior in that situation. The subject indicated this likelihood by circling one of eleven probabilities (0, 10, 20, ..., 90, or 100 percent). Because my theoretical concern was for the differences in responses according to the purpose for engaging in unethical behavior (to benefit oneself or others), the scores for the 24 combinations were collapsed into three measures: (1) a composite score for the individual in all situations resulting in personal gain ('engage in unethical behavior for personal gain', EUB-P, coefficient $\alpha = .83$), (2) a composite score from all situations resulting in organizational gain (EUB-O, coefficient $\alpha = .81$), and (3) a composite score from all situations resulting in societal gain (EUB-S, coefficient $\alpha = .84$).

PREDICTOR MEASURES

This study was primarily concerned with the effects of birth order and sex on the propensity to engage in unethical behavior. Birth order was measured by asking the subject his or her age. Later in the survey, the subject was asked to list in order the current ages of the siblings with whom he or she grew up. From this, I was able to locate the subject within the sibship and identify him or her as firstborn, laterborn, or only child. Sex was obtained by asking the subject directly.

Of additional interest were these measures' relationships to personality and organizational citizenship behavior (OCB). The subjects' personality was measured using a 50-item FFM instrument (Goldberg, 1999). This FFM instrument measures each of five factors with 10 items: extraversion (coefficient $\alpha = .87$), agreeableness (coefficient $\alpha = .82$), conscientiousness (coefficient $\alpha = .79$), emotional stability (coefficient $\alpha = .86$), and openness to experience (coefficient $\alpha = .84$). To check for the possibility of response bias, I included in the FFM instrument items from the Marlowe-Crowne social desirability scale (Marlowe & Crowne, 1967). OCB was measured using an instrument developed by Organ and his colleagues (Smith, Near, & Organ, 1983). The OCB instrument has two component scales. The first, altruism, comprises six items and measures the subject's willingness to help someone else in need of assistance (coefficient $\alpha = .88$). The second scale, generalized compliance, is less directly helpful to others. It measures the subject's willingness to follow rules and conform to the expectations of others. It comprises eight items (coefficient $\alpha = .85$).

ANALYSES

For the primary hypotheses, a series of three analyses was conducted. The first analysis employed a general linear model (GLM) repeated-measures design. The three dependent measures (EUB-P, EUB-O, and EUB-S) were treated as levels of an overall benefit treatment. All subjects received all three levels of the benefit treatment, and their self-reported likelihoods (EUB-P, EUB-O, and EUB-S) in response to those treatment levels were analyzed as repeated measures. The independent fixed factors for the analysis were sex and birth order. Follow-up tests for mean differences (between independent samples) were conducted for significant sex and birth-order effects identified in the omnibus test of the GLM.

For the secondary hypotheses, within-subjects effects from the above GLM repeated-measures analysis were examined for evidence of benefit-by-birth-order, benefit-by-sex, and benefit-by-birth-order-by-sex interactions. Paired *t*-tests were planned as follow-ups to any significant interaction effect.

The supplementary hypotheses required tests of bivariate correlations between the EUB measures and conscientiousness, agreeableness, compliance, altruism, and organizational citizenship behavior. Additionally, an examination of the mean differences among groups on the component factors of OCB, general compliance and altruism, was required. This was accomplished by running a GLM multivariate (i.e., multiple dependent variables) analysis for generalized compliance and altruism and conducting follow-up, univariate mean-difference tests as required.

CHAPTER 4

Results

MAIN HYPOTHESES

The main hypotheses were that (1) laterborns would report higher likelihoods of engaging in unethical behavior than would firstborns (H-BO), and (2) males would report higher likelihoods of engaging in unethical behavior than would women (H-SEX). That is, there would be main effects for both sex and birth order. Additionally, birth order effects would be the most influential, such that all firstborns would report lower probabilities of engaging in unethical behavior (EUB) than would laterborns. Within birth order, women would be less likely to engage in unethical behavior.

To test these main hypotheses, a general linear model (GLM) analysis was run with repeated measures, one for each of three dependent measures—likelihood of EUB for personal gain (EUB-P), likelihood of EUB for organizational gain (EUB-O), likelihood of EUB for societal gain (EUB-S) as levels of a general benefit treatment. Table 4-1 presents the descriptive statistics for the three dependent measures according to birth order and sex. Tables 4-2 and 4-3 show the results of this GLM analysis.

Table 4-1

Descriptive Statistics

SEX	BIRTH ORDER		PERSONAL BENEFIT	ORGANI-ZATIONAL BENEFIT	SOCIETAL BENEFIT
Male	Later born	Mean	1.1964	.9578	1.3896
		N	77	77	77
		Std. Deviation	1.08527	.97472	1.20835
	First born	Mean	1.6896	1.3250	1.8604
		N	60	60	60
		Std. Deviation	1.60895	1.26771	1.63339
	Total	Mean	1.4124	1.1186	1.5958
		N	137	137	137
		Std. Deviation	1.35703	1.12319	1.42419
Female	Later born	Mean	.8983	.4477	1.0552
		N	43	43	43
		Std. Deviation	.97447	.69663	1.05479
	First born	Mean	1.1531	.7781	1.2594
		N	40	40	40
		Std. Deviation	1.26545	1.01530	1.14438
	Total	Mean	1.0211	.6069	1.1536
		N	83	83	83
		Std. Deviation	1.12446	.87546	1.09693
Total	Later born	Mean	1.0896	.7750	1.2698
		N	120	120	120
		Std. Deviation	1.05261	.91564	1.16237
	First born	Mean	1.4750	1.1062	1.6200
		N	100	100	100
		Std. Deviation	1.49779	1.19848	1.48104
	Total	Mean	1.2648	.9256	1.4290
		N	220	220	220
		Std. Deviation	1.28576	1.06405	1.32525

Note: Higher values indicate a higher likelihood of engaging in unethical behavior.

Table 4-2

Multivariate Tests(b) for Primary and Secondary Hypotheses

Effect		Value	F	Hypothesis df	Error df	Sig.
BENEFIT	Pillai's Trace	.328	52.553(a)	2.000	215.000	.000
	Wilks' Lambda	.672	52.553(a)	2.000	215.000	.000
	Hotelling's Trace	.489	52.553(a)	2.000	215.000	.000
	Roy's Largest Root	.489	52.553(a)	2.000	215.000	.000
BENEFIT * BO	Pillai's Trace	.000	.045(a)	2.000	215.000	.956
	Wilks' Lambda	1.000	.045(a)	2.000	215.000	.956
	Hotelling's Trace	.000	.045(a)	2.000	215.000	.956
	Roy's Largest Root	.000	.045(a)	2.000	215.000	.956
BENEFIT * SEX	Pillai's Trace	.007	.731(a)	2.000	215.000	.483
	Wilks' Lambda	.993	.731(a)	2.000	215.000	.483
	Hotelling's Trace	.007	.731(a)	2.000	215.000	.483
	Roy's Largest Root	.007	.731(a)	2.000	215.000	.483
BENEFIT * BO * SEX	Pillai's Trace	.008	.839(a)	2.000	215.000	.433
	Wilks' Lambda	.992	.839(a)	2.000	215.000	.433
	Hotelling's Trace	.008	.839(a)	2.000	215.000	.433
	Roy's Largest Root	.008	.839(a)	2.000	215.000	.433

a Exact statistic

b Design: Intercept+BO+SEX+BO * SEX Within Subjects Design: BENEFIT

Table 4.3

Tests of Within-Subjects Effects for Primary and Secondary Hypotheses

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
BENEFIT	Sphericity Assumed	28.504	2	14.252	36.225	.000
	Greenhouse-Geisser	28.504	1.654	17.236	36.225	.000
	Huynh-Feldt	28.504	1.688	16.886	36.225	.000
	Lower-bound	28.504	1.000	28.504	36.225	.000
BENEFIT * BO	Sphericity Assumed	.036	2	.018	.046	.955
	Greenhouse-Geisser	.036	1.654	.022	.046	.930
	Huynh-Feldt	.036	1.688	.021	.046	.933
	Lower-bound	.036	1.000	.036	.046	.831
BENEFIT * SEX	Sphericity Assumed	.318	2	.159	.404	.668
	Greenhouse-Geisser	.318	1.654	.192	.404	.628
	Huynh-Feldt	.318	1.688	.189	.404	.633
	Lower-bound	.318	1.000	.318	.404	.525
BENEFIT * BO * SEX	Sphericity Assumed	.403	2	.202	.513	.599
	Greenhouse-Geisser	.403	1.654	.244	.513	.565
	Huynh-Feldt	.403	1.688	.239	.513	.568
	Lower-bound	.403	1.000	.403	.513	.475
Error(BENEFIT)	Sphericity Assumed	169.964	432	.393		
	Greenhouse-Geisser	169.964	357.208	.476		
	Huynh-Feldt	169.964	364.614	.466		
	Lower-bound	169.964	216.000	.787		

Table 4-4

Tests of Within-Subjects Contrasts for Primary and Secondary Hypotheses

Source	BENEFIT	Type III Sum of Squares	df	Mean Square	F	Sig.
BENEFIT	Linear	2.525	1	2.525	4.683	.032
	Quadratic	25.979	1	25.979	104.902	.000
BENEFIT * BO	Linear	.034	1	.034	.064	.801
	Quadratic	.002	1	.002	.007	.935
BENEFIT * SEX	Linear	.065	1	.065	.121	.728
	Quadratic	.253	1	.253	1.022	.313
BENEFIT * BO * SEX	Linear	.005	1	.005	.010	.922
	Quadratic	.398	1	.398	1.608	.206
Error(BENEFIT)	Linear	116.471	216	.539		
	Quadratic	53.493	216	.248		

Table 4-2 presents a summary of the results of the multivariate tests for the general linear model. The results find a main effect for the benefit treatment but no interaction effects for benefit and either sex or birth order. This finding is corroborated by the within-subjects effects and contrast tests presented in Tables 4-3 and 4-4. Taken together, the tests presented in Tables 4-2, 4-3, and 4-4 suggest that birth order and sex do not interact with the various levels of the benefit from engaging in unethical behavior. This finding bears more directly on the secondary hypotheses but clears the way for us to examine the between-subjects effects represented in this model. It is these between-subjects effects that directly test my primary hypotheses.

Table 4-5

Tests of Between-Subjects Effects for the Primary Hypotheses

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	839.852	1	839.852	236.083	.000
BO	19.241	1	19.241	5.409	.021
SEX	34.194	1	34.194	9.612	.002
BO * SEX	1.255	1	1.255	.353	.553
Error	768.409	216	3.557		

Table 4-5 presents the results from the tests of the between-subjects effects. The between-subjects analysis averages the three measures (EUB-P, EUB-O, and EUB-S) and essentially runs a factorial analysis of variance. The results of this analysis suggest both a birth-order main effect and a sex main effect with no interaction. Hypothesis H-SEX is supported, but Hypothesis H-BO is not, despite the fact that a birth-order main effect exists. Careful examination of Table 4-1 shows that,

contrary to H-BO and theory, it is firstborns who report that they are more likely to engage in unethical behavior, regardless of gain, and not laterborns. So H-BO is not supported. Examining Table 4-1 again shows that, in all three benefit situations, firstborn males were most likely to engage in unethical behavior. Firstborn females were more likely to engage in unethical behavior than were laterborn females, but they were less likely than laterborn males to do so. That is, the pattern under all three benefit situations (i.e., all three dependent variables) was the same: firstborn males reported the highest probabilities (of engaging in unethical behavior), then laterborn males followed by firstborn females, with laterborn females reporting the lowest probabilities.

SECONDARY HYPOTHESES

It was hypothesized that, even though they are less likely to engage in unethical behavior, when a firstborn does decide to engage in unethical behavior, it is more likely to be in pursuit of personal gain, as opposed a more collective benefit. Conversely, laterborns were expected to be more likely to engage in unethical behavior when the benefit was more altruistic and less inclined to do so when the benefit was personal. Likewise, women were expected to be more likely to engage in unethical behavior when the benefit was more altruistic.

As seen from the raw means in Table 4-1, both sexes and both birth orders report that they would be most likely to engage in unethical behavior when it benefits society. Likewise, both sexes and both birth orders report that they would be least likely to engage in unethical behavior when it benefits the organization. In other

words, for all subjects, regardless of sex or birth order, the highest probabilities were reported for EUB-S, then EUB-P and EUB-O.

Again, Tables 4-2 through 4-4 show that there are no interactions between levels of benefit and either sex or birth order. What differences there are in reported likelihoods are due simply to the levels of benefit—personal, organizational, and societal—for firstborns and laterborns of both sexes.

Table 4-6

Pairwise Comparisons For Dependent Variables

	Firstborn	Laterborn	Male	Female
EUB-P – EUB-O	Mean = 0.3688	Mean = 0.3146	Mean = 0.2938	Mean = 0.4142
EUB-P – EUB-S	Mean = -0.1450	Mean = -0.1812	Mean = -0.1834	Mean = -0.1325
EUB-O – EUB-S	Mean = -.5138	Mean = -0.4948	Mean = -0.4772	Mean = -0.5467

Table 4-6 presents univariate pairwise mean differences among EUB-P, EUB-O, and EUB-S by birth order and sex. The patterns for all groups are the same. Both firstborns and laterborns report being more likely to engage in unethical behavior for societal benefit than for personal or organizational gain.

Table 4-7

Paired Samples Test

		Mean	Std. Deviation	t	df	Sig. (2-tailed)
Pair 1	EUB_P - EUB_O	.3392	.67695	7.432	219	.000
Pair 2	EUB_P - EUB_S	-.1642	1.03179	-2.361	219	.019
Pair 3	EUB_O - EUB_S	-.5034	.90391	-8.261	219	.000

Table 4-7 shows the results of the follow-up tests for all groups. All three pairwise comparisons are significant. From the signs of the mean differences, we find that all groups reported that they would be more likely to engage in unethical behavior first if it benefited society and then if it benefited themselves personally. All groups reported that they would be less likely to engage in unethical behavior for the sake of the organization.

Table 4-8

Significant Correlations with Personality and OCB factors

		PERSONAL BENEFIT (EUB-P)	ORGANI-ZATIONAL BENEFIT (EUB-O)	SOCIETAL BENEFIT (EUB-S)
ALL GROUPS	Agreeableness	-.291[a,b]	-.300	-.293
	Conscientiousness	—	-.145	-.167
	Altruism	-.325	-.291	-.326
	OCB	-.276	—	-.276
LATERBORN MEN	Agreeableness	-.439	-.426	-.321
	Altruism	-.472	-.466	-.539
	OCB	-.378	—	—
FIRSTBORN MEN	Conscientiousness	-.235	-.273	-.232
	Openness	—	-.261	-.247
LATERBORN WOMEN	Emotional Stability	-.312	—	-.328
	Openness	-.361	-.260	-.369
	Altruism	-.536	-.430	-.543
	OCB	-.400	—	-.446
FIRSTBORN WOMEN	Compliance	—	—	-.401
	OCB	—	—	-.425

a All correlations are significant at the 0.05 level (1-tailed) or better.
b Negative values mean that one is less inclined to engage in unethical behavior.

Table 4-9

Descriptive Statistics for Personality and OCB Measures

BO		AGREE	CONSCI	EMOT STAB	OPENNESS	ALTRUISM	COMPLI	OCB
Later born	Mean	3.9203	3.7041	3.1392	3.2232	3.8762	3.9752	3.8560
	N	120	120	120	120	49	49	49
	Std. Deviation	.53967	.56427	.72101	.29855	.55565	.46885	.37726
First born	Mean	3.9351	3.7598	3.1734	3.2330	3.7946	3.8488	3.7631
	N	100	100	100	100	43	43	43
	Std. Deviation	.58128	.60543	.61455	.32344	.58400	.55872	.49936
SEX		AGREE	CONSC	EMOT STAB	OPENNESS	ALTRUISM	COMPLIN	OCB
Male	Mean	3.8485	3.6866	3.2489	3.2480	3.8059	3.9737	3.8261
	N	137	137	137	137	51	51	51
	Std. Deviation	.54556	.56048	.66706	.29628	.58327	.46097	.42363
Female	Mean	4.0566	3.8000	2.9993	3.1941	3.8780	3.8445	3.7957
	N	83	83	83	83	41	41	41
	Std. Deviation	.55660	.61446	.65871	.32909	.55154	.57062	.46119
Total	Mean	3.9270	3.7294	3.1547	3.2277	3.8380	3.9161	3.8125
	N	220	220	220	220	92	92	92
	Std. Deviation	.55773	.58265	.67342	.30943	.56740	.51386	.43856

ASSOCIATIONS WITH PERSONALITY AND OCB

There was some evidence that individuals of different sexes and birth orders (and combinations thereof) do differ in ways other than a simple main effect would suggest. The most interesting of these were found among the personality and OCB factors. No variables correlated significantly with social desirability.

Table 4-8 lists the significant bivariate correlations among these factors and the dependent measures. Table 4-9 presents the descriptive statistics for these factors. It is here where we find differences emerging more or less according to expectations. For example, despite the fact that there is no significant difference between firstborns

and laterborns on conscientiousness (where we would expect firstborns to be significantly higher) conscientiousness does seem to have an effect on firstborns. Among firstborn males—and firstborn males alone—the more conscientious one is, the less likely he or she is to engage in unethical behavior. Interestingly, openness seems to have had an effect on firstborn males and their propensity for engaging in unethical behavior.

For firstborn females, a different picture emerges. Under the cases of personal and organizational benefit, personality and OCB seem to have no effect on their likelihood of engaging in unethical behavior. For societal benefit, though, both compliance (considered a firstborn trait) and OCB correlate significantly with the woman's decision to engage in unethical behavior. For both laterborn men and women, altruism and OCB correlate with the likelihood of engaging in unethical behavior.

Table 4-10

Multivariate Tests(b) for Supplementary Hypotheses

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Wilks' Lambda	.004	2370.590(a)	9.000	80.000	.000
BO	Wilks' Lambda	.949	.478(a)	9.000	80.000	.885
SEX	Wilks' Lambda	.888	1.125(a)	9.000	80.000	.355
BO * SEX	Wilks' Lambda	.895	1.042(a)	9.000	80.000	.414

a Exact statistic
b Design: Intercept+BO+SEX+BO * SEX

Table 4-10 shows a GLM multivariate analysis testing differences in the personality and OCB measures according to birth order and sex. (Because all four test statistics reported by SPSS resulted in identical *F* statistic values, only Wilks's

Lambda is shown.) There was no main effect for either sex or birth order and no interaction effect. Even univariate tests, as shown below in Table 4-11, find no significant differences in any of these variables between firstborns and laterborns. Univariate tests, however, would find significant differences between men and women on the personality measures of openness and emotional stability, as shown in Table 4-12. Again, however, these univariate tests are unwarranted by the omnibus test. So we find no differences on any of the personality or OCB variables according to either sex or birth order.

Table 4-11

Independent Samples Tests (Firstborn – Laterborn)

	t	df	Sig. (2-tailed)	Mean Difference
EXTRAVERSION	-.030	218	.976	-.0031
AGREEABLENESS	.196	218	.845	.0148
CONSCIENTIOUSNESS	.705	218	.481	.0557
EMOTIONAL STABILITY	.701	218	.484	.0557
OPENNESS	.375	218	.708	.0343
SOCIAL DESIRABILITY	.232	218	.816	.0098
ALTRUISM	-.490	218	.625	-.0226
COMPLIANCE	-.686	90	.494	-.0816
OCB	-1.180	90	.241	-.1264

Table 4-12

Independent Samples Tests (Male – Female)

	t	df	Sig. (2-tailed)	Mean Difference
EXTRAVERSION	.433	218	.665	.0460
AGREEABLENESS	**-2.722**	**218**	**.007**	**-.2081**
CONSCIENTIOUSNESS	-1.402	218	.162	-.1134
EMOTIONAL STABILITY	**2.702**	**218**	**.007**	**.2496**
OPENNESS	1.254	218	.211	.0539
SOCIAL DESIRABILITY	-.508	218	.612	-.0241
ALTRUISM	-.604	90	.547	-.0722
COMPLIANCE	1.202	90	.233	.1292
OCB	.328	90	.744	.0303

Bolded items are significant (2-tailed) at the 0.05 level.

SUMMARY

Table 4-13 summarizes the results from tests of the various hypotheses. The results found support for Hypothesis H-SEX but failed to support Hypothesis H-BO. Although the birth-order main effect was found to be significant, the effect was found to be in the opposite direction of that hypothesized. Contrary to theory, firstborns were found to be significantly higher in their self-reported likelihoods of engaging in unethical behavior for all benefit treatments.

Table 4-13

Summary of Hypothesis Test Results

Hypothesis	Supported?	Hypothesis	Supported?	Hypothesis	Supported?
H-BO	NO	H-FEMALE	NO	H-OCB	YES (2 OF 3)
H-SEX	YES	H-CON	YES (2 OF 3)	H-BOC	NO
H-FB	NO	H-COM	NO	H-SEXC	NO
H-LB	NO	H-AGREE	YES	H-BOA	NO
H-MALE	NO	H-ALT	YES	H-SEXA	NO

None of the secondary hypotheses were supported. Rather than differ according to group, all groups exhibited the same pattern of likeliness to engage in unethical behavior. Both firstborn and laterborn men and women reported that they would be more likely to engage in unethical behavior if it resulted in some benefit to society. Next they reported that they would engage in unethical behavior if it benefited them personally. The situations where all groups would be least likely to engage in unethical behavior is when it benefits the organization. Although some groups (laterborns and women) were hypothesized to be more likely to engage in unethical behavior for the benefit of others, thus conforming to the finding that societal gain would most likely encourage unethical behavior, the finding that organizational gain was less likely to encourage unethical behavior than was personal benefit leads us to reject the hypothesis. That is, because the two levels representing benefit to others were both the most and least likely to encourage unethical behavior for all groups, we cannot conclude that any of the four secondary hypotheses is supported.

Fewer than half the supplementary hypotheses were supported. Conscientiousness was found to be inversely related with EUB-O and EUB-S. Compliance was not found to correlate with any of the three dependent measures.

Agreeableness and altruism were both found to correlate negatively with all three EUB measures. OCB related inversely to two of the measures—EUB-P and EUB-S. Finally, no sex or birth order effects were found for either OCB construct. So of the supplementary hypotheses, H-AGREE and H-ALT were supported. H-CON was supported for EUB-O and EUB-S, and H-OCB was supported for EUB-P and EUB-S.

CHAPTER 5

Discussion

Professional schools such as business colleges, law schools, and schools of medicine have had to implement courses in professional ethics and ethical behavior. Many wonder if this emphasis on ethical training is little more than public relations. It is not clear that ethics can be taught well enough to change the orientations and behavior of post-adolescents. What is necessary is a better understanding of how people develop their ethical orientations. If we knew this, we might better be able to develop effective curricula for ethical development in both schools of business and organizations. This study was an initial investigation into whether or not the recently revived idea that birth order influences the development of one's personality could provide insights into individual ethical development. Of particular interest were recent findings that birth order correlates with conscientiousness, a personality construct that researchers are equating in various ways with integrity. Specifically, conscientiousness is found to be a firstborn trait (Paulhus et al., 1999; Sulloway, 1996). Coupled with the increasingly popular idea among researchers that conscientiousness is a measure of integrity (or vice versa), we would expect firstborns to be higher in integrity and, therefore, less likely to engage in unethical behavior.

MAIN EFFECTS

This was not the case, however. Surprisingly, firstborns reported that they would be more likely than laterborns to engage in unethical behavior (EUB). This

was found for all three levels of benefit manipulated in this study. It did not matter if the expected benefit were societal, organizational, or personal. Firstborns indicated that they were more likely to behave unethically. Additionally, it was found that there was no significant difference between firstborns and laterborns (or between men and women) on any of the five-factor model (FFM) measures, social desirability, or organizational citizenship behavior (OCB).

While not associated with significant differences between groups, there were certain FFM and OCB variables that correlated significantly with EUB for all groups and all benefit levels of EUB (personal benefit, organizational benefit, and societal benefit). Specifically, agreeableness (FFM) and altruism (OCB) correlated negatively with EUB for all three benefit levels. These are traits posited in existing theory to be characteristic of laterborns (Sulloway, 1996). While it cannot be said that these were the key factors in accounting for the observed birth-order effect, it does help to cast doubt on the theoretical role of the presumed firstborn trait of conscientiousness in influencing one's EUB. Neither can we conclude that agreeableness and altruism are the key factors in determining EUB, and, therefore, we should expect laterborns and females to behave more ethically. Firstborns actually scored higher on agreeableness in this sample (as they did on all the FFM traits except extraversion), and its correlations with EUB were about the same as those of altruism (an OCB trait), on which laterborns scored higher. Again, these differences in group means were not statistically significant. So it is impossible to say, from this sample, that any of these traits belongs to any group in particular. The notion that conscientiousness is a firstborn trait, for example, is not corroborated in this sample. We are left to conclude

that, while there was a statistically significant birth-order effect, it seems to have come about as the result of exogenous variables not measured or accounted for in this study. The claim that it operated through conscientiousness was not supported with this data.

There was a significant benefit effect. That means that there were significant differences in EUB among the three different levels of benefit (personal, organizational, societal). For all groups, it mattered who would benefit from the unethical behavior. Interestingly, the pattern was the same for all groups. Everyone (firstborn, laterborn, male, female) reported that they would be more likely to engage in unethical behavior if it benefited society. Next, all groups reported that they would be more likely to engage in unethical behavior if it benefited them personally. Finally, they reported that they would be least likely to engage in unethical behavior if it benefited the organization.

This benefit factor was intended to form something of a continuum from "benefiting self" (personal benefit) to "benefiting others" (organizational benefit) to "benefiting infinitely many others" (societal benefit). But the response pattern did not seem to follow this continuum. That is, subjects were both least likely and most likely to engage in unethical behavior when it benefited others (organizational and societal, respectively). It is not clear why this was. It could be that the subjects had a difficult time relating to a fictional organization. Perhaps if they had actually been part of a business organization, and had spent sufficient time in it, they would have felt differently about engaging in unethical behavior on the organization's behalf.

SUPPLEMENTARY RESULTS

While there were no significant differences in any of the FFM or OCB factors according to either sex or birth order, there were some intriguing correlations within birth-order and sex groups. For all groups and across all benefits (personal, organizational, and social benefit), agreeableness and altruism were negatively correlated with EUB. These traits are theoretically female and laterborn traits, but because there were no significant differences in agreeableness and altruism between firstborns and laterborns or men and women, it is cannot be argued that these traits account for the sex and birth-order effects observed in this study. The propensity to engage in unethical behavior is negatively related to agreeableness and altruism, and males and firstborns—who are expected to score lower on these two factors—did in fact report being more likely to engage in unethical behavior. But despite expectations, they were not in fact lower in agreeableness and altruism. So it is really difficult to say how agreeableness and altruism relate to birth order and sex as influences in this propensity to engage in unethical behavior, if they relate at all.

Within groups, some interesting correlations emerge. For laterborn men—but not for firstborn men—agreeableness and altruism correlated strongly with EUB. For firstborn men, conscientiousness correlated strongly and negatively with EUB. So it seems that for men, the traits one would expect for a particular birth order help determine who within that birth-order group will be more likely to engage in unethical behavior. So for firstborn males, individual differences in conscientiousness seem to translate into individual differences in ethical behavior. For laterborn males, individual differences in altruism and agreeableness translate into individual

differences in ethical behavior. So these data seem to be saying that there are no differences between firstborn and laterborn males on the putative firstborn trait of conscientiousness and the putative laterborn traits of altruism and agreeableness. But among firstborn males, the putative firstborn trait is related to individual differences in ethical behavior, while among laterborn males, the putative laterborn traits are related to individual differences in ethical behavior. For laterborn women, the putative laterborn and feminine trait of agreeableness was related to ethical behavior. Surprisingly, openness was, too, although it is not clear why. For firstborn females, there was very little that correlated with ethical behavior. Individual differences in compliance translated into individual differences in ethical behavior, but only for societal benefit. There were no correlates with ethical behavior under personal and organizational benefit for firstborn women.

Table 5-1

Summary of Results

ALL GROUPS	- Agreeableness, conscientiousness, altruism, and organizational citizenship behavior all correlated negatively with likelihood of engaging in unethical behavior.
FIRSTBORNS VS. LATERBORNS	- Firstborns more unethical than laterborns. - No differences between firstborns and laterborns on any personality variable, social desirability, or organizational citizenship behavior.
MEN VS. WOMEN	- Men are more unethical than women. - No differences between men and women on any personality variable, social desirability, or organizational citizenship behavior.
FIRSTBORN MEN	- Most unethical group. - Conscientiousness and openness correlated negatively with likelihood to engage in unethical behavior.
LATERBORN MEN	- Second most unethical group. - Agreeableness, altruism, and organizational citizenship behavior correlated negatively with likelihood of engaging in unethical behavior.
FIRSTBORN WOMEN	- Third most unethical group. - Compliance and organizational citizenship behavior correlated negatively with likelihood for engaging in unethical behavior—but only for the benefit of society.
LATERBORN WOMEN	- Most ethical group of all. - Emotional stability, openness, altruism, and organizational citizenship behavior all correlated negatively with likelihood of engaging in unethical behavior.

IMPLICATIONS FOR THEORY AND FUTURE RESEARCH

This study represents an initial investigation of the link between birth order and personality from recent work in developmental psychology and the link between conscientiousness and integrity in human resource management. Since its reintroduction into the mainstream of psychological research in recent years, birth-order research has produced a paucity of studies examining the relationship between birth order and the FFM (Paulhus et al., 1999; Sulloway, 1996). In those studies, it was found that firstborns were higher in conscientiousness. It was on the basis of that finding, and findings in human resource management research that conscientiousness equates to integrity, that I expected that firstborns would report being less likely to engage in unethical behavior. That was a finding that was not replicated in this study. There were no differences in any personality or OCB factor between firstborns and laterborns. Despite that, I did find a birth-order effect, but it was in the opposite direction. That is, firstborns did not score significantly higher on conscientiousness, but they did report being more likely to engage in unethical behavior, regardless of who would benefit from the behavior. It is not clear, based on what little research has been done, why this occurred. It is tempting to speculate that firstborns are still seeking to conform to parents' wishes, and the drive to excel makes the firstborn more willing to consider achieving success through unethical means. But, overall, firstborns were not found to be more compliant than laterborns, so it is difficult to offer that speculation with any confidence. Again, it is interesting that (1) agreeableness and altruism would predict (with correlations of about 0.30) for all groups who would be more likely to engage in unethical behavior, and (2) there were

differences according to both sex and birth order that would correspond to what we would expect from theory regarding their standing on agreeableness and altruism. That is, we would expect laterborns and women to be higher in altruism and agreeableness; therefore, they would be less likely to engage in unethical behavior. The puzzling part of that equation is that I found no differences in agreeableness and altruism between firstborns and laterborns or men and women. So just why the birth-order and sex effects occurred as expected without the requisite differences in personality according to birth order and sex is something I would suggest be investigated further. It is also suggested that investigations into the effects individual differences in various personality constructs have on ethical behavior might be fruitful and interesting. Results from this study suggest that, although there were not any significant differences between groups on the personality and OCB factors included in the study, different personality factors seemed to influence each of the groups differently. Further study to try to confirm these results and then investigate in more depth the reasons why this may occur would be useful.

Furthermore, as indicated already, these results would not be expected to generalize beyond the entry level. Although the students surveyed represent a good sample of people entering the workforce, these results could not be assumed to apply beyond that particular group. Studies including more diverse groups of employees at different levels of organizational life and with varying levels of experience and occupation should be studied before extending these findings beyond the entry level.

Beyond the fact that this study failed to confirm the theoretical proposition that firstborns would be more likely to behave ethically, this study failed to support

earlier findings that firstborns were higher on conscientiousness and laterborns were higher on agreeableness, emotional stability, and openness to experience. These earlier findings derived from two studies: (1) Sulloway's (1996) reexamination of Ernst & Angst's (1983) finding that birth order did not correlate with personality, and (2) Paulhus et al. (1999), using a similar sample of undergraduate students.

My results suggest that this fundamental finding of personality differences between firstborns and laterborns, upon which the theoretical extensions proposed in this study were based, require further study. Additionally, this lack of corroboration with previous findings of personality differences supports the finding that firstborns and laterborns would not, as expected, engage in unethical behavior for different reasons. Both firstborns and laterborns tend to view society most worthy of risking engaging in unethical behavior and the organization least worthy. Without this corroboration, it is difficult to maintain either theoretical proposition: (1) that firstborns would be less likely to engage in unethical behavior, and (2) that firstborns would be more likely to engage in unethical behavior for personal gain while laterborns would be more likely to engage in unethical behavior for the benefit of others. Neither proposition was supported in this study.

Of significance was the strong pattern of differences according to birth-order-sex combinations. Women were clearly more inclined to avoid unethical behavior than were men, and firstborns were clearly more inclined to engage in unethical behavior than were laterborns. But it is not clear at all why this was. The differences could not be attributed to any personality differences. This needs to be investigated further. If the results presented here can be replicated, then there needs to be a better

theoretical rationale for why women and laterborns are more ethical in their orientations beyond that of personality.

It is important to note at this point that some researchers feel that within-family designs—where subjects rate themselves and their siblings—are better suited to answer the question of whether or not birth order correlates with psychological phenomena such as personality and intelligence, most notably Rodgers and his colleagues (Rodgers, et al., 2000). Other researchers do not agree with this assessment (e.g., Armor, 2001; Michalski & Shackleford, 2001). It does seem, however, that the two designs will produce conflicting results. Paulhus et al. (1999) used a within-family design and found that firstborns were significantly more conscientious and high achieving while laterborns were significantly more agreeable, rebellious, and liberal. Studies employing between-family designs examining these same relationships failed to find such differences (Michalski & Shackleford, 2001). It is not clear how many studies in the Sulloway (1996) meta-analysis used between-family designs and how many used within-family designs, but his results agreed with those of Paulhus et al. (1999).

The ultimate question in this study was whether there was some basis for examining in more detail the relevance of various aspects of childhood development in the formation of our ethical orientations. That is, does there appear to be a relationship between ethical orientation and birth order or sex? It appears that there are significant relationships. It is also apparent that certain personality and OCB factors correlate significantly with the likelihood of engaging in unethical behavior, in ways that one would expect. Conscientiousness, agreeableness, altruism, and OCB all

correlated negatively with the likelihood of engaging in unethical behavior for everyone. But those factors do not appear to mediate the relationship of sex and birth order with the likelihood of engaging in unethical behavior. It is not clear why the presumed methodological flaws of the between-family design would suppress the mediating effects of personality but not suppress the overall effects of birth order, sex, and these personality and OCB factors. It certainly cannot explain why the expected difference between firstborn and laterborn likelihoods of engaging in unethical behavior would be reversed while the differences between men and women would be exactly as expected.

Additionally, it is not clear that a within-study design, which asks the subject to rate his or her siblings, would have been the superior design for this study. First of all, despite the fact that their correlations with self ratings are comparable to those of peer and self ratings, sibling ratings of FFM personality are significantly different than self ratings. Subjects report higher conscientiousness, openness, and agreeableness scores and lower emotional stability scores than siblings give them (Lanthier, 2000). That is, despite "moderate" correlations (Lanthier, 2000), self and sibling ratings are significantly different from one another, and it is not clear which is to be preferred. Second, I felt it ill advised to ask subjects to speculate on the likelihood of their siblings engaging in unethical behavior under various situations. The fear is that in the absence of a rather intimate knowledge of the siblings' ethical predispositions, subjects would result to stereotypes they have developed with regard to how different siblings, based on birth order, would behave. This was a concern for Paulhus et al. (1999) with respect to personality as they conducted their within-family

studies. Spurious correlations may result if the subject results to such stereotypes when rating siblings on both personality and the likelihood of engaging in unethical behavior. There was also a concern that differences in the likelihoods of engaging in unethical behavior among the three benefit levels might be obscured if subjects were guessing what his or her siblings might do. There might be a tendency to acknowledge an ability to make such distinctions for oneself but not allow for them, at least to the same extent, in one's siblings. Overall, it was doubtful that a within-family design would have been desirable. The between-family design was seen to be the superior design and answered the ultimate question. It does appear that aspects of childhood development relating to birth order may provide important clues into how people develop their ethical orientations. Further study is certainly warranted.

ORGANIZATIONAL IMPLICATIONS

The most immediate implication is that, if you want ethical behavior, hire agreeable and altruistic people. You should also hire conscientious people as well, although it does not correlate with the propensity to engage in unethical behavior as strongly as agreeableness and altruism. It has no significant correlation under personal benefit. (See Table 4-8.) That is, it does not appear to be the dominant trait underlying ethical behavior that theory would suggest. But conscientiousness still provides a good indication of whether or not someone would be more or less willing to engage in unethical behavior. This comports well with findings by human resource management researchers that agreeableness and conscientiousness are the two FFM factors that correlate most strongly with performance. They are also thought to be the

FFM factors behind the two components of OCB, and this study found evidence that people high on OCB, particularly the altruism component, make for ethical workers. So the lesson here for practitioners is that the personality traits that make for good performers also make for ethical workers. As indicated earlier, because of the clear birth-order-sex patterns in the propensity to engage in unethical behavior, it might be suggested that organizations seeking ethical employees prefer women to men, and laterborn men to firstborn men. But without a better understanding why women and laterborns are more ethical, it might not be wise, from an EEO standpoint, to make that kind of recommendation.

The benefit effect offers some intriguing suggestions. Members of all groups (female, male, firstborn, laterborn) were found to be more likely to engage in unethical behavior when if benefited society. Apparently all subjects deemed this level of benefit or payoff worth the risks. What was interesting was the finding that all subjects regarded the organization, whether their school or a business organization, as less worth the risk than if the behavior benefited themselves personally. It may reflect a relative disregard for the welfare of the organization. This has interesting implications for organizations. One suggestion is that, in order to help prevent unethical behavior, organizations should try to align the interests of the individual with those of the organization. That is, the organization should be careful to avoid situations where the individual's interests are at odds with those of the organization. If an employee finds that he or she stands to benefit from a behavior, while the organization will suffer some harm as a result, the individual may opt to engage in the behavior anyway. Again here we find compatibility of ethical behavior

with other important organizational outcomes, where it has been found that goal alignment or congruence enhances job satisfaction, commitment, and person-organization fit (Witt, 1998). So just as selecting employees high in agreeableness, conscientiousness, and OCB improves both the ethical approach and task performance of the organization, facilitating congruence between individual and organizational goals may promote important organizational outcomes as well.

CONCLUSION

The expectation that firstborns would behave more ethically than laterborns was not supported by the data in this study. In fact, the basis for this expectation—previous findings that firstborns were more conscientious (Paulhus et al., 1999; Sulloway, 1996)—was not replicated here. There were no significant differences on any personality or OCB factor according to birth order or sex. There were, however, differences in the likelihood that different sexes and birth orders would engage in unethical behavior. And there were significant correlations between some personality factors with the likelihood of engaging in unethical behavior. This suggests that personality—specifically, agreeableness and conscientiousness—does influence the likelihood of engaging in unethical behavior. It does not, however, explain the rather clear differences according to birth order and sex. Agreeableness, conscientiousness, and organizational citizenship behavior appear to translate into more ethical orientations for all groups. Interestingly, these traits are also found to correlate most highly with job performance, making them even more desirable traits for employees. What causes the differences between men and women and firstborns and laterborns is

not clear. Those differences are strong, but do not appear to be accounted for by differences in personality.

The motivation for this research was to try and obtain some idea about how employees develop their ethical orientations and how academia and businesses might be able to improve business's ethical climate. It was hoped that recent work on birth order and personality development, through the lens of Darwinian psychology, might shed some light on this development. What was made clear to me is that there is something in the socialization process—the way boys and girls are raised that makes women more ethical. Likewise, there is a difference in the way firstborns and laterborns are raised that makes laterborns more ethical. The findings here suggest that it may not be rooted in their personalities. More theory driven research is needed to discover the developmental mechanisms that tend to make laterborns and women more ethical.

Literature Cited

Adler, A. (1927). *Understanding human nature*. Garden City, NY: Garden City Publishing.

Adler, A. (1931). *What life should mean to you*. Boston: Little, Brown, & Co.

Adler, P. S. (2002). Corporate scandals: It's time for reflection in business schools. *Academy of Management Online* [Online]. Available: www.aom.pace.edu/sessions/A_call_for_reflection.stm.

Allport, G. W., & Odbert, H. S. (1933). Trait-names: A psycho-lexical study. *Psychological Monographs*, *47*, 177-220. (1, Whole No. 211).

Angier, N. (1994, January 25). Canary chicks: Not all created equal. *New York Times (Science Times)*, pp. C1, C8.

Barrick, M. R., & Mount, M. K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, *44*, 1-26.

Camara, W. J., & Schneider, D. L. (1994). Integrity tests: Facts and unresolved issues. *American Psychologist*, *49(2)*. 112-119.

Cattell, R. B. (1947). Confirmation and clarification of primary personality factors. *Psychometrika*, *12*, 197-220.

CEOs held primarily responsible for recent accounting scandals according to special edition TEC index. (2002, July 17). *Business Wire*.

CEOs see slower growth. (2002, October 3). *The Wall Street Journal*.

Ernst, C. & Angst, J. (1983). *Birth order: Its influences on personality*. Berlin and New York: Springer-Verlag.

Digman, J. M. (1990). Personality structure: Emergence of a five-factor model. *Annual Review of Psychology* (Vol. 41, pp. 417-440). Palo Alto, CA: Annual Reviews.

Digman, J. M., & Takemoto-Chock, N. K. (1981). Factors in the natural language of personality. *Multivariate Behavioral Research, 16*, 149-170.

Eysenck, H. J. (1967). *The biological basis of personality*. Springfield, IL: Charles C. Thomas.

Fiske, D. W. (1949). Consistency of the factorial structures of personality ratings from different sources. *Journal of Abnormal and Social Psychology, 44*, 329-344.

Gilligan, C. (1982). *In a different voice*. Cambridge, MA: Harvard University Press.

Goldberg, L. R. (1982). From ace to zombie: Some explorations in the language of personality. In P. McReynolds (Ed.), *Advances in personality assessment*(Vol. 1, pp. 203-234). Hillsdale, NJ: Erlbaum.

Goldberg, L. R. (1992). The development of markers for the big five factor structure. *Psychological Assessment, 4*, 26-42.

Guion, R. M., & Gottier, R. F. (1965). Validity of personality measures in personnel selection. *Personnel Psychology, 18*, 135-164.

Hogan, J., & Ones, D. S. (1997). Conscientiousness and integrity at work. In R. Hogan and J. A. Johnson (Eds.) *Handbook of personnel psychology*, 849-870.

Kline, P. (1994). *Personality: The psychometric view*. London: Routledge.

Kline, P. (1999). *The new psychometrics: Science, psychology, measurement.* London: Routledge.

Koch, H. L. (1954). The relation of "primary abilities" in five- and six-year-olds to sex of child and characteristics of his sibling. *Child Development, 25*, 209-223.

Koch, H. L. (1955). The relation of certain family constellation characteristics and the attitudes of children toward adults. *Child Development, 26*, 13-40.

Koch, H. L. (1956). Children's work attitudes and sibling characteristics. *Child Development, 27*, 322-328.

Koch, H. L. (1957). The relation in young children between characteristics of their playmates and certain attributes of their siblings. *Child Development, 28*, 175-202.

Koch, H. L. (1960). The relation of certain formal attributes of siblings to attitudes held toward each other and toward their parents. *Monograph of the Society for Research in Child Development, 25*, 1-124.

Lack, D. (1947). *Darwin's finches: An essay on the general biological theory of evolution.* Cambridge: Cambridge University Press.

Martin, J. R. (1994). *Changing the educational landscape: Philosophy, women, and curriculum.* New York: Routledge.

Mayr, E. (1976). *Evolution and the diversity of life: Selected essays.* Cambridge and London: The Belknap Press of Harvard University.

McCall, G. J. (1978). *Identities and interactions.* New York: The Free Press.

McCrae, R. R., & Costa, P. T., Jr. (1985). Updating Norman's adequate taxonomy: Intelligence and personality dimensions in natural language and questionnaires. *Journal of Personality and Social Psychology, 49*, 710-721.

Mischel, W. (1968). *Personality and assessment*. New York: Wiley.

Mock, D. W. (1984). Infanticide, siblicide, and avian nestling mortality. In G. Hausfater and S. B. Hardy *Infanticide: Comparative and evolutionary perspectives*. New York: Aldine.

Morin, R. (2002, July 2). More curbs on business sought: Poll shows support for regulation grows amid scandals. *The Washington Post*, p. A4.

Murphy, K. (1993). *Honesty in the workplace*.

Norman, W. T. (1963). Toward an adequate taxonomy of personality attributes: Replicated factor structure in peer nomination personality ratings. *Journal of Abnormal and Social Psychology, 66*, 574-583.

Ones, D. S. (1993). *The construct validity of integrity tests*. Unpublished doctoral dissertation, University of Iowa.

Ones, D. S, Viswesvaran, C., & Schmidt, F. L. (1995). Integrity tests: Overlooked facts, resolved issues, and remaining questions. *American Psychologist, 50(6)*, 456-457.

Ones, D. S, Viswesvaran, C., & Schmidt, F. L. (1993). Comprehensive meta-analysis of integrity test validities: Findings and implications for personnel selection and theories of job performance. *Journal of Applied Psychology, 78(4)*, 679-703.

Paulhus, D. L., Trapnell, P. D., & Chen, D. (1999). Birth order effects on personality and achievement within families. *Psychological Science, 10*, 482-488.

Pepper, F. C. (1971). Birth order. In A. G. Nikelly (Ed.) *Techniques for behavioral change: Applications of Adlerian theory* (pp. 49-54). Springfield, IL: Charles C. Thomas.

Post/ABC poll: Americans want tighter regulation of business. (2002, July 1). *The Washington Post.*

Rieke, M. L., & Guastello, S. J. (1995). Unresolved issues in honesty and integrity testing. *American Psychologist, 50(6)*, 458-459.

Rodgers, J. L., Cleveland, H. H., & van den Oord, E. (2000). Resolving the debate over birth order, family size, and intelligence. *American Psychologist, 55(6)*, 599-612.

Sackett, P. R., Burris, L. R., & Callahan, C. (1989). Integrity testing for personnel selection: An update. *Personnel Psychology, 42(3)*, 491-529.

Sackett, P. R., & Wanek, J. E. (1996). New developments in the use of measures of honesty, integrity, conscientiousness, dependability, trustworthiness, and reliability for personnel selection. *Personnel Psychology, 49(4)*, 787-829.

Salgado, J. F. (1997). The five factor model of personality and job performance in the European Community. *Journal of Applied Psychology, 82*, 30-43.

Salgado, J. F. (1998). Big Five personality dimensions and job performance in army and civil occupations: A European perspective. *Human Performance, 11*, 271-288.

Scheper-Hughes, N. (1992). *Death without weeping: The violence of everyday life in Brazil.* Berkeley, CA: University of California Press.

Smith, C. A., Organ, D. W., & Near, J. P., (1983). Organizational citizenship: Its nature and consequences. *Journal of Applied Psychology, 68(4)*, 653-663.

Stewart, A. E., Stewart, E. A., & Campbell, L. F. (2001). The relationship of psychological birth order to the family atmosphere and to personality. *Journal of Individual Psychology, 57(4)*, 363-387.

Stryker, S. & Stathan, A. (1985). Symbolic interaction and role theory. In M. Snyder *Handbook of sociology* (pp. 311-378). New York: Random House.

Sulloway, F. J. (1995). Birth order and evolutionary psychology: A meta-analytic overview. *Psychological Inquiry, 6*, 75-80.

Sulloway, F. J. (1996). *Born to rebel: Birth order, family dynamics, and creative lives*. New York: Pantheon Books.

Tett, R. P., Jackson, D. N., & Rothstein, M. (1991). Personality measures as predictors of job performance: A meta-analytic review. *Personnel Psychology, 44*, 703-742.

Trivers, R. L. (1974). Parent-offspring conflict. *American Zoologist, 14*, 249-64.

Witt, L. A. 1998. Enhancing organizational goal congruence: A solution to organizational politics. *Journal of Applied Psychology, 83*, 666-674.

Appendix

Survey Instruments

Informed Consent Cover Letter

I am Joe Stauffer, a graduate student under the direction of Professor Michael Buckley in the Management Department at The University of Oklahoma-Norman Campus. I invite you to participate in a research study being conducted under the auspices of the University of Oklahoma-Norman Campus to study student attitudes.

Your participation will involve filling out two questionnaires and should only take about 45 minutes. Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time. The results of our study may be published, but your name will not be linked to responses in publications that are released from the project. In fact, the published results will be presented in summary form only. All information you provide will remain strictly confidential.

Your course instructor has agreed to provide you with 4 points of extra credit for participating in this study. If you do not want to participate in this study, or do not complete it, you may still get 4 points extra credit by doing an alternative project. For that, you will be asked to find a business article on some problem in business ethics and, in 2 to 3 typed, double-spaced pages, summarize the article and offer suggestions as to how to fix or prevent these types of problems.

This research project is entitled, "A Survey of Student Attitudes". The findings from this project will provide information on the attitudes of people entering the workforce with no cost to you other than the time it takes to complete the survey.

If you have any questions about this research project, please feel free to call me at (405) 325-5737 or e-mail at joestauffer@ou.edu. Questions about your rights as a research participant or concerns about the project should be directed to the Institutional Review Board at The University of Oklahoma-Norman Campus at (405) 325-4757 or irb@ou.edu.

By signing below and returning this questionnaire, you will be agreeing to participate in the above described project.

PARTICIPANT ASSURANCE: I have read and understand the terms and conditions of this study and I hereby agree to participate in the above-described research study. I understand my participation is voluntary and that I may withdraw at any time without penalty.

_____

Signature of Participant Date

_____

Printed Name of Participant Joseph M. Stauffer

STUDENT OPINION QUESTIONNAIRE

A. Please answer the following four questions.

Gender (circle)	Male	Female
Grade Point Average	_____	(carry out to two decimal places)
Citizenship (circle)	USA Student	International Student
Major	_____	

B. Please list from oldest to youngest the current ages of you and the brothers and sisters (siblings) you grew up with. They may be full siblings, half brothers and sisters, step brothers and sisters, or any combination, as long as they were in your family household while you were growing up.

1. _____ (oldest child)	2. _____	3. _____
4. _____	5. _____	6. _____
7. _____	8. _____	9. _____
10. _____	11. _____	12. _____
13. _____	14. _____	15. _____

C. Answer questions 1 through 11 as they pertain to you.

Suppose that cheating would result in **high personal** gain, such as meeting a required GPA to maintain your scholarship. Given that the chances of being caught and penalized are some specific percentage (0% to 100%), what is the probability that YOU would engage in unethical behavior (cheat) in *school*? (Please circle the appropriate probabilities of engaging in unethical behavior.)

Chances of being caught and penalized		**Probability of engaging in the behavior**										
1.	**0%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2.	**10%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
3.	**20%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
4.	**30%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
5.	**40%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
6.	**50%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
7.	**60%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8.	**70%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
9.	**80%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10.	**90%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
11.	**100%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

D. Answer questions 1 through 11 as they pertain to you.

Suppose that cheating would result in **minimal personal** gain, such that getting an A, for example, does not alter (up or down) your grade in the class. Given that the chances of being caught and penalized are some specific percentage (0% to 100%), what is the probability that YOU would engage in unethical behavior (cheat) in *school*?
(Please circle the appropriate probabilities of engaging in unethical behavior.)

Chances of being caught and penalized		**Probability of engaging in the behavior**										
1.	**0%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2.	**10%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
3.	**20%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
4.	**30%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
5.	**40%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
6.	**50%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
7.	**60%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8.	**70%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
9.	**80%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10.	**90%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
11.	**100%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

E. Answer questions 1 through 11 as they pertain to you.

Suppose that unethical behavior would result in **high personal** gain, such as securing a high dollar contract that would result in a large commission for you, as well as making certain that you would receive that promotion you have been seeking. Given that the chances of being caught and penalized are some specific percentage (0% to 100%), what is the probability that YOU would engage in unethical behavior (cheat) in *business*?
(Please circle the appropriate probabilities of engaging in unethical behavior.)

Chances of being caught and penalized		**Probability of engaging in the behavior**										
1.	**0%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2.	**10%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
3.	**20%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
4.	**30%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
5.	**40%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
6.	**50%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
7.	**60%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8.	**70%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
9.	**80%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10.	**90%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
11.	**100%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

F. Answer questions 1 through 11 as they pertain to you.

Suppose that unethical behavior would result in **minimal personal** gain, such as having the organization pay for lunch when it is not really a business luncheon (or other falsification of an expense report). Given that the chances of being caught and penalized are some specific percentage (0% to 100%), what is the probability that YOU would engage in unethical behavior (cheat) in *business*?
(Please circle the appropriate probabilities of engaging in unethical behavior.)

Chances of being caught and penalized		**Probability of engaging in the behavior**										
1.	**0%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2.	**10%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
3.	**20%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
4.	**30%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
5.	**40%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
6.	**50%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
7.	**60%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8.	**70%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
9.	**80%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10.	**90%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

11.	**100%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

G. Answer questions 1 through 11 as they pertain to you.

Suppose cheating by you would result in **high organizational** gain, such as maintaining a minimal aggregate GPA which is necessary to keep your fraternity/sorority charter. Given that the chances of being caught and penalized are some specific percentage (0% to 100%), what is the probability that YOU would engage in unethical behavior (cheat) in *school*?
(Please circle the appropriate probabilities of engaging in unethical behavior.)

Chances of being caught and penalized		**Probability of engaging in the behavior**										
1.	**0%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2.	**10%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
3.	**20%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
4.	**30%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
5.	**40%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
6.	**50%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
7.	**60%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8.	**70%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
9.	**80%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10.	**90%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
11.	**100%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

H. Answer questions 1 through 11 as they pertain to you.

Suppose that cheating by you would result in **minimal organizational** gain. It will not improve your organization in a tangible manner. Given that the chances of being caught and penalized are some specific percentage (0% to 100%), what is the probability that YOU would engage in unethical behavior (cheat) in *business*?
(Please circle the appropriate probabilities of engaging in unethical behavior.)

Chances of being caught and penalized		**Probability of engaging in the behavior**										
1.	**0%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2.	**10%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
3.	**20%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
4.	**30%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
5.	**40%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
6.	**50%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
7.	**60%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8.	**70%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
9.	**80%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10.	**90%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
11.	**100%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

I. Answer questions 1 through 11 as they pertain to you.

Suppose that unethical behavior by you would result in **high organizational** gain, such as engaging in bribery of public officials to obtain business in a foreign country that would double your organization's business, assuring profitability. Given that the chances of being caught and penalized are some specific percentage (0% to 100%), what is the probability that YOU would engage in unethical behavior (cheat) in *business*?
(Please circle the appropriate probabilities of engaging in unethical behavior.)

Chances of being caught and penalized		**Probability of engaging in the behavior**										
1.	**0%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2.	**10%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
3.	**20%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
4.	**30%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
5.	**40%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
6.	**50%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
7.	**60%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8.	**70%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
9.	**80%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10.	**90%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
11.	**100%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

J. Answer questions 1 through 11 as they pertain to you.

Suppose that unethical behavior by you would result in **minimal organizational** gain, such as doing whatever it takes to keep a contract that is worth minimal profit, in an industry that offers little new business opportunities. Given that the chances of being caught and penalized are some specific percentage (0% to 100%), what is the probability that YOU would engage in unethical behavior (cheat) in *business*?
(Please circle the appropriate probabilities of engaging in unethical behavior.)

Chances of being caught and penalized		**Probability of engaging in the behavior**										
1.	**0%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2.	**10%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
3.	**20%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
4.	**30%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
5.	**40%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
6.	**50%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
7.	**60%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8.	**70%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
9.	**80%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10.	**90%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
11.	**100%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

K. Answer questions 1 through 11 as they pertain to you.

Suppose that unethical behavior by you would result in **low societal** gain, such as being able to graduate so that you can join a service organization like the Peace Corps. Given that the chances of being caught and penalized are some specific percentage (0% to 100%), what is the probability that YOU would engage in unethical behavior (cheat) in *school*?
(Please circle the appropriate probabilities of engaging in unethical behavior.)

Chances of being caught and penalized		**Probability of engaging in the behavior**										
1.	**0%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2.	**10%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
3.	**20%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
4.	**30%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
5.	**40%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
6.	**50%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
7.	**60%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8.	**70%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
9.	**80%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10.	**90%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
11.	**100%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

L. Answer questions 1 through 11 as they pertain to you.

Suppose that unethical behavior by you would result in **high societal** gain. Given that the chances of being caught and penalized are some specific percentage (0% to 100%), what is the probability that YOU would engage in unethical behavior (cheat) in *school*?
(Please circle the appropriate probabilities of engaging in unethical behavior.)

Chances of being caught and penalized		**Probability of engaging in the behavior**										
1.	**0%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2.	**10%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
3.	**20%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
4.	**30%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
5.	**40%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
6.	**50%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
7.	**60%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8.	**70%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
9.	**80%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10.	**90%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
11.	**100%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

M. Answer questions 1 through 11 as they pertain to you.

Suppose that unethical behavior by you would result in **high societal** gain, such as paying an illegal bribe to get a shipment of food to the hungry. Given that the chances of being caught and penalized are some specific percentage (0% to 100%), what is the probability that YOU would engage in unethical behavior (cheat) in *business*?
(Please circle the appropriate probabilities of engaging in unethical behavior.)

Chances of being caught and penalized		**Probability of engaging in the behavior**										
1.	**0%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2.	**10%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
3.	**20%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
4.	**30%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
5.	**40%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
6.	**50%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
7.	**60%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8.	**70%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
9.	**80%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10.	**90%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
11.	**100%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

N. Answer questions 1 through 11 as they pertain to you.

Suppose that unethical behavior by you would result in **minimal societal** gain. Given that the chances of being caught and penalized are some specific percentage (0% to 100%), what is the probability that YOU would engage in unethical behavior (cheat) in *business*?
(Please circle the appropriate probabilities of engaging in unethical behavior.)

Chances of being caught and penalized		**Probability of engaging in the behavior**										
1.	**0%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2.	**10%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
3.	**20%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
4.	**30%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
5.	**40%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
6.	**50%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
7.	**60%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8.	**70%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
9.	**80%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10.	**90%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
11.	**100%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

O. Answer questions 1 through 11 as they pertain to you.

Suppose that unethical behavior would result in high personal gain, such as meeting a required GPA to maintain your scholarship. The unethical behavior involves using a computer to obtain information regarding a professor's final exam and your identity will be completely anonymous, as the computer system does not know "who" you are. Given that the chances of being caught and penalized are some specific percentage (0% to 100%), what is the probability that YOU would engage in unethical behavior (cheat) in *school*?
(Please circle the appropriate probabilities of engaging in unethical behavior.)

Chances of being caught and penalized		**Probability of engaging in the behavior**										
1.	**0%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2.	**10%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
3.	**20%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
4.	**30%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
5.	**40%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
6.	**50%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
7.	**60%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8.	**70%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
9.	**80%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10.	**90%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
11.	**100%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

P. Answer questions 1 through 11 as they pertain to you.

Suppose that unethical behavior would result in high personal gain, such as meeting a required GPA to maintain your scholarship. The unethical behavior involves using a computer to obtain information regarding a professor's final exam. However, the computer system is able to monitor which users are logged in and it is possible that your identity could be determined. Given that the chances of being caught and penalized are some specific percentage (0% to 100%), what is the probability that YOU would engage in unethical behavior (cheat) in *school*?
(Please circle the appropriate probabilities of engaging in unethical behavior.)

Chances of being caught and penalized		**Probability of engaging in the behavior**										
1.	**0%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2.	**10%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
3.	**20%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
4.	**30%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
5.	**40%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
6.	**50%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
7.	**60%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8.	**70%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
9.	**80%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10.	**90%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
11.	**100%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

Q. Answer questions 1 through 11 as they pertain to you.

Suppose that unethical behavior would result in low personal gain, such as obtaining confidential information about someone that was unimportant. The unethical behavior involves using a computer to obtain this information and your identity will be completely anonymous, as the computer system does not know "who" you are. Given that the chances of being caught and penalized are some specific percentage (0% to 100%), what is the probability that YOU would engage in unethical behavior (cheat)?
(Please circle the appropriate probabilities of engaging in unethical behavior.)

Chances of being caught and penalized		**Probability of engaging in the behavior**										
1.	**0%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2.	**10%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
3.	**20%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
4.	**30%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
5.	**40%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
6.	**50%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
7.	**60%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8.	**70%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
9.	**80%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10.	**90%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
11.	**100%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

R. Answer questions 1 through 11 as they pertain to you.

Suppose that unethical behavior would result in low personal gain, such as obtaining confidential information about someone that was unimportant. However, the computer system is able to monitor which users are logged in and it is possible that your identity could be determined. Given that the chances of being caught and penalized are some specific percentage (0% to 100%), what is the probability that YOU would engage in unethical behavior (cheat)?
(Please circle the appropriate probabilities of engaging in unethical behavior.)

Chances of being caught and penalized		**Probability of engaging in the behavior**										
1.	**0%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2.	**10%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
3.	**20%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
4.	**30%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
5.	**40%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
6.	**50%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
7.	**60%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8.	**70%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
9.	**80%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10.	**90%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
11.	**100%**	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

On the following pages, there are phrases describing people's behaviors. Please use the rating scale below to describe how accurately each statement describes ***you***. Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence. Please read each statement carefully, and then circle the answer that corresponds to how accurate the statement is about you.

	Very Inaccurate	Moderately Inaccurate	Neither Inaccurate Nor Accurate	Moderately Accurate	Very Accurate
1. Am the life of the party	1	2	3	4	5
2. Feel little concern for others	1	2	3	4	5
3. Am always prepared	1	2	3	4	5
4. Get stressed out easily	1	2	3	4	5
5. Never hesitate to go out of my way to help someone in trouble.	1	2	3	4	5
6. Have a rich vocabulary	1	2	3	4	5
7. Don't talk a lot	1	2	3	4	5
8. Am interested in people	1	2	3	4	5
9. Leave my belongings around	1	2	3	4	5
10. Never intensely disliked anyone	1	2	3	4	5
11. Am relaxed most of the time	1	2	3	4	5
12. Have difficulty understanding abstract ideas	1	2	3	4	5
13. Feel comfortable around people	1	2	3	4	5
14. Insult people	1	2	3	4	5
15. Sometimes get jealous of the good fortune of others	1	2	3	4	5
16. Pay attention to details	1	2	3	4	5
17. Worry about things	1	2	3	4	5
18. Have a vivid imagination	1	2	3	4	5
19. Keep in the background	1	2	3	4	5
20. Never think of letting someone else be punished for my wrong doings	1	2	3	4	5
21. Sympathize with others' feelings	1	2	3	4	5
22. Make a mess of things	1	2	3	4	5
23. Seldom feel blue	1	2	3	4	5
24. Am not interested in abstract ideas	1	2	3	4	5
25. Sometimes feel resentful when I don't get my way	1	2	3	4	5
26. Start conversations	1	2	3	4	5
27. Am not interested in other people's problems	1	2	3	4	5
28. Get chores done right away	1	2	3	4	5
29. Am easily disturbed	1	2	3	4	5
30. Sometimes feel like rebelling against someone in authority, even if I know they are right	1	2	3	4	5

	Very Inaccurate	Moderately Inaccurate	Neither Inaccurate Nor Accurate	Moderately Accurate	Very Accurate
31. Have excellent ideas	1	2	3	4	5
32. Have little to say	1	2	3	4	5
33. Have a soft heart	1	2	3	4	5
34. Often forget to put things back in their proper place	1	2	3	4	5
35. Am always courteous, even to people who are disagreeable	1	2	3	4	5
36. Get upset easily	1	2	3	4	5
37. Do not have a good imagination	1	2	3	4	5
38. Talk to a lot of different people at parties	1	2	3	4	5
39. Am not really interested in others	1	2	3	4	5
40. Never mind admitting when I don't know something	1	2	3	4	5
41. Like order	1	2	3	4	5
42. Change my mood a lot	1	2	3	4	5
43. Am quick to understand things	1	2	3	4	5
44. Don't like to draw attention to myself	1	2	3	4	5
45. Sometimes play sick to get out of something	1	2	3	4	5
46. Take time out for others	1	2	3	4	5
47. Shirk my duties	1	2	3	4	5
48. Have frequent mood swings	1	2	3	4	5
49. Use difficult words	1	2	3	4	5
50. Am sometimes irritated by people who ask favors of me	1	2	3	4	5
51. Don't mind being the center of attention	1	2	3	4	5
52. Feel others' emotions	1	2	3	4	5
53. Follow a schedule	1	2	3	4	5
54. Get irritated easily	1	2	3	4	5
55. Spend time reflecting on things	1	2	3	4	5
56. Am quiet around strangers	1	2	3	4	5
57. Make people feel at ease	1	2	3	4	5
58. Am exacting in my work	1	2	3	4	5
59. Often feel blue	1	2	3	4	5
60. Am full of ideas	1	2	3	4	5

For the following questions, describe yourself in a work setting. It can be at a job or working in any other organization (church, student or civic group, for example.

	Very Inaccurate	Moderately Inaccurate	Neither Inaccurate Nor Accurate	Moderately Accurate	Very Accurate
61. Help others who have been absent	1	2	3	4	5
62. Am punctual	1	2	3	4	5
63. Volunteer for things that are not required	1	2	3	4	5
64. Take undeserved breaks	1	2	3	4	5
65. Orient new people even though it is not required	1	2	3	4	5
66. Have better attendance than most	1	2	3	4	5
67. Help others who have heavy work loads	1	2	3	4	5
68. Coast toward the end of the workday	1	2	3	4	5
69. Give advance notice if I'm unable to come to work	1	2	3	4	5
70. Spend a lot of time on personal phone calls	1	2	3	4	5
71. Do not take unnecessary time off work	1	2	3	4	5
72. Assist supervisor with his or her work	1	2	3	4	5
73. Make innovative suggestions to improve the department	1	2	3	4	5
74. Do not take extra breaks	1	2	3	4	5
75. Attend functions not required but help the organization's image	1	2	3	4	5
76. Do not spend time in idle conversation	1	2	3	4	5

DEBRIEFING

Thank you for participating in this study. On the reverse side is a blank copy of the consent form you signed. Feel free to contact me or Professor Buckley if you have any questions or concerns.

PURPOSE OF THE STUDY.

In our quest in business to understand how people develop their ethical values and orientations, we can look to research in developmental psychology for clues. One older idea that is enjoying a resurgence in research activity in developmental psychology is the notion that birth order (e.g., only child, firstborn child, laterborn child) helps determine one's personality. The idea is that your position in the sibship (i.e., the order of siblings) determines to some extent your strategy for coping in the family and vying for family resources, particularly parental attention and approval.

Of particular interest to me is the recent finding that firstborn children are more conscientious than laterborn children. In industrial/organizational (I/O) psychology, we are finding that conscientiousness equates more or less to the concept of integrity, which is used in I/O psychology to predict an employee's ethical behavior.

So when you put these two research streams together, we should expect that firstborns are more ethical in general than laterborns. Furthermore, we would expect that when firstborns do behave unethically, it is to advance their own self interest. Laterborns would be more likely to behave unethically when it benefits a group with which they are affiliated.

This study represents an initial test of those hypotheses. We briefly measured your personality, ethical orientation and birth order in this survey.

Email me if you'd like to know the results of the study. I'd be happy to share them with you. Again, my information is on the other side of this form. Feel free to contact me with any questions or concerns.

Thank you.

Joe Stauffer