

# **Myers-Briggs Type Indicator, A/B Personality Types, and Locus of Control: Where Do They Intersect?**

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*Organizational researchers continually strive to establish models and patterns to predict the behavior of employees within the organizational context. However, much of this research relating to personality types has been conducted in silos. Therefore, the goal of this paper is to explore the relationships among Myers-Briggs Type Indicator, A/B Personality Types, and Locus of Control. Data were collected via survey from 276 business students.*

## **INTRODUCTION**

Organizational researchers continually strive to establish models and patterns to predict the behavior of employees within the organizational context. Human behavior is inherently unpredictable; but by understanding the interactions among tasks, organization structure, the external environment, and individual personality traits, we may, to some extent, be able to calculate the actions of individuals. As a result, there has been an increased interest among researchers in understanding the role of personality types in different work situations, particularly as it relates to predicting the type of personality that will be most effective in different organizational environments (Spector & O'Connell, 1994; Tan & Tiong, 1999).

There are many different aspects of personality that can be evaluated and many different assessments tools that can be used to classify different aspects of individuals' personalities. In this research we examine three different measures of personality traits including the Myers-Briggs Type Indicator, the Type A behavior pattern, and an individual's locus of control, in an effort to determine where these three indicators intersect. By establishing relationships among these variables, organizations may be better prepared to understand and predict employee behavior and thus design work environments, jobs and rewards that will maximize employee productivity, efficiency and satisfaction.

The rest of the paper is presented as follows: First, the theoretical framework that guides our study is described. A review of the Myers-Briggs Type Indicator, A/B Personality Types, and Locus of Control follows, and then a set of hypotheses is developed predicting the relationships between the constructs. A

research methodology and construct measures to test the hypotheses are presented, followed by the results from our analyses. The paper concludes with limitations and opportunities for future research.

## **THEORETICAL DEVELOPMENT**

In this section, the Myers-Briggs Type Indicator, the Type A behavior pattern, and locus of control literatures are reviewed and explored for potential relationships among the three constructs. In addition, our research hypotheses are presented.

### **Myers-Briggs Type Indicator (MBTI)**

The Myers-Briggs Type Indicator (MBTI) is one of the most widely used and recognized personality preference instruments (Filbeck, Hatfield, & Horvath, 2005). The MBTI is essentially a personality typology using four pairs of contrasting traits to create 16 personality patterns (Abrams, 2011). It was developed by Isabel Briggs Myers and her mother, Katharine Cooks Briggs, who integrated their own concepts and research with the theory of personality developed by psychiatrist Carl Jung (Abrams, 2011). Its popularity persists because it focuses on normal as opposed to pathological behavior and its logic and descriptions are straightforward and nonthreatening (Fox-Hines & Bowersock, 1995; Zemke, 1992). The MBTI provides a framework for examining similarities and differences in personality traits by assessing an individual's preferences regarding perceptions and judgments (Opt & Loffredo, 2003; Tan & Tiong, 1999). The MBTI utilizes self-reporting to determine an individual's dominant preferences on four opposing dimensions: extroversion-introversion (E-I), sensation-intuition (S-N), thinking-feeling (T-F), and judgment-perception (J-P). As a result of the interactions among these preferences, 16 distinctive personality types are identified by the instrument. The MBTI score also indicates the strength of the preference for each dimension. Stronger scores indicate a greater likelihood that the individual has developed the attributes associated with those preferences (Tan & Tiong, 1999; Varvel, Adams, Pridie, & Ruiz Ulloa, 2004).

#### *Extraversion-Introversion*

The E-I index reflects where individuals prefer to focus their attention. Extraverts are oriented primarily to the outer world of experience including people and things, while introverts are oriented more towards the inner world of experience including concepts and ideas. Extroverts get their energy from the outside world of people while for introverts energy comes from the inside world of thoughts and ideas. Extroverts are people and action-oriented, like variety and action, and they can act quickly (sometimes without thinking). They prefer oral communication and can communicate freely with others. They work quickly and dislike complicated procedures, but they can be impatient at long slow jobs. Introverts are more contemplative, like quiet concentration, are careful with details and enjoy working on one project for a long time. They are content to work alone and prefer to utilize written communication (Filbeck et al., 2005; Fox-Hines & Bowersock, 1995; McPherson, 1999; Myers & McCaulley, 1989; Opt & Loffredo, 2003; Tan & Tiong, 1999; Varvel et al., 2004).

#### *Sensing-Intuition*

The S-N Index reflects how individuals acquire information about their surroundings and how they choose to perceive the world. Those with a sensing preference prefer concrete details of a situation and rely on the five senses to observe facts or happenings. An intuitive prefers to look at the overall picture of an experience, relying on a *sixth* sense or personal hunches or insight rather than on the five senses. They enjoy novelty, change and the unusual. Sensing types tend to be more realistic and practical while intuitive types focus on the future and the possibilities that it holds (Filbeck et al., 2005; Fox-Hines & Bowersock, 1995; McPherson, 1999; Myers & McCaulley, 1989; Opt & Loffredo, 2003; Tan & Tiong, 1999; Varvel et al., 2004).

### *Thinking-Feeling*

The T-F index reflects the preferences of individuals for making decisions, processing data, and evaluating their perceptions. Those with a thinking preference use logic, facts, and fairness. They strive for objectivity and the application of principles to a decision. They are often uncomfortable dealing with the feelings of others. Those with a feeling preference use personal or social values when making decisions. Their decisions are more subjective in nature, and they consider the impact that their decisions will have on others. They enjoy pleasing others and are more likely to offer appreciation and sympathy (Filbeck et al., 2005; Fox-Hines & Bowersock, 1995; McPherson, 1999; Myers & McCaulley, 1989; Opt & Loffredo, 2003; Tan & Tiong, 1999; Varvel et al., 2004).

### *Judging-Perceiving*

The J-P index addresses how people prefer to organize and orient themselves to the outer world. Individuals who utilize a judging preference (either thinking or feeling) focus on leading an organized and orderly life. They are punctual, orderly, seek closure, and prefer control over their lives through detailed planning. They are action-oriented, decisive, and may see things as black and white, which can manifest itself as a closed-minded attitude. Those with a perceiving preference (either sensing or intuition) are more spontaneous and open to new ideas. They are more flexible and relaxed; they *go with the flow*, and resent time constraints. They see more *grays* and tend to be more open-minded. These individuals prefer to adapt to situations rather than control them (Filbeck et al., 2005; Fox-Hines & Bowersock, 1995; McPherson, 1999; Myers & McCaulley, 1989; Varvel et al., 2004).

Using data provided by Filbeck et al. (2005) and Fox-Hines and Bowersock (1995), Table 1 provides an approximate distribution of each dimension in the general U.S. population. The Myers & Briggs Foundation at <http://www.myersbriggs.org/my-mbti-personality-type/my-mbti-results/how-frequent-is-my-type.asp> indicates the distribution in the U.S. population to be 49.3% for Extroverts and 50.7% for Introverts.

**TABLE 1  
BREAKDOWN OF EACH DIMENSION IN THE U.S. POPULATION**

<b>Preference for Being in the World</b>	
Extroverted (E)	70-75%
Introverted (I)	25-30%
<b>Preference for Gathering Data</b>	
Sensing (S)	70-75%
Intuitive (N)	35-30%
<b>Preference for Making Decisions</b>	
Thinking (T)	60% males, 40% females
Feeling (F)	60% females, 40% males
<b>Preference for Either Making Decisions or Gathering Data</b>	
Judging (J)	55%
Perceiving (P)	45%

According to Fox-Hines and Bowersock (1995), there are more Extroverted, Sensing, Judging types in the U.S. than those who are classified as Introverted, Intuiting or Perceiving. The Thinking-Feeling index is the only dimension that persistently demonstrates differences along gender lines with more males being classified as Thinking and more females as Feeling. Furthermore, a majority of business leaders and managers have Sensing-Judging as part of their personality type.

### **Type A Personality Characteristic**

The Type A behavior pattern originally described by Friedman and Rosenman (1974) has received considerable attention in the literature. While the definition of the construct has evolved over the years (Watson, Minzenmayer, & Bowler, 2006), it continues to be associated with three particular personality characteristics: highly competitive attitudes toward achievement, a strong sense of time urgency, and the use of aggression and hostility to cope with a frustrating situation (Lobel, 1988; Watson et al., 2006). Glass (1977) further hypothesized that these three components are all indicative of the Type A individual's strong desire to exert control over the environment. Type A individuals generally demonstrate a more ambitious orientation to life (Watson et al., 2006). They are characterized as aggressive, competitive, always in a hurry, impatient, ambitious, forceful, work-oriented, preoccupied with deadlines, hard-working, and highly involved with their jobs (Mahajan & Rastogi, 2011; Rastogi & Dave, 2004; Watson et al., 2006). Type A individuals are action-oriented, constantly struggle for the highest amount of achievement in the least amount of time, and set higher performance standards for themselves (Nahavandi, Mizzi, & Malekzadeh, 1992). They set high career goals for themselves and put in longer hours to achieve them (Watson et al., 2006).

However, Type A individuals do not always outperform Type B individuals. They are not as effective on complex tasks that require slow and careful responses, their focus on time urgency may result in a rush to judgment that does not adequately consider alternative approaches, and they are poor delegators and often report being overworked. Their strong need to attain control and maintain it can make them competitive and even hostile, while driving their decision making and their behavior even in social situations where they will promote their own self-interest (Nahavandi et al., 1992; Watson et al., 2006). Friedman and Rosenman (1974) reported that this behavior led to what they termed 'joyless striving' such that even their accomplishments brought them limited happiness.

On the other hand, Type B individuals are more relaxed and easygoing. They do not suffer from a sense of time urgency, and in contrast to Type A individuals, those with Type B characteristics have the ability to enjoy leisure time and can relax without guilt (Mahajan & Rastogi, 2011; Rastogi & Dave, 2004). Type B individuals generally do not feel pressing conflict with either time or people. They may have a considerable drive to work hard and accomplish goals, but the Type B has a confident style that allows him or her to work at a steady pace rather than racing against the clock. The Type B individuals can be "highly productive workers who meet schedule expectations; they simply obtain results in a different manner" (Mahajan & Rastogi, 2011, p. 59). Watson et al. (2006) indicate that while Type A individuals fill the majority of management-level positions and have the driven type of personality that often succeeds in mid-management, they do not have the more conceptual, relationship style preferred by upper management. Type B individuals are better able to see things from a global perspective, encourage teamwork, and exercise patience in decision making while inspiring employees to work as a team to achieve goals, which are characteristics necessary for success at the executive level.

Spector and O'Connell (1994) speculate that the Type A construct may be better defined as multidimensional rather than unidimensional. In their review of the literature they conclude that there are two major dimensions comprising the Type A construct that appear to be unrelated. The first is the impatience-irritability dimension which is defined as the tendency to become angry and frustrated, while the second is the achievement striving dimension which is the tendency to work hard to achieve goals. Spector and O'Connell (1994) speculate that the first dimension would likely generate more affective outcomes including frustration, interpersonal conflicts, and perceptions of organizational constraints, along with the physical symptoms associated with the Type A behavior pattern. The second dimension would likely be related to work motivation and effort which may result in those employees perceiving that they have higher workloads, but may not be associated with somatic symptoms.

### **Locus of Control**

Individuals differ in the degree to which they perceive that events in the environment are subject to their personal control. Rotter (1966) identified locus of control as a personality variable that measures people's general expectancies about whether they can or cannot control events affecting them, and their

tendencies to attribute the causes of their successes or failures to either internal or external sources (Allen, Weeks, & Moffitt, 2005; Scott & Severance, 1975; Spector & O'Connell, 1994). Those who hold high expectancies that they have the ability to control reinforcing events in the environment and attribute success or failure to themselves are considered to have an internal locus of control (internals). Those who perceive themselves as having little control over events and hold expectancies that outside forces or luck control reinforcements are considered to have an external locus of control (externals). Externals generally attribute success or failure to external sources such as situations, other people, luck or fate (Allen et al., 2005; Rotter, 1966; Scott & Severance, 1975; Spector & O'Connell, 1994).

Keenan and McBain (1979) assert that internals are likely to engage in a variety of behaviors that indicate their motivation to master or control their environment, while externals tend to feel helpless as they perceive that events are beyond their control. Because internals believe that they can master their environment and control their outcomes, they are more likely to act to achieve an attractive alternative while externals will be more likely to be passive observers of events as they perceive any attempts to control desired outcomes would be futile (Allen et al., 2005). Internals believe that change is possible and will act in such a way as to control their destiny.

Anderson (1977) indicated a link between locus of control and employee motivation. Individuals with an internal locus of control assume that they can cause certain changes in their environment, which leads to an increase in their motivation to act. Anderson found that internals engage in more task-oriented coping behaviors to successfully resolve organizational problems than externals. Generally speaking, because internals attribute success to personal abilities, successfully striving towards goals will likely enhance their internal orientation (Anderson, 1977; Cole & Cole, 1977).

## **WHERE PERSONALITY TRAITS INTERSECT**

Personality presents itself as a collection of traits where some traits tend to appear in connection with each other. Based on the review of the literature presented above, predictions can be made about the relationships among the indices measured in this research: Myers-Briggs personality type, Type A behavior pattern, and locus of control.

### **Type A Personality and MBTI**

It is expected that those exhibiting the Type A personality trait will be more likely to demonstrate ESTJ as their dominant preferences on the MBTI. Type A personalities are action-oriented, work quickly, and can be impatient, which more closely reflects the extroversion dimension. Further, it is expected that Type As will most closely align with the sensing dimension. Type As do not demonstrate the conceptual, global, big picture thought that characterizes intuitives. Rather, they rely on facts and actions that will allow them to achieve the maximum return in the least amount of time. Type A individuals are likely to prefer the objectivity of the thinking dimension because concern over the feelings of others is inconsistent with their competitive, ambitious, forceful, task-oriented nature. Finally, it seems evident that Type A individuals will utilize a judging preference because a primary behavior pattern for Type A is a desire to exert control over the environment. Type A individuals have a strong need to attain and maintain control, which is consistent with the organized, planned and orderly life that characterizes those high on the judging preference.

Thus, we hypothesize that:

*H1: Type A personalities will be positively associated with extroversion, sensing, thinking, and judging.*

### **Internal Locus of Control and MBTI**

It is expected that those demonstrating an internal locus of control will most closely demonstrate ENJ preferences on the MBTI. Internals are action-oriented and exercise task-oriented behaviors, and they are expected to be more closely aligned with the extroversion dimension. Because internals are confident they

can master their environment and act to change their lives and circumstances, they are likely associated with the intuitives who enjoy novelty and change and focus on the possibilities that the future holds. No a priori assumptions are made about the relationship between internal locus of control and the Thinking-Feeling index. There is no clear expectation as to whether the decision making style of internals will focus on subjective feelings or objective facts. However, it is expected that internals will demonstrate a dominant preference for judging. Internals believe that through their own actions they can control their environment and the outcomes of their actions, which is consistent with the desire of judgers to control the situations in their lives. Thus, we hypothesize that:

*H2: Internal locus of control will be positively associated with extroversion, intuition, and judging.*

### **Type A and Internal Locus of Control**

Type A individuals exhibit a strong desire to control their environment. The need to control events in their lives drives their actions. If Type As did not perceive that the events in their lives were subject to their personal control, it would be unlikely to expect them to be action-oriented, achievement-driven, and ambitious. They would not perceive a link between their actions and the outcomes of those actions. In order to be motivated to work hard, achieve deadlines and struggle to succeed, they must believe that their success (or failure) is due to internal sources. Type As strive to achieve because they believe they can impact the outcomes of their actions. Therefore, it is expected that there will be a strong relationship between Type A behaviors and internal locus of control. Thus, we hypothesize that:

*H3: Type A personalities will be positively associated with internal locus of control.*

## **RESEARCH METHOD**

### **Data Collection and Measurement**

Our target population was students attending higher-education classes at a southeastern university in the U.S. The data for our study are from 276 students. The scales utilized in this research were adapted from prior studies. For complete versions of the measurement items, contact the authors. Scales for locus of control were taken from Nowicki and Strickland (Aero & Weiner, 1981). This assessment consisted of 40 yes/no questions. A scoring key was provided to the participants, allocating one point for each time their answer agreed with the keyed answer. Their locus of control score was then tallied to be the total number of agreements between their answers and the ones on the key. The Myers-Briggs scales were adapted from Marcic and Nutt (1989). Thirty-two questions were asked to identify basic preferences of each of the four dichotomies specified in Jung's theory. A scoring key was used to determine the outcome of individual dimensions. The Type A or Type B personality measures were adapted from Friedman and Rosenman (1974). These seven items utilized an eight-point Likert scale. Responses were totaled and, once more, compared to a scoring key to determine personality type. Demographic variables were also collected on age, gender, marital status, and number of children.

## **RESULTS**

Participants ranged from 21 to 58 years old, with the average age being 31. Seventy-five percent of the sample had fewer than two children. There were more females than males represented at 65% and 35%, respectively, with an approximately equal split between single and married. Descriptive statistics and correlations for the sample are shown in Table 2.

**TABLE 2**  
**MEANS, STANDARD DEVIATIONS, AND CORRELATIONS**

	Mean	SD	1	2	3	4	5	6
<b>1. LOC</b>	9.46	5.76	1					
<b>2. MB IE</b>	.46	.50	-.088	1				
<b>3. MB SN</b>	.49	.50	-.098	.150*	1			
<b>4. MB TF</b>	.37	.48	.108	.104	.016	1		
<b>5. MB JP</b>	.31	.46	-.004	.188**	.243**	.156**	1	
<b>6. PT</b>	2.81	1.49	-.040	.094	.047	.101	.141*	1

1. LOC: Locus of Control; MB IE: Myers-Briggs Introversion versus Extraversion; MB SN: Myers-Briggs Sensing versus Intuition; MB TF: Myers-Briggs Thinking versus Feeling; MB JP: Myers-Briggs Judging versus Perceiving; PT: Personality Type
2. \*p < 0.05; \*\*p < 0.01 (two-tailed); all other correlations are insignificant.
3. n = 276

The correlation matrix displays the highest correlation between any two variables as .24 ( $p < .01$ ), indicating a relationship between the Myers-Briggs judging versus perceiving and sensing versus intuition dimensions. Specifically, individuals falling in the judging domain were more likely to also be sensing whereas those on the perceiving end of the spectrum were more likely to be associated with the intuition domain. Other significant correlations resulted from the relationship between the Myers-Briggs introversion versus extraversion and sensing versus intuition dimensions ( $r = .15$ ,  $p < .05$ ). That is, introversion was significantly correlated with sensing as extraversion was with intuition. Additionally, introversion was significantly related to judging and extraversion to perceiving ( $r = .19$ ,  $p < .01$ ). A final relationship between the Myers-Briggs indicators is shown between judging and thinking, and therefore between perceiving and feeling ( $r = .16$ ,  $p < .01$ ). Surprisingly, none of the variables displayed a significant relationship with locus of control. However, personality type was significantly related to the Myers-Briggs judging versus perceiving dimension. Specifically, Type A personalities were more closely associated with the judging dimension, whereas Type B personalities were more closely associated with the perceiving dimension ( $r = .14$ ,  $p < .05$ ).

### Main Study Hypotheses Tests and Control Variables

In the online questionnaire, we collected data for each construct and four control variables: age, number of children, gender, and marital status. Data were analyzed with SPSS using logistic regression analysis, which is appropriate due to the binary coding associated with the Myers-Briggs dimensions. The control variables were analyzed as antecedents to the personality constructs in an attempt to further explain the intersections among the variables. The only control variable to have a significant relationship with a personality construct was gender. Specifically, gender was significantly related to the MBTI sensing/intuition dimension ( $\beta = -.811$ ,  $p < .01$ ) and the MBTI thinking/feeling dimension ( $\beta = .574$ ,  $p < .05$ ). Table 3 displays the percentage of males and females with their associated MBTI scores. For instance, male subjects were more closely associated with the intuition dimension, whereas female subjects tended to be more sensing. Although both genders scored higher on thinking than the feeling dimension, this result was much stronger for males as opposed to females at 71% versus 58%, respectively.

**TABLE 3  
GENDER DIFFERENCES IN MBTI SCORES**

	<b>Sensing</b>	<b>Intuition</b>	<b>Thinking</b>	<b>Feeling</b>
	39%	61%	71%	29%
	58%	42%	58%	42%

As suspected from the correlation analysis, A/B Personality Type was significantly related to the MBTI judging/perceiving dimension ( $\beta = .182, p < .05$ ). As can be seen from Table 4, overall judging was more common than perceiving. However, a closer look indicates a judging preference for stronger Type A personalities.

**TABLE 4  
A/B PERSONALITY DIFFERENCE IN MBTI JUDGING/PERCEIVING**

	79%	21%
	73%	27%
	61%	39%
	67%	33%

Some support was found for our hypotheses. H1 predicted that Type A personalities would be positively associated with extroversion, sensing, thinking, and judging. This was partially supported in that Type A personalities were positively associated with judging but not extroversion, sensing, or thinking. Unfortunately, there were no significant relationships with locus of control. Therefore, H2, which predicted that internal locus of control would be positively associated with extroversion, intuition, and judging, was not supported. Furthermore, H3 was not supported as it predicted Type A personalities to be positively associated with internal locus of control.

#### **LIMITATIONS AND FUTURE RESEARCH**

One of the major limitations of our study is that it involved students from one southeastern university, although the data was collected over several years and the target population did include mostly working adults. Additional research could address a potential link between personality types and job positions occupied by the individuals surveyed. An awareness of which personality factors are linked to types of occupations may be useful for students seeking a better job fit, and some specific personality traits may be even more beneficial in certain occupations and work environments. Future research with a similar population might also include identifying international students and further comparing their personality traits and characteristics to students from across the United States. Another possibility would be to take into consideration whether students completed their academic program. In addition, a link between academic achievement and the various personality indices could be investigated. The use of self-reported measures is a second limitation of this study. Although it is extremely common and accepted among these types of studies, if other more objective measures could be found it would improve the quality of such research efforts.



## CONCLUSIONS

The findings of the present study further our understanding of the connection among various personality assessments. We suggest that Myers-Briggs Type Indicators are related to each other and to A/B Personality Types, which in turn may play an important role in predicting behavior and enhancing job fit in an organization. Human resource departments should incorporate such personality tests in their initial assessment of job candidates to improve the selection process. Moreover, there should be active efforts in higher education classrooms through case study sessions, job fit discussions, and personality analyses to help students identify their own personality traits.

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