

Running Head: IDENTIFYING LEADERSHIP

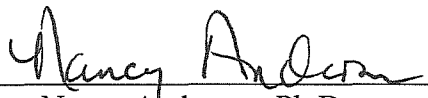
Identifying Leadership:
Correlations Between Introversion–Extroversion and Leadership Qualities

Tom Hinkley

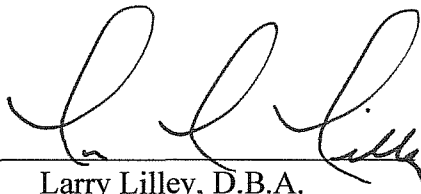
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Acceptance of Senior Honors Thesis


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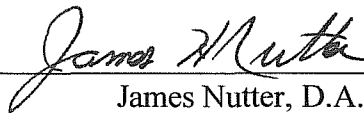
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Abstract

From the beginning of time, individuals have been forced to work in groups via the circumstances they were presented with. Naturally, individuals within the groups stepped forward to take roles of leadership, guiding the rest of the group. Since then, an emphasis has been placed identifying those qualities which make successful leaders. Kouzes and Posner (1995) have identified five vital qualities of a leader: challenging the process; inspiring a shared vision; enabling others to act; modeling the way; and encouraging the heart. In an effort to gain personal insight, leader or not, an emphasis on getting to know your personality and how it affects you, has recently taken root in our culture. Most commonly diagnosed via a personality test, persons are commonly defined by characteristics such as introversion and extroversion. The traits of introversion and extroversion help define who an individual is. In an attempt to combine the knowledge of who a person is with what tasks for which they are most equipped, the question has been raised of whether the personality traits of introversion and extroversion correlate with the level of leadership qualities one possesses. Forty college subjects were given the Student Leadership Practices Inventory and a Jung Typology test from Humanmetrics.com. It was hypothesized that there would be significant, positive correlations between extroversion and leadership scores among the five subscales of leadership qualities. After analysis and data collection, it was found that there was not a significant correlation between introversion/extroversion and any of the five subscales of leadership as defined by Kouzes and Posner. Thus, the quality of either being an introvert or extrovert does not have significant bearing on the leadership quality of an individual.

Identifying Leadership:

Correlations Between Introversion–Extroversion and Leadership Qualities

Since the dawn of time and from the instant that Eve was created to coexist with Adam, a new quality possible to be attributed to an individual arose. This quality has since been seen in every war, dispute, victory, or defeat. In fact, it is present whenever two or more individuals are gathered and one possesses the ability to guide or direct others (Dictionary.com). The quality in question is leadership, and a recent move in the past 20 to 30 years has left the world starving to identify, gain, and then implement it. During roughly this same time frame, and in an effort to help define one's self, individuals have become increasingly interested in what exactly makes them *tick*. This has led to an explosion of personality testing; one of the more basic ones being to classify an individual as an introvert or extrovert. Could leadership and personality traits be connected? If so, the identification of leadership qualities at an early age could have monumental impacts on industry, academia, and nearly every facet of our lives. In its most basic form then, the question arises of whether there is a correlation between whether a person is an introvert or extrovert and the leadership qualities which they possess.

Introversion – Extroversion

Much of the work in regards to personality traits was done by Carl Jung in the early to mid 1900s. His work was sparked by differences he had with his colleague Freud, and a need to explain the friction between them. As one of the first people to classify people as introverts or extroverts, his work centered along the idea of a person's dominant and auxiliary functions (Cloninger, 1993). An introvert's dominant function is

to analyze and reason things within his head before using his auxiliary function to go out into the world and share. The opposite personality, an extrovert, will use his dominant function to go out into the world and bounce ideas around, eventually ending up taking the data gained and analyzing it via his auxiliary function, dealing with the idea internally. Put simply, an introvert is an individual who is oriented toward the inner world, whereas an extrovert is oriented toward external reality (Cloninger, 1993).

Much work has been done on simplifying Jung's idea of dominant and auxiliary functions. In her article, Mudore (2002) states that "extroverts get their energy from people and are renewed by being around others. Introverts get their batteries charged from the inner world of ideas and enjoy being alone" (p. 1). This would tend to lead toward the idea that introverts are nothing more than hermits, preferring to keep to themselves and not interact with the outside world. Some would label them as shy but this is not the case. A person's level of social functioning doesn't depend on how introverted or extroverted he or she is. Shyness is a completely different attribute (Allerton, 1997). Therefore, a person can be an introvert and outgoing, or an extrovert and shy. It is pointed out that shy extroverts are common in society today, commonly holding positions as teachers, politicians, and entertainers (Mudore, 2002). These positions give the individual a chance to recharge from being in front of or around people with minimal close interaction.

Introverts and extroverts are most popularly diagnosed via the Jung Typology Test, Myers-Briggs Type Indicator, or a variation of one of these tests. Both tests give an individual a four letter classification (ex. ISTJ), identifying them as either: introvert or extrovert; sensing or intuitive; thinking or feeling; and judging or perceiving (Cloninger,

1993). As of 2002, approximately 75% of the general population of the United States was classified as extroverted (Weingarten, 2002). The remaining 25%, classified as introverts, most commonly held jobs in the technical fields of computer programming and data analysis, allowing them to hone their skills for being most charged when working primarily alone (Humanmetrics, 1998).

Lastly, there appears to be a biological difference between introverts and extroverts. Recent research has shown a difference in the cerebral blood flow between the two personality types (Shy or outgoing, 2000). Introverts had higher blood flow in the frontal, or thalamus, regions where remembering, problem-solving, and planning take place. Extroverts had higher blood flow in the anterior cingulate gyrus, temporal lobes, and posterior thalamus, areas of the brain that deal with sensory perceptions such as listening, watching or driving (Shy or outgoing, 2000). These studies could lead to early predictions of introversion and extroversion, and if a correlation with leadership is found, be predictors of leadership qualities.

Leadership

Leadership can be defined in its most simple form as “influence” (Maxwell, 1998, p.11). While many say that leadership is simply a person in front directing others, true leadership results when a legacy is left behind for others to follow. There is a definite need for leadership; otherwise, a group of people trying to accomplish a task without a leader are nothing more than an army of helpers (Collins, 2001). Conversely, without constituents to enlist, a leader is alone, not able to complete his task (Kouzes & Posner, 1995).

Much work has been done to identify what makes a leader great. In the early 1980s, James Kouzes and Barry Posner (1995), surveyed nearly 1,200 successful managers in order to come up with a picture of what makes a successful leader. After much data collection and analysis, they identified five characteristics of a leader: challenging the process; inspiring a shared vision; enabling others to act; modeling the way; and encouraging the heart. It is important to note that these characteristics are what allowed ordinary people to get extraordinary things done. Kouzes and Posner are also quick to point out that these principles are available to anyone and have stood the test of time (Kouzes & Posner, 1995). The five characteristics bear further explanation.

Challenging the process. Through the studies of Kouzes and Posner, it was found that all successful leaders had an element in them which challenged the process. Challenging the process is defined as stepping out and being innovative or willing to change the way things are done (Kouzes & Posner, 1995). An example of this is when personnel who have been with a company for many years are fired and not kept just because it would be comfortable to keep them (Collins, 2001). It is important to note that simply challenging the process for the sake of challenging it is not what is important; leaders must learn from successes as well as failures (Kouzes & Posner, 1995).

Kouzes and Posner (1995) are also quick to point out that challenging the process requires arousing intrinsic motivation among those employees working beneath a leader in the hierarchy. While the traditional cliché of “what gets rewarded gets done” is usually fulfilled by rewarding subordinates with external, tangible gifts, studies have shown that those companies which had the highest rates of economic turnaround did not spend as much on external rewards. Instead, people felt rewarded intrinsically by what they were

getting accomplished, not what they would receive after accomplishing someone (Kouzes & Posner, 1995). This parallels an idea Jim Collins (2001) expresses in chapter three of his book *Good to Great*. The idea of focusing first on who to approach a task with, then what task to be accomplished, will lead to greater success than if approached inversely. If leaders challenge the status quo, place people under them who will have a passion for a job and make it their own, those individuals will undoubtedly have a higher rate of success (Collins, 2001). This is an example of the intrinsic motivation observed by Kouzes and Posner. Failure would cause a burden to fall upon them, not left on the shoulders of the organization.

Lastly, in looking at how a leader challenges the process, change is inevitable. Much of this change comes as a result of communication, whether it be internal or external:

If leaders are going to detect demands for change, they must... go out and talk to their constituents, be they citizens, customers, employees, stockholders, student, suppliers, vendors, business partners, managers, or just interested parties. They must listen and stay in touch. (Kouzes & Posner, 1995, p. 45)

It is vital for leaders and organizations as a whole to stay in contact with those people who have any dealings with them. In a study of 224 new electronics products, it was found that the key success factor for the longevity of that product's lifespan was the development team's interaction and communication with the customer (Kouzes & Posner, 1995). Richard Branson, head of Virgin Atlantic and Virgin Records, repeatedly states that the key to his business is the people: first employees, then customers, and finally stockholders (Pfeffer, 1998). Branson's love for interaction with people falls in

line with his personality type (ESTP) as described by the Myers-Briggs type indicator (Farrell, 2003). Without talking to those individuals involved either externally or internally with your organization, challenging the process, and thus change, might simply be unproductive and a shot in the dark.

Inspiring a shared vision. To inspire a shared vision is to look at what something could be, and then instill in others the belief that you can get there. In order to accomplish this leaders must “know their constituents and speak their language... understand needs and have others best interests at heart” (Kouzes & Posner, 1995, pg. 10). This necessitates that relationships be built with those following you toward the vision, not something done in a short amount of time or through insignificant conversations. This relationship building is seen when highly effective people must seek first to understand, and then be understood. This is carried out through the process of empathetic communication, where time is spent hearing both leader and subordinate out (Covey, 1989). This vision is then cast through vivid language and expressive style – qualities of an extrovert (Kouzes & Posner, 1995).

In research done by Kouzes and Posner, organizations in which leaders clearly articulated a vision had higher levels of job satisfaction, motivation, commitment, loyalty, esprit de corps, clarity about the organization’s values, pride in the organization, and organizational productivity. However, of the five qualities of leadership, inspiring a shared vision was the quality least applied. In fact, only 10% of those leaders surveyed noted themselves as being inspiring. This was a striking contradiction though to the data. Many individuals who noted themselves as being uninspiring were actually quite expressive when talking about their dreams, successes, or hopes. It seems that regardless

of a person's level of everyday expression (introversion/extroversion), most individuals will exhibit inspiring actions when discussing what they are passionate about (Kouzes & Posner, 1995).

An example of inspiring such a shared vision can be seen in Martin Luther King Jr.'s *I Have a Dream* speech. Three essentials to enlisting others are emphasized in King's speech. First, leaders must discover and appeal to a common purpose. In order to accomplish this, the leader must study and know who he is speaking to. Second, they must communicate expressively, and bring the vision to life in such a way that people can make it their own. Lastly, the speaker must display a personal conviction in regards to what they are saying (Kouzes & Posner, 1995). It is interesting to note that King described himself as an ambivert – “half introvert and half extrovert,” as essential one lends itself more towards an introvert and essential two lends itself more towards an extrovert (A Leader on the Rise, 1985). Perhaps this is what made King a leader that helped to shape a generation.

Enabling others to act. Enabling others to act can best be understood in the expression, *Once a task is completed, it was we, not me.* The act of enabling others involves empowering people to make something their own, more often than not, that being vision mentioned before. People following the leader must feel that they have ownership and a stake in the project at hand, and feel free to take risks in an effort to complete the task (Kouzes & Posner, 1995). If a leader is to empower people though, it is vital for him to make sure that he has the right people on the bus, before deciding where the bus is going. By surrounding himself with the correct people, he can put the necessary faith in them regardless of the situation they are facing (Collins, 2001): “Leadership is a

relationship, founded on trust and confidence. Without trust and confidence, people don't take risks. Without risks, there is no change. Without change, organizations and movements die" (Kouzes & Posner, 1995, p. 12).

In enabling and empowering others to act, two approaches have been taken in order to mobilize a team – “implementing competition” and “encouraging collaboration” (Kouzes & Posner, 1995, p. 152). If working solely within one organization, collaboration has proven to be much more effective in improving performance. Though some would argue competition fosters more growth, collaboration requires fewer resources to be put forth by an organizing body, and emphasis is placed on success rather than making someone else feel inferior (Robbins, 2002). Collaboration towards accomplishing a major task requires vast amounts of interaction among individuals – an activity which energizes extroverts. While this does not imply that introverts would be ineffective in fostering collaboration, Kouzes and Posner (1995) cite Dean and Mary Tjosvold in a study they conducted on collaboration within a body:

Leaders who had cooperative relationships, results suggested, inspired commitment and were considered competent. Competitive and independent leaders, on the other hand, were seen as obstructive and ineffective. (p. 154)

This study would lend itself to stating that introverts might have more obstacles to overcome in fostering collaboration among those parties involved in a given project.

Modeling the way. Leaders have the quality of not asking anything of someone on the team without being willing to do it themselves. In order to convey this, they must stand up for what they believe in, stare down distractions, and keep the movement on track. In order to model the way, the leader must be willing to be humble, and put others

needs ahead of their own. One example of this is an owner of seven gyms for young children. She makes it a point to scrub floors as often as she teaches classes (Kouzes & Posner, 1995). It has been found that leaders of the highest caliber display a compelling modesty and are understated (Collins, 2001). This sense of modesty fits in well with the qualities most introverts might possess. In summary, the leader should be the example for his followers to look towards when completing any task.

Members of any organization have a desire to know that the leader which they are following had a vision and values that will not shift or sway. Kouzes and Posner (1995) state this as the DWYSYWD principle: "Do What You Say You Will Do" (p. 211). A leader becomes effective when he can take his vision or that of the organization and transform the *you*'s into *we*'s. Thus the leader models the values needed to fill a given role, and sets the example for those under him. Once all have bought into the vision, growth can then take place. There are many stories of owners *putting on aprons*, taking roles of those lowest in the hierarchy, and working along side them for a short time. Robert Gordon, an owner of a convenience store, works with other corporate personnel in the physical store on holidays so that employees can spend time with their families. In turn, a sense of loyalty and thanks towards Gordon and the organization is fostered. Gordon had modeled the way, thereby closing the gap between president and service clerk (Kouzes and Posner, 1995).

Encouraging the heart. On the course towards the top, followers will become tired quite easily. In an effort to keep them moving towards the common goal, it is important to see where your followers are struggling and take the time to help remedy the situation. The leader must also take the time to show the people that they can win. This

can be done through the celebration of small wins en route to larger, seemingly impossible one (Kouzes & Posner, 1995). The main task in encouraging the heart relates back to the quality of attention you pay to those around you: “Employees want to be recognized as human beings and leaders need to pay attention to the little things, taking time to ask questions” (Alsfine, Sept. 27, 2004). Finally, when something goes correctly, true leaders are the first ones to attribute success to other factors (people), rather than themselves (Collins, 2001).

Though already mentioned somewhat above in relation to challenging the process, it is important for leaders to encourage those on the journey towards completing a common task. This can be done through a combination of intrinsic and extrinsic rewards. The importance of praise and recognition within a group cannot be overestimated. Research has shown that positive feedback has a huge effect on motivation of employees: “By having a positive outlook and being hopeful, leaders make the impossible a possibility and then motivate people in their drive to transform the possible into reality” (Kouzes and Posner, 1995, p. 284).

Leadership and Personality

Due to the recent concentration on effective leadership and its necessity in organizations, there has been an attempt to make connections between the effectiveness of leadership, the personality of the leader, and how to raise the level of leadership. This stems from the idea that after World War II, success became more a function of personality... that lubricates the processes of human interaction (Covey, 1989). However, success must then be seen in light of the task being performed. Freeman (2004) found that prize-winning photo-journalists are mainly introverts rather than the extroverts

society perceives them as. Due to the nature of the job and working primarily alone, the introverted photo-journalist thrives in the environment. Therefore, when talking about success and leadership, it is important to recognize the success and pertaining to the group rather than the individual.

In a survey of executives running businesses in 20 countries, 134 major companies reported currently enrolling over 21,000 employees in leadership programs at a cost of over \$210 million (Bennis, Oct. 1, 2004). Leadership development has become a big business, and the quest to find out whom to focus that energy towards is on. In a 2000 study by Bonner of groups randomly assigned ambivalent tasks, those participants with the highest level of extroversion in their respective group were more influential than other group members. When looking back to the purest definition of leadership, it is equated to influence (Maxwell, 1998). Following this connection, the question of whether extroverts would have higher leadership qualities is raised. Conversely, would introverts have lesser leadership qualities?

From the most basic definition of an extrovert, he or she is seen to draw energy from and enjoy being around other people. Vast amounts of research have shown that in order for leaders to be successful, they must be energetic and enthusiastic. A leader will communicate his passion through vivid language and expressive style (Kouzes & Posner, 1995). Leadership, in almost every setting, has taken a shift towards this idea of a leader needing to have good social skills: "Social interaction is America's prime lubricant, and runs heavy in the workplace" (Weingarten, 2002, p. 1). Thus, it would be more comfortable for an extrovert to go about his day interacting with his followers than it would an introvert. This is based solely upon the idea that an introvert exposed to such

conditions day in and day out would become drained physically and emotionally. It is also interesting to note that studies have repeatedly shown that extroverts tend to be much happier than introverts when performing the same task (Becker, 2003). If people are happy, they are usually more confident; people will commit to and follow a leader who is confident (Collins, 2001).

Due to the research and information presented above, it is therefore hypothesized that there would be significant, positive correlations between extroversion and leadership scores among the five subscales of leadership qualities. While it would then stand to reason that there would be a significant, negative correlation between introversion and leadership scores, it is not expected that this will be the case as Collins (2001) points out that some of the most successful (Level 5) leaders display “a compelling sense of modesty and are understated”(p. 39).

Method

Subjects

Due to the nature of the study and its ramifications in possibly assisting future employers in selecting candidates for jobs, 40 subjects were randomly selected from a conservative, private, collegiate campus. Of the 40 subjects, half were male, and half were female in an attempt to negate any skewing of data due to gender. The subjects were between 18 and 25 years of age, enrolled as full-time students at the university. Students were then asked if they had basic computer competency in order to complete the Jung typology test. In order to complete the Student Leadership Practices Inventory, each of the randomly selected students needed to have an individual who knew them well agree to participate in testing. Random selection was allowed for a broad range of people

currently in leadership roles, considering leadership roles, or not interested in leadership, as well as healthy samples of both introverts and extroverts.

Apparatus

In order to assess the relationship between the personality trait of introversion/extroversion which one possesses and his leadership qualities, two inventories were administered: the Jung Typology Test (JTT) and the Student Leadership Practices Inventory (SLPI).

Jung typology test. The Jung Typology Test is a 72-question survey administered online via the website www.Humanmetrics.com aimed at determining a person's basic personality traits. (See Appendix C). Each of the 72 questions is answered either yes or no, and relates back to one of four subscales labeling a person as: introvert or extrovert; sensing or intuitive; thinking or feeling; and judging or perceiving. Once the test is completed, it is scored automatically online. The results from the test assign the individual a four letter classification (ex. ISTJ) that defines his basic personality traits, and the percentage to which they lean towards that trait. Though 16 different combinations of traits are possible, only the first classification of introvert/extrovert will be used for the purpose of this experiment, ignoring the last three classification letters. This will also help in defining the individual as introvert or extrovert, as a test with questions only aimed at identifying someone as an introvert or extrovert might be easier to taint via a subject figuring out what is being tested. The Jung typology test as presented on Humanmetrics.com has an internal reliability of 0.83 (Humanmetrics).

Student leadership practices inventory. The second instrument that was given to the subjects is the Leadership Practices Inventory (SLPI), created by Kouzes & Posner

(1998). This inventory is comprised of two, 30-question, 10-point Likert scale questionnaires. One of the questionnaires was given to the randomly selected subject, and the other to an individual deemed by the subject as someone who knows them well. The results from the questionnaires fed into scores on the five subscales of: *Challenging the process*; *Inspiring a shared vision*; *Enabling others to act*; *Modeling the way*; and *Encouraging the heart*. These five subscales are the same qualities deemed necessary by Kouzes and Posner to being a leader. Each individual then is given a rating of how prevalent each of those leadership qualities is within their life (Kouzes & Posner, 1998). Though Kouzes and Posner have four or five variations of their original inventory used worldwide in various industries, the Student Leadership Practices Inventory was selected due to the tailoring towards the collegiate age group and a high internal reliability of .93 to .95 (Pearson, n.d.).

Procedure

Before beginning, each student being tested and individual accompanying them were given an Informed Consent Form to fill out (See Appendix A). Following the agreement of both student and accompanying individual, the Jung typology test was administered online via the Humanmetrics.com website. This was done individually in an environment sterile to mental distractions. Each individual was given a twenty minute uninterrupted time period in which to complete the Jung typology test. Should an individual finish early, not all 20 minutes might have been used. Following completion of the test, results were downloaded and recorded. Following the Jung typology test, the individuals were allowed to take a five minute break. Upon returning from the break, the Student Leadership Practices Inventory was distributed to the individual and the observer

who knows the individual best as predetermined by the subject. Both the student and the observer were to complete the inventory at the same time having no interaction while completing the inventory. Due to the nature of the questions and two people testing at the same time, no time limit was placed on answering the questionnaires. Upon completion of the Student Leadership Practices Inventory, both questionnaires were marked with the individual's identification number assigned to them and scored later by hand. The students were then free to go.

Results

Data from the experiment was placed into spreadsheet form and analyzed using the statistical package SPSS. The data collected from the two inventories was classified as interval data. Looking at it from a general standpoint, the data classifying a subject as either an introvert or extrovert could be considered nominal, if not for the percentage which one leans to a given side. Viewing this data as nominal would be helpful in providing a general overview of how introverts compared to extroverts within the five subscales of the SLPI.

The results from the experiment were quite interesting. None of the analysis showed a significant relationship at the .05 level between the qualities of introversion/extroversion and any of the five leadership subscales. Significant relationships were found among all of the five subscales of leadership. Each of these relationships was significant at the .01 level with the exception of modeling the way and enabling others to act being significant at the .05 level. The following table shows the SPSS analysis with the qualities of introversion and extroversion being looked at from an interval data ratio.

Table 1

SPSS output showing significance of introversion/extroversion and leadership qualities

(Introversion/extroversion is interval data.)

Correlations

		strength	challenge	inspiring	enabling	modeling	encouraging
strength	Pearson Correlation	1	.293	.178	.192	-.024	.203
	Sig. (2-tailed)	.	.067	.271	.236	.883	.210
	N	40	40	40	40	40	40
challenge	Pearson Correlation	.293	1	.619(**)	.554(**)	.635(**)	.657(**)
	Sig. (2-tailed)	.067	.	.000	.000	.000	.000
	N	40	40	40	40	40	40
inspiring	Pearson Correlation	.178	.619(**)	1	.478(**)	.674(**)	.531(**)
	Sig. (2-tailed)	.271	.000	.	.002	.000	.000
	N	40	40	40	40	40	40
enabling	Pearson Correlation	.192	.554(**)	.478(**)	1	.375(*)	.493(**)
	Sig. (2-tailed)	.236	.000	.002	.	.017	.001
	N	40	40	40	40	40	40
modeling	Pearson Correlation	-.024	.635(**)	.674(**)	.375(*)	1	.474(**)
	Sig. (2-tailed)	.883	.000	.000	.017	.	.002
	N	40	40	40	40	40	40
encouraging	Pearson Correlation	.203	.657(**)	.531(**)	.493(**)	.474(**)	1
	Sig. (2-tailed)	.210	.000	.000	.001	.002	.
	N	40	40	40	40	40	40

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

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

Though no significant relationship between introversion/extroversion and any of the five qualities of leadership was found at the .05 level, it is interesting to note that the relationship between challenging the process and introversion/extroversion was significant at the .10 level, thereby implying a correlation between 90-95% of the time.

After analyzing the data using multiple Pearson correlations in SPSS, many interesting results came to the surface. Throughout the data collection, it was evident that there were more extroverts present within the sample population (26 extroverts versus 14 introverts). After examining the scoring means within the five subscales, extroverts typically scored slightly higher in all five qualities of leadership other than modeling the way. Though one could naturally conclude that the very nature of being an introvert could lead to that individual ranking himself higher, the inventory filled out by the observer would counteract any such skewing of the data.

The results relating to the relationship between introversion/extroversion and challenging the process did not yield a significant relationship between the two at the .05 level which is required to meet the significant criteria by most psychological and statistical standards. It was, however, significant at the .067 level, which would make it significant if viewed from the .10 level of significance. This would show a significant positive correlation between challenging the process and a person's level of introversion/extroversion. However, even though this was the strongest relationship present within the study, it does not register as a significant relationship as determined by the academic community. Challenging the process registered the lowest among all five subscales as to the means of scores recorded.

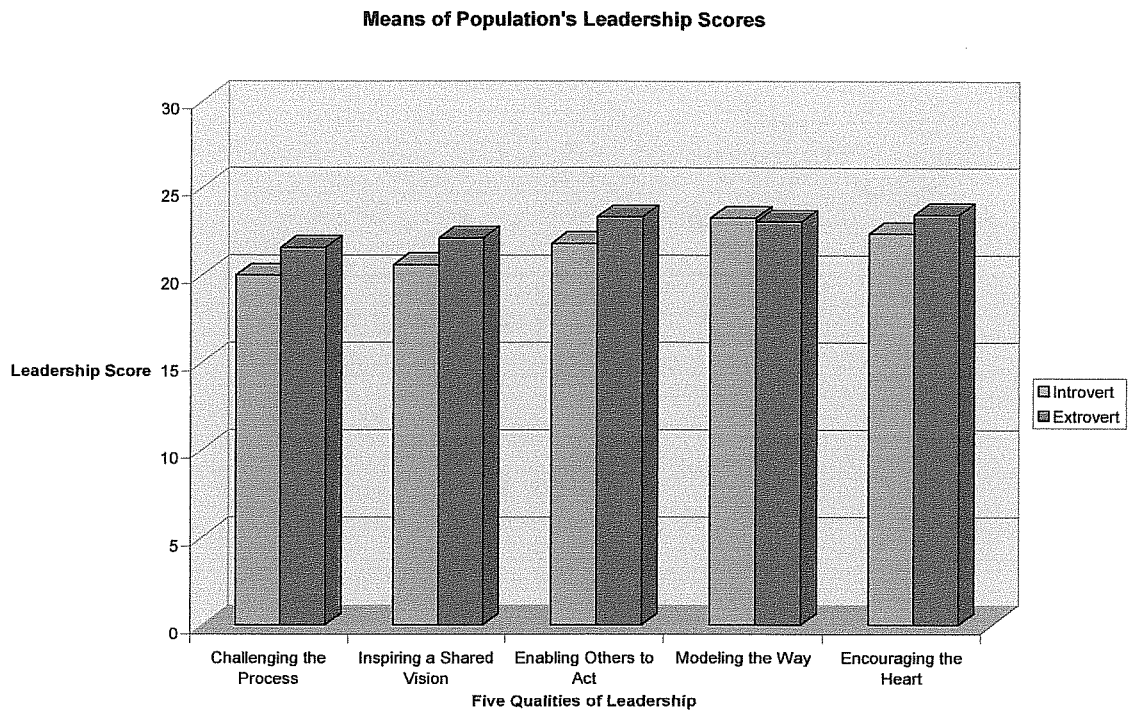


Figure 1. Means of Population's Leadership Scores between Introverts and Extroverts

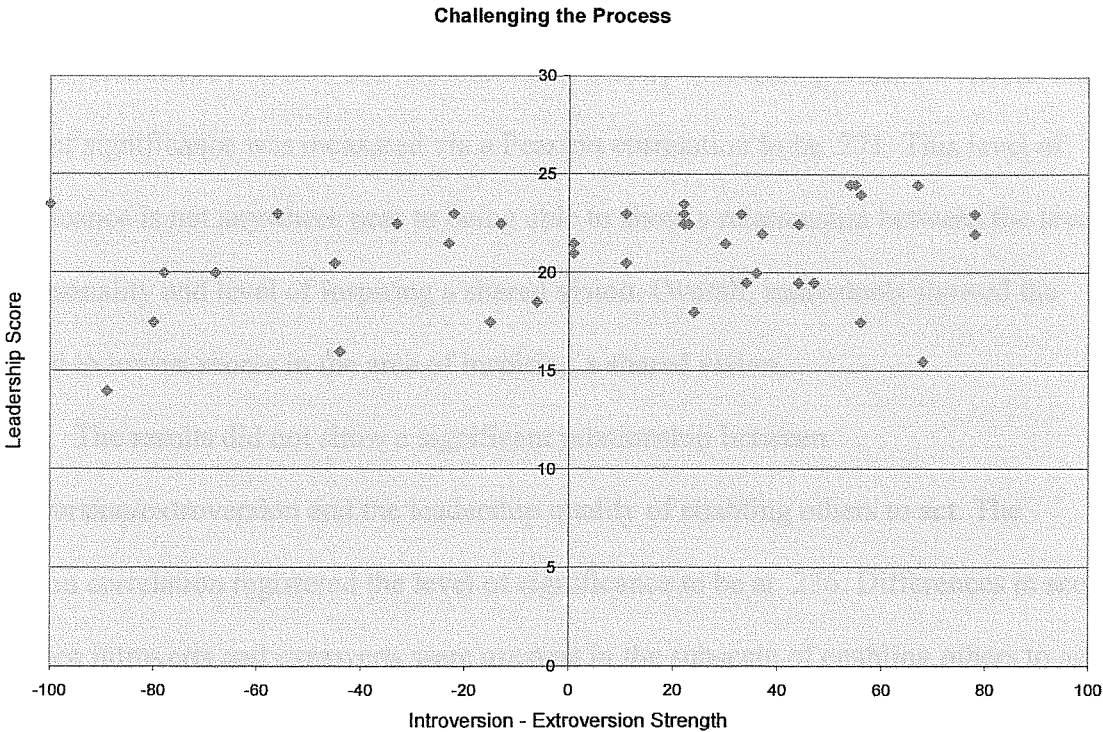


Figure 2. Relationship between introversion/extroversion and challenging the process.

The results did not show a significant relationship between an individual's level of introversion/extroversion and the leadership quality of inspiring a shared vision. The level of significance was measured via a Pearson correlation to be .271. This level of significance is not anywhere near to being able to show a relationship between the level of personality and level of inspiring a shared vision. Overall, individuals showed the second to lowest scores in the area of inspiring a shared vision.

The results did not show a significant relationship between introversion/extroversion and the leadership quality of enabling others to act. The Pearson correlation registered the level of significance to be at .236. Differences in scores between introverts and extroverts were greatest in the subscale of enabling others to act. Some of this may be attributed to the high level of interaction needed with people within this quality. While introverts are not sub par in this area, the fact that extroverts thrive when around other people might convey a sense of passion in the enabling process.

The results for the relationship between introversion/extroversion and modeling the way showed the least level of significance of any of the five subscales. Pearson correlations in SPSS showed a level of significance at .883. Means of scores were nearly identical with the subscale of enabling others to act. One primary difference in this quality of leadership involved the higher average scoring by introverts as opposed to extroverts. It is plausible that the level of significance be lowest with relation to this quality of leadership due to the ability of a person to lead by example either visibly showing the action of leading (extrovert), or letting the results of the action speak of the modeling (introvert).

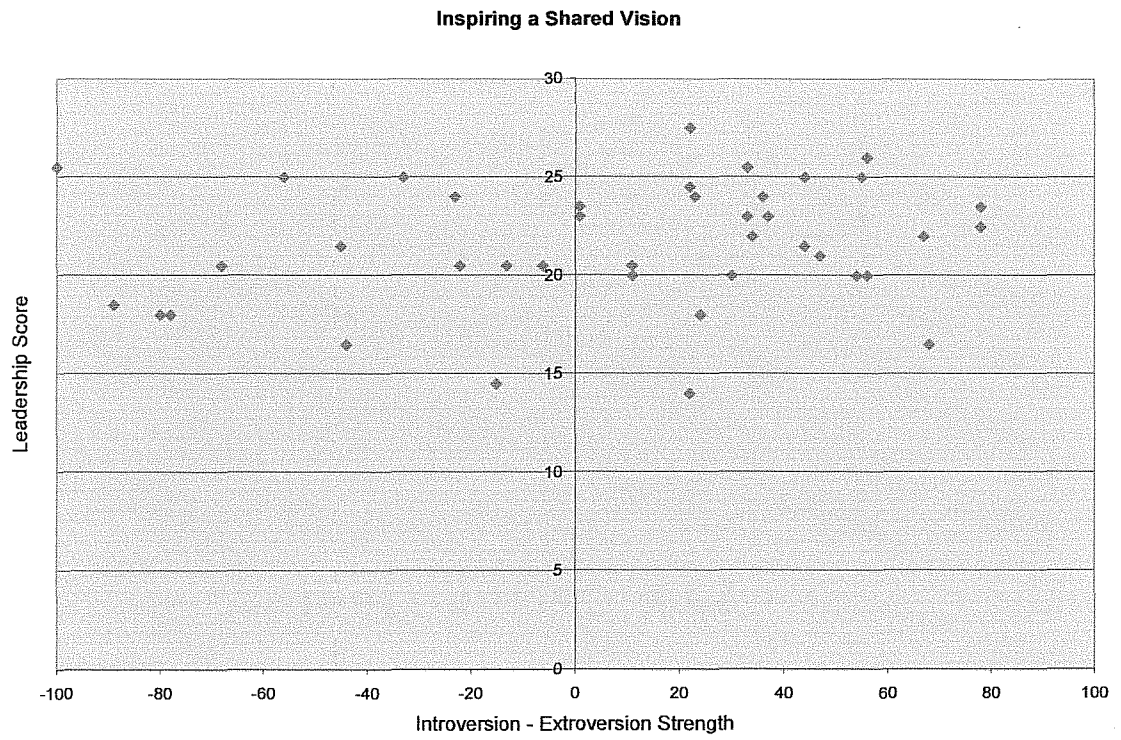


Figure 3. Relationship between introversion/extroversion and inspiring a shared vision.

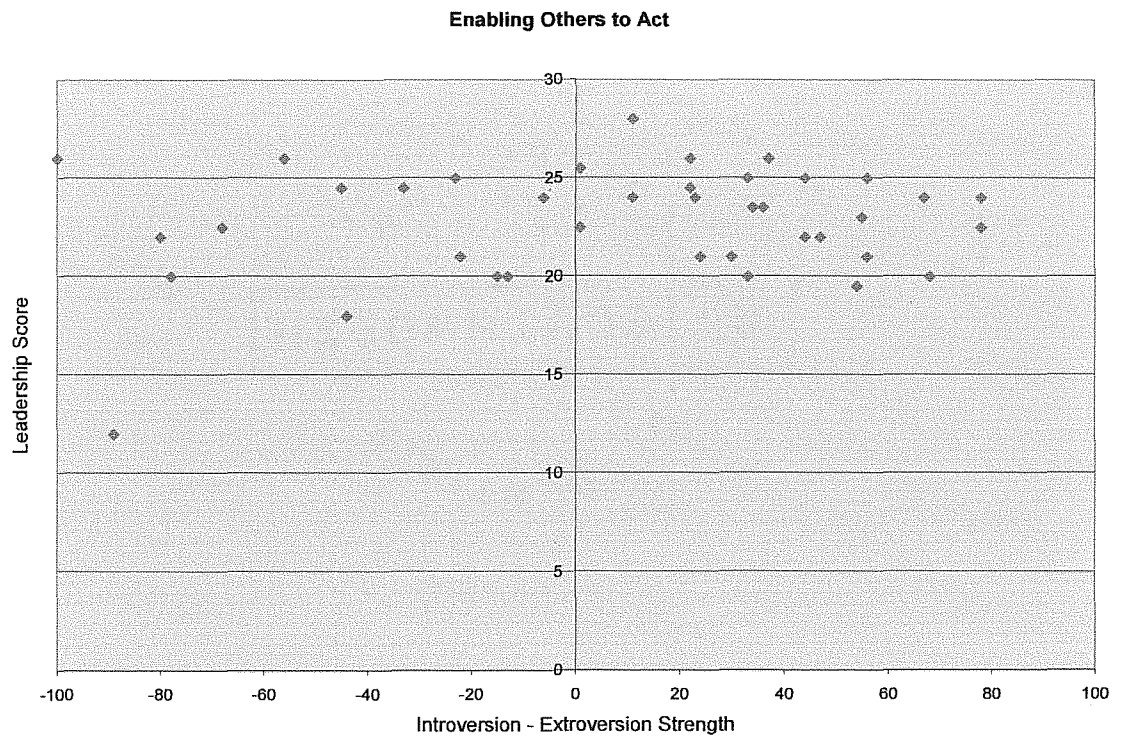


Figure 4. Relationship between introversion/extroversion and enabling others to act.

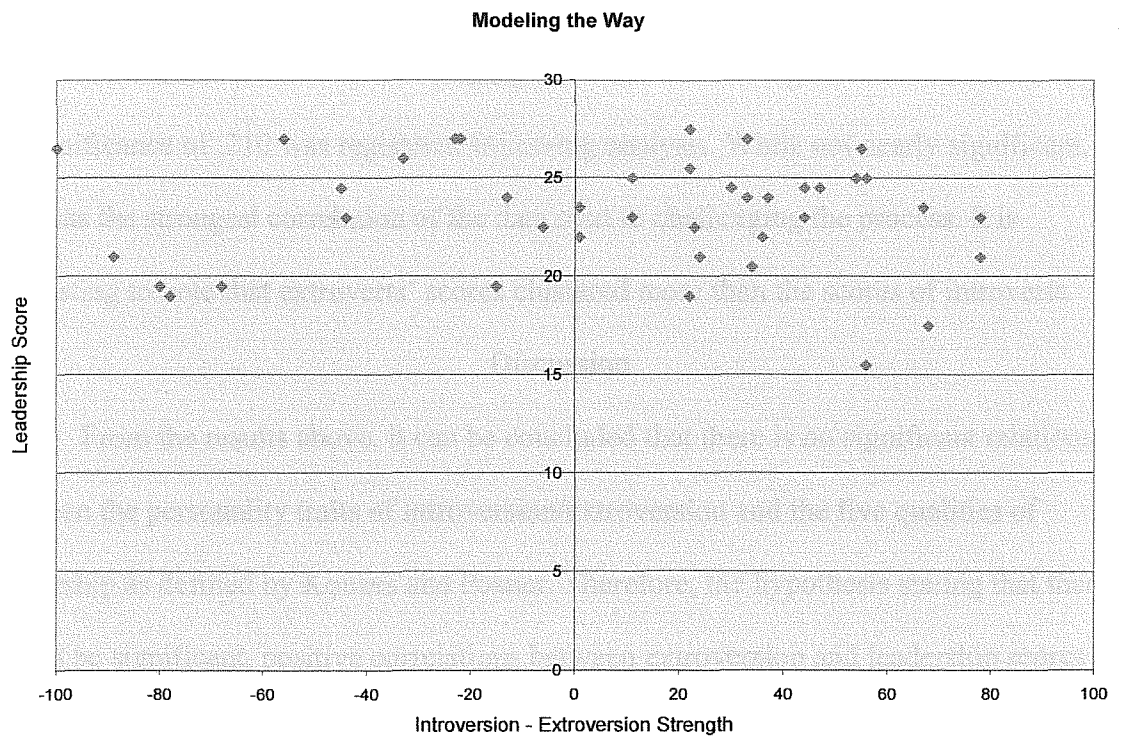


Figure 5. Relationship between introversion/extroversion and modeling the way.

As with all of the other qualities of a leader, the relationship between introversion/extroversion and encouraging the heart was not significant. A Pearson level of significance of .210 was registered following analysis. While not nearly significant, this was the strongest correlation of the data next to challenging the process. It is interesting to note that extroverts' scores clustered more than the scores of introverts.

Discussion

From the results above, it can be concluded that there is no significant relationship between the personality traits of introversion/extroversion and the five qualities of leadership as defined by Kouzes and Posner. Therefore, the hypothesis stating that there would be significant, positive correlations between extroversion and leadership scores among the five subscales of leadership qualities is incorrect. While there were no significant correlations among any of the five subscales of leadership at the .05 level, it is interesting again to note that the level of significance for challenging the process was measured to be .067. Perhaps with further experimentation and both a larger and more diverse sample population, a significant correlation would be found. As to the strength of this correlation, the very nature of an extrovert and their tendency to enjoy voicing their opinion are offered as a partial explanation. Conversely, the tendency of an introvert to prefer time to oneself, might offer less opportunities to make his opinion heard.

Another interesting observation is the higher mean scores for extroverts as opposed to introverts among the five subscales of leadership, minus modeling the way. This mirrors previous research and literature review suggesting that extrovert leaders are seen more in the public eye, and thus are recognized more as possessing these qualities. As for the difference with introverts having a higher average in modeling the way, refer

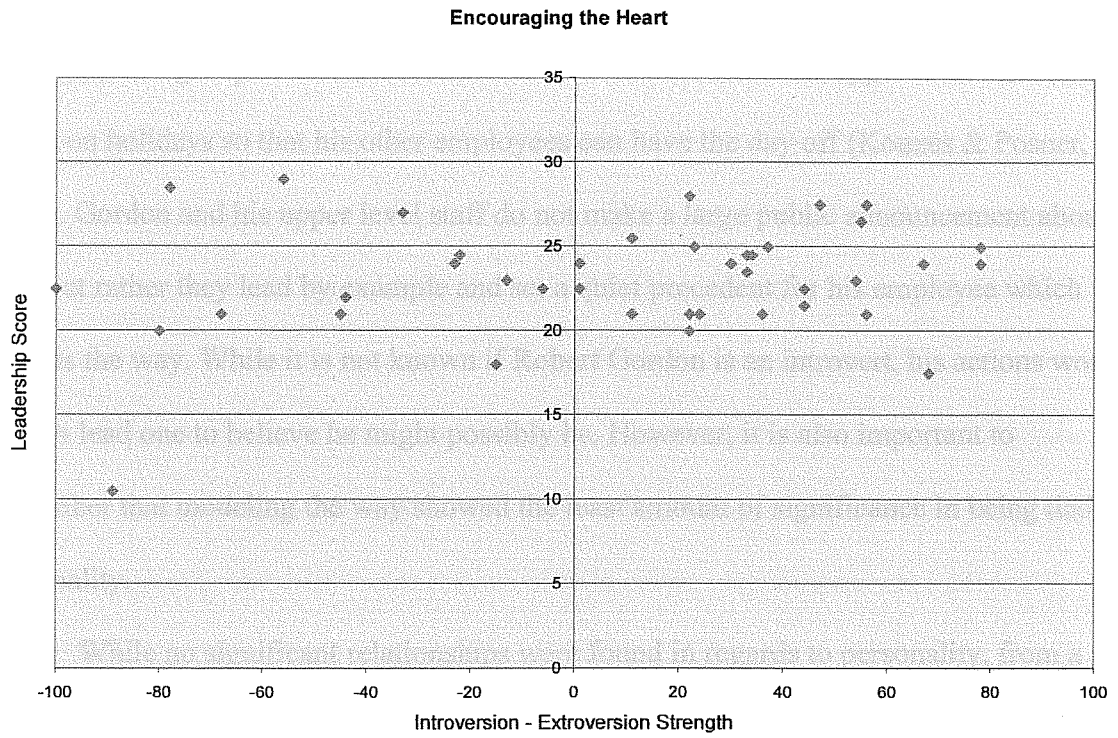


Figure 6. Relationship between introversion/extroversion and encouraging the heart.

back to the literature review where Kouzes and Posner tell the story of Robert Gordon, the owner of a group of convenience stores who works with other upper level staff in the stores on holidays so that his other employees can have the day off (Kouzes & Posner, 1995). Gordon and his upper level staff do not make a large public announcement about this, but rather they lead by example and set a quiet precedent for his employee which models the way. While it is not known if Robert Gordon is an introvert, his actions would tend to lead one to believe he might possibly be. However, it is also important to remember that modeling the way showed the least amount of significance in being tied to personality.

While no significant relationships were found in regards to personality, from a leadership standpoint, students at a private, conservative college campus on a whole ranked comparatively to a group of 1,200 students surveyed by Kouzes and Posner. In regards to challenging the process and inspiring a shared vision, students ranked in the 44th percentile. Students ranked in the 25th percentile in enabling others to act. In regards to modeling the way, the students ranked in the 57th percentile. Lastly, students ranked in the 43rd percentile in encouraging the heart. It is therefore interesting to observe that students at this particular university ranked slightly lower than the average population on a whole. Kouzes and Posner would classify these ratings as moderate (Kouzes & Posner, 1998). The lowest ranking when compared to the Kouzes and Posner study, enabling others to act, could be explained by the recent trends of individualization and stagnation present within our society over the past few years. Children are being taught to rely almost solely upon themselves. Along with this, children have become more and more lackadaisical, unwilling to act and initiate. Secondly, this could be explained as the

campus on which this study was done having few people willing to empower others, leading them towards a common goal. In any case, the means of scores on this campus, though slightly lower in most subscales, falls in line with previous research.

In further experimentation, a larger sample size could yield additional insight into any other correlations or relationships present. The larger sample size could also allow for the study of differences in results due to gender, education level, and current position or lack of leadership. In order to minimize regional and societal differences, subjects could be tested at various locations around the country or world. While this study was aimed at exploring the differences present among college age students as a predictor of leadership in future employment positions, Kouzes and Posner have another inventory available for working-age individuals. The Leadership Practices Inventory is their original inventory developed after studying leadership in the workplace. Furthermore, while only the personality traits of introversion/extroversion were examined in this study, relationships could be studied using the remaining three personality descriptive as identified by a Myers-Briggs inspired personality test: sensing or intuitive; thinking or feeling; and perceiving or judging.

In conclusion, while there is no significant relationship between introversion/extroversion and the five qualities of leadership, the personality of an individual still has tremendous influence on their actions as a leader. Personality by its very definition lends itself to interaction and functioning with other people. Personality is the “distinctive qualities of a person, especially those distinguishing personal characteristics that make one socially appealing” (Dictionary.com). Should a leader not be appealing, it is unlikely those following him will feel passionate about the goal, let

alone follow at all. Perhaps the personality and make-up of an effective leader is something that cannot be studied; perhaps it is an innate gift developed over time. One thing is for certain: for the rest of time that man is on earth, there will be leaders and those who follow. Through further study, one can only hope to make the discovery of what will help to identify tomorrow's leaders.

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Appendix A

Informed Consent Form

I, _____, do hereby give permission to Thomas Hinkley to use any data collected via surveys, inventories, or interviews for the purpose of his research and evaluation. I realize that this information will be kept confidential and all attempts for anonymity will be made.

Date: _____

Signature: _____

Should you desire information about the outcome of this project, please feel free to contact me at thinkley@liberty.edu

Appendix B

SPSS Data Bank

Subject	Introvert - Extrovert	I/E Strength	Challenging the Process	Inspiring a Shared Vision	Enabling Others to Act	Modeling the Way	Encouraging the Heart
1	Extrovert	78	22	22.5	24	23	24
2	Introvert	-33	22.5	25	24.5	26	27
3	Extrovert	44	19.5	21.5	25	23	22.5
4	Extrovert	1	21	23.5	22.5	22	22.5
5	Extrovert	44	22.5	25	22	24.5	21.5
6	Extrovert	22	23.5	27.5	24.5	27.5	28
7	Extrovert	56	24	26	25	25	27.5
8	Extrovert	56	17.5	20	21	15.5	21
9	Extrovert	22	22.5	24.5	24.5	25.5	21
10	Introvert	-44	16	16.5	18	23	22
11	Extrovert	11	23	20	24	23	25.5
12	Introvert	-89	14	18.5	12	21	10.5
13	Extrovert	33	23	23	20	24	24.5
14	Extrovert	67	24.5	22	24	23.5	24
15	Introvert	-78	20	18	20	19	28.5
16	Extrovert	1	21.5	23	25.5	23.5	24
17	Extrovert	33	23	25.5	25	27	23.5
18	Extrovert	22	23	14	26	19	20
19	Introvert	-100	23.5	25.5	26	26.5	22.5
20	Extrovert	11	20.5	20.5	28	25	21
21	Introvert	-22	23	20.5	21	27	24.5
22	Extrovert	54	24.5	20	19.5	25	23
23	Extrovert	55	24.5	25	23	26.5	26.5
24	Introvert	-56	23	25	26	27	29
25	Extrovert	30	21.5	20	21	24.5	24
26	Introvert	-80	17.5	18	22	19.5	20
27	Introvert	-68	20	20.5	22.5	19.5	21
28	Extrovert	34	19.5	22	23.5	20.5	24.5
29	Introvert	-15	17.5	14.5	20	19.5	18
30	Extrovert	78	23	23.5	22.5	21	25
31	Introvert	-45	20.5	21.5	24.5	24.5	21
32	Introvert	-6	18.5	20.5	24	22.5	22.5
33	Extrovert	24	18	18	21	21	21
34	Extrovert	68	15.5	16.5	20	17.5	17.5
35	Extrovert	37	22	23	26	24	25
36	Introvert	-23	21.5	24	25	27	24
37	Extrovert	23	22.5	24	24	22.5	25
38	Extrovert	36	20	24	23.5	22	21
39	Introvert	-13	22.5	20.5	20	24	23
40	Extrovert	47	19.5	21	22	24.5	27.5

Appendix C

Jung Typology Test (Humanmetrics.com)

- | | |
|---|--|
| 1. You feel at ease in a crowd
<input type="radio"/> YES <input type="radio"/> NO | 11. After prolonged socializing you feel you need to get away and be alone
<input type="radio"/> YES <input type="radio"/> NO |
| 2. You rapidly get involved in social life at a new workplace
<input type="radio"/> YES <input type="radio"/> NO | 12. You prefer to spend your leisure time alone, within a narrow circle of friends or relaxing in a tranquil family atmosphere
<input type="radio"/> YES <input type="radio"/> NO |
| 3. You spend your leisure time actively socializing with a group of people, attending parties, shopping, etc.
<input type="radio"/> YES <input type="radio"/> NO | 13. You are able to cut yourself off from the bustle of everyday life
<input type="radio"/> YES <input type="radio"/> NO |
| 4. Direct-contact group discussions stimulate you and give you energy
<input type="radio"/> YES <input type="radio"/> NO | 14. You are more of a listener than a speaker
<input type="radio"/> YES <input type="radio"/> NO |
| 5. The more people you speak to, the better you feel
<input type="radio"/> YES <input type="radio"/> NO | 15. You prefer meeting in small groups to interaction with lots of people
<input type="radio"/> YES <input type="radio"/> NO |
| 6. You are usually the first to react to a sudden event: the telephone ringing or unexpected question
<input type="radio"/> YES <input type="radio"/> NO | 16. You usually place yourself nearer to the side than in the center of the room
<input type="radio"/> YES <input type="radio"/> NO |
| 7. It is easy for you to communicate in social situations
<input type="radio"/> YES <input type="radio"/> NO | 17. You prefer to isolate yourself from outside noises
<input type="radio"/> YES <input type="radio"/> NO |
| 8. You enjoy having a wide circle of acquaintances
<input type="radio"/> YES <input type="radio"/> NO | 18. You find it difficult to speak loudly
<input type="radio"/> YES <input type="radio"/> NO |
| 9. You enjoy being at the center of events in which other people are directly involved
<input type="radio"/> YES <input type="radio"/> NO | 19. As a rule, current preoccupations worry you more than your future plans
<input type="radio"/> YES <input type="radio"/> NO |
| 10. You get pleasure from solitary walks
<input type="radio"/> YES <input type="radio"/> NO | 20. You tend to rely on your experience rather than |

- on theoretical alternatives
 YES NO
21. You prefer to act immediately rather than speculate about various options
 YES NO
22. Your desk, workbench etc. is usually neat and orderly
 YES NO
23. You have difficulty understanding the notion of "an approximate decision"
 YES NO
24. It's essential for you to try things with your own hands
 YES NO
25. When solving a problem you would rather follow a familiar approach than seek a new one
 YES NO
26. When considering a situation you pay more attention to the current situation and less to a possible sequence of events
 YES NO
27. You feel more comfortable sticking to conventional ways
 YES NO
28. You easily see the general principle behind specific occurrences
 YES NO
29. You are always looking for opportunities
 YES NO
30. You often spend time thinking of how things

- could be improved
 YES NO
31. You easily perceive various ways in which events could develop
 YES NO
32. You are more interested in a general idea than in the details of its realization
 YES NO
33. You easily understand new theoretical principles
 YES NO
34. You often think about the mankind and its destiny
 YES NO
35. You are more inclined to experiment than to follow familiar approaches
 YES NO
36. You are eager to know how things work
 YES NO
37. You find it difficult to talk about your feelings
 YES NO
38. It's difficult to get you excited or make you lose your temper
 YES NO
39. You trust reason rather than feelings
 YES NO
40. You value justice higher than mercy
 YES NO
41. You think that almost everything can be analyzed
 YES NO
42. Objective criticism is always useful in any activity
 YES NO

43. You tend to be unbiased even if this might endanger your good relations with people
 YES NO
44. You try to stand firmly by your principles
 YES NO
45. You consider the scientific approach to be the best
 YES NO
46. You tend to sympathize with other people
 YES NO
47. You are easily affected by strong emotions
 YES NO
48. You readily help people while asking nothing in return
 YES NO
49. You willingly involve yourself in matters which engage your sympathies
 YES NO
50. You feel involved when watching TV soaps
 YES NO
51. You easily empathize with the concerns of other people
 YES NO
52. Your actions are frequently influenced by emotions
 YES NO
53. You feel that the world is founded on compassion
 YES NO
54. In a debate, you strive to achieve mutual agreement
 YES NO

55. You do your best to complete a task on time
 YES NO
56. It is in your nature to assume responsibility
 YES NO
57. You usually plan your actions in advance
 YES NO
58. You like to keep a check on how things are progressing
 YES NO
59. You take pleasure in putting things in order
 YES NO
60. You are consistent in your habits
 YES NO
61. You are almost never late for your appointments
 YES NO
62. You know how to put every minute of your time to good purpose
 YES NO
63. You like giving instructions
 YES NO
64. You are inclined to rely more on improvisation than on careful planning
 YES NO
65. Deadlines seem to you to be of relative rather than absolute importance
 YES NO
66. You think that everything in the world is relative
 YES NO

67. A thirst for adventure is something close to your heart
 YES NO
68. The process of searching for solution is more important to you than the solution itself
 YES NO
69. You avoid being bound by obligations
 YES NO
70. You often do jobs in a hurry
 YES NO
71. You believe the best decision is one which can be easily changed
 YES NO
72. Strict observance of the established rules is likely to prevent attaining a good outcome
 YES NO