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Birth Order’s effects on Depression Levels and Personality Styles

Andrew Miller
Carroll College, Helena, MT

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Running Head: BIRTH ORDER

Birth Order's effects on Depression Levels and Personality Styles

Andrew J. Miller
Carroll College
Department of Psychology

April 14, 2009
Murphy Fox
Carroll College
Abstract

An individual’s depression level was measured as a function of their birth order. An individual’s personality style was also evaluated based as a function of their birth order. Individuals were classified into one of five categories based on their birth order: oldest, middle of three, middle of four or more, youngest, and only child. Results indicated that birth order is not a significant dimension when it comes to evaluating depression levels. Youngest children and only children typically showed higher depression levels on a Beck Depression Inventory. Results also showed that birth order was a factor that should be considered when it comes to determining an individual’s style of personality. Middle children, particularly those in a family of three, showed a high level of introversion. Middle children of families of four or more showed a higher score of feeling, or being emotional, than they did as a thinker or intellectual. A significant majority of the participants also showed more ‘judger’ characteristics, which include being on time and following rules and norms.
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Birth Order

I have always been interested in the idea of birth order and pondered if it affected depression levels and personality of an individual. I am the oldest of four children and thought that it was nothing short of amazing the ways in which we interacted with one another. In addition, I have long wondered if our birth order actually did have an effect on our personalities and on our ways of living.

Birth order is an important topic and is a topic that has seen more publicity in the news today. Birth order is valuable in a couple different ways. First, birth order raises awareness that all children are important and should be given an appropriate amount of attention, regardless of their birth orders. Second, finding a correlation between birth order and depression may cause parents to have only one child or encourage them to have more children.

There is a lot of research that suggests that birth order does play somewhat of a role in different aspects of living. An example of this interaction is the article “Interaction of Birth Order, Handedness, and Sexual Orientation in the Kinsey Interview data”. They did this study to show that there was a genetic connection between handedness and sexual orientation and the chance of that connection increased with a greater number of older brothers. They sampled only boys older than age 18 and only those whom had not been convicted of a felony or misdemeanor or whom had lived in an orphanage. Participants in their study were asked to self-report on multiple surveys including a survey about their place in the family birth order as well as a survey on their homosexual experience, if any.
They found that the number of older brothers that a participant had did, have an influence on whether or not that participant was homosexual, if that participant was non-right handed. (Non-right handed included left-handed, ambidextrous, and those who became right-handed but who were originally left-handed.) They concluded that there is a genetic connection between handedness and sexual orientation, thus giving sexual orientation more evidence of a natural background, rather than nurtured. They also concluded that in non-right handed men over the age of 18, the chances of homosexual behavior increased if they had older brothers.

This study was correlational, and most of the non-treatment factors were accounted for. However, one thing I thought is that the younger brothers could have shown homosexual behavior due to some other occurrence in their lives. Whether that is having an older brother sexual abuse a younger brother or homosexual behavior was modeled by the eldest brother. We cannot know by reading their study because there is no way of getting that feedback (Crosthwait, 845-853).

Another study shows us that whether we know it or not, we feel more comfortable with our leaders, people that are in power, or are in charge, being an oldest child.

“Birth order means more than school or faith: to understand those in power, ask whether they are older or younger siblings” article, by Alice Thomson, says “that in America birth order is taken seriously. However talented or dedicated you are, companies now increasingly ask people where they come in the family” (Thomson 20). This is a big deal, if companies are beginning to ask what your birth order is, it must (or at least should) be important or related to one’s personality and or productivity.
This article also notes that Americans like to have their presidents as firstborn children. Teddy Roosevelt, Richard Nixon, Bill Clinton, and George W. Bush are all eldest children who have been trusted to run our country, while at the same time having a younger sibling that is on the other end of the responsibility spectrum.

Thomson goes on to say that oldest children tend to be taller and better built. They will tend to go into higher-paying jobs such as law as well as taking fewer risks. They also tend to have a better sense of humor (Thomson, 20-21).

Fergusson, Horwood, and Boden in their article “Birth order and educational achievement in adolescence and young adulthood” examines a relationship between birth order and later educational outcomes in a cohort of more than 1,000 New Zealanders. Being a later born was associated with gaining fewer educational qualifications at a secondary level and beyond. Through their research they concluded that the intra-family dynamics initiated by birth order may have a lasting effect on the individual in terms of later educational and achievement outcomes (Fergusson 122-139).

This study cites a previously found correlation between earlier birth order and school achievement (grades and test scores) in a sample of adolescents. However, the research they gave may not be valid in a different setting, whether it is time or place.

There are numerous sources of existing evidence for the correlation between birth order and educational achievement; however, there are some limits to the research of birth order. One of those limits is the size of the family. A family with a larger size should be treated differently than a family with a smaller size due to the different interactions that occur within those two different types of families (Fergusson, 122-139).
Russell Travis and Vandana Kohli also wrote an article that deals with birth order and its relation to educational achievement. This article also discussed firstborn children favorably. It says that firstborns increase parental status, stabilize parental marriage, and are more likely to grow up with authority over siblings. The firstborns get respect from their siblings and get special attention compared to them. This special attention typically comes in forms of elaborate birth ceremonies or being named after one of the parents.

However, this article is different in the sense that it attempts to disprove some of the common misconceptions that go along with birth order. This article states that, “birth order effects are conditioned by cultural norms that regulate family structure, just as intellectual destiny is influenced by the sibling situation into which one is born.” This article also defends the “only” child. Their findings show that “contrary to findings of previous research, only children disproportionately appear to excel in terms of educational attainment (Travis & Kohli, 9).”

Argys et al in their article “Birth order and risky adolescent behavior” say that it has been commonly believed that birth order is an important determinant of success. However, previous studies in this area have failed to provide significant evidence that birth order is related to test scores, education or even earnings. This group of researchers took data from a survey of youth dealing with adolescent behaviors like smoking, drinking, marijuana, sexual activity, and crime. They estimated that middle and younger born children will show a higher rate in these risky, adolescent behaviors.

This article did have something that was somewhat contradictory to the previous way that the oldest children are portrayed. It was somewhat explanatory of the way that eldest children assume the roles of high authority or caregivers. This article states that
“firstborns go through life feeling like they cannot measure up to the high standards their parents expected lacking in confidence they might drop out and refuse to compete altogether (Argys, 19).”

During my literature review, not much was discovered that related birth order to depression. There has not been anyone that has been able to make a correlation between the two although it has been hypothesized many times through anecdotal stories among friends. This study was able to show that one’s birth order does have some impact on their level of depression, however not a significant impact, and should be taking into account when evaluating that person.

Birth order will not have a significant effect on depression levels. Birth order will also be shown to not have an effect on introversion compared to extroversion, no effect on intuitiveness compared to sensitivity, no effect on thinking characteristics compared to feeler characteristics, and no effect on perceiving versus judger characteristics.

Methods

Participants

A convenience sample of eighty-nine participants was selected from both the Helena, Montana community, the faculty at Intermountain Children’s Home, and Carroll College. Due to incomplete questionnaires, thirteen participants were thrown out, leaving the total of acceptable participants at seventy-six. Of the seventy-six, roughly 60 percent of participants were female, with the average age of the seventy-six participants being 30 years old. The participants were spread unevenly among the different birth orders. The oldest children category contained 18 participants. Middle children of a family of three had 8 participants. Middle children from a family of four had 27 participants. Youngest
children had 20 participants. Only children had 3 people participate. The participants were not given any compensation for participating in the study.

**Materials**

The study used the Beck Depression Inventory (Beck, 1996), shown in Appendix C, as a way of measuring depression levels. A personality scale (Tieger, 2009), shown in Appendix D, was given as a method to assess participants’ personality style, as well as a general questionnaire, Appendix B, to determine a participant’s birth order while getting a brief family background. A pen or pencil was provided to the participants in order for them to complete the materials.

**Procedure**

Groups of people were approached and asked to participate in the study. These groups of people were selected based upon the probability of getting a large number of participants. Larger groups of people were approached due to the chances of more people being willing to participate. Groups who were viewed as unoccupied were also approached over those who appeared busy, due to chances of people having more time to participate. Those who were willing were given a consent form, Appendix A, to sign. Once that was signed, the participant was given a battery of tests that included a Birth Order survey, Beck Depression Inventory, and Personality Scale to fill out and return to me at their earliest convenience. Although approached while in a group setting, the tests were given to each participant individually.

The Beck Depression Inventory (Appendix C) was used to evaluate the level of depression that a participant shows. A score of 0–9 indicated that a person is not
depressed, 10–18 indicated mild to moderate depression, 19–29 indicated moderate to severe depression and 30–63 was indicative of severe depression. Higher total scores indicated more severe depressive symptoms.

I designed my own personality scale (Appendix D) based off of the Myers-Briggs Personality Scale and following the same divisions of personality as the Myers-Briggs. The divisions are between Introversion and Extroversion, Intuitiveness and Sensitiveness, Thinking and Feeling, and Perceiving and Judging. The Myers-Briggs places participants along a spectrum while for simplicity I have categorized my participants as either one or the other in each of the four categories. I was able to do this by having an odd number of questions in each division of personality. I assumed that if the majority of questions answered favored a characteristic that would be representative of that same personality characteristic in that participant’s real life. Each of the questions given in my personality scale had two responses, for example one dignifying Introversion and the other dignifying Extroversion, so that there is no ‘gray’ area within a question.

This experiment would be considered quasi-experimental because it compares different groups of birth order but there are some factors in which cannot be controlled for, such as gender and age.

During the examinations, participants were asked multiple questions from multiple tests, as explained earlier. Participants had the right to stop testing at any point as well as for any reason. The data collected was in the form of a score on the Beck Depression Inventory, a four variable score on the Personality Scale, as well as one self-reported survey of one’s own family history. This data helped place each participant into a category in terms of depression, personality, and primarily birth order.
Before the testing began, participants were required to give informed consent. All participants were over the age of 18 so no parental consent forms were needed. In terms of confidentiality, a participant’s identity was given only once and used only for a brief period of time. Once classified into a birth order category, there was no longer a use for their names and any identifiable data was destroyed; therefore confidentiality was not an issue. After testing was completed, participants were debriefed on what exactly was being tested for as well as, once the study was completed, allowing the participants access to the results.

To analyze the data received from the experiment multiple graphs and charts were used to show the relationship between birth order and each of the two variables, depression and personality. These charts and tables have categories for each birth order found in the study. A one-way analysis of variance was used to show correlation between birth order and depression levels. A table of frequencies was used to show frequencies between birth order and different personality styles.

Results
Depression levels among the different birth orders are shown in Table 1. An analysis of variance was computed on the dependent variable of depression level and showed that the main effect on birth order was not statistically significant, $F (4, 71) = 1.45, p = .22$. There were no statistically significant differences in depression among different birth order groups. The average depression scores (M) for each birth order can be found in Figure 1.

Personality characteristics between different birth orders are shown in Table 2. A frequency table was used to model the frequencies of eight different characteristics of
personality. Figure 2 shows the largest difference in frequency in comparing Introversion (.60) to Extroversion (.40) in middle children from a family of three. Middle children from families of four or more showed a similar comparison between Introversion (.57) and Extroversion (.43), shown in Figure 3. Middle children from a family of four or more recorded more Feeler characteristics (.59) than Thinker characteristics (.41) as seen in Figure 4. Figure 5 illustrates the overall tendency of participants to side with the Judger characteristics of personality (.59) over the Perceiver characteristics (.41).

Discussion

My hypothesis for the experiment was that birth order would have no effect on depression levels as well as not having any effect on the different characteristics of personality.

The present data shows that an individual’s birth order is not a significant factor when evaluating that person’s level of depression. This study shows that there are differences between birth orders and that on average middle children have higher levels of depression, however this difference is not statistically significant.

This finding is important in that it opens doors for research into depression and why certain birth orders would experience a higher level of depression then others. It also gives attention to the fact that individuals with different birth orders may behave differently.

The present data shows that birth order plays a part in forming one’s personality characteristics. Middle children, in both classifications, families of three and families of more than four, showed higher scores in introversion than did other birth orders.
Middle children from a family of four also showed more “feeler” characteristics than they did with “thinker” characteristics.

Also a significant amount of participants were found to be “judgers” rather than “perceivers”, which I would be interested to see how well that translated to a larger population.

The topic of birth order is interesting, however what research shows can not be taken as absolute. Every person is different to begin with, and to add onto that the fact that every person, including those brought up in the same family, are reared in a different environment. The chances of two people being raised exactly the same way are next to impossible. It is simply impossible to have everyone fit under the same generalization without exceptions.

Children can also adapt different roles within the family depending on what is going on in their life. In this way, children with one birth order can behave in a way in which we would expect a child with a different birth order to behave in.

There were many limits to this study. The number of participants I had, I don’t believe was representative of the general population. My questionnaires were self-reported, which cannot be taken as absolute truth. My measures themselves also have faults. The Beck Depression Inventory is not the best measure to evaluate depression and the Myers-Briggs Personality Test has many more levels that I didn’t get into because of trying to keep my design simple.

The implications of this study suggest that birth order has no effect on depression level and may influence personality style. However, I hope this research sparks interest in some researchers and further research is conducted. I hope to continue working with
the topic of birth order and think that with a larger sample size I will be able to find a significant relationship between birth order and depression levels.
Table 1
Summary and ANOVA of Depression Levels as an effect of Birth Order

ANOVA: Single Factor

<table>
<thead>
<tr>
<th>Groups</th>
<th>Count</th>
<th>Sum</th>
<th>Average</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oldest</td>
<td>18</td>
<td>111</td>
<td>6.1667</td>
<td>22.5</td>
</tr>
<tr>
<td>Middle (3)</td>
<td>8</td>
<td>45</td>
<td>5.625</td>
<td>24.28786</td>
</tr>
<tr>
<td>Middle (4)</td>
<td>27</td>
<td>178</td>
<td>6.5926</td>
<td>49.5584</td>
</tr>
<tr>
<td>Youngest</td>
<td>20</td>
<td>135</td>
<td>6.75</td>
<td>39.03947</td>
</tr>
<tr>
<td>Only</td>
<td>3</td>
<td>45</td>
<td>15</td>
<td>61</td>
</tr>
</tbody>
</table>

ANOVA

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>P-value</th>
<th>F crit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>221.0933</td>
<td>4</td>
<td>55.27333</td>
<td>1.450988</td>
<td>0.226318</td>
<td>2.50076</td>
</tr>
<tr>
<td>Within Groups</td>
<td>2704.644</td>
<td>71</td>
<td>38.09357</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2925.737</td>
<td>75</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2

*Frequency Table of Personality Characteristics*

<table>
<thead>
<tr>
<th></th>
<th>Oldest Child</th>
<th>Middle Child (family of 3)</th>
<th>Middle Child (family of 4+)</th>
<th>Youngest Child</th>
<th>Only Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introversion</td>
<td>9</td>
<td>5</td>
<td>17</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>Extroversion</td>
<td>9</td>
<td>3</td>
<td>10</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>iNtuitiveness</td>
<td>10</td>
<td>4</td>
<td>11</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>8</td>
<td>4</td>
<td>16</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Thinker</td>
<td>9</td>
<td>5</td>
<td>9</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Feeler</td>
<td>9</td>
<td>3</td>
<td>18</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Perceiver</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Judger</td>
<td>13</td>
<td>4</td>
<td>21</td>
<td>11</td>
<td>1</td>
</tr>
</tbody>
</table>
Figure 1
Beck Depression Levels Among Birth Order

<table>
<thead>
<tr>
<th>Birth Order</th>
<th>BDI Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oldest Child</td>
<td>6.17</td>
</tr>
<tr>
<td>Middle (of 3) Child</td>
<td>5.63</td>
</tr>
<tr>
<td>Middle (of 4+) Child</td>
<td>6.59</td>
</tr>
<tr>
<td>Youngest Child</td>
<td>6.75</td>
</tr>
<tr>
<td>Only Child</td>
<td>15.00</td>
</tr>
</tbody>
</table>
Figure 2
Introversion vs. Extroversion in Middle Children (family of 3)
Figure 3
Introversion vs. Extroversion Middle Children (family of 4 or more)

Middle (of 4+) Child

Extroversion
43%

Introversion
57%
Figure 4
Thinker vs. Feeler in Middle Children (family of 4 or more)

Middle (of 4+) Child

Thinker
41%

Feeler
59%
Figure 5
Perceiver vs. Judge in Overall Participants

Total

Perceiver
41%

Judge
59%
Works Cited


Thomson, Alice (2008, Jan. 12). “Birth order means more than school or faith: to understand those in power, ask whether they are older or younger siblings.” *Spectator*, [20-21].


Appendix A

Carroll College

Subject Consent Form
For Participation in Human Research

Title of Study: Birth Order and its effects on levels of Depression and style of Personality

You are being asked to participate in a research study about Birth Order. From this study, the investigator(s) hope to learn about Birth Orders effects on both Depression and Personality.

You have been selected to participate in this study because you fit into the age demographic we are looking for. If you agree to participate, you will be asked to answer three surveys; the first to give information on your birth order, the second to indicate your level of depression, and the third to help identify your personality. All of the surveys are self-reports and thus will be completed at the participants leisure. A typical time for completion of the three surveys will be about 30 minutes during one sitting. The study is expected to involve upwards of 300 participants and will be conducted over the next year.

Participation in this study may involve certain risks, such as the discomfort the participant will feel releasing his or her family history. This study is of no benefit to you.

There is no funding necessary for this study. If you choose to participate, the cost to you will be nothing.

Your privacy is important to us. Confidentiality of records identifying you will be maintained by coding the surveys you answer for the study. Those surveys will be destroyed once all the necessary information is taken from them.

Carroll College cannot be held responsible for injury, accidents, or expenses that may occur as a result of your participation in this project. In addition, Carroll College cannot be held responsible for injury, accidents, or expenses that may occur as a result of traveling to and from your appointments at the site of data collection.

Further information about this research study may be obtained by calling Drew Miller at (406) 459-4747. Additional questions about the rights of human subjects can be answered by the Chairman of the Institutional Review Board, John Scharf (406) 447-4457.

__________________________ (name of subject), agree to participate in this research. The investigator has thoroughly explained the nature and process of this research to me. I have read the above and understand the discomforts, inconvenience and risks of this study. I understand that I have the right to refuse to participate in this study and that refusal to participate will involve no penalty or loss of benefits to which I am otherwise entitled. I also understand that I may withdraw from the study at any time without penalty or loss of benefits to which I am otherwise entitled. To the best of my knowledge I have no physical or mental condition that would be adversely affected by my participation. I have received a copy of this consent form for my own records.
Birth Order 26

Signature of Participant

Date

Printed Name of Participant

Signature of Witness

Date

Printed Name of Witness
Appendix B
Birth Order Inventory

Birth Order

1. Age:

2. Gender:
   - Male
   - Female

3. What is your birth order?
   - Oldest
   - Middle Child (family of 3)
   - Middle Child (family of 4 or more)
   - Youngest Child
   - Only Child

4. Please list the gender and ages of your siblings in order. (Please include yourself)
Birth Order 28

Race:
- White
- Black
- Asian
- Native American
- Hispanic
- Other, please specify

Religious Preference:
- Roman Catholic
- Protestant
- Mormon
- Jewish
- Not Religiously Affiliated
- Other, please specify
Which answer best fits how often you attended church growing up?

- Daily
- Once a week
- Once a month
- A couple times a year

What was your family's socio-economic status at your time of birth?

- Upper Class
- Upper-Middle Class
- Middle Class
- Lower-Middle Class
- Lower Class

Were there any complications during any of your family's births?

- Yes
- No
- Unsure
How would you classify your mother’s parenting style?

- Authoritarian (Highly demanding of child and non responsive to child’s needs)
- Authoritative (Highly demanding of child yet responsive to child’s needs)
- Indulgent (Non demanding of child yet responsive to child’s needs)
- Uninvolved (Non demanding of child and non responsive to child’s needs)

How would you describe your father’s parenting style?

- Authoritarian (Highly demanding of child and non responsive to child’s needs)
- Authoritative (Highly demanding of child yet responsive to child’s needs)
- Indulgent (Non demanding of child yet responsive to child’s needs)
- Uninvolved (Non demanding of child and non responsive to child’s needs)

What is your educational background?

- No High School Education
- High School Diploma or Equivalent
- Some College Education
- Bachelors Degree (BA/BS)
- Masters Degree (MA/MS)
What is your mother's educational background?

- No High School Education
- High School Diploma or Equivalent
- Some College Education
- Bachelors Degree (BA/BS)
- Masters Degree (MA/MS)
- Doctoral Degree (PhD)
- Professional Degree (such as M.D.)

What is your father's educational background?

- No High School Education
- High School Diploma or Equivalent
- Some College Education
- Bachelors Degree (BA/BS)
- Masters Degree (MA/MS)
- Doctoral Degree (PhD)
- Professional Degree (such as M.D.)
Appendix C
Beck Depression Inventory

Beck Depression Inventory

1

SADNESS

(feeling or showing sorrow; unhappy; causing or characterized by sorrow or regret; unfortunate and regrettable)

- I do not feel sad.
- I feel sad much of the time.
- I'm sad all the time.
- I'm so sad and unhappy that I can't stand it.

2

PESSIMISM

- I'm not discouraged about my future.
- I feel more discouraged about my future than I used to be.
- I do not expect things to work out for me.
- I feel my future is hopeless and will only get worse.

3

PAST FAILURE

- I do not feel like a failure.
- I have failed more than I should have.
As I look back, I see a lot of failures.

I feel I am a total failure as a person.

---

**LOSS OF PLEASURE**

I get as much pleasure as I ever did from the things I enjoy.

I don't enjoy things as much as I used to.

I get very little pleasure from the things I used to enjoy it.

I can't get any pleasure from the things I used to enjoy.

---

**GUILTY FEELINGS**

I don't feel particularly guilty.

I feel guilty over many things I have done or should have done.

I feel quite guilty most of the time.

I feel guilty all of the time.

---

**PUNISHMENT FEELINGS**

I don't feel I am being punished.

I feel I may be punished.

I expect to be punished.
I feel I am being punished.

7

SELF-DISLIKE

- I feel the same about myself as ever.
- I have lost confidence in myself.
- I am disappointed in myself.
- I dislike myself.

8

SELF-CRITICALNESS

- I don't criticize or blame myself more than usual.
- I am more critical of myself than I used to be.
- I criticize myself for all of my faults.
- I blame myself for everything bad that happens.

9

SUICIDAL THOUGHTS OR WISHES

- I don't have any thoughts of killing myself.
- I have thoughts of killing myself, but I would not carry them out.
- I would like to kill myself.
- I would kill myself if I had the chance.
CRYING

- I don't cry anymore than I used to.
- I cry more than I used to.
- I cry over every little things.
- I feel like crying, but I can't.

AGITATION
(a stirring up or arousing; disturbance of tranquility; disturbance of mind which shows itself by physical excitement)

- I am no more restless or wound up than usual.
- I feel more restless or wound up than usual.
- I am so restless or agitated that it's hard to stay still.
- I am so restless or agitated that I have to keep moving or doing something.

LOSS OF INTEREST

- I have not lost interest in other people or activities.
- I am less interested in other people or things than before.
- I have lost most of my interest in other people or things.
- It's hard to get interested in anything.
INDECISIVENESS
(not having or showing the ability to make decisions quickly and effectively)

- I make decisions about as well as ever.
- I find it more difficult to make decisions than usual.
- I have much greater difficulty making decisions than I used to.
- I have trouble making any decisions.

WORTHLESSNESS
(having no real value or use; having no good qualities; deserving contempt)

- I do not feel I am worthless.
- I don't consider myself as worthwhile and useful as I used to.
- I feel more worthless as compared to other people.
- I feel utterly worthless.

LOSS OF ENERGY

- I have as much energy as ever.
- I have less energy than I used to have.
- I don't have enough energy to do very much.
I don't have enough energy to do anything.

16

CHANGES IN SLEEPING PATTERN
(Changes in either direction are important. Thus tick the appropriate answer either less or more do you sleep.)

- I have not experienced any change in my sleeping pattern.
- I sleep somewhat more OR less than usual.
- I sleep a lot more OR less than usual.
- I sleep most the day. OR I wake up 1-2 hours early and can't get back to sleep.

17

IRRITABLITY
(having or showing a tendency to be easily annoyed or made angry)

- I am no more irritable than usual.
- I am more irritable than usual.
- I am much more irritable than usual.
- I am irritable all the time.

18

CHANGES IN APPETITE
(Changes in either direction are important. Thus select the appropriate answer either less or more do you eat.)

- I have not experienced any change in my appetite.
- My appetite is somewhat less than usual. OR My appetite is somewhat greater than usual.
- My appetite is much less than usual. OR My appetite is much greater than usual.
19

CONCENTRATION DIFFICULTY
(the action or power of focusing one’s attention or mental effort)

- I can concentrate as well as ever.
- I can't concentrate as well as usual.
- It's hard to keep my mind on anything for long.
- I find I can't concentrate on anything.

20

TIREDNESS OR FATIGUE

- I am no more tired or fatigued than usual.
- I am more tired or fatigued more easily than usual.
- I am too tired or fatigued to do a lot of things I used to do.
- I am too tired or fatigued to do most of the things I used to do.

21

LOSS OF INTEREST IN SEX

- I have not noticed any recent change in my interest in sex.
- I am less interested in sex than I used to be.
- I am much less interested in sex now.
- I have lost interest in sex completely.
Appendix D
Personality Scale

**Personality Test**

Please answer all questions.

1. Do you...
   - Listen more than talk
   - Talk more than listen

2. Do you prefer to...
   - Focus on many things at once.
   - Focus on one thing at a time.

3. Would you say that you...
   - Think, then act.
   - Act, then think.

4. Would you say that you are...
   - Quiet and reserved.
   - Outgoing and enthusiastic.
5
Would you say that you are...

- More comfortable being alone.
- Prefer being with other people.

6
Would you say that when working on a project you...

- Focus on the individual details.
- Focus on the bigger picture.

7
Would you rather...

- Work at a steady pace.
- Work in short bursts of energy.

8
When given an object, do you...

- See the object for what it is.
- See the object for what it could be.
Do you prefer to...

- Learn new skills.
- Use skills that you already know.

When praising an idea, is it more because of...

- The idea's creativeness.
- The idea's practicality.

Would other people say that you appear...

- Cool and reserved.
- Warm and friendly.

Would you say that you are more motivated by...

- Achievement.
- Appreciation.

Would you say that you are...

- Diplomatic and tactful.
Honest and direct.

When making a decision, are you more likely to go with...

- The rational answer.
- Your emotions regarding the decision.

Would you say that...

- You try to avoid arguments and debates when you can.
- Arguments and debates are fun.

In regards to time, would you say that...

- You tend to be on time and prompt.
- Are less aware of time and run late.

Which would you rather do...

- Play first, work later.
- Work first, play later.
18

Would you say that you...

- Question the need for most rules.
- See the need for most rules.

19

Would you say that you...

- Find comfort in schedules.
- Want the freedom to be spontaneous.

20

Would you prefer to...

- Keep your plans flexible.
- Make and stick with plans.
Birth Order 44

Murphy Fox, Director

Tom Hamilton, Reader

Brad Elison, Reader

4-16-09
Date

4/14/09
Date

4/16/09
Date