

The Whitman Journal of Psychology 2014

Dear Readers,

We are pleased to present Volume 23 Issue 1 of the Walt Whitman Journal of Psychology. The articles in this journal, submitted by students nationwide, reflect an enthusiasm for psychology. In addition, our editors researched and wrote pieces for inclusion.

This issue includes articles discussing photographic memory and political psychology. We chose to research photographic memory due to the controversies over whether or not this ability exists. Political psychology also interests us because we want to examine how childhood experiences can contribute to a leader's personality and decisions.

Our editors for this issue are seniors in the Psychology program at Walt Whitman High School. We work together to choose and edit articles for the Journal.

We received over 75 submissions for this issue and carefully reviewed each of them. The articles were chosen based on the topic and quality of the writing.

Thank you for your submissions and for your interest in the Journal.

For more information, visit our website at www.whitmanpsych.com

Enjoy!

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Manuscript Preparation

Authors should prepare manuscripts according to guidelines established in the Publication Manual of the American Psychology Association (5th ed.). *The Journal* reserves the right to modify APA style. Manuscripts should be no longer than 15 pages and should include an abstract. Additionally, all manuscripts must include a list of references as well as parenthetical documentation in accordance with APA style. It is suggested that manuscripts include the following sections: introduction, methods, results and discussion. Manuscripts are not limited to these sections.

All manuscripts submitted for consideration may be mask (blind) reviewed at the request of the author. Clear notification must be given on the title page of a manuscript in order for it to be mask reviewed. It is the author's responsibility to ensure that identification is omitted from the manuscript. All manuscripts submitted are subject to editing on the basis of style as well as context. It is the author's responsibility to ensure clarity of expression.

Manuscript Submissions

Submissions should include a cover letter in which the author's name, school affiliation, advisor's name, address, phone number and e-mail address are given. Authors should keep a copy of their manuscript to guard against loss. Please e-mail a copy of your file along with a cover letter with the requirements listed above to whitmanpsych@gmail.com. You will get a confirmation e-mail once we have received your submission and are able to open the file(s).

Statements contained in *The Whitman Journal of Psychology* are the personal views of the authors and do not constitute Walt Whitman High School policy unless so indicated. There is a rolling deadline for submissions.

Published in Bethesda, Maryland

<http://www.whitmanpsychjournal.org>

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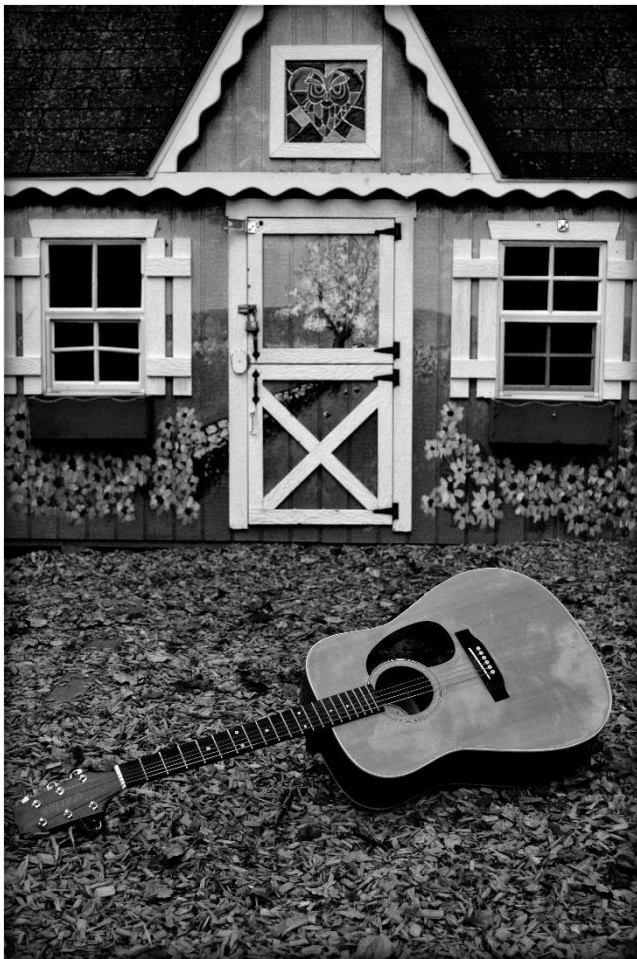
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Cognizant Dissonance: A Logical Approach to Cognitive Dissonance

Jonathan Cook and Joseph Prestley
Sheboygan North High School

Abstract

The theory of Cognizant Dissonance was proposed to provide an alternative interpretation for several of the major phenomena embraced by Festinger's theory of Cognitive Dissonance and Bem's Theory of Self-Perception. The new model also explicates some of the secondary patterns of data that have appeared in dissonance and self-perception experiments such as those of Zanna and Cooper (1974). By recreating the original Festinger and Carlsmith forced-compliance experiment, we hope to find a statistically significant correlation between attitude ratings of enjoyment regarding a particular task and different levels of certainty within the subjects. Our data suggests that the attitude ratings which compromise the major dependent variables in dissonance experiments, may be regarded as intrapersonal judgments. The subject who experiences dissonance between two cognitions takes a logical approach to changing cognitions, which accounts for the attitude change phenomena observed. Supporting experiments are presented and a metatheoretical model is produced which contrasts between original ideas of Cognitive Dissonance and our alternative theory of Cognizant Dissonance.

Cognizant Dissonance: A Logical Approach to Cognitive Dissonance

After a failed attempt at reaching inaccessible grapes, the fox in Aesop's fable *The Fox and the Grapes* leaves remarking, "I am sure they are sour" (Aesop, 1993). This analogy has long been used to portray the psychological theory of Cognitive Dissonance, which states that when a person holds two or more contrasting cognitions, they experience mental

tension (Festinger, 1957). Proposed by Leon Festinger in 1957, the theory continues to state that people attempt to remove cognitive tension by changing either their cognitions, to better align with one another, or by changing their actions to align with the cognitions. Thus, the fox in Aesop's tale felt a dissonance because he could not reach the grapes that he desired. To remove this tension, he changed his belief about the grapes, and thus they became undesirable.

To test this hypothesis, Festinger used three types of experiments: forced-compliance studies, free-choice studies, and exposure-to-information studies (Bem, 1967). The study we focused on is the forced-compliance study, the most cited piece of evidence supporting Dissonance Theory (Festinger & Carlsmith, 1959). In Festinger and Carlsmith's famous experiment, subjects were randomly assigned into different groups. Subjects assigned to the \$1 dollar group were required to perform a banal, long, and repetitive task. After the task, the experimenter asked the subject to tell a waiting subject (actually confederate) that the task was fun, enjoyable and interesting in exchange for \$1. Another group did the same task and were offered \$20. After the experiment was completed, all subjects were asked how much they actually enjoyed the task. The results revealed that the subjects that were given \$1 dollar found the task more enjoyable than the subjects that received \$20.

Festinger argued that there was a difference in opinion because the subjects who were offered \$1 had less incentive to lie. Yet, when they lied they felt a tension for acting against their true beliefs. This tension caused them to change their cognitions and convince themselves that they enjoyed the task (Festinger

& Carlsmith, 1959). However, the subjects who were offered \$20, accepted the money as incentive enough to lie, and felt less tension. Their beliefs remained relatively similar to those of the control group. As such, Festinger believed that when tension arises as a result of dissonant cognitions, people seek to remove that tension, confirming the idea of cognitive dissonance. Festinger & Carlsmith's approach was extended in more recent research and retesting (Harmon-Jones & Mills, 1999) and applied to Dissonance with arousal factors (Sénémeaud & Somat, 2009.)

Every popular theory is open to criticism, and in 1967, a decade after Festinger made his ground breaking discovery in Cognitive Dissonance, Daryl Bem published a paper entitled "Self-Perception: An Alternative Interpretation of Cognitive Dissonance Phenomena" (Bem, 1967). Bem proposed a new approach to dissonance: he argued "an individual bases his... beliefs and attitudes on such self-observed behaviors to the extent that these behaviors are emitted under circumstances that have in the past set the occasion for telling the truth" (Bem, 1967, 185). The idea that people only change their beliefs when they effect people's perceptions of themselves contradicts Festinger's idea of a tension driven catalyst.

Bem tested this theory by recreating the experiment Festinger and Carlsmith conducted, but he had a third party subject observe the process (Bem, 1967). Bem found that when asked how much the third party felt the subjects enjoyed themselves, the third party's answer was similar to those of the test subjects. The results also revealed that those who observed the subjects given one dollar believed that the subjects found the task enjoyable. However, those who observed the subjects that received \$20, did not believe that the subjects enjoyed themselves.

Bem used these findings to form an alternative approach to Dissonance Theory, which he called "Self-Perception Theory." Bem argued that subjects who received \$1 dollar changed their beliefs because they did not

perceive one dollar as enough justification for lying. They wanted to perceive themselves as an honest person, because there was such a small incentive to lie. As such, they changed their cognitions to believe that they actually enjoyed the task (Bem, 1967). Conversely, those who received \$20 found a strong enough incentive for lying that they didn't need change their perception of themselves as a liar; the incentive was enough. Bem believed this was correct, because those observing the experiment had the same conclusive results, even though they themselves would not have to feel the tension Festinger proposed is the catalyst. Bem continued his research, applying it to the creation and belief of false confessions (Bem, 1966.)

This theory had great influence over the psychological community, prompting new waves of research into dissonance and Self-Perception Theory. In 1974, Zanna and Cooper published "Dissonance and the Pill: An Attribution Approach to Studying the Arousal Properties of Dissonance" (Zanna and Cooper, 1974). Attempting to refute Bem's theory, they provided subjects with a pill. The subjects were told that the pill, a placebo, caused minor tension, minor comfort, or had no effect. After receiving the pill, the subjects were asked to write a counter-attitudinal essay. They found that subjects who were given a pill that was said to cause tension had little to no change in their beliefs after they wrote the essay. Those who were given a "comfort inducing" pill were much more likely to change their beliefs after writing the essay.

Zanna and Cooper concluded that this evidence was a result of the attribution of tension (1974). Subjects who were given a "tension" pill misattributed the tension created by writing a counter-attitudinal essay, giving them no incentive to change their beliefs or actions. Subjects who were given a "comfort" pill felt tension from the cognitive dissonance of writing the essay. When they expected comfort, but felt tension, the dissonance was increased, forcing a change in belief after writing the essay. Zanna and Cooper argued that this

demonstrated major holes in the Self-Perception Theory, because if Bem was correct, misattribution to the pill would have no effect on people's perception of themselves. They concluded that Bem's theory could not be universalized or even used to explain people's actions in these cases.

Bem's findings reveal errors in Festinger's original theory, but as Zanna and Cooper argue, Bem's alternative is far from perfect. Thus, a new approach to Cognitive Dissonance has become necessary. In the following research, we explore a new approach to dissonance, one that follows a cognizant approach. Following Bem's idea of an individual, subjective approach to dissonance, our experiment demonstrates that changing cognition occurs only when subjects personally find problems with their beliefs. The trial hypothesis suggests that beliefs are changed based on subjective uncertainty, not on self-perception. In the following study, before subjects experienced the original Festinger and Carlsmith experiment, they were given a survey that asked after each question how certain they felt about the response, ranging from a level of 1 (very uncertain) to 4 (very certain.) This method was derived by Altemeyer's "hidden observers" study (1988; Altemeyer, 1996). In the survey, we also attempted to gauge the level of hidden doubt each subject had by asking them to estimate how certain someone observing their thoughts would find them to be (using the same 1-4 scale). By recreating the experiment, we hoped to find a correlation between obvious uncertainty (one the individual subject is aware of) and hidden doubt by indicating that only a subjective and conscious dissonance between cognitions allows for changes in beliefs. Results of this nature would lead to a conclusion that a cognizant approach, rather than a tension-based approach, is more accurate.

Methods

The experimental group consisted of 17 student volunteers from a large, Midwestern high school. The students ranged from freshman to seniors, and were broken into small groups.

This age group was chosen because cognizance begins at the high school level of adolescence and continues through adulthood. Adolescents in this age group have recently transitioned from a concrete operational mode of thinking into a formal operational mode. Thus, being in their formative years, subjects' thinking will not show signs of holding long-held beliefs, unlike the subjects in Festinger's studies (1957.) While Bem argued that self-focus was the driving force in dissonance experiments, this study aimed to find a developmental beginning of cognizant thinking (1967.) In analyzing the data, it is important to take into consideration that sample size of the study was relatively small. However, if the results appear to be statistically significant, given the large standard deviation resulting from small sample size, then the results will still be strong evidence to support our approach to Cognitive Dissonance.

When the subjects arrived, they were immediately given a survey. The survey consisted of 22 questions that ranged from political standing to simple mathematics and popular culture. After each question, the survey asked subjects to rate their certainty of their answer ranging from 1 (very uncertain) to 4 (very certain). The subjects were then asked to rate their secret doubt (described as how a person

Figure 1

	2.05882
	2
	0.966345
	3.20753
	3.273
	0.421203
	-0.486996
	-0.0231203

S1 = mean (Rating)
 S2 = median (Rating)
 S3 = stdDev (Rating)
 S4 = mean (First_Certainty)
 S5 = median (First_Certainty)
 S6 = stdDev (First_Certainty)
 S7 = correlation (Rating, First_Certainty)
 S8 = correlation (rating, second_certainty)

with the ability to read the subjects' thoughts would rate their certainty, on the same scale). For example:

How likely would you be to lie for money? (Circle one)

Very likely
Likely
Unlikely
Very unlikely

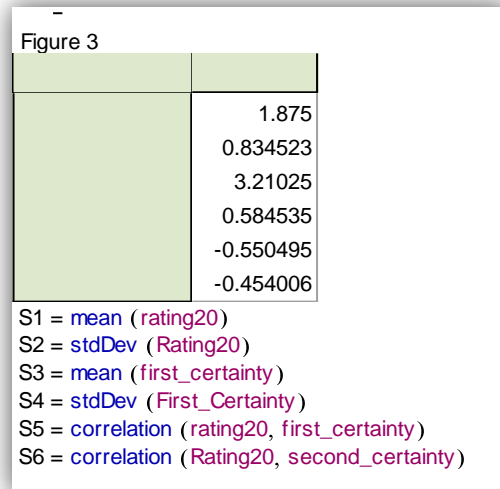
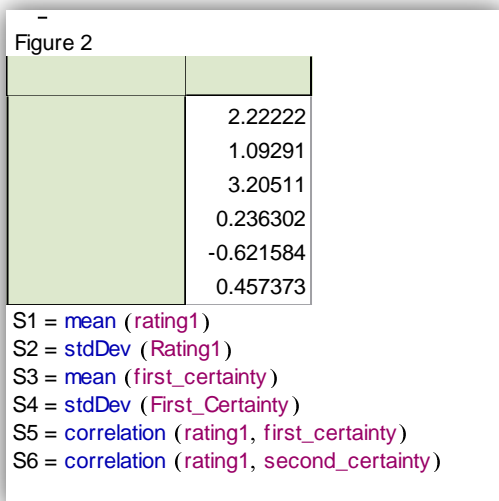
How certain are you that the statement you circled is correct?

Very certain Not certain at all
4 3 2 1

Imagine there is a monitoring system in your brain that monitors and records all of your thoughts. How certain would a person watching what you think be if asked about your certainty in the statement you circled?

Very certain Not certain at all
4 3 2 1

Once the subjects had completed their surveys, they were randomly placed into one of four groups to eliminate confounding variables. Group 1 was given 20 pieces of candy to lie, group 2 observed group 1, group 3 was given one piece of candy to lie, and group 4 observed group 3.

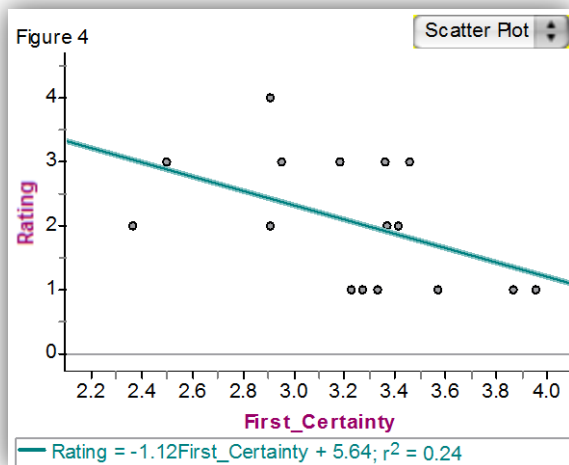


The subjects in the groups 1 and 3 completed a long, repetitive task, while subjects in groups 2 and 4 watched. After completing the task, the subjects in groups 1 and 3 were asked to type a statement explaining that the task was fun, enjoyable and interesting. Group 1 was offered 20 pieces of candy to lie, whereas subjects group 3 were only offered 1 piece of candy. In both cases, those in the observation groups (2 and 4) watched the responses being typed. After the responses were typed, the subjects who completed the task from groups 1 and 3 were asked to rate how much they actually enjoyed the activity from 1 to 4. The subjects from observation groups 2 and 4 were then asked how much they thought the subjects they watched enjoyed the task using the same scale.

We began by attempting to find a correlation between people's first certainty rating and their rating of enjoyment for the task. We hypothesized that there would be a negative correlation, with the ratings of enjoyment increasing as general levels of certainty decreased. Thus, the level of uncertainty is the independent variable of our experiment, and the rating of enjoyment is the dependent variable.

RESULTS

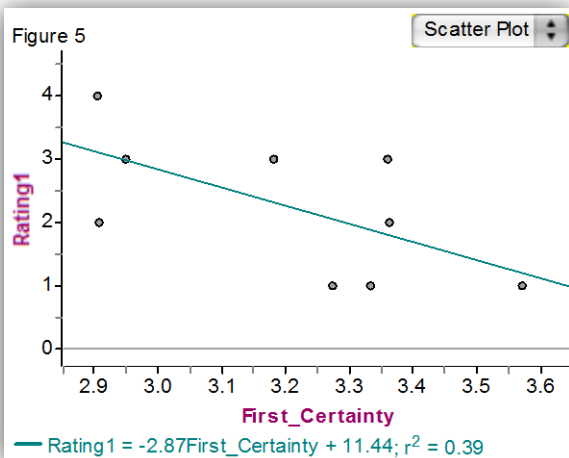
As shown in figure 1 (page 9), the mean enjoyment rating for all groups was 2.06, or not enjoyable. The standard deviation of these ratings was a .966. The mean first level of



uncertainty was a 3.21, or in between very certain and slightly certain. The deviation for that rating was a .421. The correlation between these two statistics was a -0.487 (graph in figure 4.) For the correlation between the second level of uncertainty and the enjoyment rating, we found a correlation of -0.0231.

We divided the data up into two groups, those in groups involving one piece of candy and those in groups involving 20 pieces of candy. In figure 2 we have a summary of the data for those offered one piece of candy. Figure 3 summarizes the data from those subjects who were offered 20 pieces of candy.

Figure 5 shows a graphical representation of the correlation for subjects offered one piece of candy and their first certainty level. Figure 6 shows the same



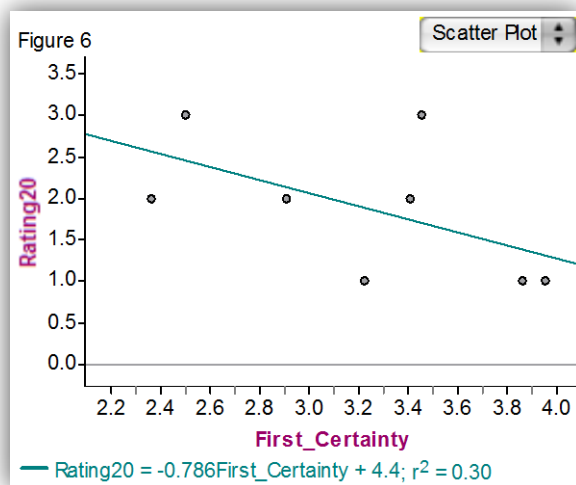
correlation, but for subjects who were offered 20 pieces of candy.

Verifying the Original Festinger-Carlsmith Study

We began our data analysis similarly to the original Festinger and Carlsmith experiment, which required us to determine whether the mean rating between each group (group 1 and group 3) were statistically different from one another (Festinger and Carlsmith, 1959). Shown below (Where?) is a test of means for two sets of data. As the table below shows, the t-value was .7407, with 14 degrees of freedom. That means that given a randomly distributed population, we would have a 4.7% chance of having a difference in means at the same difference or at more extreme differences than the one we observed in our experiment. Although this is not significant, even at a $\alpha = .10$, this may be due to our relatively small sample size, which would cause the standard deviation to be large. This large standard deviation caused the difference of .34722 that we observed. This difference, even if not statistically significant, still supports the original Festinger and Carlsmith study, because the subjects who were offered 1 piece of candy, on average, had an enjoyment rating that was .347 points larger than those subjects who were offered 20 pieces of candy.

A Cognizant Approach

Despite the evidence supporting Festinger's theory, Bem's results hold that an alternative theory of dissonance is needed. The observer subjects in Bem's study had the same results as those who should have felt the cognitive dissonance, indicating Festinger's approach cannot be generalized (Bem, 1967). However, as Zanna and Cooper revealed in their misattribution studies, Bem's approach is similarly flawed. Thus, more analysis is needed on the idea of dissonance to resolve these issues. Zanna and Cooper's study explains we realize that dissonance must be cognizant, because when we can misattribute dissonance, we feel no incentive or reason to change (Zanna and Cooper, 1974). Bem's study reveals internal



tension is not necessary; subjects merely need to acknowledge and understand their own dissonance. Thus, the logical approach to dissonance is not Festinger's *cognitive* approach, but our *cognizant* Theory, which states that subjects recognize their cognitive uncertainty and attempt to stabilize their views. This explains the findings of Zanna and Cooper as well as Bem and Festinger.

Table A	
First Attribute (numeric): Rating	
Second Attribute (numeric): First_Certainty	
Ho: Population correlation between Rating and First_Certainty is 0	
Ha: Population correlation is not equal to 0	
Count:	17
Correlation:	-0.486996
Student's t:	-2.16
DF:	15
P-value:	0.047

Approach Analysis

As Table A reveals, the correlation between the enjoyment rating of our subjects and their first level of certainty was approximately -0.487. This suggests that as certainty decreases, the subject's enjoyment of the activity (or change in cognitions as a result of dissonance) tends to increase. Although our

sample size is relatively small, we can proceed with a statistical test of significance for the correlation between enjoyment rating and the level of first certainty.

As shown in Table B, the results of the test of significance for the correlation produced a t-value of -2.16, with 15 degrees of freedom. If the correlation was 0 and we randomly selected from that population, the probability that our results would be as or more extreme than our correlation of -0.487 is approximately 0.047, significant at even a $\alpha = .05$. Thus, our evidence indicates that there is a significant correlation between the level of uncertainty someone feels and the amount in which they change their beliefs. This is even more surprising with a low sample size, because the low sample size results in a larger standard deviation. This means that the results have to be significant to produce a t-value as large as -2.16. However, the test of significance for the correlation between enjoyment rating and "secret doubt" (second level of certainty) was less conclusive. Our results showed a t-rating of -0.0896, suggesting a probability of randomly selecting a set of data with that correlation or a more extreme correlation at 0.93 (a 93% chance of randomly selecting a data set with a correlation as large or larger from a population with a 0 correlation).

The statistical significance of the first correlation (obvious doubt and enjoyment rating) and lack thereof in the second test (hidden doubt and enjoyment rating) produces

Table B	
First Attribute (numeric): Rating1	
Second Attribute (numeric): First_Certainty	
Ho: Population correlation between Rating1 and First_Certainty is 0	
Ha: Population correlation is not equal to 0	
Count:	9
Correlation:	-0.621584
Student's t:	-2.099
DF:	7
P-value:	0.074

very strong support for the cognizant dissonance theory. The subjects who were aware of their own doubt (the obvious doubt rating) had a large correlation with their change in cognition (shown by their enjoyment rating). Yet, the subjects' "hidden" certainties seemed to have no statistically significant influence or correlation with their changes in cognitions. This indicates that the subjects had cognizant awareness of their uncertainty. This awareness resulted in their desire to stabilize their uncertainty by adjusting their cognitions.

The trend is also relevant to individual categories. For the subjects offered one piece of candy, we have a correlation between their first certainty and their rating of enjoyment of -0.622. For a test of significance against a null hypothesis, the resulting t-value is a -2.099 with 7 degrees of freedom, giving a p-value of .074, or a 7.4% probability of randomly selecting a data set from a population with a correlation of 0. This provides strong evidence against the null hypothesis.

The trend does not apply for second levels of certainty, or "hidden doubt." As the summary table below reveals, the p-value is 0.22, producing no evidence that would allow us to reject the null hypothesis.

Table C	
First Attribute (numeric): Rating20	
Second Attribute (numeric): Second_Certainty	
Ho: Population correlation between Rating20 and Second_Certainty is 0	
Ha: Population correlation is not equal to 0	
Count:	8
Correlation:	-0.454006
Student's t:	-1.248
DF:	6
P-value:	0.26

Table D	
First Attribute (numeric): Rating20	
Second Attribute (numeric): First_Certainty	
Ho: Population correlation between Rating20 and First_Certainty is 0	
Ha: Population correlation is not equal to 0	
Count:	8
Correlation:	-0.550495
Student's t:	-1.615
DF:	6
P-value:	0.16

This trend also applies to the subjects who were offered 20 pieces of candy. As Table D shows, the correlation between the "20" subjects' ratings and their first certainty level was a -0.55. This produced a t-value of -1.615, with 6 degrees of freedom, and a p-value of 0.16. Although this is not as statically significant as the other results, this may be due to the small sample size of only 8 people. Yet, a 16% probability of randomly selecting a data set this extreme or more extreme, when combined with the evidence and other statically significant correlation above, still supports the hypothesis that only known certainty, the first level, has an effect on the change of cognitions (represented by the enjoyment rating).

The second level of certainty does not have a statistically significant correlation, with a p-value of only 0.26. This continues to support the hypothesis that only known certainty, not "hidden doubt" or "secret uncertainty" plays an influential role in the changing of cognitions.

To further solidify this hypothesis, we divided the subjects whose ratings of enjoyment were greater than the mean rating within their group and the subjects whose were below the average and tested to see if the mean certainty levels for these subgroups were statistically significant. The mean rating for the subjects offered one piece of candy was a rating of 2.22.

Summary Table 1		
First attribute (numeric): FirstAbove		
Second attribute (numeric or categorical): FirstBelow		
Ho: Population mean of FirstAbove equals that of FirstBelow		
Ha: Population mean of FirstAbove is not equal to that of FirstBelow		
	FirstAbove	FirstBelow
Count:	4	5
Mean:	3.09925	3.4898
Std dev:	0.212012	0.259603
Std error:	0.106006	0.116098
Using unpooled variances		
Student's t:	-2.484	
DF:	6.98061	
P-value:	0.042	

After dividing the group into the two subgroups (those above the mean and those below the mean), we did a tested for significance by comparing the means of the two subgroups. Summary Table 1 reveals that the t-value, with 6.98 DF, was -2.484, resulting in a p-level of 0.042, significant at even the $\alpha = .05$ level. When we did the same test for the hidden certainty level of subjects above and below the mean, the results were not significant, with a p-level of 0.49, or a 49% probability.

The same results held true for the subjects who were offered 20 pieces of candy (. The mean rating of enjoyment was 1.875, and after dividing the subjects into the two subgroups, we did the same test of significance. The t-value, with 5.27 DF, was -2.35, resulting in a p-value of 0.063, significant at a $\alpha = .075$ level. The p-value for the second levels of certainty, however, had a non-significant p-value of 0.26.

Conclusion

The statistically significant results provide strong evidence that the null hypothesis (cognizant awareness has no correlation with change of cognitions) can be rejected. This was supported through several different statistical tests that all gave conclusive results rejecting the null hypothesis. This, supports our hypothesis for

an alternative approach to cognitive dissonance. More evidence is provided for this hypothesis than for Festinger's cognitive model of dissonance, because in each test, second "hidden" levels of uncertainty had no correlation with the changes of cognitions or the enjoyment ratings. Thus, only when our subjects had a conscious awareness of their uncertainty or "dissonance," were they motivated to change their beliefs. This resulted in more certainty which reflects Festinger's hypothesis that subjects attempt to remove tension by changing their beliefs (1957; Festinger & Carlsmith, 1959). However, instead of tension, we found uncertainty to be the leading cause.

This study requires future replications with larger sample sizes to validate the statistical tests. Another potential extension of this experiment would be to test the effects of certainty on self-perception as they relate to Bem's theories. This would provide a cognizant view of self-perception, which would align with Bem's original hypothesis, but also extend it to make changes in self-perception more quantifiable. This type of study would test whether the cognizant theory could be extended to explain Bem's findings.

More studies should also be done with different age groups as the sample population. This would help determine whether or not there

Test of Test of Means Offer 20 Cert		Compare Means
First attribute (numeric): FirstAbove		
Summary Table 2		
FirstBelow		
Ha: Population mean of FirstAbove is not equal to that of FirstBelow		
	FirstAbove	FirstBelow
Count:	5	3
Mean:	2.9274	3.68167
Std dev:	0.502675	0.396431
Std error:	0.224803	0.228879
Using unpooled variances		
Student's t:	-2.351	
DF:	5.26852	
P-value:	0.063	

is a developmental component relating to the cognizant phenomenon. Adults may have more concrete, solidified thought processes than adolescents which would provide vastly different experimental results. Should these experiments be executed, the approach could be used to analyze developmental theories using cognizant dissonance.

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Fiction's Effect on Thoughts and Behaviors

Barbara A. Gawin

Niles West High School

Experience-taking is “the imaginative process of spontaneously assuming the identity of a character in a narrative and simulating that character’s thoughts, emotions, behaviors, goals, and traits as if they were one’s own” (Kaufman, Libby, 2012). It takes place because readers don’t simply observe what they read, they feel as though they experience it. Their own identity gets suppressed as they engage in a work of fiction and it becomes hard for the reader to distinguish between himself and the main character. Thus, experience-taking is an involved process and can therefore alter the reader’s thoughts, beliefs, and behaviors (Kaufman et al, 2012).

Experience-taking is most likely to take place when a piece of fiction is written in first-person, the main character possesses similar characteristics to the reader, and when the reader has sufficient time to connect with the protagonist. It is difficult for readers to connect with a protagonist that does not share some of their characteristics, especially if this is revealed early on. In order to experience-take, readers have to become less aware of themselves. They have to become fully immersed in the fictional story. However, when a reader connects with a protagonist from a work of fiction through experience-taking, changes can take place within the reader (Kaufman et al, 2012).

There have been a few studies done before on how fiction can affect people, but none of these studies had a term for experience-taking, because it wasn’t well understood. The term was coined last year in an intensive study done by Kaufman and Libby. Earlier studies showed that emotions experienced from fiction are just as realistic as those experienced in real life (Goldstein, 2009). They also suggested that readers adjust their thinking when presented with new information in a piece of fiction

(Oatley, 1994). There were also studies done on how fiction affects people’s behaviors at work (Bal, Butterman, Bakker, 2011). Another correlational study showed that there is a connection between reading about aggression and displaying aggression (Coyne, Ridge, Stevens, Callister, Stockdale, 2011). All the researchers in charge of these studies understood that fiction can impact an individual, but were not clear on how this happens. The process of experience-taking is just starting to be understood now, even though fiction has been affecting people for thousands of years. All these studies suggest that fiction influences individuals. The category of “fiction” includes movies and plays, but mostly concerns fictional writing.

Self-Concept and Self-Perception

How People See Themselves

Before one can understand how people can take on the “thoughts, emotions, behaviors, goals, and traits” of a fictional character, one must understand how people see themselves (Kaufman, Libby, 2012). In psychology, the two main ways in which people evaluate themselves are through self-concept and self-perception.

Self-concept

Self-concept is simply defined as “the way in which one perceives oneself” (Strickland, 2001). There are three subdivisions: personal self-concept, social self-concept, and self-ideals. Personal self-concept is simply how one views themselves. Social self-concept involves how one believes others perceive them. Self-ideals are a person’s aspirations. They affect how a person sees him or herself and how others see that person (Strickland, 2001). Collectively, self-concepts influence people’s behaviors. A

positive self-concept, for example, means that a person believes in him or herself, which often leads to success. A person who is mentally healthy has a self-concept that “is consistent with his or her thoughts, experiences, and behavior” (Strickland, 2001). People’s self-concepts influence their social perceptions (how they see others) and behavioral attributions (Strickland, 2001). A person’s behavior can either be attributed to personal traits or their environment. What behavior is attributed to can alter a person’s view of himself and others.

Self-perception

According to William Darity, “people come to know their own attitudes, beliefs, and other internal states by inferring them from their own behavior and the circumstances under which they occur” (Darity, 2008). Thus, people develop self-concept by analyzing their own behavior in the same manner an outside observer would. The self-perception theory states that cognitive dissonance does not have to exist for people to alter their views of themselves (Darity, 2008). A person experiences cognitive dissonance when his beliefs and behaviors do not match up. For example, a person who believes that racism is bad but avoids African Americans would experience cognitive dissonance.

Factors That Affect Self-Concept

A person’s self-concept can be affected by his or her environment and social factors within that environment.

The Environment

The environment plays a big role in how people act because people are constantly responding to their environments. For example, if a person is put into a threatening environment, his self-concept will become less positive, which might lead him to feel helpless. However, if that same person is placed in an accepting environment, he will respond differently to it. His self-concept will become more positive, and he will feel better about himself.

Social factors

There are also many social factors within the environment that impact people’s self-concepts. These include their peers, the media, and according to recent studies, fiction. Peers can influence how a person feels about himself by making him feel welcome and wanted or by ostracizing him. A person who is welcomed will have a better self-concept than one that is shunned. The media also impact a person’s self-concept because they are constantly bombarding people with ideals through television, radio, and the internet. People who are always shown the perfect life with no worries will have a lower self-concept when they are not able to achieve this ideal. Skinny models, muscular athletes, and rich celebrities seem to be the standard in the media, which causes people who are not meeting these standards to feel despair about their lives and have a lower self-concept. These all seem like more modern factors, but there have been some recent studies that show that fiction, which has been around since the beginning of language and storytelling, is also a social factor that can greatly impact people.

Fiction Can Affect the Way a Person Thinks

Fictional Writing’s Impact on Self-Concept

In the first major study on experience-taking, Kaufman and Libby showed how a person’s self-concept can affect their level of involvement with a work of fiction. They discovered that readers are not observers of what they read. They actually see and experience everything from the perspective of the protagonist. This is not the same as perspective-taking, where the reader simply develops the same perspective as the main character. Experience-taking is easier for readers if they are made to be less aware of themselves. For example, readers who read in front of a mirror were less likely to undergo experience-taking than those who read without a mirror in front of them. This shows that the level of self-concept, or how aware the readers were of themselves, was a factor that affected the degree of experience-taking. It was easier for

people to assume the identity of someone else if they weren't thinking about themselves (Kaufman et al, 2012).

Sadness Does Not Distinguish Fact from Fiction

Another study, conducted by Goldstein, showed that "our appraisal system – by which we judge whether events are plausible and try to determine the proper emotional reaction – is quieted" when we are experiencing fiction (Goldstein, 2009). This study involved participants watching four fictional movie clips, two of which were presented as fact, and two of which were presented as fiction. The results showed that the levels of sadness and anxiety reported by the participants after watching the movie clips did not vary. (Goldstein, 2009) This shows that people experience the same emotions when they think they are viewing something that is fictional or true. Since they quiet their appraisal system, they don't think about whether something is fictional or not, which allows them to experience the same emotions in both situations. They are not constantly thinking about and assessing the situation, which makes them believe that the fiction is as true as the fact at that moment.

Experience-Taking's Impact on Thinking

In this same study, Kaufman and Libby showed how great an impact fiction can have on the way a person thinks because of experience-taking (2012, Kaufman). According to the study, the readers take on the mentality of the main character, which makes it hard for them to distinguish between themselves and the character. The readers forget themselves as they get caught up in the story. Experience-taking allows the piece of fiction to change a reader's opinion on an issue (Kaufman et al, 2012).

Attitudes About Sexual Orientation

In the experience-taking study, heterosexual participants read a fictional narrative in which the main character was revealed to be either heterosexual two thirds of the way through the narrative (straight

narrative), homosexual two thirds of the way through the narrative (gay-late narrative), or homosexual in the first paragraph (gay-early narrative). After reading the narrative, the participants who read the gay-late narrative were more accepting of homosexuals than the participants who read the gay-early or straight narrative. Also, those who read the gay-early narrative rated the protagonist as more emotional and feminine than those who read the gay-late or straight narrative. This shows that once a person undergoes experience taking, how they think about an issue can change. The people who did not have enough time to undergo experience-taking did not show as big of a difference in their attitude as those who had more time to undergo experience-taking. Those who had enough time to undergo experience taking had their attitude about homosexuals become more accepting, or in other words, the way they thought about homosexuals changed (Kaufman et al, 2012).

Attitudes About Race

The impact of fiction on people's thinking also became apparent when a similar fictional narrative was used to test if experience-taking would produce the same results with race. In this part of the study, Caucasian participants read either a Black-early narrative, where the protagonist's African American sounding name was given in the first paragraph; a Black-late narrative, where the protagonist's African American sounding name was given in the middle of the narrative; or a White narrative, where the protagonist's White sounding name was given in the middle of the narrative. People who read the Black-late narrative saw the protagonist as less hostile than those who read the Black-early narrative. Those who read the Black-late narrative also were less likely to apply common stereotypes than those who read the Black-early narrative. This shows that those people who were given enough time to undergo experience-taking experienced a change in the way they think about African Americans. The fictional piece changed how they think about race (Kaufman et al, 2012).

How a Person Can React

Oatley is one of the leading researchers when it comes to fiction. In his 1994 study, he identified ways in which a reader can emotionally respond to a fictional text. He also identified ways a reader can react when his mental schemata gets challenged by a piece of fiction (Oatley, 1994).

Emotional Responses to a Fictional Text

Oatley identified three different ways in which literary world emotions can be experienced. These emotions are truly experienced even though the reader knows that he is experiencing fiction. The reader can feel sympathy for the character by being an invisible witness to the story. He can also experience emotions that he has experienced in his life. Events in the fictional text can prompt these memories to not just be remembered, but to be relived. The reader will react with real emotions to an event in a fictional story when that event brings back a memory from real life. The third way in which a reader can respond to a text that is fictional is through identification. This is “a psychological process in which the reader (...) takes on characteristics of the fictional character” (Oatley, 1994). The reader can experience true emotions in these ways in response to a text that he knows is fictional. This shows that fiction can by-pass the logic we use in everyday life to allow us to experience real emotions in response to a work of fiction.

Challenging of Mental Schemata by Fiction

According to Oatley, reader’s mental schemata can be challenged while reading (1994). This requires the reader to change the way they think. Oatley says that the reader can either assimilate to the schema presented to him or change his schema. Assimilating to the schema presented does not change the reader. However, a change of schema does. (Oatley, 1994) It provides the reader with a different way of thinking or looking at something. A change of schema can have differing affects that can either be temporary or lasting (Oatley, 1994) This is very notable because it shows that a piece of

writing can interact with a reader, and therefore change his way of thinking. The reader does not walk away from a piece of writing with the same schema and attitudes that he started reading with. If a reader interacts with the text, he will walk away a changed person.

Fiction Can Impact a Person’s Actions

Fictional Writing’s Impact on a Person’s Actions at Work

Fictional narratives can affect not only how humans think, but how humans behave. Because people can learn from fictional narratives, they may change their “beliefs about the world and their work” (Bal et al, 2011). This “influences how people think, feel, and act at their work” (Bal et al, 2011). Even though people know that they are reading something fictional, it can still affect them. This happens through transformation, which is the “change of the person as a consequence of the narrative experience” (Bal et al, 2011). The transformation happens through “construction of mental schemas,” “changes in mental schemas,” and the “establishment of new linkages among mental schemas” (Bal et al, 2011). Experiences with fictional narratives can have either short-term or long-term effects. Short-term effects might just be recharging after expending energy at work. A person can recharge through a fictional narrative experience. A study showed that people who read fiction had improved work recovery, and those that read non-fiction did not. Long-term effects come into play when people alter their schemas because this is a cognitive change. Good behaviors, such as empathy, can be strengthened through fictional narrative experiences. Also, characters in works of fiction can be seen as role models, which can cause people to display more positive behaviors at work when trying to follow these role models. (Bal et al, 2011) All this evidence shows that the mental changes that take place when a person immerses himself in a work of fiction later show themselves in his actions. The relaxing experience of fiction, the changes in mental

schemata, and the adoption of a fictional role model can all improve performance at work.

Fictional Writing's Impact on a Person's Voting Behavior

A study that took place one week before a major election showed how fiction can affect a person's voting behavior. The protagonist in the fictional narrative that was read by the participants overcame many obstacles to vote. The study measured the participants' intention to vote and if they actually voted. Readers who read a first-person narrative about a character that was from the same college that they were from reported the highest intention to vote and 65% of them actually voted. This contrasted with only 29% of participants who voted after reading a first-person narrative about a character from a different college and 25% of participants who voted after reading a third-person narrative about a character from the same college they were from. (Kaufman et al, 2012) The participants that read a fictional narrative in first-person were more likely to undergo experience-taking because they actually put themselves in the shoes of the main character. This was different from the third-person narrative because while reading that narrative, the participants most likely only felt like an observer to the action. Also, those that read about a student from the same college were more likely to undergo experience-taking because they were able to better connect with that character. They wouldn't connect to a character from a different college as easily. When the narrative was both first-person and about a character from the same college, the results show that experience-taking was greatest. This experience-taking actually affected the participants' behavior. It made them more likely to vote. This shows that fiction can change how someone acts.

Reading About Aggression Can Cause Aggression

There have been many studies done that find connections between watching violence on television and acting violently. Similar results

have been found when participants in a study read about aggression. Participants in this study read about either physical aggression or relational aggression in literature. Relational aggression is "behavior aimed at harming a person's relationships or social standing in the group" (Coyne et al, 2011). After reading, the participants had to play a game online with a "partner," who sent them annoying messages, which were meant to provoke the participant. Then, the participants got to choose "from 10 noise levels (...) and 10 noise durations (...) to be administered to the opponent" if they were slow at pushing a button in a contest (Coyne et al, 2011). The participants who read the physical aggression story were more physically aggressive than those who read the relational aggression story (Coyne et al, 2011). This shows that reading about physical aggression and then getting provoked can cause people to become more physically aggressive. Their behavior changed because of the fictional piece they read. In another part of the study, participants also read about either physical aggression or relational aggression. They then played an online ball tossing game with two others. One of the other people provoked them by sending annoying messages. The participants' ostracism towards the annoying person was measured. Participants who read the relational aggression story were more relationally aggressive than those who read the physical aggression story. Both parts of this study showed that participants displayed the type of aggression they read about (Coyne et al, 2011). This can be seen as evidence that fictional literature can alter or bring out a person's behavior. However, as all the other studies about aggression after viewing violence, this study does not prove causation, only correlation.

Conclusion

As can be seen from all these studies, fiction really does have a major influence on people. Through experience-taking people assume a different identity while they are interacting with a work of fiction. This work of fiction can change them drastically by first changing how they think, which later changes

their actions. It is interesting to see how the effects of fiction on people are just undergoing major studies now when fiction has been around just as long as language and imagination. Stories have been an important part of all human cultures since the beginning of our time.

One person who understands the importance of stories is Chimamanda Adichie, a Nigerian author. In a TED talk featuring Adichie, she talked about how she had first started writing.

“I wrote exactly the kinds of stories I was reading: All my characters were white and blue-eyed, they played in the snow, they ate apples, and they talked a lot about the weather, how lovely it was that the sun had come out. Now, this despite the fact that I lived in Nigeria. I had never been outside Nigeria. We didn't have snow, we ate mangoes, and we never talked about the weather, because there was no need to” (Adichie, 2009). Growing up in Nigeria, with only books written by White authors, she saw the impact of fiction on her thoughts and beliefs firsthand. She said, “What this demonstrates, I think, is how impressionable and vulnerable we are in the face of a story, particularly as children” (Adichie, 2009). She fully understands how fiction can impact a person because of her experiences. The important point is that we are all affected by fiction as much as Adichie. The studies presented here showed the people's thoughts, beliefs, opinions, and actions can be changed by a work of fiction. This means that we can change ourselves simply by reading and interacting with fictional texts. If for example, we admire Juliette, we can undergo experience-taking by reading *Romeo and Juliette*, and therefore emerge as a more Juliette-like person. If we want our kids to be honest and caring, we should read them books with protagonists that have these characteristics.

The results of these studies can have a huge impact on society. People can be changed through reading. This can be used to society's advantage if people read to improve themselves, or it can be a disadvantage, as might have happened in Nazi Germany when everyone was

reading Hitler's *Mein Kampf*. This raises questions about whether works of writing should be controlled or banned. Depending on how works of writing are used, they can either improve humankind, or shatter the society we have achieved after all these thousands of years. We might find out exactly what kind of major impact fiction can have in the near future.

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Disparities Between Male and Female Stereotyping of Mental Illnesses

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Abstract

The stigmas that derive from stereotyping mental illnesses often lead to discrimination for individuals with. In this study, researchers sought to discover the basis behind mental illness stereotyping between males and females. Researchers asked participants to read two separate biographies of two different men both applying for the same job. One depicted a highly qualified man with a mental illness, and the other portrayed an unqualified man without a mental illness. The researchers instructed participants to choose which man they would hire for the position. The results showed that twice as many females would hire the mentally ill applicant. This demonstrates their tendencies to display empathy which influences who they would hire.

The development of negative stereotypes, fixed generalizations about a particular person or thing, often times triggers the arrival of stigmas in society. A stigma is an extreme disapproval and mark of disgrace toward a person based on the perception of their distinguishing characteristics. In particular, the stigmas associated with mental health often times have profound effects on the individual associated with the stigma. According to Boyd (2003), "One of the especially painful and destructive effects of stigma is that people with mental illness are left feeling that they are not full members of society"(p. 3). In other words, stigma, a mark of disgrace associated with a particular circumstance, makes people who seem to be inconsistent with societal norms, feel inferior. This leads to societal alienation and feelings of rejection.

The negative stereotypes and stigmas directed toward individuals with mental illnesses frequently provoke prejudice attitudes, beliefs, and emotions, along with a predisposition to discriminate against the mentally ill. Due to this discrimination, a person with a mental illness is prone to experience feelings of shame, hopelessness, distress, misrepresentation in society, and an overall reluctance to seek or accept treatment (Mental Health Commission, 2006, np). Often times, these overwhelming feelings can cause the individual to become resentful and isolated from society, as well as a self-destructive hazard to those around them. According to the Mental Health Commission of Australia (2006), "Nearly 2 in 3 people surveyed thought that people with Schizophrenia were unpredictable and one fourth felt that they were dangerous" (np). These inaccurate and negative assumptions concerning mental illness affect a mentally ill individual's self-esteem, in which they start to believe the misconceptions, imminently leading to dangerous behavior. Consequently, people with mental illnesses are given fewer opportunities to work, attain normal education, and lead a life of acceptance because of the stereotypes that define them.

In a previous study conducted by Psychologist D. L. Rosenhan, pseudopatients: people who have never had symptoms of any serious mental disorders, reported auditory hallucinations in order to gain admission to psychiatric hospitals across the United States. After admission, these pseudopatients stopped reporting hallucinations and behaved as they normally would. Even though they weren't having hallucinations, all pseudopatients were discharged from the hospital and given a

diagnosis of a psychiatric disorder. Although these patients were truly devoid of any mental illness, and perfectly capable of contributing to society, the psychiatrists couldn't look past the initial diagnosis due to the confirmation bias: they only took notice to the patient's symptoms confirming their beliefs and rejected the behavior that contradicted their beliefs. Rosenhan said, "it is clear that we cannot distinguish the sane from the insane" (Hock, 2009, p. 229).

The Rosenhan Experiment, accurately highlights the flaws of diagnostic labeling yet fails to explain the differences of stereotyping mental illnesses between both males and females. The purpose of this study was to illuminate the disparities between the tendencies of male versus female labeling, with regards to mental health. In a different study conducted recently, researchers "revealed that while women manifested activation in areas involved in basic emotional, empathic, and moral processes, such as basal regions... activation in men was restricted mainly to the occipital cortex and parahippocampal gyrus" (Diaz, 2011). Women tend to be more understanding toward those who suffer from mental illnesses than men. Likewise, the findings suggested that women are more empathetic and compassionate when dealing with compromising moral dilemmas, including people in poor mental health, while men tend to be more apathetic. This study accentuated a gender bias in Rosenhan's study, and motivated current research. Are women less likely to stereotype mental illnesses in comparison to males? If males display less sympathy than women when resolving problems of the ethical and moral nature, this would provide evidence that males are more apt to stereotyping individuals with mental illnesses, than women.

Method

Participants

For this study, the researchers gave out eighty surveys to a total of four randomly selected groups in the Lakeland High School

population. Each group consisted of ten Caucasian males and ten Caucasian females in either eleventh or twelfth grade, ages sixteen to eighteen. Those involved were given enough information to decide if they wanted to participate, but the ultimate purpose of the study was not revealed to them until after they completed the survey. This method is known as debriefing after deception (Appendix A). Of the participants, most were students who had not previously been exposed to the aspects of a mental illness. To help encourage the participants, the researchers informed them of the numerous benefits that accompanied research on mental illness, including a safer and a more tolerable, accepting society (Appendix A).

Design and Procedure

First, the researchers began by giving each individual a survey. They were asked not to put their name on the survey for confidentiality purposes (Appendix A), and to keep their opinions to themselves as to not influence others because it would skew the results. Each group received the same instructions; to complete the survey individually, as completely and honestly as possible (Appendix A). Any survey consisting of derogatory or inappropriate content would not be used for research and data purposes. Each group received a survey that described two people applying for a job (Appendix B). The first applicant was not very qualified for the position, but in his biography it was clear that he had no previous history of mental illness. The second applicant was highly qualified for the job, but in his biography, it showed a history of Schizoaffective Disorder, and was receiving proper treatment. After the participants read the biographies, the researchers asked them to identify their gender, which applicant they would hire, and why they would hire their choice, to see if there was a difference between male and female stereotyping concerning the Schizoaffective Disorder. Additionally, the researchers did not provide any of their own opinions while conducting this single-blind study. They refrained from making any misleading eye

contact with the participants, or answering any questions the participants had in regards to the biographies. In general, it took participants around five minutes to complete the survey.

When they were finished, the researchers collected them from each individual and debriefed them.

Results

Table 1-1 Lakeland Students Responses to Mental Health Survey

Gender	Would Hire Applicant #1 (No Mental Illness)	Would Hire Applicant #2 (Schizoaffective Disorder)	Total Number of Participants
Male	32	8	40
Female	24	16	40

Table 1-2

Gender	Would Hire Applicant #1 (No Mental Illness)	Would Hire Applicant #2 (Schizoaffective Disorder)	Total Percentage of Participants
Male	80%	20%	100%
Female	60%	40%	100%

Table 2-1 Explanations behind Mental Health Survey Result

Gender	Would Hire Applicant #2 (Schizoaffective Disorder)	Wouldn't Hire Applicant #2 (Schizoaffective Disorder)
Male	He's highly qualified	He has Schizoaffective Disorder
Female	His treatment seems to be working and he is highly qualified	His treatment could be ineffective
Gender	Would Hire Applicant #1 (No Mental Illness)	Wouldn't Hire Applicant #1 (No Mental Illness)
Male	He has a business degree; He's not mentally ill	Worked in the food industry
Female	He seems qualified	He is not qualified

As shown in Table 1-1, 8 males would hire Applicant #2, whereas more females, sixteen to be exact, would hire him. In contrast, thirty-two males would have rather hired Applicant #1, and twenty-four females would have rather hired him. According to Table 1-2, 40% of the females would hire Applicant #2, despite his mental illness. Additionally, in Table 2-2, the majority of male participants simply stated that they would not hire Applicant #2 based on the fact that he had previously been diagnosed with Schizoaffective Disorder. Females, in comparison, showed more hesitancy to hire Applicant #2 based on the fear that his treatment could stop working. Even though Applicant #1 was less qualified, a majority of the males found him to be more competent because he didn't have a mental illness.

Discussion

The key finding in this study was that males, were less inclined to hire Applicant #2, because he had been diagnosed with Schizoaffective Disorder, while the females were twice as likely to hire Applicant #2, inevitably supporting the researchers' previously stated hypothesis that men and women stereotype mentally ill people very differently. The tendency for females to be more compassionate and empathetic, as concluded by Diaz, (2011, np), certainly contributes to these statistical results. For instance, the females understand and draw empathy from the struggle that accompanied Applicant #2's mental disorder, and therefore, recognized that despite his illness, he was still more qualified than Applicant #1. Though this research didn't provide a mentally ill individual's perspective regarding the labeling and stereotyping as the Boyd Study (2003), it instead provided a perspective directly from those who create and maintain the stigmas.

One confounding variable in this study is the gender of the participant. Depending on the gender of the participant, they could be less or more inclined to hire one applicant over another

based on that variable. Women may also have subconsciously picked the applicant they found more attractive. Another confounding variable was the difference in age and appearance of both applicants. Additionally, the wide range of intelligence among the participants could have skewed the results. In future studies, it would benefit the researchers to exclude the picture of the potential CEOs on the survey in order to eliminate the possibility of gender bias.

To further expand on the tendencies of stereotypes regarding mental illnesses, subsequent studies should focus on the impact of intellectual standing. In other words, are people with higher IQ levels more or less likely to stereotype mental illnesses more or less than those with a lower level IQ? Researchers need to focus on these differences regarding intelligence when evaluating stereotypes because those with a higher level of thinking, when evaluating an applicant, may find it easier to disregard the stigma.

In brief, this study evaluates the idea that women are more apt than men to sympathize with the mental illness stigma in general. Although it is still clear that stereotyping frequently occurs among males and females, this study expands on the idea that males are more prone to the habit. Furthermore, this demonstrates that males in powerful career positions, or any other positions of power, hold a greater chance of stereotyping individuals with mental disorders, of which is likely to only worsen and prolong the illnesses.

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APPENDIX A:

INFORMED CONSENT FORM

[Male and Female Stereotyping of Mental Illnesses SURVEY Revised May 24, 2013]

Participant's Name: Jane Doe

Date: May 18, 2013

Researchers: Alexis King and Taylor Spierling

Educational Sponsor: Mrs. Oddi

The following information describes this study and the rights and obligations as a participant. The Principal Investigator or one of the co-investigators will answer any questions about the study or this form.

A. TERMS OF THE STUDY:

You have been asked through random sampling to participate in an educational research study at Lakeland High School, being a representative of that population. The study is designed to look for differences in mental illness stereotypes amongst men and women. As one of eighty participants, you will receive a survey, the same survey that the rest of the participants received. Alexis King and Taylor Spierling are looking at the empathetic tendencies of women in comparison to the aggressive and apathetic characteristics of men in order to determine whether women are less likely to stereotype against those with mental disorders than men. The purpose of this study is to bring awareness to the issues of mental illness stereotypes, stigma, and labels in society, and also to determine if gender plays a role in that process. This survey is designed to help provide us with information regarding the issue, and ultimately find the root of the problem in order to start developing solutions for it in the future.

You understand that participation in this study will be voluntary, and results will be kept confidential, in which you will not be identified.

B. INSTRUCTIONS

If you choose to participate in this study, you will be directly handed a survey by the researchers asking you to read two short biographies depicting two different men, one with a mental disorder and one without a mental disorder, each applying for the same job. After you read the short summaries, you will then complete the survey attached to the bottom of the page. Do not talk with anyone while taking the survey, including other students or the researchers, or exchange thoughts or feelings until after all the surveys have been completed and collected. Please fill out the survey as honestly and accurately as you can, otherwise, our data runs the risk of being skewed. It is asked that you refrain from writing your name on the survey, for the researchers will not disclose results of an identified participant under ethical considerations of confidentiality. When all the surveys are entirely completed, the researchers will come around and pick up the surveys.

There will be approximately 80 participants enrolled in this study at four classrooms in Lakeland. It is anticipated that you will participate in this research study for approximately 35 minutes.

C. BENEFITS:

Though you may not receive any direct and immediate benefit for participating, we hope that this study will help to generate crucial awareness of the problems in stereotyping mental disorders. We hope that the labels that lead to negative stigma toward mental illnesses, of which prolong and aggravate the symptoms, can eventually be accommodated in societal schemas with accurate information regarding mental health.

No promise of beneficial results has been made to you, nor have any guarantees been offered, either formally or implied, that this survey will rid of the stereotypes of mental illness or the stigma that derives from the labeling.

D. CONFIDENTIALITY OF RECORDS:

You understand that your identity and all information pertaining to you that is collected for this study will remain confidential. However, in order to meet the obligations of Federal law, you understand that case records from this study may be subject to review by representatives of Mrs. Oddi.

E. AVAILABLE INFORMATION:

You understand that any significant new information developed during the course of this study, which may relate to your willingness to continue as a participant, will be provided to you. If you have any questions or desire further information with respect to this study, you should contact:

Taylor Spierling or Alexis King

Address: 1630 Bogie Lake Road White Lake, MI 48383

Phone number: (248) 676-8320

If you wish to contact an impartial third party not associated with this study, you may contact:

Sponsor: Mrs. Oddi at 1630 Bogie Lake Road White Lake, MI 48383

F. TERMINATION:

You understand that your participation in this study is voluntary and you are under no obligation to participate. Your decision on whether to participate in the study will in no way lead to negative consequences. You may refuse to participate or may discontinue at any time during the study without punishment or ridicule. If you choose not to participate, or to discontinue your participation in this study, you may just inform either Alexis King or Taylor Spierling. In addition, you understand that your participation may go undocumented if inappropriate answers are submitted in the survey.

G. PARTICIPANT'S AUTHORIZATION AND CONSENT:

You have had the opportunity to ask questions about mental illness stereotypes following the completion of the survey, and your participation in this study. You have had the questions answered to your complete satisfaction. You have read and fully understand this consent form. You understand that you should not sign this form if all your questions have not been fully explained or answered to your satisfaction, or if you do not understand any of the words or terms contained in this consent. You voluntarily choose to participate in the experimental treatment as part of this study and have been given a copy of this consent form for your records.

Signature

Date

APPENDIX B:

SURVEY

Applicant 1



My name is Robert Hollingdale. I am 35 years old and I am applying for the CEO position at Ameritech Enterprises. To begin, I worked in the food industry for 15 years as a restaurant manager, but went back to college a few years ago to switch my career field. I just recently graduated from Central Michigan University, with a Bachelor's degree in business. My on-the-job experience includes two internships, one with a local White Lake business, and the other at Ameritech Enterprises. Though I have less experience than others in business, I believe my experience handling finances and schooling has prepared me for this job. Also, I am physical healthy and I have never been diagnosed with a mental illness in my life.

Applicant 2



My name is Jeffrey Gearhardt. I am 48 years old and I am applying for the CEO position at Ameritech Enterprises. To begin, I obtained my bachelor's degree in financing and my master's degree in business from the University of Michigan. Previously, I have worked as an Executive Director at Ameritech Enterprises for a total of 10 years helping to bring record profits to our White Lake branch. I resigned last fall to fulfill a higher position at the corporate level. I am physically healthy although I have been diagnosed with Schizoaffective Disorder, a mental illness reflecting Schizophrenia and Bipolar Disorder, my ongoing treatment and family support have allowed for my strong leadership and, ultimately, the recent success of the Ameritech White Lake branch.

Please circle your gender. MALE or FEMALE

Check the box below for the man you would hire.

Applicant 1

☐

Applicant 2

☐

Explain why you would hire the man you chose and why you wouldn't hire the opposing applicant.

Inside Psychology



A Psychobiographical to Profiling Political Leaders: Northern Ireland

by Samantha Blumberg and Clara Li

Now an integral component of the United States' foreign policy and central intelligence, the official commissioning of psychological analyses presumably began around 1942 with a description of Adolf Hitler. However, modern reflections reveal that the study was not organized into a format that would effectively aid foreign policy. Thus, a more coherent analysis was compiled in 1943. William Donovan, director of the Office of Strategic Services at the time, tasked psychologist Walter Langer with producing a thorough psychoanalysis of Adolf Hitler that would hopefully be used to guide US leaders in foreign affairs. As Langer's research and other subsequent studies quickly gained esteem in the US intelligence community, an official state program to provide personality assessments of foreign leaders was founded by Dr. Jerrold Post in 1965. This operation eventually evolved into the Central Intelligence Agency's present-day Center for the Analysis of Personality and Political Behavior (CAPPB). For the purposes of this article, we will be exploring the psychobiographical portion of the CAPPB's research as it applies to The Troubles in Northern Ireland.

This article will examine two leaders in The Troubles in Northern Ireland. The term "The Troubles" refers to the conflict between Irish nationalists and the United Kingdom as the Irish Republican Army (IRA) resorted to violence in attempting to secure Irish independence. Irish politician Gerry Adams is President of political party Sinn Féin and previously served as a MP in the British Parliament. British leader Tony Blair is a member of the Labour Party and served as Prime Minister during the Northern Ireland peace negotiations. We will examine how factors from these leaders' childhoods and early professional careers contributed to their later decisions in the political realm.

Tony Blair: Childhood

As psychobiographical research frequently reveals, a leader's childhood often has crucial influence over the development of their political personality. This certainly holds true in the case of Tony Blair. Born to Leo and Hazel Blair on May 6th, 1953 in Edinburgh, Scotland, Blair spent his early childhood in Durham, England where his father served as a Tory¹ Member of Parliament² (MP) ("Tony Blair Biography"). Leo Blair became a critical political role model for his son who later reflected, "I felt I couldn't let him down" in an interview for the *London Sunday Times* ("Tony Blair Biography"). As political psychological profiling places great emphasis on childhood mentors and role models, Leo Blair's impact on his son's political personality will be revisited during the discussion of Blair's political career. However, Blair faced tremendous hardship at an early age when a devastating stroke rendered his father mute and unable to serve in The House of Commons³ ("Tony Blair"). As a result, Blair was forced to take greater responsibility at a young age in the face of his family's mounting financial difficulties ("Tony Blair"). Arguably, this instilled Blair with a sense of self-reliance which remained central to his psychological makeup throughout his political career.

Education and Early Career

After graduating from secondary school, Blair attended Fettes College in Edinburgh where he developed an interest in music. Inspired by The Rolling Stones lead singer Mick Jagger, the

1 - Dominant conservative-leaning party in the UK

2 - Regionally elected legislator in the British House of a Commons

3 - Regionally elected lower chamber of the British Legislature

relatable, almost celebrity-like political persona Blair developed, may have had its roots in his fascination with the performing arts ("Tony Blair"). House of Lords⁴ leader Margaret Jay later remembered his first election as Prime Minister explaining, "This was like a pop idol. There were all these people sort of standing about saying, 'Tony! Tony!'" ("Tony Blair Biography"). Upon completing his college education, Blair followed in his father's footsteps by studying law at England's Oxford University. While attending the institution, Blair engaged his musical interests by performing as the lead singer of a rock band called "The Ugly Rumors" which covered the music of many notable groups including The Rolling Stones.

Upon examining Blair's early political career, it is important to note one key distinction between his politics and his father's. Although psychological profiles often reveal strong similarities between the policy decisions of consecutive generations of leaders, Blair chose to join Britain's Labour⁵ party, rather than his father's more conservative Tory Party after witnessing the miners in his home town. Blair ran for a seat in the House of Commons in 1982 as a Labour candidate, but lost the election. However, the apparent confidence and motivation engrained in Blair's psyche, likely resultant from his turbulent childhood and performance experience, led him to electoral victory the following year. A popular member of his party, Blair was appointed as the assistant Treasury spokesman in 1984 ("Tony Blair"). During his rise to power, Blair eventually succeeded John Smith as the leader of the Labour Party in 1994. As Blair began the campaign that would result in his victory as Prime Minister, his father's political influence became clear. Blair campaigned on a platform revolving around the concept of "New Labour" in which the party distanced itself slightly from its labor union roots, and focused on modernization. The psychological impact of Leo

Blair's career on his son's politics became clear as many argued that "New Labour" closely resembled the Conservative Party's structure and ideology. However, the "New Labour" campaign platform proved hugely successful as the party secured a landslide victory in 1997, and Blair was sworn in as Prime Minister on May second of the same year.

Prime Minister of the United Kingdom

Despite the incredible margin with which Blair won the election, his road to Number Ten⁶ was much more psychologically tumultuous than it appeared. As Peter Hyman, one of Blair's advisors, later revealed, "I think he was very daunted. I think he was daunted about being Prime Minister, because although he showed huge confidence in public, it was a big thing, and obviously the majority heightened expectations" (Rawnsley, 2007). The anxieties that began to plague the Prime Minister after the election could have been foretold by a Freudian-style analysis of the dreams he experienced during his campaign. British political commentator Andrew Rawnsley explained: "Before the election, Tony Blair confided to me that he had two recurring nightmares, the first, which he would lose the election, the second nightmare, which he would win, only to discover, that he wasn't very good at being Prime Minister" (Rawnsley, 2007). Although Blair effectively conveyed to his constituency a front of self-assurance and control, his suppressed anxieties would remain with him throughout his political career. Another key psychological component of Blair's leadership style was his resistance to the influence of his Cabinet. Cabinet Secretary Robin Butler later remembered an incident following Blair's redistribution of power over British interests rates into the hands of the Bank of England: "Tony Blair told me that they would like to announce it on the Tuesday, and I said, 'Well we won't have had a cabinet by then. This is surely something the government should decide,

4 - Unelected upper chamber of the British Legislature

5 - Dominant liberal-leaning party in the UK

6 - Colloquial British term referring to the address Number Ten, Downing Street which houses government headquarters

it's an important decision, and surely the cabinet should take this decision.' 'Oh no,' he said, 'No, no that's not the way we do things at all'" (Rawnsley, 2007). Potentially stemming from the self-reliance his childhood necessitated, Blair's dominion over the other members of his government would allow a political psychologist to foretell the stubbornness that characterized much of his foreign policy negotiations.

Although many considered these two factors to be psychological barriers, it is important to note Blair's incredible charisma and charm. As mentioned previously, from the beginning of Blair's administration, the Prime Minister enjoyed celebrity-like admiration and soaring approval ratings. It was this characteristic which inarguably was one of his greatest tools while attempting to broker peace in Northern Ireland.

Involvement in the Troubles in Northern Ireland

Highly praised for his role in the peace process in Northern Ireland, Blair later admitted during an interview that throughout the negotiations, he came to better understand, and even respect Gerry Adams and others involved with Sinn Féin. This ability to relate to others and capacity for empathy allowed Blair to establish the relationships necessary to reach an agreement. Blair later explained, "It was a very strange set of personal relationships that I came to have with them [...]. And those personal relationships were actually very important in [...] creating the confidence [...] that I was basically a good faith go-between" ("Tony Blair Interview," 2010). Ultimately, Blair's psychological persuasive capabilities, outward confidence, and personal accessibility proved invaluable contributors to negotiating peace in Northern Ireland.

Gerry Adams: Childhood

Gerard "Gerry" Adams was born on October 6th, 1948 in Belfast, Ireland and raised in a Catholic family that emphasized republican values ("Gerry Adams Biography"). His mother was a member of Cumann na mBan, the women's branch of the Irish Republican Army

(IRA), and his grandfather was a member of the Irish Republican Brotherhood that dedicated efforts to the establishment of an independent democratic republic during the Irish War of Independence ("Gerry Adams"). Furthermore, his great-grandfather was a member of the Fenian Brotherhood, a political organization that later became a secret revolutionary group that was subject to suppression ("Gerry Adams"). The Brotherhood rebelled against British rule in Ireland and rallied for the establishment of an Irish Republic (Vronsky). These influences within his family suggest that their views highlighting Ireland's independence resonated with Adams and prompted his participation in the IRA at sixteen years of age. Adams was raised with strong values supporting the unification of Ireland and consistently had models of dedication and allegiance to one's beliefs and country. Adams would later take these examples of commitment and loyalty as he would become more involved in Irish political affairs, such as the peace negotiations leading up to the Good Friday Agreement. Although Adams was raised with these values, he was also in an environment that included the physically and sexually abusive father presence ("Gerry Adams Biography"). In addition, in recent years Adams' brother has encountered similar allegations ("Gerry Adams Biography"). It can be argued that because of the lack of a supportive father figure, Adams supplemented that by becoming more dominant and controlling himself.

Early Involvement and Context of Times

In Adams' young adulthood, he increasingly became active in social and political issues in Northern Ireland. His dedication to the IRA is highlighted by his involvement in the 1942 ambush of the Royal Ulster Constabulary, Northern Ireland's police force, and his subsequent arrest and imprisonment ("Gerry Adams"). After his release he continued to be involved in the Irish republican movement as he became a member of Sinn Féin and Fianna Éireann, a military-style youth organization created by a member of the Irish Republican Brotherhood ("History of Na Fianna Éireann").

Throughout his childhood, Adams likely learned from family members about their experiences in organizations such as the Irish Republican Brotherhood and the Fenian Brotherhood. Therefore his involvement in the IRA and Fianna Eireann are ways in which he could continue to foster his republican beliefs and sustain the legacy of fighting for unification and independence. Adams later became more involved with the political side of the Irish movements. He first handily witnessed British intervention in Northern Ireland affairs, which could have strengthened his own nationalistic beliefs. In addition, he could have used experiences during protests and IRA activity to better represent these paramilitary groups in political affairs, a skill that would be key leading up to the Good Friday Agreement.

There was political unrest as well, for example, the passage of the Special Powers Act of 1922 which allowed the Northern Irish government to act in order to preserve peace and maintain order. This included a regulation that permitted internment without trial. Adams was interned two separated times ("Gerry Adams TD"). However, he was released shortly from his first internment in order to participate in secret negotiations in London ("Gerry Adams TD"). He was one of the representatives of the IRA in discussions with the British Parliament that resulted in a short-lived truce ("Gerry Adams TD"). Adams therefore has a history of negotiations with Parliament and started becoming more involved in developing relations with members of other parties. Adams has, however, never explicitly admitted to being a member of the IRA, and was interned only on suspicion. His claim continues today, as he denies his involvement. During his second imprisonment he spent his time writing political articles for Sinn Fein's newspaper *An Phoblacht* that criticized the strategies and policies of Ruairí Ó Brádaigh and Billy McKee ("Gerry Adams"). He also criticized McKee's decision to assassinate members of the other branch of the IRA, who had been on a ceasefire since 1972. It is interesting to see how, although he has been around such violence and social and political

unrest, he continues to be firm in his beliefs that center on peace and negotiation. For, according to Adams, the emphasis should continue to be around a "united Ireland. We believe that an Ireland independent of Britain, in which the people are sovereign, and where citizens are treated on the basis of equality, is the way forward" (Varacalli, 2006).

Political Career

Originally Adams supported conjoining Sinn Fein's political activity with armed struggle, however he later helped redirect the party to start legitimizing its political base and grounding its influence through electoral politics rather than through paramilitarism in the Provisional IRA. Adams, under the pseudonym "Brownie" contributed articles to the *Republican News* that worked to cultivate political activity, especially on the local level ("Gerry Adams"). This rally resonated with the younger generations, many of whom were active in the Provisional IRA but not necessarily in Sinn Fein. Just as his family has inspired and strengthened his allegiance to Ireland, Adams may have wanted to continue that legacy, for he stated "that this generation will be the one which finally, successfully concludes Ireland's long struggle for freedom" (Varacalli, 2006). Through his family's his own involvement in numerous nationalist organizations and activities, Adams understands the necessary enduring dedication towards the ultimate goal of peace and unification.

Peg Hermann developed the Personality at a Distance (PAD) method which uses content analysis, "a technique for making psychological inferences about politically relevant aspects of the personality of political actors from the systematic, objective study of written and transcribed oral material," to examine leaders' attributes (Mastors, 2000). The method studies interviews to collect data because it is considered "spontaneous material" compared to previously drafted speeches (Mastors, 2000). Although elements of positive self-presentation can be present, the interviews generally can be used to evaluate a leader's personality (Mastors, 2000). Through this method, Adams, compared

to 53 other leaders, had high levels in characteristics such as nationalism, need for power, need for affiliation and distrust of others, while average in belief in ability to control events, conceptual complexity, self-confidence, and task (Mastors 2000). Adams' high need for affiliation highlights his concern over how others view him, which leads him to seek peaceful relations with the opposition (Mastors, 2000). This can be represented through his involvement in secret negotiations with the British Parliament. The combination of the importance of others' perception "with his high need for power, nationalism, and distrust, suggests that he will go to great lengths to be heard as a major participant in the task at hand"(Mastors, 2000). Adams' involvement in the Good Friday Agreement negotiations and other political and social issues correspond to his need to be heavily involved and the leader in affairs.

Involvement in the Good Friday Agreement

In 1988 Adams began secret talks toward a settlement with the Social Democratic and Labour Party (SDLP), initiated by SDLP leader John Hume (McIntyre, 2004). These negotiations led to the IRA ceasefire in 1994, however, the slow rate of development and challenges within the British government led to end of the ceasefire (McIntyre, 2004). Later, with the help of former United States Senator George Mitchell, parties from the British and Irish governments, the Ulster Unionist Party, the SDLP, Sinn Fein, and representatives from the loyalists paramilitary groups, produced the Belfast Agreement, also known as the Good Friday Agreement (McIntyre, 2004). This agreement created a power-sharing government in Northern Ireland and stated that there would be no change in the region's location in the UK or become part of Ireland without the consent of the majority ("Gerry Adams TD"). Adams, when addressing this negotiation, highlighted how the agreement contributed to the unification of Ireland through non-violent and constitutional means. Four months after the signing, the Real IRA planted a car bomb in Omagh, County

Tyrone, and led to Adams' first condemnation of their actions, stating that this "violence must be a thing of the past" ("Republican Splinter Party") His declaration contrasts with the previous policy of refusal to denounce the IRA and their splinter groups' actions. For, he understood the political ramifications of this act and how it will create more tension between the two regions and this newly established agreement. Adams further declared that "The principles, structures and obligations of that Agreement cannot and will not be subverted. We are determined to see the Agreement implemented, and a new dispensation of peace and justice on this island" (Varacalli, 2006).

Conclusion

Despite Tony Blair and Gerry Adams' contrasting political beliefs, experiences, and psychological background, they were ultimately able to reach a relatively peaceful resolution to The Troubles in Northern Ireland. Due to their shared emphasis on negotiation and compromise, the leaders effectively cooperated and contributed to the development of The Good Friday Agreement which mitigated the conflict by establishing a devolved government in 1999.

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Photographic Memory

Annabelle Scully and Kendall Wiss
Walt Whitman High School

Memory, the ability to retain, reactivate, and reconstruct experience, is a part of our daily lives. Short-term memory, also known as working memory, is the information we are currently thinking about. In Freudian terms, short-term memory is known as the conscious mind. The parietal lobe manipulates the brain to store short-term memories. Most of the information kept in short-term memory will be stored for approximately 20 to 30 seconds. While many of our short-term memories are quickly forgotten, attending to this information with active rehearsal and maintenance allows it to continue onto the next stage - long-term memory. Long-term memory is stored in many places, as there are two types; declarative and procedural. Declarative memory is information about the world, either semantic (facts) or episodic (people and/or events). Non-declarative memory is the unconscious element of memory. These types of memories include procedures and habitual activities.

Recent studies show that adrenaline helps form memories; meaning people are able to clearly remember days when adrenaline is rushing (*Dartmouth*, 2010). This makes it easy for people to remember details about what they were doing on days such as 9/11 or the day when Osama Bin Laden was assassinated. But some individuals don't need adrenaline rushes to enhance their memories. These people experience eidetic imagery, which is the closest thing neurologists have found to a photographic memory. When a person with an eidetic memory is shown a new image for only 30 seconds, they can vividly describe the image as if it were still right in front of them (Stahl, 2010). Studies show that eidetic memory usually comes from a genetic mutation or rare environmental factors.

Another form of extraordinary memory appears in people with Superior Autobiographical memories. These people are able to vividly remember many years of their lives in detail. Some people can remember everything since they were only 7, while others can remember everything since they were about 20. Superior Autobiographical Memory is so new to doctors that it's not even in textbooks yet. People with Superior Autobiographical Memory have higher levels of adrenaline and they engrave every memory into their brain (Stahl, 2010). Neurologists, McGaugh and Cahill, have met and completed studies on five outstanding individuals with this ability (Stahl, 2010).

One such individual is Louise Owens. She's a thirty-five year old, single, violinist living in New York (Stahl, 2010). When asked what having Superior Autobiographical Memory is like, she replies, "It's as simple as someone asking me where I live or what my name is". She can remember everyday of her life from the time she was eleven years old. Everyday she thinks, what can I do to make this day stand out amongst every other day of my life?

Marilou Henner, actress, wife, and mother of two, loves having a Superior Autobiographical Memory because she wins every argument. On a more serious note, she says it helps remarkably with her acting career and everyday organization. Henner also admits that her ability makes her a bit OCD (Stahl, 2010). She organizes her closet by color-coding her clothing items and placing them in the order she remembers last wearing them.

A 41 year old woman, who chose to remain anonymous, is able to remember everyday of her life since she was 11. She says her memory flows like a movie and she is able to

remember the date and time something happened and details about events at that time (Goldstein, 2006). Some scientists who have observed her have hypothesized that she has hyperthymestic syndrome. A condition simple meaning she possesses and extremely detailed autographical memory.

Another individual famous for his fantastic memory is Kim Peek. Peek was born with severe brain abnormalities. He was unable to dress himself or even brush his teeth without assistance and he found metaphoric language incomprehensible and conceptually baffling (Foer, 2007). As Peek grew older he discovered that he could read facing pages of a book at the same time, each page with one eye. In his lifetime he read 12,000 volumes and was able to read a page in 8-10 seconds (Foer, 2007). Not only was Peek able to read quickly, he could remember what he read in incredible accuracy. Most people with incredible memories like Peek's are only able to recall a depth of knowledge in one field, but Peek had a wide range of interest and could instantly answer very specific questions on subjects ranging from history to sports and even pop-culture (Weber, 2009). Dr. Darold A. Treffert referred to Peek as a "mount Everest of memory". Peek has memorized area codes and zip codes in the United States and can attach them to television stations. He has skills like mapquest and can identify classical compositions (Weber, 2009). While listening to a piece he is able to identify the composer, when it was first performed, biographical detail about the composer, and the formal and tonal components of the music.

Drs. McGaugh and Cahill met with a few of these people who have amazing memories

(Stahl, 2010). They talked about their experiences and shared several characteristics of their memories. They all agreed that their minds didn't feel cluttered all the time as some people assumed. They also all said that on several occasions they've been asked, "What's the trick?" for having a Superior Autobiographical Memory? They all said they laugh and respond, "I just feel it".

Although it has not been proven that people with superior memories can take mental pictures of something they see and store it in their brain forever, people with Superior Autobiographical Memory describe their experiences as very similar (Dartmouth, 2010). Most people with advanced memories, who are asked about the process they go through in their mind to recall memories, say they literally go through vivid scenes in their mind of what they were wearing or doing on a particular day and just backtrack through several years to arrive at a certain date (Stahl, 2010).

Recently McGaugh and Cahill took MRIs of individual's brains and surprisingly found the temporal lobe and the caudate nucleus in each individual's brain were larger than normal (Stahl, 2010). The temporal lobe is usually responsible for destroying memories, while the caudate nucleus is responsible for the ability to create habits (Dartmouth, 2010). The enlargement of both structures might have caused an adverse effect in the temporal lobe.

Some may describe these people's incredible memories as photographic, since they are able to remember such specific and vivid detail, but scientists don't even apply this term to people with this amazing set of memories.

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