

Saint Peter's University

The Effects of Stress on Leadership Behavior:  
Examining Jesuit Leadership in a Modern World

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Honors Thesis  
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## Abstract

A former Jesuit seminarian once said that we are all leaders and we are leading all of the time (albeit poorly in most cases). The concept of Jesuit leadership holds that a leader is the architect of his or her life and master of the world around them. Through taking the initiative to lead in areas of challenge, great or small, a leader dares to achieve positive change their objective and act when it is easier to be passive and uncaring. Because the Jesuits believe that everyone is a leader, this entails that everyone can practice, learn, and train to become a greater leader than they were before. More now than ever does the world offer chances for everyone to assume leadership. According to the World Economic Forum, 86% surveyed believe that the world is in a leadership crisis.<sup>1</sup> If anything, the world needs more better-trained, charismatic, and inspirational leaders.

However, this call to leadership in the 21st century and the notion that anyone can lead faces challenges from old schools of thought and, more recently, new evidence to the contrary. According to Gallup's *State of the American Manager*, which is an annual report building on a body of extensive research of management teams in the corporate world for over 40 years, 7 in 10 people are unfit to lead regardless of leadership training or experience<sup>2</sup>. Alongside this data, Gallup suggests that the corporate world's promotion and hiring practices for leadership and management roles cost business \$319 billion to \$398 billion annually.<sup>3</sup> This information challenges the fundamental concepts of Jesuit leadership, not just that some are talented leaders.

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<sup>1</sup> World Economic Forum, "Lack of Leadership."

<sup>2</sup> Gallup, "State of the American Manager," 3.

<sup>3</sup> Gallup, "State of the American Manager," 6.

## Introduction

This introductory section will define the study of leadership, the growth of leadership opportunities throughout history, and how recent findings have challenged the existence of this study. These subjects lead to the purpose of this thesis: to ascertain the impact that stress has on leadership behavior and whether it can improve or hinder those behaviors.

### *The Study of Leadership*

The study of leadership teaches how best to take command through social influence in situations so one may achieve optimum results.<sup>4</sup> At its core, the study is an analysis of leadership framework in which three actors play a role: the leader, the follower, and the situation. The emergence of this field in academics occurs as some scholars moved from the, "...quiet world of high academe and into the world of practical affairs."<sup>5</sup> The worlds of business and military, which both serve as prime examples of leadership-oriented fields, both fueled and drew from this study early from its conception. Currently, the leadership research, while still prominently business and military, can be easily integrated into the study of many other professions.

### *Growth in Leadership Opportunities*

It was once believed that those in charge were born with special talents that lend themselves to the challenge of leadership. These trace their origins to the time of Roman republics and Greek democracy. However, the cultural relevance of these systems concerning leadership becomes a mere reference when based in the context of the post-Rome Middle Ages.

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<sup>4</sup> Kruse, "What Is Leadership?"

<sup>5</sup> Farberman, "Essays in Interactionist Sociology." 1.

History teaches that certain people claimed the divine right to rule. Historically, this can be seen in the practice of primogeniture, which is the inheritance of a throne from King to the firstborn son. This practice in history has led to the “risk of having incompetents rule the state.”<sup>6</sup> So, largely in the past, leadership was limited in scope to social standing as opposed to skill.

During the Enlightenment period, thinkers of the time changed the notions of who can rule and who determines that decision. As opposed to primogeniture, social contract theorists such as John Locke argued that the, “...obligation to mutual love amongst men on which he builds the duties they owe one another,”<sup>7</sup> is the foundation of society. As opposed to a God granting divine right upon a monarch to rule over the people, Locke argues that the people reserve the right to choose their leader.

In more recent times, corporate America subscribed to the Great Man Theory, in which leaders were thought to be born endowed with leadership abilities. If great men and women exist by birth, there would be no need to seek guidance from history, practice, or research to improve leadership skills. In contrast to this theory, an expanding body of leadership study challenges this notion to explore situations of leadership, the factors involved, and to transform its students into better leaders.

In contemporary leadership study, the Great Man Theory has been overwhelmingly discarded and thrown away from the focus of this field. However, there is a recent body of evidence collected by Gallup that, in part, affirms this old world theory that some are born to lead and others to follow. In a 40 year-long study involving 2.5 million manager-led teams and 27 million employees<sup>8</sup> of corporate teams, Gallup has gathered research suggesting that not every person can be a leader. According to this research, only 1 in 10 people possess the traits necessary to lead and manage a team.

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<sup>6</sup> Kokkonen, and Sundell. "Delivering Stability," 438.

<sup>7</sup> Locke, "Second Treatise," 107.

<sup>8</sup> Gallup, "State of the American Manager," iii.

The research also states that 2 of 10 in a group statistically demonstrate some of the traits leaders need and can be coached. While this study gives hope that 3 of 10 people can be leaders in some fashion, stating that 70% of people are best suited as subordinates carry cynical implications beyond the world of business.

### *Performance versus Behavior*

The study of leadership has taught the relationship between stress and performance variables, knowing that there is an optimal blend of the two which accomplished peak performance. However, the research on the relationship between stress and performance fails to include a behavioral component. Strong leadership behaviors are paramount in establishing trust and cohesiveness within a team. Often, people in leadership positions fail to exude peak leadership behavior and, while achieving desired results, may not establish a sustainable team dynamic with subordinates.

### *Purpose of Thesis*

Chris Lowney, an author on Jesuit Leadership, once wrote that “Everyone is a leader, and everyone is leading all the time,”<sup>9</sup> and mostly, people are failing most of the time. This thesis seeks to examine this assertion by Lowney.

This thesis seeks to ascertain the impact of stress on leadership behavior, the relationship between stress, performance, and behavior, and whether peak leadership behaviors can be achieved through experiencing a specific level of stress. While it is well known that stress impacts performance to a degree, if the same goes for behavior, then there should be a certain level of stress which maximizes both variables.

If the results from Gallup are true for all leadership, then there is no use in training someone to be a leader. The world would be better off seeking those with these traits

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<sup>9</sup> Lowney, “*Heroic Leadership*,” 17.

than training others to build them. Furthermore, while the study of leadership teaches that people rise to lead when challenges arise, these findings remove the opportunity for leadership from 70% of people.

Ultimately, if there is an optimum level of stress to achieve optimum levels of leadership behavior, this research can serve as a justification for the study of leadership.

## Literature Review

To begin researching the relationship between stress and behavior in leadership, one must review the large body of research on stress and performance. This section compiles research on stress and performance, styles of leadership, and the few studies of leadership behavior and stress in existence.

### *Yerkes-Dodson Law*

The link between stress and performance has been known in the world of psychology since 1908 with the advent of the Yerkes-Dodson Law. Yerkes and Dodson, two psychologists in collaboration, performed experiments to determine how states of arousal varying by intensity impact performance. Specifically, the psychologists devised a box course with two exit boxes (black and white) in which rats were expected to exit through the white box.<sup>10</sup>

When a rat attempted to exit through the black box, and the electric shock of varying intensity would be administered via an electrode inside of the black box. Success was defined as the rat, "...choosing correctly in every test on three consecutive days."<sup>11</sup>

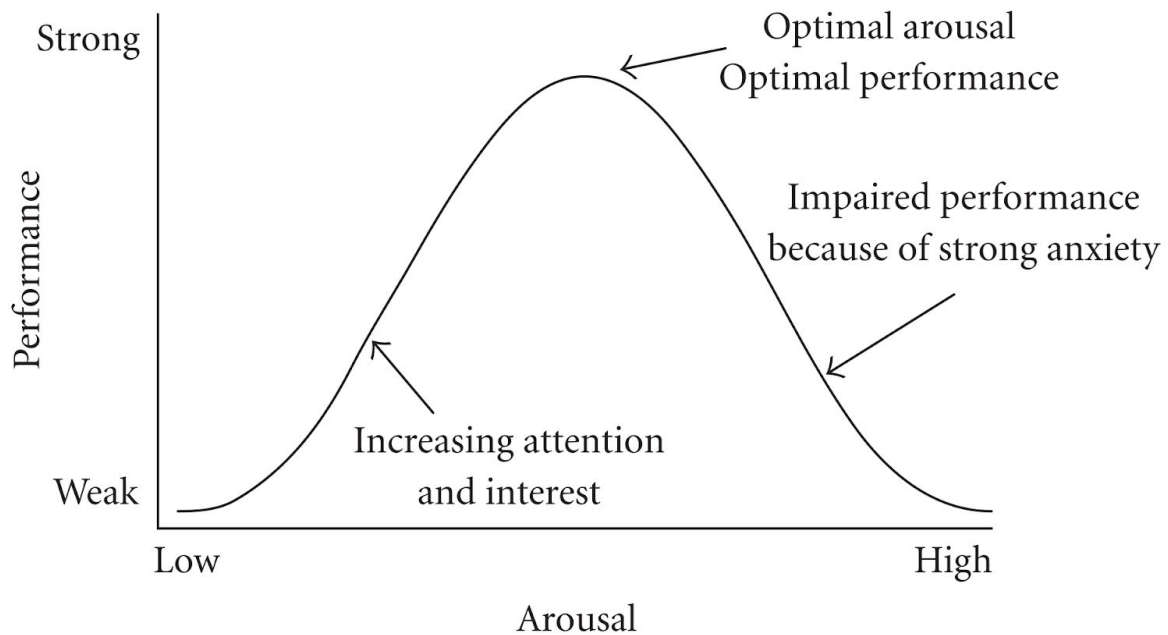
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<sup>10</sup> Yerkes and Dodson, "The Relation of Strength of Stimulus to Rapidity of Habit Formation," 1.

<sup>11</sup> Yerkes and Dodson, "The Relation of Strength of Stimulus to Rapidity of Habit Formation," 7.



(Figure 1)



From the set of experiments performed, as shown in the figure above, Yerkes and Dodson determined that low and high-intensity shocks were equally poor in their effects of deterring undesired performance, while medium level intensity was significantly more effective. These findings established the Yerkes-Dodson Law, which states that performance is highest when a subject experiences a certain level of stress. Medium level stressors make the subject fully conscious of their actions while low levels lead to an unaware state and high levels create states of high stress for the individual.

Admittedly, Yerkes and Dodson acknowledged the gaps inherent in their research. They disclosed that their test was limited to only three inputs of arousal. In review, this experiment creates a situation that links behavior and performance when those variables are often separated. If this test was more detailed in levels of arousal and

task complexity, the pair psychologists could have greatly expanded their findings from this study<sup>12</sup>.

Despite these admitted shortcomings, the Yerke-Dodson law has become a well-known principle in examining human performance, particularly in the field of leadership. Further studies of this concept in the context of business have consecrated the Yerkes-Dodson Law into the study of leadership. Firstly, this experiment was redone in essence in the field of psychology with the use of other animals. These findings were proven in animals twice more after psychologists recreated the same experiment with cats<sup>13</sup> and kittens.<sup>14</sup> The findings of each study determined there to be an inverse U-curve between arousal (stress) and performance, where the performance of a participant increases with medium level arousal and decreases with low and high-level arousal. From this point, the implications of the original study became known as the Yerkes-Dodson Law, which grew to universal application in studies ranging from education, business, leadership, psychology, and beyond.

Despite the prevalence of the Yerkes-Dodson Law, there is a base of criticism surrounding the famous rat experiment. There are many ways for research of this general scope to lead to errors. For instance, Yerkes and Dodson admit in their original paper that there were plenty of pathways to follow that their research did not entertain, such as examining a greater variety of shock inputs or implementing positive reinforcement for successful performance.<sup>15</sup>

Notably, some psychologists, to contribute to this phenomenon, manipulated the method of display for their findings to mimic an inverted U-curve when, in reality, the findings are far from the Yerkes-Dodson Law.<sup>16</sup>

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<sup>12</sup> Yerkes and Dodson, "The Relation of Strength of Stimulus to Rapidity of Habit Formation," 18.

<sup>13</sup> Cole, "The Relation of Strength of Stimulus to Rate of Learning in the Chick."

<sup>14</sup> Dodson, "The Relation of Strength of Stimulus to Rapidity of Habit-Formation in the Kitten."

<sup>15</sup> Yerkes and Dodson, "The Relation of Strength of Stimulus to Rapidity of Habit Formation," 17.

<sup>16</sup>Corbett, "From Law to Folklore: Work Stress and the Yerkes-Dodson Law," 742.

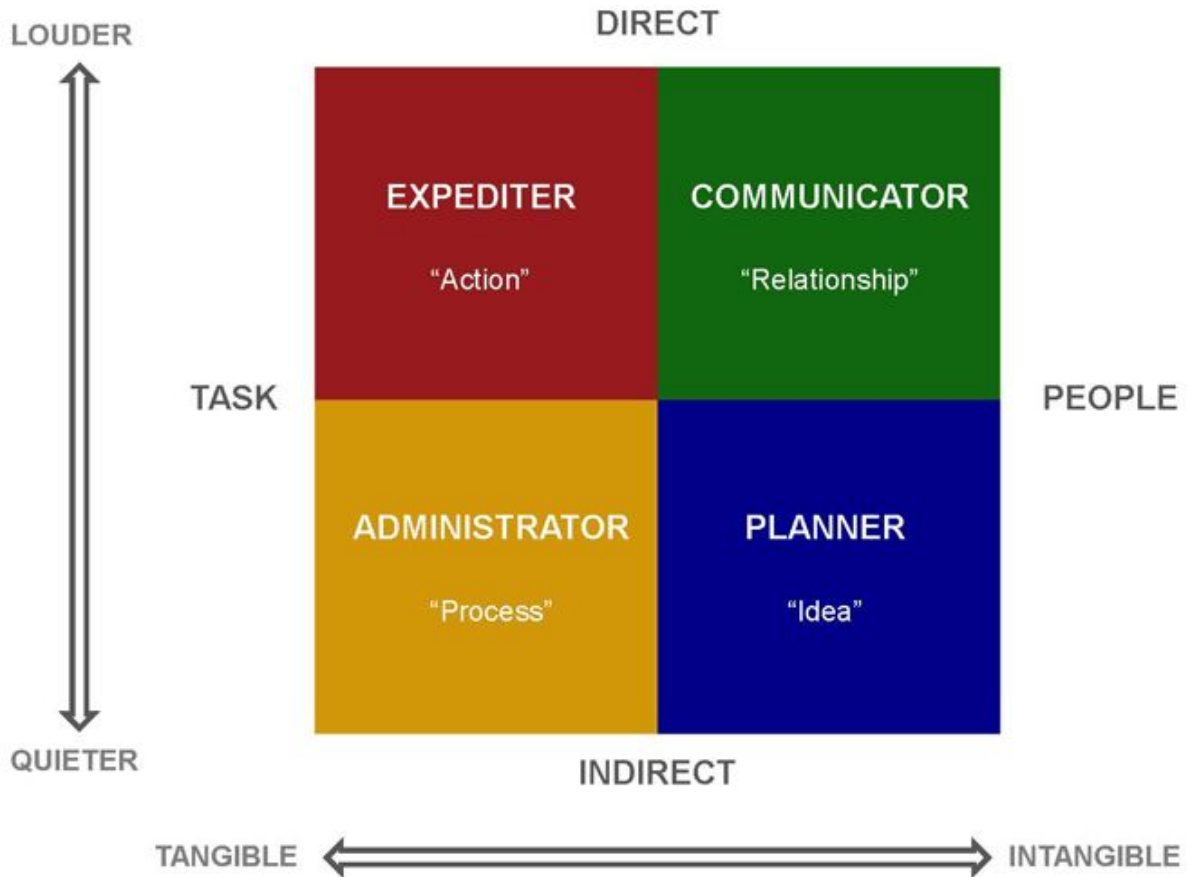
### *Acknowledgment of the Birkman Method*

The psychologist, Roger Birkman, wrote his doctoral dissertation on developing a personality test based on a person's interests, relaxed behaviors, and stress behaviors.<sup>17</sup> During World War II, he experienced a radical change in behavior among his peers when their bomber was shot down and they were forced to parachute in enemy territory and seek refuge. He noticed that his peers acted unlike themselves when they were training and operating in a low-stress environment, but once they entered this situation, his peers' behaviors radically changed. With this as the inspiration for research, Birkman assessed that there were four quadrants of personality and four aspects to each person's personality. Each quadrant of personality represented an interest, regular behavior, a social need, and stress behavior found within people. The social need and stress behavior rest atop each other, as the failure to meet one's social need sparks their stress behaviors. Likewise, people have personality variables that land in all one quadrant, mostly one quadrant, or one in three of four quadrants.

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<sup>17</sup> Fink and Capparell, *The Birkman Method: Your Personality at Work*, 10

(Figure 2)



This dissertation is the basis for the Birkman Method personality test, which is shown in the figure above. Participants complete personality assessments to discover the locations of their personality variables on Birkman's quadrant. From this, participants can learn about their needs and wants, particularly in the workforce. In addition, participants can determine their strengths and understand their personality weaknesses.<sup>18</sup>

While the organization that proctors this personality test notes there is no personality trait, tendency, or behavior that is better or worse than another, the definitions of

<sup>18</sup> Fink and Capparell, *The Birkman Method: Your Personality at Work*, 4

these innate tendencies denote a preference for leadership aptitude. In conjunction with the Gallup results that state managers are largely born, sometimes coached, but never made, the organization can refer to this personality test as a proof-of-concept.

The acknowledgment of this personality test must be made considering its relevance to the content of this thesis. At first, the discovery of this crushed the hopes to assess a leader's behaviors in situations of stress. If a person has an innate stress behavior that is either aligned with strong leadership or weak leadership, then Gallup's research may be correct. If true, then along with the Gallup research, there is no need for academic studies of leadership. However, there are points to refute this determinist notion.

### **In Rejection of Determinism based on the Birkman Method**

#### Tendencies are not Actions

While leaders may have behavioral tendencies when experiencing stress, such as withdrawal or over-assertion, tendencies themselves are not the ultimate action of a person. Instead, tendencies are inclinations within people, so they do not necessitate improper actions that create poor leadership. The Birkman Method admits to this truth in that coping mechanisms for ill-advised stress behaviors exist for each tendency. For instance, the method recommends those that experience withdrawal take frequent breaks to muster energy, develop plans to avoid confusion, and accumulate strength to combat the inclination to feel fatigued while in stress.

#### Personality is Ever-Evolving

Nowhere can it be found that personality is a set piece of human consciousness. This thesis posits that all people can change over time and shift their tendencies and behaviors to their situation, for better or worse. In essence, this belief is the core of the study of leadership. Everyone can be a great leader if they behave as such, even if those behaviors are contrary to one's personality preferences and inclinations.

## *Styles of Leadership*

The following section outlines an academic review of the major styles of leadership that a leader can exhibit. Each leader can be classified in one of these styles and can switch between them, consciously or intuitively, depending on the situation at play. Likewise, under the lens of academic research, not all leadership styles are equally effective. The styles under review are transformational leadership, transactional leadership, laissez-faire leadership, and consideration leadership. The following descriptions are based on a study by Jens Rowold and the work of Anders Skogstad, Ståle Einarsen, Torbjørn Torsheim, Merethe S. Aasland, and Hilde Hetland.

### Transformational Leadership

Transformational Leadership is the act of a leader transforming the values and interests of the team to join in a shared vision. Ultimately, the leader hopes to lead a team that performs beyond expectations.<sup>19</sup>

### Transactional Leadership

Transactional Leadership is the transaction-like approach between a leader and follower in which the leader sets forth the follower's role and the follower completes it for a reward.<sup>20</sup> In a way, the opposite of transformational leadership. While transformational leaders care about their team's values and interests, transactional leaders do not. The only identity that the transactional leader sees in that of a subordinate; one which can be replaced if necessary. So, in a field of high attrition such as retail,<sup>21</sup> this style of leadership performs better. However, it is not behaviorally geared to lead a successful team in the long-term.

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<sup>19</sup> Rowold, "Relationship between Leadership Behaviors and Performance," 630.

<sup>20</sup> Rowold, "Relationship between Leadership Behaviors and Performance," 630.

<sup>21</sup> Korn Ferry, "Retail Employee Turnover Up."

### Laissez-Faire Leadership

Laissez-Faire Leadership is often considered the least effective form of leadership. By definition, it is the absence of leadership.<sup>22</sup> Potentially, a team with considerable skill can work autonomously under an absent leader, but this tends to fail in comparison to the other styles. The practice of Laissez-Faire Leadership tends to bring destruction to many teams. This style can lead to bullying and harassment,<sup>23</sup> post-traumatic stress disorder,<sup>24</sup> and overall distress.<sup>25</sup>

### Consideration Leadership

According to Rowold, Consideration Leadership is when a leader places individual attention for each team member to build comprehension of goals and objectives as well as to provide coaching in the moment.<sup>26</sup> In particular, considerate leaders tend to do well with teams high in gender diversity.<sup>27</sup>

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<sup>22</sup> Rowold, "Relationship between Leadership Behaviors and Performance," 634.

<sup>23</sup> Skogstad, et. al., "The Destructiveness of Laissez-Faire Leadership Behavior," 84.

<sup>24</sup> Skogstad, et. al., "The Destructiveness of Laissez-Faire Leadership Behavior," 85.

<sup>25</sup> Skogstad, et. al., "The Destructiveness of Laissez-Faire Leadership Behavior," 86.

<sup>26</sup> Rowold, "Relationship between Leadership Behaviors and Performance," 634.

<sup>27</sup> Rowold, "Relationship between Leadership Behaviors and Performance," 640.

## Experiment

Thus far, this paper has examined scholarship in the field of leadership with a focus on behavior and stress. An experiment was devised to ascertain the relationship between stress and leadership behavior. As it deals with human subjects, all necessary requirements have been met through the Institutional Review Board to ensure proper processes were followed and consent was received. The following section is on the experiment phase of this thesis. It details the leadership simulation, the objective of the participants, and the rubric for measuring the participants.

### Leadership Simulation: Evaluating Behaviors

In essence, this leadership situation is in furtherance to the Yerkes and Dodson experiments from 1908, only this time, in a leadership context.<sup>28</sup> In a general sense, the Yerkes and Dodson experiments placed a participant in a weak situation<sup>29</sup>, in which stimulus is intended to lead the participant towards a favorable outcome. For this leadership simulation, this research will evaluate selected simulation criteria of effective leadership behaviors over the time of the simulation against stress levels to determine correlations and causations between the two variables.

### BA-322 - Goldman Sachs College Collaborative Program 4.0

The BA-322 class component to the Saint Peter's University Team as they compete in the Goldman Sachs Local College Collaborative Program 4.0 (GS LCC) will serve as the experiment for this thesis. The course's variety of different stress environments along with its collaborative team dynamics into a field where many lack experience makes for an objective area of observation. Through observing the two 5 person teams in

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<sup>28</sup> Yerkes and Dodson, "The Relation of Strength of Stimulus to Rapidity of Habit-Formation."

<sup>29</sup> Snyder and Ickes. "Personality and Social Behavior."



this course, data will be collected on each leader's execution or failure to exercise effective leadership behaviors.

There are key elements within this course that create high-stress environments. The closeness of collaboration to work on projects that are unfamiliar to the participants, followed by the close evaluation of the course instructor and scrutiny of coaches creates high-stress levels. Likewise, teams have close deadlines to meet for each project. Oftentimes, these stress factors heighten the conflict within each team, which requires strong leadership to overcome.

#### Collaborative Leadership Seminar

While the observation of BA-322 serves as a measure of varying stress levels, an evaluation of their tasks in a control group without any stress component would serve as a body of work to compare against. In this way, they can demonstrate behavior at all levels of stress, including none at all. To create this control group, a one-day conference titled the Collaborative Leadership Seminar (CLS) was conducted. This conference serves as a way for students, most of whom show interest in participating in the GS LCC the following term, to gain relevant experience through solving business challenges in the style of the BA-322 class. While students participated in the stress-free conference, their resulting behaviors were compared against the BA-322 class as a control group.

In an attempt to create a low-stress environment, certain measures were taken to ease the stress on participants. The conference began with a group mindfulness exercise focused on calming the participants into a state of relaxation. In addition, teams were offered refreshments during the program and ample time to work within their teams on their business challenges.

## *Simulation Criteria*

The following criteria serve as the behavioral assessment for the leadership simulation. This set of criteria is based on the criteria for the Collegiate Leadership Competition<sup>30</sup> and the criteria for effective managers set forth by Gallup in *State of the American Manager*<sup>31</sup>. Each measurement is either taken directly from either source or is a combination of the two. Likewise, each behavior is listed in stage order from the beginning to the end of leadership interaction except for the final behavior which is constant throughout the leadership interaction.

### 1. Situational Analysis

The first step in problem-solving is correct problem identification. A great leader can analyze a situation quickly and holistically so that the team can effectively address it. This section of the rubric will measure the leader's ability to recognize and understand the objectives set forth, rules of the activity, and communicate those aspects to the team<sup>32</sup>.

### 2. Listing Strategies

A great leader facilitates strategy discussions among the team to develop creative and successful solutions. This element of the criteria measures the leader's ability to facilitate discussion, explore multiple pathways, find creative approaches, thoroughly explore options, and swiftly move to the next phase.

### 3. Forming Consensus

Regardless of how skilled a leader may be, teams are bound to experience conflict. In this leadership simulation, conflict may arise in the brainstorming phase, in particular. Part of a leader's role is to mitigate conflicts and drive the team towards

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<sup>30</sup> Collegiate Leadership Competition, "Solve - Skill Sheet."

<sup>31</sup> Gallup, "State of the American Manager," 12.

<sup>32</sup> Collegiate Leadership Competition, "Solve - Skill Sheet."

consensus. This element of the criteria measures the leader's ability to determine the best path forward, as well as mitigate conflict that may arise.

#### 4. Assign Roles & Create Accountability

Effective leaders create a culture of accountability in their teams<sup>33</sup>. Part of this culture-setting task is to assign roles to team members, focusing on their strengths rather than their weaknesses. This point in the rubric measures the leader's ability to assign appropriate roles to team members and their ability to create accountability within the team.

#### 5. Evaluating Results

A great leader is constantly learning from past experiences to improve and better solve the problems of the future. During and after the leadership simulation, this element measures the leader's evaluation of progress and learning from results during and after the experiment.

#### 6. Assert, Relate, and Motivate

This last measurement is a series of 3 related behaviors that leaders should demonstrate consistently through a leadership interaction. Likewise, these behaviors differentiate a leader with strong referent power<sup>34</sup> from those that do not possess this influence.

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<sup>33</sup> Gallup, "State of the American Manager," 12.

<sup>34</sup> Raven and French, Jr., "The Bases of Social Power," 266.

### *Measurement of Criteria*

Below is an example of the tool used to measure the aforementioned criteria. This rubric tracks a leader's effectiveness in each category against the level of stress the situation creates on a scale of 1-5, 5 being the most effective or most stressful respectively. These data points are tracked on a 5-minute basis.

Rubric	Time & Description (minutes)						
	(Start of Situation)						
Criteria	0	5	10	15	20	25	30
Situational Analysis							
Listing Strategies							
Forming Consensus							
Roles & Accountability							
Evaluating Results							
Assert, Relate, and Motivate							
Stress Level							

## Results & Analysis

### Results

Below are the results of the leadership simulations. These results are visualized as scatter graphs, demonstrating the relationship between stress level and quality of behavior on a scale of 1 to 5.

#### *Potential for Error*

It is important to acknowledge the potential for error that may have impacted this experiment. Below are some key areas that may have been impactful:

#### Perception of Qualitative Data

Part of this experiment was the assessment of the general stress level and the quality of leadership behaviors. It is possible that participants may have felt a greater or lesser impact from the generally measured level of stress.

#### Small Sample Size

There were a total of 17 participants in these experiments. It is certain that a larger sample size would garner more points of data, which could potentially yield different results.

#### Limitations in Observation

This experiment had a sole observer, so in the CLS, the observer would spend shifts tracking data between the two teams in separate rooms. In the time between observations, it is possible that valuable data may have gone unobserved, which could have impacted the findings of this thesis.

#### Challenge of Anonymity

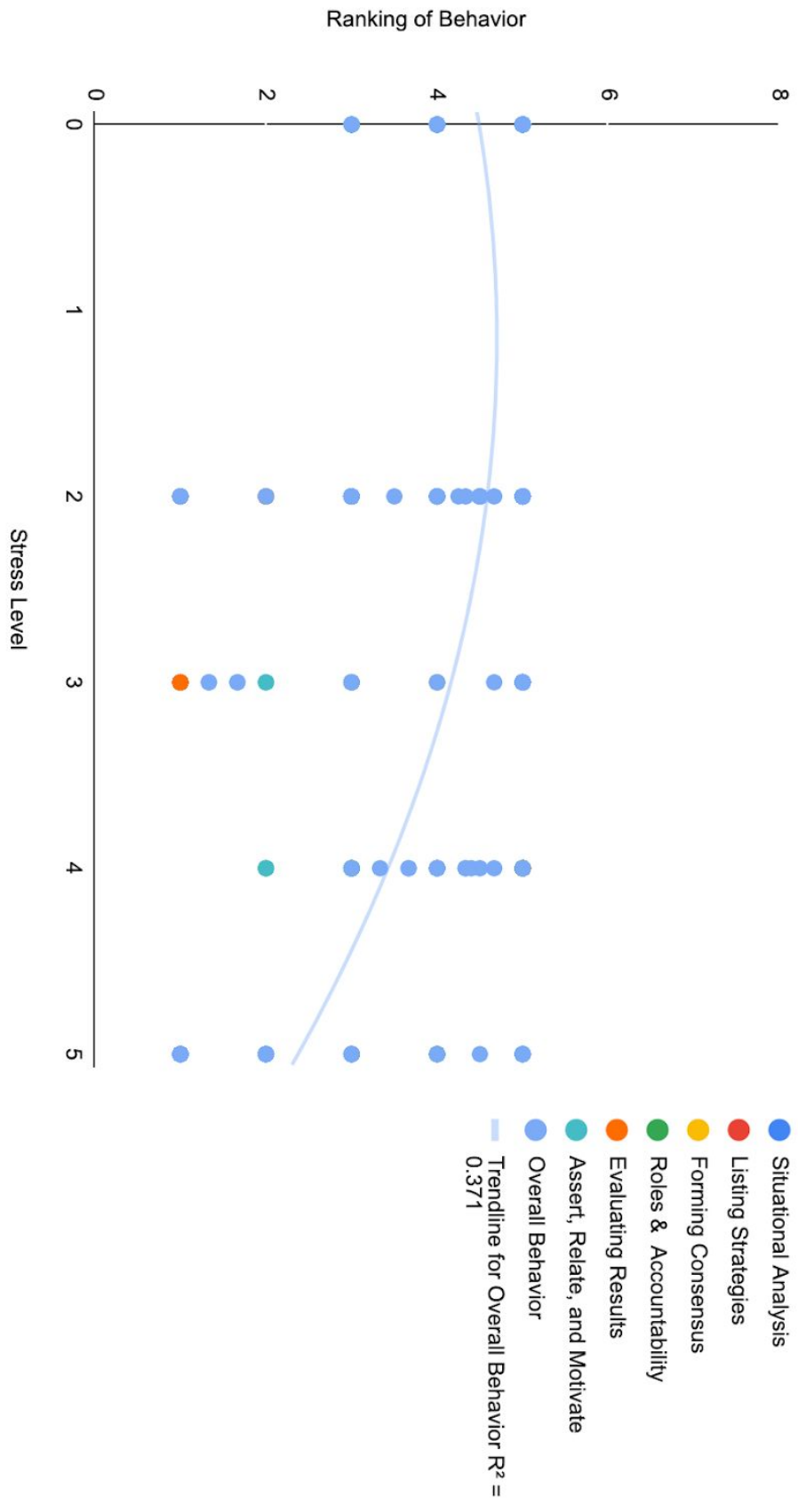
As this is a small sample size from a small university, the chances that participants have known each other are greater than in larger sample sizes, particularly in the CLS. The potential for prior relationships may have affected the behaviors of the participants and the results of the experiments.

#### Previous Leadership Experience

Some of the participants may have previous leadership experience that could impact the study.

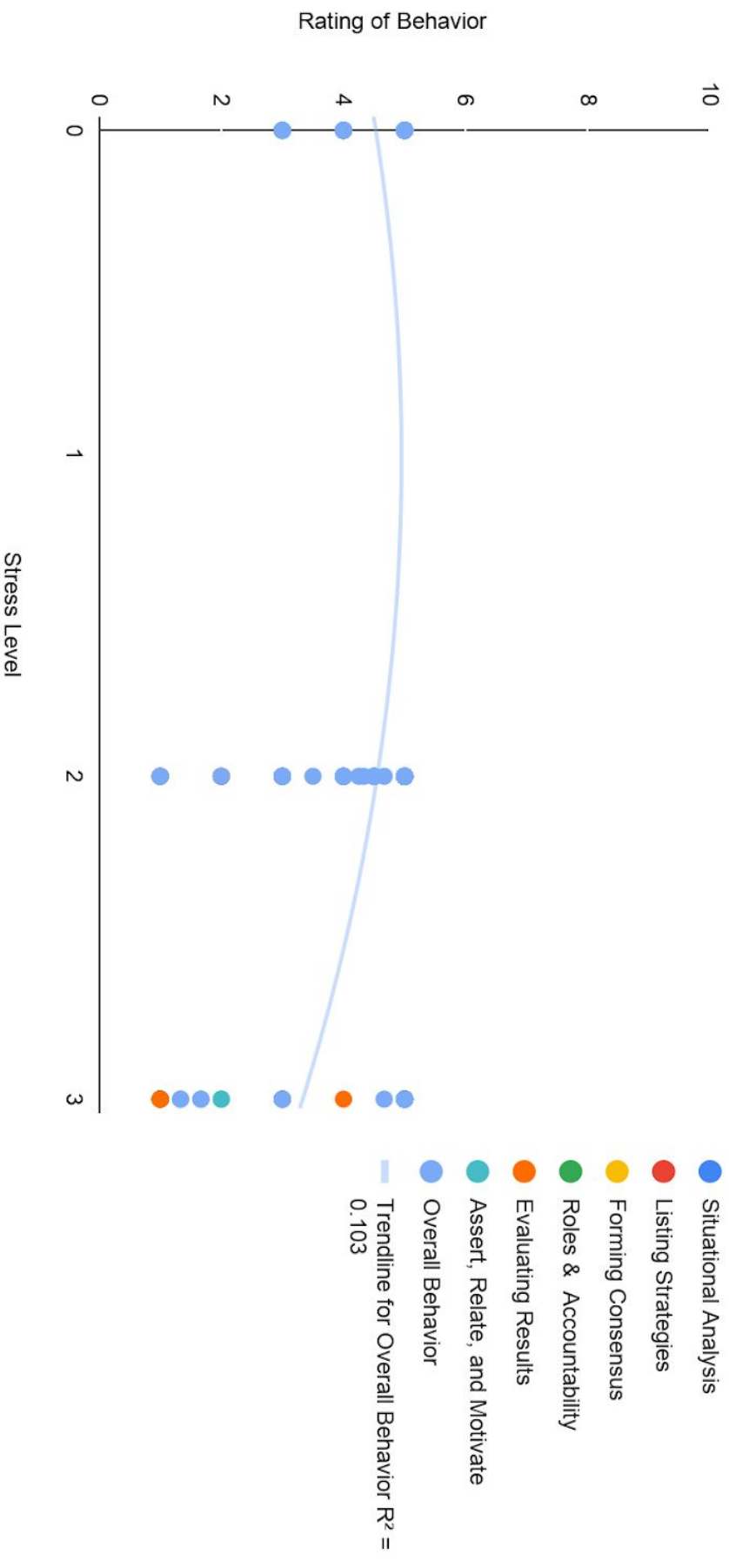
# Relationship Between Stress and Leadership Behavior

Goldman Sachs Local College Collaborative Program 4.0: Total Data



# Relationship Between Stress and Leadership Behavior

Collaborative Leadership Seminar 2020: Total Data



## Analysis

### *Elements of Analysis*

The data was visualized with regression analysis, which creates a model to determine trends within the dataset. These models can vary in reliability depending on the consistency of the data. To determine reliability, there is an indicator built into regression modeling called the  $R^2$  value, which ranks reliability on a 0% to 100% scale. Human behavior is generally tougher to predict. Nearing a value of 50% in reliability with human subjects is ideal.

### *GS LLC Experiment Data*

The GS LLC 4.0 dataset captured quality of behavior over a variety of stress levels over a 75 minute period. This experiment demonstrates that the quality of behavior increases with an increase in stress level up to a point then decreases beyond that point. This data is represented in a bell-shaped curve, similar to that of the Yerkes-Dodson Law. The difference between the Yerkes-Dodson Law and the findings of this experiment is the peak point of stress level. While Yerkes-Dodson identifies medium stress as the point of peak performance, this experiment discovered that low-medium stress is the point of peak behavior.

### *CLS Control Group Data*

The CLS served as a control group by creating a low-stress environment that simulated certain aspects of the GS LLC. In this way, the experiment would benefit from collecting data on how participants would behave without stressors. The control group data measured up to stress level 3, which is medium stress in regular experiments. Upon analysis, the data suggests an identical bell-curve to the experiment data relative to their stress levels.

### *Reliability of Data*

The experiment model has an  $R^2$  value of 37.1%, while the control group model has an  $R^2$  value of 10.3%. Overall, the experiment data model is fairly reliable, while the control group model is less reliable. Yet, both models are strong enough to draw takeaways for this thesis.



## Takeaways

The takeaways from this thesis demonstrate its implications on various domains and how it rejects the claims made by Gallup's *State of the American Manager*.

### *Implications in Leadership Theory*

Ultimately, this thesis determined that low-medium stress levels lead to optimum leadership behaviors. These findings are similar to the Yerkes-Dodson Law, in which a medium stress level creates optimum performance. While Gallup's research suggests that people are either born to lead or destined to follow, this research suggests otherwise. It suggests that leaders need low-medium level stress to act their best. Courtesy of the Yerkes-Dodson Law, it is also known that this range is when leaders perform their best. When stress is set to this level, leaders can achieve the best results by utilizing the best behaviors.

These findings on behavior can serve as a point of knowledge across various domains that require leadership, from informing better leadership training to creating better conditions for exemplary leaders in organizations. As previously stated, many view the world in need of better leadership and more creative, exemplary leaders. This thesis demonstrates how people can be positioned best to behave like strong leaders.

### *Perception of Stress*

One key observation was the way participants perceived stress during the experiments. While there was an intended stress level from the conductors of the experiment, certain participants experienced stress to a greater or lesser degree based on their sensitivity to stress. Even in the CLS, where stress was never intended to exist, a stress level 3 was achieved in practice.

In regard to the need for leadership across various domains, insight on stress perception has strong implications on leadership success. Some people have low sensitivity to stress, which according to this study, offers them a greater chance to behave well in a leadership context. However, focusing on stress management in all candidates for leadership positions, especially those with higher levels of sensitivity, can reduce their stress levels in leadership scenarios. In turn, reduced stress will garner greater leadership behavior and performance.

*Triumph of Lowney's Jesuit Leadership over Gallup's Determinism*

All in all, this thesis set out to affirm Lowney's quote on Jesuit Leadership, that everyone is leading all of the time (albeit poorly most of the time), in rejection of Gallup's claim that only 10% of people carry the proper ingredients to be leaders. Gallup views leadership as a trait. However, Lowney and the concept of Jesuit Leadership view it as a behavior. When viewed as a behavior, as it was in this thesis, anyone is capable of leading well, just as anyone can modify their behaviors.

## Works Cited

- Cole, L.W. "The Relation of Strength of Stimulus to Rate of Learning in the Chick." *Journal of Animal Behaviour* 1, no. 2 (1911), 111-124.
- Collegiate Leadership Competition. "Solve - Skill Sheet." Paper presented at Collegiate Leadership Competition, Rider University, July 31, 2018.
- Corbett, Martin. "From Law to Folklore: Work Stress and the Yerkes-Dodson Law." *Journal of Managerial Psychology* 30, no. 6 (2015): 741-752.  
doi:<http://dx.doi.org/10.1108/JMP-03-2013-0085>.
- Dodson, J.D. "The Relation of Strength of Stimulus to Rapidity of Habit-Formation in the Kitten." *Journal of Animal Behaviour* 5, no. 4 (1915), 330-336.
- Gallup. *State of the American Manager: Analytics and Advice for Leaders*. Washington, DC, 2019.  
<https://www.gallup.com/services/182138/state-american-manager.aspx>.
- Farberman, Harvey A. *Essays in Interactionist Sociology*. Archway Publishing, 2019.
- Fink, Sharon B., and Stephanie Capparell. *The Birkman Method: Your Personality at Work*. Hoboken: John Wiley & Sons, 2013.
- Lee-Kelley, Liz. "Situational Leadership: Managing the Virtual Project Team." *The Journal of Management Development* 21, no. 5 (2002): 461-471.  
doi:<http://dx.doi.org/10.1108/02621710210430623>.
- Lowney, Chris. *Heroic Leadership: Best Practices from a 450-Year-Old Company That Changed the World*. Loyola Press, 2009.
- Locke, John. "Second Treatise." *John Locke: Two Treatises of Government* (n.d.), 265-428. doi:[10.1017/cbo9780511810268.011](https://doi.org/10.1017/cbo9780511810268.011).

Kokkonen, Andrej and Anders Sundell. "Delivering Stability--Primogeniture and Autocratic Survival in European Monarchies 1000-1800." *The American Political Science Review* 108, no. 2 (05, 2014): 438-453. doi:<http://dx.doi.org/10.1017/S000305541400015X>.

Korn Ferry. "Retail Employee Turnover Up As Black Friday and Holiday Shopping Season Nears, According to Korn Ferry Survey of Top U.S. Retailers." MarketWatch. Last modified November 15, 2018. <https://www.marketwatch.com/press-release/retail-employee-turnover-up-as-black-friday-and-holiday-shopping-season-nears-according-to-korn-ferry-survey-of-top-us-retailers-2018-11-15>.

Kruse, Kevin. "What Is Leadership?" Forbes. Last modified September 2, 2015. <https://www.forbes.com/sites/kevinkruse/2013/04/09/what-is-leadership/#4b20545c5b90>.

Raven, Bertram H., and John R. French, Jr. "The Bases of Social Power." *Encyclopedia of Power*, 1959, 259-270.

Rowold, Jens. "Relationship between leadership behaviors and performance." *Leadership & Organization Development Journal* 32, no. 6 (2011), 628-647. doi:10.1108/01437731111161094.

Snyder, Mark, and William Ickes. "Personality and Social Behavior." *Handbook in Social Psychology* 2 (1985), 883-295.

Skogstad, Anders, Stale Einarsen, Torbjorn Torsheim, Merethe S. Aasland, and Hilde Hetland. "The Destructiveness of Laissez-Faire Leadership Behavior." *Journal of Occupational Health Psychology* 12, no. 1 (n.d.), 80-92. [The destructiveness of laissez-faire leadership behavior.](#)

World Economic Forum. "Lack of Leadership." Outlook on the Global Agenda 2015. Accessed October 15, 2019. <http://reports.weforum.org/outlook-global-agenda-2015/top->

10-trends-of-2015/3-lack-of-leadership/?doing\_wp\_cron=1571174273.  
2911899089813232421875.

Yerkes, Robert M., and John D. Dodson. "The relation of strength of stimulus to rapidity of habit-formation." *Journal of Comparative Neurology and Psychology* 18, no. 5 (1908), 459-482. doi:10.1002/cne.920180503.