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## They Always Do What They Ought To Do: A Historical Analysis, and Exploratory Examination of the “Woman Problem” and the Function of Gender in American Psychology

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They Always Do What They Ought To Do: A Historical Analysis, and Exploratory Examination  
of the “Woman Problem” and the Function of Gender in American Psychology

Senior Project Submitted to  
The Division of Science, Mathematics and Computing  
Of Bard College

By  
Willa Baigelman

Annandale-on-Hudson, NY

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### **Abstract**

The “woman problem” in American psychology refers to, “...the underrepresentation of women in the highest offices of psychology’s professional organizations and women’s general lack of eminence compared to men,” (Rutherford, 2015). It is a problem that seems to have existed from the beginnings of American psychology to the present day. This piece of writing seeks to better understand this problem, the function of it within American psychology, its origins and where it stands today. Through a historical analysis of Edwin Boring, Edward Titchener, Alice Bryan, Margaret Washburn, Eleanor Gibson, Mary Whiton Calkins and Mamie Phipps Clark, we can begin to investigate these issues. An examination of Boring and Titchener provides an historical context for the origins of this problem. By looking at the work they produced, the ideologies they held, and the groups, associations and circles they found themselves in, I have found what I see as evidence for their involvement in the production and maintenance of the “woman problem.” By examining the biographies on the five woman mentioned above, I have come to a better understanding of how women navigated their academic and professional careers in psychology while combating the problem of gender and sexism. Finally, I conducted a very preliminary, exploratory research project on the psychology department at Bard College as a way of conceptualizing the problem of gender in modern American Psychology.

*“She accepted the inferiority of the female sex pretty well. They don’t make experimentalists.”*<sup>1</sup>

### **Chapter One: Introduction**

For my last and final semester at Bard, I decided to take the Social Psychology Advanced Methodology class. Unbeknownst to me, the focus of the class would be an examination of gender disparity in science, technology, engineering, and mathematics (STEM). This was all very exciting for me because I have always been interested in tying issues of gender into my academics. I like to say that I have an unofficial Gender and Sexualities studies concentration, having taken so many courses that explore gender within many facets of life. The class’s focus on gender disparity in STEM also made me selfishly happy because it was directly related to my senior thesis. I knew that the knowledge I gained in the lab would undeniably further and deepen my understanding of gender in American psychology, and STEM as a whole. During the first class session, I was asked to close my eyes and imagine a scientist. I was asked to imagine their attire, their environment, what they were doing etc. I was asked to create a full and concrete idea of who this scientist was. Then, I was asked to identify what gender I had assigned to the scientist I imagined. There was no question that the scientist I imagined was a man and the same was true for the six other women in the room. This was an upsetting, and somewhat surprising realization. We learned that it is common to have the implicit beliefs that a “scientist” is unquestionably male. Another requirement for the class was the taking of an online Implicit Association Test. I chose to take the version of the test that dealt with gender and science. After all, I had just automatically pictured a general scientist as male. Going into the test I had a pretty good idea of what my results would show; a strong automatic associate for male-science

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<sup>1</sup> Said by Edwin G. Boring. From Oral History Interviews of Edwin G. Boring (cit. N. 26), 234.



and female-liberal arts, and after completing the test, I received a score indicating that I have a slightly automatic association for Male with Science and Female with Liberal Arts. With my results, I was also able to view the data from hundreds of thousands of tests. This data indicates that nearly 18% of people have a slight association for male with science, 29% of people have a moderate association for male with science and 23% of people have a strong association for male with science (Project implicit, 1998). This means that, collectively, around 70% of people who have taken this Implicit Association Test have a stronger association for male-science than for female-science. This only adds to the empirical evidence that gender does factor into our attitudes and beliefs about the sciences.

We can look to research examining stereotypes and implicit attitudes and beliefs about women in STEM. There is no question that, in recent years, the conversation surrounding gender disparity within STEM has taken a central role in discussions about gender disparities overall. What is it about women’s underrepresentation in most STEM fields that makes it a highly discussed and researched phenomena? Many studies spanning decades have tried to understand why we see such patterns with gender in STEM. Most are aimed at identifying what factors influence or affect women in ways that dissuade them from pursuing a future in STEM. There have been great strides in this research that have uncovered some of the underlying possible causes of gender disparity in psychology. Furthermore, through this research, more studies have been conducted that intend to design successful interventions that will hopefully help close the gender gap in STEM. This research is of the utmost importance when addressing these issues. However, when reviewing the literature, psychology seems to be quite absent from the conversation. I am left wondering why the discussion about gender disparity does not extend to

the field of psychology. Perhaps it is because psychology has not always been considered as much of a "science" as chemistry or physics, for example. There also seems to be relative gender balance in practitioners (although not yet in leadership) in the field as well. These two ideas may create the "logic" for why gender disparity is rarely investigated within the field. This is an unfortunate oversight. Research, past and present, points to the disproportionate number of women studying psychology, compared to the number of women holding positions of power in psychology. This is, in itself, a gender related issue. Therefore, it should be looked at and included in these conversations. We have to investigate if and why there is a “women problem” in psychology, just as there is in other STEM fields, though it may have taken a different form.

A psychologist by the name of Alexandra Rutherford<sup>2</sup> explores the history and implications of gender in American psychology. A professor in the Department of Psychology at York University, Rutherford's focus surrounds the history of psychology, feminist psychology, gender issues, as well as policy surrounding gender bias. Her work is historically oriented, allowing her to question the issues of gender disparity through a historical lens. Her research has lead to projects such as Psychology’s Feminist Voices, a digital archive housing the stories of dozens of female psychologists dating back to the very beginning of the field. It provides a comprehensive history of women working as psychologists. Her determination, not only to further qualitative research around gender in psychology, but also to implement projects that highlight women in the field, is inspiring. Gaining knowledge about women who have been accomplished in psychology is encouraging to me as a young women studying the subject.

However, the sexism that is prevalent in the history of women in psychology is infuriating and

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<sup>2</sup> Rutherford is a Professor of Psychology at York University in Toronto, Canada. She specializes in the history of American psychology and feminist psychology. She created and continuously works on an online, digital archive called Psychology’s Feminist Voices. <https://alexandrarutherford.org>.

most often baffling from a modern perspective. When you read some of the biographies provided by “Psychology’s Feminist Voices” you begin to understand the breadth of the “women problem” in psychology. You begin to see their struggles and ask questions about how, and why these struggles existed, and still exist for women in psychology today. This is why researchers and scientists like Alexandra Rutherford are so important. We must have them at the table when discussing gender disparity in STEM. Part of what Rutherford and her team are trying to accomplish through these historical analyses of the “woman problem” in psychology is to locate and identify the factors that contributed to the conception of this problem. Just as other researchers are doing, they are locating the cause and effects of sexism in American psychology. This kind of work not only helps to resolve unanswered questions, but might also provide insight into how we can begin to remedy this so called “woman problem.”

My senior thesis aims to further explore this history of the “woman problem” in American psychology. Inspired by Rutherford’s articles on this issue, and her work on Psychology’s Feminist Voices, I have chosen to examine this problem through the lives of five women who were, and remain to this day, highly influential in American psychology. With the guidance of Alexandra Rutherford, herself, as well as my advisor, Stuart Levine, I have chosen to study Alice Bryan, Margaret Washburn, Mary Whiton Calkins, Eleanor Gibson, and Mamie Phipps Clark. I did not know much about any of these women before entering into this project. The process of narrowing my choices down to these five was a matter of finding the women I felt were examples of perseverance in the face of adversity. I wanted to choose women that were highly influential, yet were fairly unknown to me. Despite the hardships faced by female scientist during their lifetimes, they determinedly and masterfully carved out a permanent space for

themselves within American psychology. They pursued higher education at a time when many graduate programs were exclusively male, or at the very least, unsupportive of women’s education in the field. They filled high power roles within psychology that that were seldom held by women and produced research that pushed psychology forward and is still studied today. Their scientific research was celebrated, and brought them eminence within the field. Whether it be the inclusion of women in certain spaces, or the desegregation of schools, their research was most often experimental and social. Through my exploration into the lives of each of these women, I hope to gain a better understand of what it took to be a female psychologist during the 20th century, and beginnings of American psychology. This insight can only work to better explain and understand why we still see disproportionate numbers of women holding higher positions within the psychological community. Before I delve into the remarkable lives of these women, I thought it necessary to start where Rutherford does in her article on the “woman problem”, with “Mr. Psychology” himself, Edwin Boring. At the time when all of these women were working, he sat at the head of the Psychology Department at Harvard University. This gave him immense influence over the field at that time. I reflect on his work and his beliefs, as does Rutherford, as a way to contextualize the climate of American psychology at the time the women I am studying were pursuing their careers in psychology. It is important to be reminded of the gendered ideologies that were pushed on the field during its early years. Edwin Boring was highly influential, and this is what makes his beliefs on the subject of science and gender so important to take note of. In addition to Edwin Boring, I will also be discussing his predecessor, Edward Titchener. I have found that while discussing these various prominent figures throughout this thesis, it is vital to consider who they were taught and influenced by. For the purpose of this

paper, I will be utilizing Titchener, as a point of reference from which we can conceive of the beginnings of the “woman problem” in American psychology.

My work in this paper is to consider these people and these questions through brief explorations of their lives and their work. This is one successful way to try and understand the dynamics of gender in American psychology which have evolved, but still haunt the field to this day.

## Chapter Two: The “Woman Problem” in American Psychology

### Edwin G. Boring

In this chapter I explore the ways in which the ideologies and teachings of Edwin Boring worked towards creating and maintaining strict gendered ideas about psychology. I attempt to understand his core beliefs about psychology and science. This means exploring his own writing on the subject, as well as other sources outlining his work in the field. I will also embark on an exploration into some exploration into his academic background, as a way of creating a more rich picture of where his ideas on science came from. Alexandra Rutherford's article serves as my jumping off point for discussing Boring. Hers is the most comprehensive article I have found that deals with Edwin Boring and his beliefs about gender in the field of psychology. As stated above, Alexandra Rutherford has devoted much of her efforts to uncovering the beginnings of what is known as the “woman problem” in psychology. She published an article entitled, “Maintaining Masculinity in Mid-Twentieth-Century American Psychology: Edwin Boring, Scientific Eminence, and the ‘Woman Problem.’” that outlines this investigation. Here, she identifies predominant male psychologist, Edwin Boring as the centerpiece, the catalyst, for these gendered ideas about psychology that still resonate today. Her main research question in this article is, how did the “women problem” come to be? Additionally, she is asking how this masculine scientific culture is maintained over time. In her writing she defines the “woman problem” as, “...the underrepresentation of women in the highest offices of psychology’s professional organizations and women’s general lack of eminence compared to men.” (Rutherford, 2015). From the beginning, she pinpoints psychologist Edwin Boring as a prominent player in the creation of the “woman problem” in psychology. She details his work in

psychology, which includes heading and participating in research and practices that were principally male-dominated. This included his time as the department head at Harvard University, a position he held for many years. She reflects on the fact that he, himself, was not a great researcher; the work he primarily produced was historical in nature. For someone who expressed such strict ideas about psychology and experimentation, he was greatly lacking in that area in his own work.

Edwin Boring lived between the years 1886 and 1968. He is most well known as both a historian of psychology, as well as a pioneer in experimental American psychology. Edwin Boring truly began his career as “Mr. Psychology” under the mentorship of Edward Titchener. In 1914, he received his PhD through his work with Titchener, and this is when he began to formulate his beliefs about the scientific nature and possibility of psychology, beliefs that were deeply rooted in structuralism and positivism. Through these lenses, Boring developed a clear and purist idea of what psychology should be. What he believed in most was that psychology, as a science, should strictly deal with experimentation. He was bright and eager to begin his career as a psychologist, and was anxious to inject the field of psychology with his beliefs about experimentation. A few years after receiving his PhD, he accepted a job as an associate professor at Harvard University, and it was there that his influence grew strong. After a few years at Harvard, he was offered a position as a full time professor, and eventually the position of department head, which he would hold this position from 1924 to 1949. It was from this prestigious position, that he was allowed to spread his own beliefs through the teaching and advising of many students. While at Harvard, he also headed the fight to cut ties between the psychology and philosophy departments. These departments had been connected for many years,

however, Boring’s dedication to casting psychology as a purely scientific endeavor, required that the two be separated. As the separation was finalized, Boring’s goal of identifying psychology as an independent field worthy of study itself, and separate from philosophy and other social sciences, was realized. This is of particular interest to me and this project, because so many of the women I will be discussing in later chapters were very much interested in both philosophy and science, and their relation to each other. Suffice it to say that, clearly, Boring was intent on creating a psychology department that reflected his own personal views about the field.

Boring’s basic views about psychology were that it should be purely experimental. This meant that any psychological exploration into subfields that were more subjective were deemed unscientific, and this included fields such as clinical and developmental psychology. He considered the goals of these fields to be subjective and people oriented, instead of scientific. This lines up with his background as a student of Titchener, who’s idea of psychology was rooted in structuralism. John Cerullo brings to light an important point about Boring’s views on the separation of experimentation and application. He quotes Titchener, and writes, “While "scientific man follows his method wherever it may take him," the technologist "seeks the attainment of some determinate end and ... takes no heed of anything that he cannot put to use as a means to that end." (Cerullo, 1988). Here, technology is paired with application. I think this is an interesting idea that was clearly held by both Titchener and Boring. He seems to believe that psychological advancement that is centered around “fixing” something, whether that be a person or bigger social issue, lacks the never ending drive that is found within pure experimental psychology. This attitude feels misguided, and I disagree greatly with Boring. I find that both forms of psychological inquiry are motivating, and push forward further inquiry. Boring is



extreme in his opinions and ideas, and there are some things in which he believed in that were not problematic. A focus and determination to make psychology more scientific is not on its own harmful. However, when paired with personal beliefs, and a seeming disinterest in acknowledging the “other”, problems arise. This is especially true for someone like Boring, whose oversized reputation as “Mr. Psychology” gave him greater influence in the field, than his actual research warranted. With such power and status, comes great responsibility.

In her paper, Rutherford points to Edwin Boring’s criteria for success in psychology. Consider it his recipe for prestige. In brief, this recipe was as follows: (1) get a PhD; (2) do good research and publish it (thus gaining recognition); (3) add some administrative work to get some larger perspective; (4) write a synthetic book about big ideas/theories; and (5) work up the administrative ladder to become a dean or college president, (Rutherford, 2015). Boring pointed out that this recipe applied to every past president of the APA. He advised women to follow this formula, but noted that top administrative jobs would be very hard for women to get because they would face sex-based discrimination. The solution was to write a big book, but here again, women would be foiled. (Rutherford, 2015). These five steps are the specific to the ways in which Edwin Boring thought about science and the people he considered “real” scientists. Although these criteria are not gender specific, he makes sure to outline the various reasons why these steps may prove difficult for women to achieve. He does acknowledge sex-based discrimination as an everyday obstacle faced by many women. However, he does not condemn these sexist practices, nor does he offer up any possible solutions, rather he tosses out vague and discussion excuses and explanations. His excuses and explanations are vague and dismissive. His tone suggests that that he saw no way to overcome these hardships, and additionally, does not

seemed concerned with finding a way. His reluctance to entertain the idea that some women have, achieved scientific success by way of these steps is concerning. Some of the most prominent women in psychology have in fact achieved these successes and more. Thus, these women should, in the eyes of Boring, be considered scientists, and yet they aren't. He has clearly stated that if one is to follow this criteria, they would achieve scientific success and prestige. However, the mere gender of the person can make recognition of this impossible. Therefore, it is not only sex discrimination within the work environment that prevents women from gaining success in science, but additionally, it is the very set of rules required to achieve success that are highly discriminatory based on gender, and additionally, success is often ignored, disparaged or rationalized away.

Boring, on his own, published a short article discussing his thoughts and opinions on the “woman problem” in psychology. At the core of his argument is a clear belief in the fundamental gaining of prestige as the key element of scientific eminence within the field of psychology. On this subject he states; “It appears, moreover, that prestige is gained or lost, not only by achievement, but also by such other reinforcers and inhibitors as the timing of the discovery, the inertia of contemporaneous thought, the way in which the discovery is promoted or advertised, and the prestige of the discovered for prestige begets prestige; it has positive feedback.” He is careful not to write that the kind of prestige he is arguing for is generally not obtainable by women. If we take a moment to step back, and examine this article, we see that from the beginning he defines the “women problem” by positioning it again the “great man problem” and the “youth problem.” The entire article deals more with defining those problems, and making statements like, “...the young grow old, and change their views, whereas women never quite turn

into men.” (Boring, 1951), than actually confronting the “woman problem.” He doesn’t hesitate to reiterate the unlikelihood of woman’s success due to the hurdles they faced at this time.

Perhaps the most frustrating, and angering idea presented in this article is his insistence that much of women's success in science is due to their charm. He presents his thoughts on women's ability to be successful in their fields while still maintaining their womanly status as housekeeper and caretaker in the form of a questions and answer, “Can a woman become a fanatic in her profession and still remain marriageable? Yes, she can, for I know some, but I think a woman must be abnormally bright to combine charm with concentration. These women make the synthesis by being charmingly enthusiastic.” (Boring, 1951). An age old and sexist idea. Not only is it disrespectful of all the female scientists, but it also disregards the complicated and sexist atmosphere that female scientists were, and are, forced to navigate.

Whether he formulated these sexist ideas due to his upbringing in a stifling matriarchal household, (Stevens, 1987), or from his time under Titchener, or from any other various reason, the facts remain the same; he believed there was a fundamental difference between men and women’s ability to be scientific. He worked hard and rose to positions within the field of psychology which gave him great influence. In a seat of great power where he could have encouraged an inclusive view of psychology both in terms of its practitioners and its content, he chose instead to support the continuation of psychology as a male-dominated, purely experimental field. He dismissed his female students “Poor things, it is pathetic.” (Boring in Rutherford, 2015), disregarded his biologist sister as a scientist “...not at the top of the scientific hierarchy...” (Boring in Rutherford, 2015), and took offense to the female pursuit for success “...aggressive feminism...” (Boring in Rutherford, 2015) by the women around him. It is clear

that he is very much at the center of the establishment of the “woman problem” in American psychology, and he held that perspective through his influence for many years.

### **Edward Titchener & Structuralism**

One question that has remained in my mind, and that Rutherford explored in her own writing, was where did Boring’s strongly held beliefs about science and women come from? In order to understand the answers to this question, we can start by taking a look at his mentor, Edward Titchener. Boring studied under Titchener at Cornell University, where he learned and internalized the idea that pure science required pure objectivity. This ideology led Boring to become a psychologist who believed that women were not capable of being objective, and so therefore, could not be scientific. Edward Titchener began his pursuit of psychology in Leipzig under Wilhelm Wundt, who was responsible for training and mentoring many successful psychologists at this time. At the core of Wundt’s teachings was an emphasis on the importance of experimentation within the field, and this manifested into research that was intended to understand human experience. Thus, research consisted of examining and measuring immediate reactions and sensations experienced by subjects, (Blumenthal, 1975). The specific importance placed on this kind of experimentation, was deeply ingrained in Wundt's students. This experimentation was placed above all other forms of exploration into psychological subjects, and Wundt would even go as far as to condemn other forms of psychological research, claiming that this was the cause of sluggishness in the field's advancement as a science, (Blumenthal, 1975). He was very much concerned with the marriage of psychology and physiology as a way of understanding mental processing. Giving some context to Wundt and his attention to experimentation within psychology, is important when discussing Titchener. We learn a great

many things from our mentors and professors, and it is clear that Titchener borrowed a lot of his beliefs from Wundt and his teachings. With Wundt, Titchener was taught the importance of experimentation above all else, and its undeniable attachment to objectivity as the highest value in psychology.

Titchener's embrace of objectivity led him to prominence as he rose to the prestigious position of Director of the Psychology Department at Cornell, where he would go on to influence many young and impressionable psychology students. At the core of his conceptualization of psychology, was the strong belief in structuralism. Through structuralism, Titchener found a way to push psychology to become more experimental, and consequently, more scientific, in his view. This was also a push to allow the field to be taken more seriously as a science, like physics or chemistry. If we think about the natural sciences, most are concerned with the physicality of the subjects being studied. Going even further, these natural sciences strive to understand what makes the physical subject behave in the way it does. Psychology, then, would have to be more concerned with what makes up our consciousness more than how that consciousness affects our existence in the world. Breaking down consciousness to its components, to the structures that make up consciousness, was the goal of experimental psychologists. This is structuralism. To gain a better understanding of structuralism, we can contrast it with functionalism. Functionalism attempts to understand the function of consciousness, while structuralism attempts to understand the structures that make up consciousness. Titchener, his colleagues, and his students based their scientific practice on this theory of structuralism. It worked very well with Titchener's interest in experimental psychology. By thinking about consciousness as a system made up of structures, it creates a concrete entity to be studied. It takes away any abstraction or ambiguity that might

accompany the study of consciousness. Unfortunately, it also abandons many subfields within psychology that deal more heavily with the functions of consciousness. These subfields include clinical, abnormal, developmental and any psychology dealing with animals. In addition to structuralism, Titchener was also a positivist. Positivism is the theory that everything in the universe, even the greatest mysteries, are logical and can be scientifically and mathematically verified. At its very core, positivism is not a dangerous theory, although it can become complicated when applied to the field of psychology. It reinforces the practice of structuralism so strongly, that it becomes the only thing of worth and it makes the scientist focus exclusively on concrete and observable answers. Titchener wholeheartedly embraced introspection as the main vehicle in experimental psychology to understand underlying psychology. He believes that measuring subjects' reaction times and reactions to stimuli through introspectionism, was a pure way to get at what was happening psychologically. This became the basis of what Titchener and his students believe to be experimental psychology.

If you take a look inside Titchener's textbook on psychology, the chapters he lays out look more like those in a biology textbook, than those meant for the study of psychology. He deals mostly in neurobiology, perception and sensation. In this textbook he writes that, “Science seeks always to answer three questions in regards to its subject-matter, the questions of what, how and why.” (Titchener, 1928). He states that all of these questions must be addressed in a practice that aims to be scientific. Additionally he separates the question of “what” and “how” from the question of “why”; making the distinction that what and how are descriptive, while why is an explanation. In one of his most concrete statements about how these questions relate to psychology and science he writes that, “In order to make psychology scientific we must not only

describe, we must also explain mind.” (Titchener, 1928). Titchener’s idea of scientific psychology includes both describing and explaining the structures of consciousness. What this leaves out, however, are the questions about the effects of these structures on human behavior in the world. It denies inquiry into the applications of psychological knowledge. For example, particular treatments, therapies or interventions created with the knowledge from experimental, structuralist research. For Titchener, questions regarding real world application are to be separate.

I would agree that the questions that come after the what, how and why follow more closely to those questions commonly asked in the social sciences as opposed to the natural sciences. However, it does not mean that scientists investigating real world applications of psychological knowledge are lesser scientists. Psychologists attempting to understand the applications of knowledge are still interested in, and informed by the the questions answered by descriptive and explanatory psychology. In fact, most have probably answered the what, how and why themselves before moving on to the work of application. However, the work being done by scientists investigating questions and seeking answers that go beyond description or explanation seems to be devalued as a science by Titchener. For example, clinical psychology often seeks to understand the ways in which scientific knowledge can be turned into treatments for different mental disorders and illnesses.

It also brings up interesting questions about responsibility. What are the responsibilities of scientists? What are the responsibilities of psychologists? What good is grand scientific theory if we can not use it to implement change in the world? Maybe for Titchener and his followers, gaining the knowledge was enough, after all this was the birth of this science. Or, alternatively,

maybe they found that part of the work less interesting, and therefore less important and they left it for the psychologists deemed less scientific; in other words: women.

Titchener’s strong beliefs provided the foundation for the exclusive Experimentalists club that he created. Rutherford describes the club as operating, “...according to a masculine code of professional sociability, and Boring’s exposure to this code shaped his future attitudes toward and professional dealings with both his male and his female colleagues,” (Rutherford, 2015). This club was set up to further scientific aims, but it operated equally as an exclusive and elite social club that was a safe space for these men to flaunt their sometimes sexist ideas. Throughout the literature there is a strong emphasis on activities, such as smoking, that were marked “male.” The inclusion of women not only threatened the “objectivity” of the research (according to the men), but also threatened this masculine form of sociality. This club was a place where objective minded men interested in experimental psychology could gather, without the perceived subjectivity or sensitivity of women psychologists. The formation of this club sets up an extraordinarily problematic and hyper masculine divide within the field of psychology. The sexist views held by some of the top professionals in psychology came to fruition in the formation of this club. In a letter written by Titchener to 20 or so colleagues, he lays out his ideas about the new group of experimental psychologists that he intended to start:

My ideas with regard to the proposed society are as follows: (1) that its membership be confined to men who are working in the field of experimental psychology, (2) that its discussions be confined to subjects investigated by the experimental method, (3) that it meet, once a year or oftener, at one of the larger university laboratories; and (4) that place and date of meeting be so chosen as to avoid conflict with the meetings of other scientific



societies. The intention underlying these proposals is, very simply, that the experimentalists shall come together for a couple of days every year, to talk, think and act nothing but Experimental Psychology. (Benjamin, 2008).

Although, not all of these ideas are problematic, the very first, and seemingly most important point, is that this group is to be exclusively made up of men. There are many more letters presented by Benjamin that outline the outrageous attitudes of men towards women’s threat to an all male scientific club. These “threats” included interrupting the smoking and drinking that would be taking place during the meetings, and women’s inability to be objective. Vague and, at times, superficial, these excuses are insulting. What was the real reason, the real threat if any, that women posed to the Experimentalists? Their threat was the challenge they posed to the establishment; to the inherent masculinity that rules the psychology field at that time, just by being women.

It would not be till after Titchener’s death that women would finally be allowed admittance into the Experimentals. These women, one of whom was Margaret Washburn, a mentee of Titchener’s, were evaluated by the all male club to determine if they were fit for student membership. Rutherford did well to point out that, although a few woman were eventually granted admission into the Experimentalists, this was by no means a progressive step forward for women. In another article, she points out that one woman who was accepted never actually attended any meetings, and that, although Washburn did actively attend meetings, another women would not be admitted to the club for many years after Washburns death, (Rutherford, 2015). These details highlight the various contradictions in the Experimentalists, Boring’s and Titchener’s views on women in psychology. To them, it seems that women were

somehow both included and excluded. However, this inclusion is most likely false, or at the very least limited in many ways. They are “allowed” to practice psychology, but due to their perceived subjectivity, it was impossible for their work to be recognized as anywhere near the quality of the work the men were producing. The ways in which Rutherford presents Titchener, and through an examination of his own writings and letters to colleagues, make it apparent that he was not against the training of women within psychology (Rutherford, 2015). However, he was still adamant about excluding them from the highest, and most prestigious groups in psychology. His relationship with Margaret Washburn illuminates his contradictory viewpoints about women and science; he taught her and thought enough of her to act as a mentor, and yet he insisted the her feminine nature made it impossible for her to conduct purely objective experiments and excel in the field.

### **Chapter Three: The Success of Five Women in American Psychology in the 20th Century**

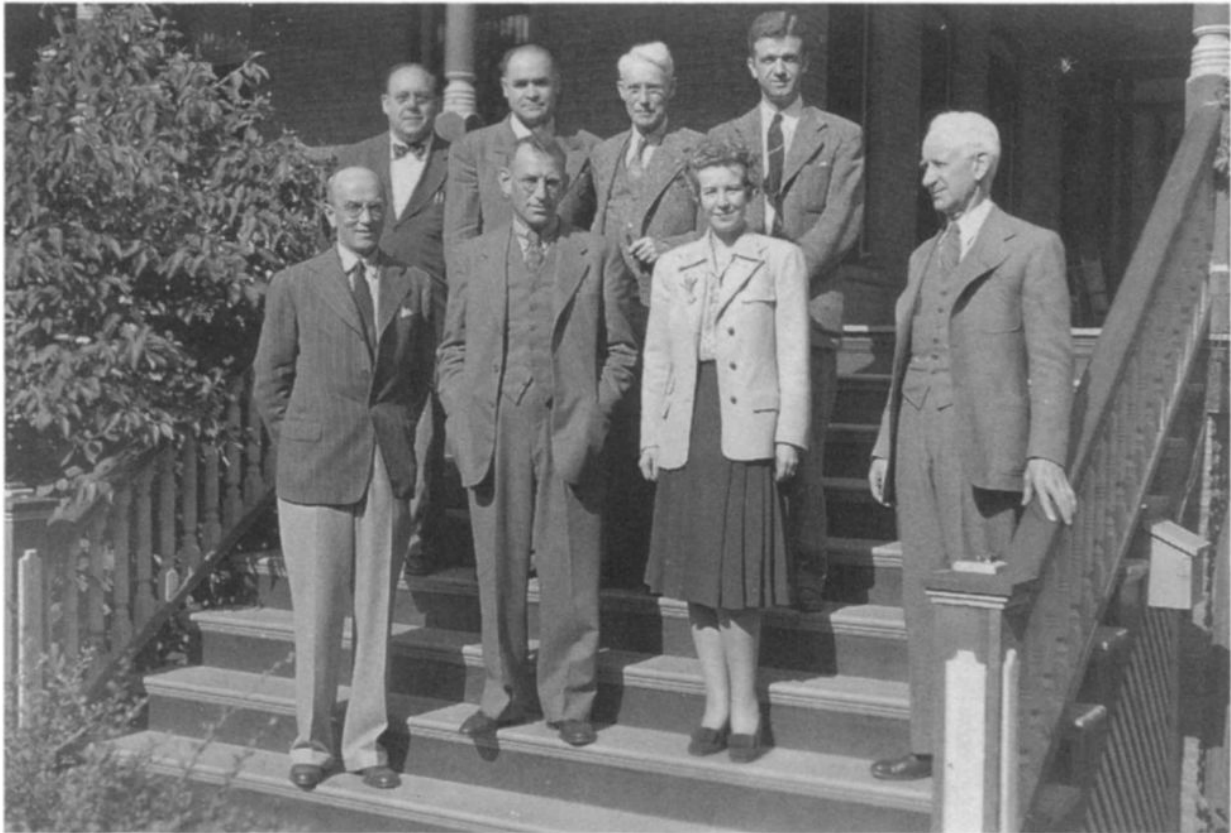
This chapter introduces five predominant female psychologists working in the 20th century. These short biographies aim to highlight their professional work within and sometimes outside of American psychology. Each scientist, while highly gifted, needed to muster incredible determination to succeed at that time, in a field that was not very welcoming. They each produced important psychological research, and each worked hard to extend this knowledge to the world.

#### **Alice Bryan**

Alice Bryan, born in 1902, grew up in a household that was supportive, and committed to providing her with an education. She was educated early on by her mother at home, where her intelligence was nurtured enough that she was able to skip grades. This landed her the opportunity to excel in school, even taking on a teaching position before enrolling in college. Her pursuit of psychology did not start right away. She entered Columbia University to pursue a degree in secretarial studies, intending to move forward in the world of publishing. Her interest in psychology came about after she was introduced to the subject in materials for another class she was taking. These materials sparked a curiosity in Bryan that led her to pursuing and receiving both a bachelors and masters degree in psychology. Her undergraduate focus, as well as her master’s and doctoral work concerned memory, children, gender, and the environment of academia. One of her studies looked at the blood pressure in women, “who were and were not attempting to deceive the investigator were correlated with their results on standardized tests.” (Held, 2010). Furthermore, Bryan took additional courses in the more “scientific” areas of neuropsychology in an attempt to position herself as a more competitive student in the field. She

moved on to receive her PhD from Columbia University. Her doctoral work entitled, “The Organization of Memory in Young Children,” (Maack, 1994), focused on memory and intelligence in children, and reinforced her place as a serious and scientific psychologist.

Her passions, although always relating back to her work as a psychologist, extended beyond psychology. Her interest led her to pursue education in Library studies, which enabled her to become the very first woman to earn a full professorship at the School of Library Service, (Maack, 1994). This meant that she held real status within that school and was able to teach and mentor doctoral students. This position gave her power and influence that very few women in academia held at that time. She was able to fuse her passion for psychology and her knowledge about library studies with the development of bibliotherapy, (Maack, 1994). This field was only just emerging during Alice Bryan’s career, and centered around the therapeutic qualities of art, specifically literature. Bryan’s engagement with the issues of gender in the fields she was working in also came to fruition when she and a group of other women in psychology founded the National Council for Women Psychologists. This group was formed out of, not only Bryan’s own qualms with the underrepresentation of women in psychology, but because women were most often left out of other scientific groups. Most meetings were held in her own apartment, (Maack, 1994). She was also a member of the Emergency Committee on Psychology, a group set up by the National Research Council to assess psychological issues put forth by various government agencies as a way of devising solutions, (Dallenbach, 1946). She was nominated to the group, and I thought to include the following image, which is very revealing of the gendered climate of psychology at this time.



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She was a focused, determined and intelligence student who always was not interested in settling; she always took the extra step, participated in additional course electives, and pursued more than one passion. She faced obstacles and sexism throughout her career, but never let it hold her back.

Her predominant work in psychology would not come about until, ironically, she teamed up with Boring to conduct research addressing the “woman problem” in American psychology.

These questions about the the disproportionate amount of women in high positions within

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<sup>3</sup> Taken from Maack’s article on Alice Bryan. She writes, “This group portrait shows the Subcommittee on Survey and Planning of the Emergency Committee on Psychology set up by the National Research Council. Alice I. Bryan, who is shown in the front row, is representing the National Council of Women Psychologists which she helped to found in November 1940 to protest the exclusion of women psychologists.” (Maack, 1994)

psychology has long been studied, but she was a pioneer on the subject, and the knowledge gained from this research would inspire later work like Rutherford's. I present the work of Alice Bryan because her studies on these issues outline the “woman problem” in American psychology towards the beginning of the field. Her work does a good job of presenting data that shows concretely what was, and to a certain extent, still is going on with gender in psychology. Edwin Boring, despite his predominately anti-women views in the context of science and psychology, published three articles with Alice Bryan, all aimed at scientifically uncovering if there was a “woman problem” within the field, and if so, why did the problem exist. The first article, entitled “Women in American Psychology: Prolegomenon” asks the question, “Do women ‘naturally’ make better applied psychologists than ‘scientific’ psychologists, or is it our culture that directs them into specific fields of endeavor?” (Bryan & Boring, 1944). This harkens back to Boring's ideas of scientific or experimental psychology versus applied psychology. These categories, broken down into “hard” and “soft”, “masculine” and “feminine”, are investigated and interrogated in this article. At first, they address the beginnings of American psychology, noting that most of the early psychologists in the field were working as professors in universities. At the time these jobs were mostly held by men, meaning that from the very beginning of what we know as American psychology, men were the predominant participants based on former, deeply ingrained, gendered roles. It is important to note these kind of facts because it acknowledges the historical context of the field and highlights that it was gendered from its very conception. As American psychology grew as a practice, more and more subfields began to grow as well. In particular, the growth of clinical and child psychology attracted more women to the field (Bryan & Boring, 1944). This specific detail, that women sought out more opportunities in psychology

that involved working with particulars, supports Boring’s notion that women are more innately interesting in working intimately with children and with particular individuals. However, this article asked a question that complicates this idea of these innate characteristic of women, “Did they go into this work because few other positions were available, or because women are more personal, more interested in children, than are men? (Bryan & Boring, 1944). This question suggests that women took on these positions in clinical and developmental psychology, not because they were more interested in those fields than men were, but because the rest of psychology had already been dominated and claimed by men. Essentially, women interested in psychology were driven into pursuing careers in these, “softer” subdisciplines within American psychology.

While psychology in American continued to flourish as a practice, the APA fought for psychology to be taken seriously as a science. The definition of “science” and what practices were considered “scientific” were found in the natural sciences, such as biology and physics. Applied psychology did not rise to these restrictive definitions, and was there not considered “scientific”. Needing to stand separately at the time, the American Association of Applied Psychology was founded as a lone organization. The National Council of Women Psychologists was also formed in the early 1940’s in response to the highly gendered field of psychology. It too needed to stand alone and separate from the other more “scientific” associations. All these differentiated groups serve to highlight the real question; what was the real reason applied psychology couldn’t be considered “scientific

Without seeking to uncover why the problem exists, this first article uses hard facts and data about members from the American Psychological Association as well as the American

Association for Applied Psychology to outline a pattern. The first data collected were the numbers of members and associates in the APA broken down by gender. They found that over the course of two decades, women made up an average of 30 percent of the total number of people in the APA. This was also true for the American Association of Applied Psychology, although applied psychology is supposedly a more feminine discipline. They also analyzed the numbers of women appointed to administrative positions. This percentage sits around 20 percent from 1938-1943 (Bryan & Boring, 1944). Their overall findings and conclusions in this first article showed that there were fewer women pursuing psychology than there were men. Further, it showed that the women who do decide to enter the field, generally focus on clinical or developmental areas of psychology. Finally, they conclude that women’s abilities and knowledge are not utilized in proportion to their numbers and representation within these two groups.

In their second article addressing the “woman problem” in psychology, “Women in American Psychology: Statistics from the OPP Questionnaire” they use data from a questionnaire conducted by the Office of Psychological Personnel that examined the educational and employment background of various psychologists. Bryan and Boring requested that they receive the data with the gender breakdown included. Firstly, they observed that only 30% of the population who participated in the study were women (Bryan & Boring, 1946). They go on to analyze the data and attempt to find gender differences in what educational degrees were obtained by the sample population, what jobs had been held by the sample population, what time had been devoted to a career in psychology, and finally what did the salaries of this population look like, (Bryan & Boring, 1946). This article references many different data points, however, the writers decide to focus in on speculations that women’s complaints about discrimination are



directly tied to dissatisfaction about monetary compensation (Bryan & Boring, 1946). After reviewing the data myself, I find their conclusions unsatisfactory. There seem to be far fewer women receiving doctorate degrees than men. The unevenness observed here is likely to be due to more than just a difference in what male and female psychologists are “interested” in studying. What we will see as we move through the lives of other important female psychologists is that most women found it difficult, based on their gender, to find programs in which they would be accepted. This is the kind of discrimination that I believe should have been explored more in this article. An additional important finding which I believe should have been discussed further is the data on “Field of Employment.” (Bryan & Boring, 1946). Here we can see that men generally made up more of the employment across all areas (Universities, hospitals, businesses etc.) but there is no discussion or exploration into why this might be the case. I am aware that these articles were meant to be neutral, to simply present the facts, however I believe by presenting the data without any sort of inquiry into the causes behind it, does a disservice to the study and to the reader.

Their third and final article, “Women in America: Factors Affecting Their Professional Careers” does try to address some of the causes of gender disparity in American psychology. They review a number of factors including; physical characteristics, family background, development of professional interest, attitudes towards training, prejudice and employment, professional employment, attitudes towards professional work, effects of sex on career, relation of marriage and children to career, professional activities outside of the job, and activities outside of the profession (Bryan & Boring, 1947). Overall, their results do show that there are gender differences for almost all of these factors. Some of their most interesting findings are that the

more supportive and educated a woman’s family is, the more likely she is to pursue and receive a PhD in psychology; women receive lower salaries in general for the same positions as men, and that overall, both men and women believe women have a disadvantage in the field. (Bryan & Boring 1947). They report two other results that I find very interesting because they seem to go beyond simply stating the facts. One result that conflicts with the beliefs of Boring and Titchener is that both men and women in the field wish they had more training in clinical techniques and personal procedures, and less training in laboratory practice and experimental psychology (Bryan & Boring, 1947). This finding is in direct opposition to the beliefs and practices held by Boring and Titchener. To them, these clinical areas would be considered hardly scientific at all. Additionally, the fact that men would have preferred less emphasis on experimental psychology would most likely be a surprise, and, in fact, a disappointment to Boring and Titchener. Although Boring did co-author this article, there is no clear comment from him on these surprising results. The final, and most thrilling result I would like to highlight is their finding that there is a gender difference in the development of professional interests (Bryan & Boring, 1947). It is not so much that this finding is surprising, but that they further elaborate by writing, “ There appears to be a basic difference between the interests of women and men, a difference which may have been imposed by the culture,” (Bryan & Boring, 1947). They acknowledge that there are cultural influences and stereotypes that are imposed on men and that this affects their field of study. This stands in direct defiance of the idea that there are innate differences in men and women that can account for these field of study differences. This is a small sentence, buried within a complicated and long article, however, I consider this declaration, a huge triumph. Finally, we see a glimmer

of understanding about the complex and different forces that act on men and women, and how they impact professional opportunity and direction.

The comprehensive and informative work done by Alice Bryan and Edwin Boring is incredibly important when considering the “woman problem” in American psychology. Bryan used her education and training in psychology to uncover and unpack gender’s complicated place in psychology. Why she ever decided to conduct this work with Edwin Boring, whose views on the subject were quite sexist and strongly held, is a mystery, although perhaps, it is for that very reason, she chose him. Despite her choice of writing partner, and her avoidance of making claims about feminism, that is what runs strongly through her work. Both scientific and socially motivated, her work brought to light important insight about women in psychology. and opened up a space for further work on gender bias.

### **Margaret Washburn**



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<sup>4</sup> Taken from Rutherford, 2015. Reprinted courtesy of the Archives of the History of American Psychology, Cummings Center for the History of Psychology, University of Akron.

Margaret Washburn was born in New York city in 1871 to a well off and supportive family. From a young age she was encouraged to pursue a future in whatever made her happy. She attended Vassar College, which at the time was an all women’s college, earning a degree in philosophy and science. She then moved on to pursue graduate studies in psychology and was mentored by James McKeen Cattell, a prominent psychology professor at Columbia University. At this time, women were not allowed to be admitted to Columbia, and could only register for single classes as “hearer’s”. She found her passion for psychology during her first year there, but when the year came to a close, Cattell did not have an available scholarships for women, (Dallenbach, 1940), which meant that Washburn could no longer attend the university. Unsatisfied by the restraints placed on her at Columbia, and taking into consideration advice from Cattell, Washburn decided apply to the Sage School of Philosophy at Cornell University. There, she continued her work in psychology with Edward Titchener. Although Titchener had not been a supporter of women in the field of psychology, the smart and engaged Washburn managed to impress him. He took her under his wing, making her the first women he personally recommended to the PhD program in psychology. With this recommendation, Margaret Washburn became the very first woman to receive her PhD in psychology in the year 1894. A year after completing her doctorate degree, she accepted a teaching position at Wells College, and continued her association with Cornell, eventually teaching at the Sage School herself. Considering the “woman problem” and all that entailed, Washburn was defying the odds by her achievements in higher education, and her positions at esteemed universities.

Her career in psychology was incredibly successful. At a time when so many women were excluded from academics, and from the sciences especially, Washburn thrived. She was a

teacher for many years, she published dozens of articles and books, and rose to the top of the field by becoming only the second female president of the American Psychological Association in 1922. Her work was respected by many, including, most notably, both Titchener and Boring. The support they voluntarily extended to Washburn only further illuminates the immense impact her contributions were having in the field of American psychology. Washburn became more independent as a psychologist, she began to distance herself from Titchener’s reliance and belief in the supremacy of experimentation and structuralism. Mabel Martin cites writings from Washburn that highlight some of her disagreements with traditional experimental psychology. Firstly he cites portions of an article in which Washburn questions the validity of introspection, a key element in Titchener’s thinking, “It is impossible, assuming only the mental structures discoverable by our present introspection, to give a continuous and coherent explanation of individual mental growth.” (Martin, 1940). Here we can see that Washburn is doubtful that the best and only way to understand consciousness is through examining structures and observing introspection as experimentalists believed. She clearly believed that psychology could encapsulate so much more than the narrow definitions her teachers used. Her growing interest in social consciousness, compelled her to push boundaries around research methodologies that went beyond the limitations of experimentation. Her interest in animal behavior expanded to behavior as a whole, and that area required her to consider aspects and facets of psychology that went beyond structuralism. But she did have good teachers, and although she focuses heavily on behaviorism and subjectivity, the importance of these combined with experimentation is not lost on her. A quote cited by Martin reads, “The conclusions drawn from experiments are now expressed in subjective terms...But extreme behaviorism, which ignored the existence of all

qualitative difference in sensations, would not have long endured.” (Martin, 1940). This shows how she came to believe that both sides of psychology are crucial to understanding consciousness.

Washburn was a force in psychology who challenged the authority and views of psychologists Boring, Titchener and their disciples. Her eminence in the field allowed her to gain admission to the exclusive Experimentalists group, but her very presence there created a tension that was unsurprising. Her very presence in this group created a tension that was unsurprising. Rutherford cites an exchange between Washburn and Boring that highlights this tension. There was an exchange of letters between Washburn and Boring, that followed an incident in which Washburn had used an “incorrect” entrance into the club’s meeting place. Accused of attempting to, “advance the cause of feminism,” (Rutherford, 2015), Washburn is forced to deny these allegations and pacify Boring’s threatened masculinity. This is just one of many examples in which women like Washburn were forced to denounce any sort of comradery with fellow women and with feminism.

The work she produced over the course of her career was illustrative of how psychology can be both experimental, and have applicability to the world. There are two more quotes from Martin that I would like to close this section with. Martin writes, “She never forgot that the task of a psychologist is twofold: first to obtain the facts; and secondly to interpret them.” (Martin, 1940). The key here is her emphasis on interpretation. This is what marks her as different from her male mentors and peers. While experimental psychology does interpret the results, it is only interpreted so far as the experiment is concerned. I believe that the interpretation that Washburn is focused on is not only interpretation of results as they pertain to the experiment, but an

interpretation of results as they pertain to the world. The second quote from Martin is, “...she never forgot that observation is only the first part of the psychologists task. His ultimate goal is an understanding of consciousness.” (Martin, 1940). This final note on “understanding” is important. It goes back to the scientific questions outlined by Titchener in his textbook. This understanding is what is missing from Titchener’s idea of science, but what Washburn sees as essential to psychology as a science.

### **Eleanor Gibson**

Twenty-two years after Margaret Washburn passed away, Eleanor Gibson became the third woman given admission into the Experimentalists, that exclusive and mostly male club. (Rutherford, 2015). Gibson was born in 1910 to a middle class family in Illinois. She followed in her mother's footsteps and attended Smith College. There she met her future husband, James Gibson, who was a professor of psychology at the university. With his support, and the support of her family, she pursued a degree in psychology. Throughout her journey to becoming one of the most successful and influential psychologists of her time, she was faced with many challenges. Like many of the other women discussed in this chapter, her status as a woman barred her from many classes, universities, and mentorships. Her time at Smith College provided her with a stable foundation that would help launch her into a successful professional career as she both completed her undergraduate degree there, but also was able to teach labs as well. While attending Smith College, she focused her interests on experimental psychology, the subject taught by her soon to be husband (Rodkey, 2010). She worked hard to learn as much as she could about the field of experimental psychology, and became specifically interested in the mechanisms of perception.

Her passion for the subject compelled her to pursue a doctorate degree in psychology and she set her sites on Yale. Yale was not very accepting of female students, and she was challenged to find an advisor in the psychology department who would agree to work with her. She was turned down by Robert Yerkes, a participant and supporter of Titchener's exclusive and gender biased Experimentalists. He stated that he would not allow any women into his laboratory. Working within the gendered system, she finally found an advisor in Clark Hull and with his acceptance and guidance, she was able to receive her PhD in Psychology.

Once her professional career commenced, there are instances of note which highlight the gendered nature in which men and women are treated differently in the professional world of psychology. Firstly, years after she received her PhD at Yale, her husband was offered a professorship at Cornell University. Gibson was also extended a position at the University, however it was as an unpaid research associate, (Eppler, 2006). As an unpaid research associate, Gibson was unable to conduct her own research because she was not granted access to any of the resources available to other faculty members. As a work around, she joined the research team of Howard Liddell, whose project concerned the psychology of animals and this proved to be critical to Gibson's career. The work she engaged in with Liddell would later inspire her famous visual cliff studies. Being forced to resourcefully find opportunities to engage in research and work, because of gender-biased university practices, allowed Gibson to be exposed to various kinds of work, great experimentalist ideas can form. She was exposed to many different kinds of psychological practices, and this interdisciplinary learning only enriched her abilities as an experimentalist.



Although she was overqualified for her position at Cornell, her time there was fruitful. From Liddell came her inspiration for the visual cliff studies, and then, with Richard Walk, she found a research partner. Although many may be unfamiliar with Gibson’s name, most are certainly familiar with the research she is most famous for. Exposure and study of her work on perception and the visual cliff is somewhat of a common requirement of most introductory psychology classes. It is unlikely that a psychology student would be completely oblivious to this research. This important research looked at an infant's ability to perceive the space around them. It focused on their development of depth perception as a way of understand their surroundings. The experiment she created was incredibly simple, and yet, produced some of the greatest findings in developmental psychology. The materials were simple, a piece of glass placed a foot above the ground, and a patterned pieces of fabric half of which was placed on the glass, half of which was placed on the ground (Gibson, 1960). She (and her research team) would observe different subjects; infants, rats and kittens, while they moved about on the glass surface. They were watching to see behavioral changes which occurred as the subjects moved from the covered glass to the uncovered glass. They concluded that, “...a seeing animal will be able to discriminate depth when its locomotion is adequate...” (Gibson, 1960). These experiments were a stupendous success for both Gibson, and her research partner Walk. However, the success of both these psychologists and this research was not enough for Cornell to fully support Gibson. As another examples of the resounding lack of endorsement from educational institutions, when Walk left Cornell, Gibson was stripped of her access to laboratory resources at the university.

I find great inspiration from woman like Gibson, and the others mentioned here, who have such unwavering dedication to their work. Despite having resources taken away, she

continued to work hard and went on to publish many books and articles that advanced the fields understanding of perception, reading and learning (Eppler, 2006). She received countless awards for her research and contributions to the field. After many, many years, she was finally offered professorship at Cornell University and regained access to a laboratory, her laboratory; where she worked for many years. It seems Eleanor Gibson never stopped working. Born in 1910, she received the nations highest scientific honor, the National Medal of Science, at the age of 82. At the age of 92, she also published her last book which described her life long career as a psychologist. Her work and her determination are inspiring. Yet again, we find that despite the setbacks and hurdles faced by women at the time, she was able to create space for herself and found ways to do work that was both highly experimental and “scientific” as well; creating knowledge that bettered the world.

### **Mary Whiton Calkins**

Mary Whiton Calkins story is so impressive to me, because it is entirely the story of a women’s conviction to get what she wants despite being told she cannot have it. If you know of Calkins, you may be aware of her numerous accomplishments within the field, one of her highest honors being that she was elected as the first female president of the APA. What may not be apparent to all is the long road she took to get to where she was. Born in 1863, the prospect of women being successful academics, especially within psychology, was slim. Like many of the other women discussed in this chapter, Calkins came from a family that was close and supportive, though her parents were not academics. She attended Smith College, where she focused her studies on classics and philosophy. She received her undergraduate degree in classics and philosophy from Smith College, and a few years after graduating, was offered a tutoring

position at Wellesley College. Her success there led to an offer from Wellesley to become a faculty member. She was to teach a course in psychology, however this offer was contingent on her studying the subject, (Benjamin, 2008). Although this was not her undergraduate area of study, she took the position, and then found herself consumed by the study of psychology, and especially physiological psychology, a new subfield at the time. She then had to work hard to find a graduate program that would facilitate her learning, and focus on this kind of psychology.

Her interests led her to pursue her graduate studies at Harvard University. Although she was a bright and eager student, and she peaked the interest of Harvard professors William James and Josiah Royce, she was denied entry into the program on the basis of gender (Benjamin, 2008). At the time, Harvard was among many universities that were not coed and women were simply not admitted to these programs. This was the first of many hurdles that Calkins faced during her career in psychology. Although she would not be admitted as a student, her determination and the support of some of the faculty, she was finally allowed to attend courses unofficially. She attended these classes at Harvard, and also conducted some of her graduate work at Clark University, for a year. After this year was over, she returned to Wellesley, where she began her professorship, and started her own laboratory. It seems that once she started down the path of psychology, she was not to be stopped. Although only a year of study was required of her by Wellesley, she sought out further graduate education in the subject.

With guidance from her mentors at Harvard and Clark University, she applied again to Harvard to study with Hugo Münsterberg (Benjamin, 115). Her interest in working with Münsterberg is of particular note, as his psychological training came under the tutelage of

Wundt. This is the same psychologist who taught, and mentored Edward Titchener. Like Washburn, it seems that Calkins was to be trained and accepted by Titchener.

All this work, and yet Calkins was still not recognized as an official student by Harvard. She had been working closely with Münsterberg for a few years when she asked the Philosophy department at Harvard to assess her doctoral work. Each member of her board agreed that Calkins, “...demonstrated a scholarship that was exceptionally high,” (Benjamin, 2008). Yet again, her attempts at gaining the degree she was rightfully owed were knocked down. Her unofficial student status, because of her gender, would bar her from being able to receive her degree, despite the support of many faculty members. But her determination and perseverance to succeed in psychology would not be diminished by these roadblocks. She was proud and believed strongly in herself and her ability to be successful. Some years after being turned away yet again by Harvard, she received some uplifting news about her graduate work. Radcliffe University, the Harvard related university for women, offered Calkins a PhD for the work she completed at Harvard. This would seem like a win for Calkins, after having been turned down so many times, however, her response in a letter dated May 30, 1902 shows a different perspective:

“I have seldom received so just, discriminating and kind a letter as yours of May 19...and I am sorrier than I can tell you not to reply to it in the way which would best please you. I hope that I may make quite clear to you my reasons for declining to accept the honor of the Radcliffe doctor’s degree. I . . . think it highly probable that the Radcliffe degree will be regarded, generally, as the practical equivalent of the Harvard degree and, . . . I should be glad to hold the Ph.D. degree for I occasionally find the lack of it an inconvenience; and now that the Radcliffe Ph.D. is offered, I doubt whether the Harvard degree will ever

be open to women. On the other hand, I still believe that the best ideals of education would be better served if Radcliffe College refused to confer the doctor’s degree. You will be quick to see that, holding this conviction, I cannot rightly take the easier course of accepting the degree . . . (Calkins to Irwin, May 30, 1902)” (Benjamin, 2008).

Calkins knew the value of her work, and recognized that a degree from Radcliffe would not satisfy her. She also felt that her success was, in the end, not dependent on the doctoral degree. Although seemingly humbled and grateful, her rejection of this degree shows the strength of her character. It also appears to be a small, but strong, declaration of her feminist views. The only degree she would accept would need to come from the University that had denied her, based on her sex alone; any other degree would not suffice.

We can take a look at a few words written by, and work produced by Calkins mentors, as a way of better understanding the stance of women in psychology. One of her professors, Edmund C. Sanford, whom she studied with at Clark University, wrote in a letter to Titchener, stating that he felt it unfair to exclude women from Titchener’s Experimentalists. He wrote, “. . . The question with regard to women in the association is a poser. Several of them on scientific grounds have full right to be there and might feel hurt. . .” (Benjamin, 2008). However, shortly after, he does agree that women would in some way interfere with the highly masculine atmosphere in which there would be smoking. Two steps forward, one step back. Her other mentor, and someone who stood behind her as she worked rigorously with him in the lab for years was Hugo Münsterberg. Münsterberg was another student of Wundt, who went on to receive degrees in psychology, philosophy and medicine, (Benjamin, 2008). His academic interests were born from scientific psychology, however as he grew older, the expanse of his

curiosity about the world expanded. Benjamin explains that most of the work that he was producing later in his career, concerned applied interests such as the media, law and psychotherapy (Benjamin, 2008). Perhaps Münsterberg’s vast academic interests, and the personal importance he seemed to place on subjects related to, but outside of experimental psychology, are what made him an appropriate and supportive mentor to Calkins. With his personal experience in many different fields, one could assume that he might be more open to considering various forms of psychology as equally valid and important. Benjamin writes that he “...strongly supported her application...” (Benjamin, 2008).

Her belief in herself would pay off a few years later when she was elected as the first female president of the American Psychological Association. This groundbreaking achievement was the crown jewel in her pursuit for recognition and success. None of the hoops she had to jump through, nor the opportunities denied to her, discouraged her for continuing on, and eventually receiving the great honor of being the first (and one of the only) female presidents of the APA.

### **Mamie Phipps Clark**

Perhaps the woman whose work best represents the social power and influence of psychological research is that of Mamie Phipps Clark. She was born in 1917 in Hot Springs, Arkansas. Like many of the other women discussed in this chapter, she came from a well off family. Her parents were supportive, and due to the status of their family, Clark was able to avoid some of the racism that faced most people of color in the South at this time, (Lal, 2002). She pursued higher education at Howard University, first studying mathematics, and later switching to psychology. From there, she pursued a master's and PhD in psychology at Columbia

University which, given her race and sex, was an incredible feat. In her article outlining some of the career of Clark, Shafali Lal presents some startling facts about the the status of black people in psychology at this time. She writes, “Between 1920 and 1966, the nation’s 10 leading psychology departments had produced 3,700 doctorates in psychology, only 8 of which were awarded to Black students,” (Guthrie & Samelson cited in Lal, 2002). Two of these people were Mamie Phipps Clark and her husband, and academic partner, Kenneth Clark, who she had met while in school. Through her studies, she became increasingly interested in child development, specifically in children's development of an understanding of the self and race. These interests were not isolated to her work at Howard and Columbia University; they would follow her throughout her entire professional career.

Her most influential, or most famous, research studies are her doll studies, conducted with her husband. They were very much in line with her devotion to understanding children and their understanding of the self in the context of race. The basic premise of these studies was to understand children's attitudes and understanding of race by presenting them with dolls of different races. Each child was presented with one white doll and one black doll. They were then asked various questions regarding their preferences of the dolls. Some of these prompts included, “Give me the doll you like best,” or “Give me the doll that is a nice doll,” (Clark, 1988). Their overall findings showed that most children preferred the white doll, and furthermore attributed more positive statements to the white doll than to the black doll. These results were true for both white and black children who participated in the study. This research was both scientifically sound, and met many of the strict expectations of experimental psychology, and it was simple, using stimuli and measured responses. It has become one of the most influential psychological

studies, and is included in many introductory courses of psychology. It goes beyond simple scientific research because of its application to the discourse on civil rights and race relations. This work was so important in connection with the fight for civil rights, that the knowledge gained from these doll studies was used as support for the NAACP during the famous Supreme Court case of *Brown v. Board of Education*. It is acknowledged that the psychological research that was presented during this case played a crucial role in the court's final decision regarding this case, (Benjamin, 2002). It was one of the first instances in which social science, and psychological research were presented and considered in such a high profile case. The importance that this research played in the court decision showed how valuable psychological research was, and how seriously it's real world application should be taken. This was not only a huge success for psychology as a whole, but considering that this research was conducted by two of the first black students, one of whom happened to be a woman, to receive PhDs in psychology, was a giant leap forward for both minorities within the field of psychology.

Another project that illustrates Clark's dedication to both psychology and social justice, was her development of the Northside Center for Child Development. This center, set up in Harlem, provided psychological, educational, and emotional services for children. If you visit the website today, you can see the pride felt by the center for the work done by Mamie Phipps Clark and her husband. There are frequent mentions of their psychological research, their involvement in the *Brown v. Board of Education* case, and their dedication to the psychological well being of children. The first sentence in the mission statement of the center reads, “Northside was founded by pioneering psychologists Drs. Kenneth B. and Mamie Clark. Their work—which showed how racial inequality negatively affected the self-esteem of young children—helped change the



course of American history,” (“Our mission”). This is a profound statement about the importance of the Clarks’ research and its positive influence on “American history.” It is crucial, when considering the work of Mamie Phipps Clark, to learn about her work outside of traditional psychological research. The idea for the center was born out of a few things. The first was Clarks’ established interest in the psychology of race and children. The second was her experience at another home for children in New York, providing psychological service to the children there. The third was her brief involvement in a law firm in which she worked as a clerk for prominent lawyer and civil rights activist Charles Houston (Karera & Rutherford, 2010). Her and her husband conceived of the idea as a way of providing psychological services and testing to minority children who they felt were not able to access these services elsewhere. Her training in psychology and her previous experience at the Riverdale Home for Children, provided her with all the knowledge and skills needed to open her own center. Through this work they believed that they would gain a better understanding of the psychology of children with regard to race, as well as providing a much needed service to an underprivileged community. The ultimate goal of this center was to improve the lives of these children, thus improving, overall, the communities that they lived in. Lal writes, “With the founding of Northside, Mamie Clark could combine service with science,” (Lal, 2002). This was at the core of Clarks motivation for her work. Her success as a psychologist and as a socially active member of her community, illustrated that women could do both, and set an example for what being a woman in science could look like.

I cannot help but the nagging, anti-women voice of Boring in the back of my head as I write about Clark’s scientific achievements. Not only does his ideology exclude her as a scientist

due to her commitment to applied research, he would also frown upon her dedication to social justice and her family. Her work does not fit into his definition of science and certainly would not be considered, in his eyes, as prestigious. The work I am doing throughout this thesis pushes back on these ideas about science and scientific eminence. The doll studies conducted by the Clarks have become one of the fundamental studies taught in social psychology classes, and this research was used in a Supreme Court case; I believe this merits “prestige”. Clark’s graduate work dealt with the development of consciousness, mental ability and self concept in children. She conducted research throughout her career which pushed forward the field of developmental psychology. What works against her, in the eyes of psychologists like Boring, I find to be the very things that make her an extraordinary psychologist. She used her training and knowledge to produce scientific work that added to grand theory and was applicable to the real world.

What makes Clark so incredibly interesting, and why I chose to conclude this chapter with her, is because of her unapologetic marriage of psychology and social justice. From the beginning, she dedicated her time to applied research that was aimed at bettering the lives of marginalized communities. This commitment to applied psychology only added to the list of categories (being a woman and being Black) working against Clark at the time. So many of those within the psychological field, having been influenced by big shots Titchener and Boring, rejected applied research, deeming it unscientific and therefore “lesser” in the eyes of academia. While others may have been discouraged to use psychology in this way, Clark understood that the social benefits of her psychological work, outweighed any hardships she might face as a social psychologist working in applied research. While the experimental work of Boring and Titchener added greatly to the grander scientific knowledge of psychology, they seemed to think

very little about the real world applications of their work. Clark is a wonderful example of how one can create highly influential research that adds to the literature of the field, while also having it be applicable in people's lives. Her doll study is still taught in classrooms today and I recall reading about it and discussing it in one of my introductory psychology courses as it has now become essential to the modern psychology students' education. However, her work that went beyond experimental work is far less recognized. Is this due to residual rejection of applied psychological work? Could we still be somewhat tied to the ideologies of Titchener and Boring? It is a shame that I am only learning about this incredible woman and her work now. I feel as though I would have benefited greatly by learning about Clark, and others like her, during my time as a psychology undergrad. Being interested in applied work myself, I find her life story motivating and it shows me how to take my knowledge and push it farther than the laboratory. I am greatly appreciative of this opportunity to learn about her, and I hope that you can find inspiration in her as I have through the process of writing about her.

### Chapter Four: Conclusion

Historically, women’s contributions and administrative presence have not been representative or proportional to their numbers within psychological associations. Additionally, we see more women pursuing careers in applied psychology (clinical, developmental) as opposed to experimental psychology (cognitive, neuropsychology). My curiosity about why it is that gender is distributed this way in the field of psychology was the driving force behind this project. Not only was I curious about the professional field of psychology, but as a woman in psychology I also began to question my place in the field. I was forced to look around at my peers, at my professors, and at the professional psychologists I learned about throughout the years. As I reviewed all of these different aspects of psychology, I began to recognize the gendered trends that I was seeing in my studies. Was this a case of confirmation bias? Was I only seeing what I wanted to, and what would support my ideas about women in psychology? Or, rather, was I legitimately noticing that what I was reading about in the literature, was actually a truth in the world I was working in. My research into the lives of some influential female psychologists broadened my perspective and illuminated my understanding of the role gender played in the developing psychology field. Now I wanted to look for similarities and common threads between these female pioneers. Hoping, that by doing some exploration into the commonality of these women, I might gain an even better understanding of how women operate within psychology.

There is no doubt that the five women reviewed in the previous chapter are some of the most influential psychologists in the fields’ history. Each and everyone of them worked hard to earn degrees in higher education, conducted important and influential research, pushed forward

women’s acceptance into this scientific field, and used their prowess to implement change in the world, big and small. Let’s begin by returning to the research conducted by Alice Bryan and Edwin Boring, that looked at factors affecting women in psychology. The factors they focused on were; physical characteristics, family background, development of professional interest, attitudes towards training, prejudice and employment, professional employment, attitudes towards professional work, effects of sex on career, relation of marriage and children to career, professional activities outside of the job, and activities outside of the profession. I will work through a few of these factors which had an influence on the lives of the women I have discussed here in this article.

However these women’s physical characteristics contributed to their success in the field is of no interest to me. I am simply uninterested in considering the importance of their physical traits (weight, height, age), or to comment on the validity of “looks” as a factor of success. Each woman came from a familial background that seemed supportive of their interests, and were able to financially support their educations. Furthermore, their families did not try to dissuade them from pursuing psychology as a passion and profession. This commonality; a supportive family, most certainly helped each woman’s ability to be successful in an academic environment. The women each attended prestigious universities and went on to pursue higher education after their undergraduate work. This allowed them to develop and hone their interest in psychology. These women were also all taught and mentored by faculty who believed in them as academics. Each was met with some resistance, and whether that resistance was manifested as the inability to attend a university, being denied from a program or being rejected by an advisor, each woman found a few professionals to back them and their work. They worked around their resistance,

finding ways to conduct their research at the universities they were accepted into, or sometimes taking their work outside of sexist university guidelines. They were able to find employment one way or another and some were fortunate enough to find themselves employed in the field of psychology. This allowed them to continue their own education within the field, while progressing in their careers as professional psychologists. Some found psychology-related work that satisfied both their scientific curiosity, as well as their dedication to outside interests. Wherever they were along their professional trajectories, they worked hard, and that hard work led some of them to be in a position to accept the highest positions within the APA. They each found themselves in differing familial structures of their own; some were married, some had children, and some did neither. However, the diverse experiences in relation to their own family life do not seem to have had a great influence on them as professional psychologists. Perhaps the greatest commonality throughout all of these women were their broad psychological curiosity and interest which expanded beyond academia and the laboratory.

This particular drive to bring psychological knowledge into the real world has been something that I have discussed at length with Stuart, Alexandra and others. It is at the center of my discussion on commonality, and is an integral part of why these women were successful. They all found ways to be engaged socially in the world around them through the work they were producing. For some, it was standing for women’s rights by simply pursuing a career in a field not welcoming to women or, furthermore, gaining a powerful position within that field. For others, it was standing for racial injustice by using their skills to improve the lives of others and uncover some of the psychology of racism. There seems to be a communal awareness for these social injustices among these women, and perhaps among women in general working within

psychology. They were not activists in the typical sense, however, they made space for themselves in an academic and professional world that often thought less of them, and used that space to make the world better. It may not have been their sole purpose; they all were driven intellectually by psychology and science, but nonetheless their impact stretched beyond the academic field.

Finally I would briefly like to touch on the connection of philosophy and psychology. Most of the women I have discussed here either studied philosophy, or have been documented as being interested in the subject. If we return for a moment to Boring and Titchener, we might recall that they strived for the separation of philosophy and psychology. This aided them in their fight to make psychology purely scientific. I feel this is a strange position for them to take as it is so limiting. The philosophy that is incorporated into psychological thinking can be so rich and the women I have discussed here seemed to know this very well. It most certainly contributed to the kind of work they were producing and the projects they were most interested in. I believe that the attention to philosophical thinking is inextricably tied to this notion of social engagement. Being able to conduct experimental research, then take it a step further by contemplating the philosophical nature surrounding it can lead to richer work and multiple paths to additional inquiry. Again, I return to the quote by Titchener, referenced by Cerullo, about how experimental psychologists are the only ones whose work is never ending. I find the perspective of these male experientialists to be pride based and gender biased. The women I've discussed here, and their philosophies (for lack of a better word) about psychology stand in direct contrast to that stifling idea.

## **Chapter Five: A Limited Exploration of Gender in Bard College’s Psychology Department**

### **Background**

As this project unfolded, I found myself asking questions about my place in psychology. It only made sense that this work would turn inward, as I myself am a woman studying psychology at an institution that places psychology within the sciences. What does this mean for me as a “scientist”? It also became unavoidable to consider what Edwin Boring would think of me, my senior thesis, and my peers in the psychology program at Bard. Considering his views on science, psychology and women, I do not think he would think of me as a scientist; I am writing a senior thesis that is mainly historical, I do not have a lot of experience conducting experimental research and I wish to pursue clinical psychology. Although Boring himself was mostly producing historical work, these facts about myself would be enough for him to dismiss me as unscientific. Rather, he would assume for me, as for any woman, that I would be drawn to subjective psychological work aimed at helping others. This line of inquiry leads me to consider the rest of my senior class. Although I do not know what everyone is choosing to study for their senior projects, I have a strong inkling that most of the projects, even those based in experimental research, still have an element of application in them. As a whole, how would Edwin Boring assess my senior class? How would he assess the psychology program at Bard as a whole? These are questions that I felt were important to contemplate.

I am also curious about the modern day manifestation of the “woman problem” in American psychology. Times have changed, and gender relations have shifted. I would suspect that the extreme hurdles faced by women in science during the early to mid 20th century, would be moderately less prevalent today. However, in today’s discussions surrounding gender related



issues, the discussions on gender disparity in the sciences are abundant. This would indicate that there are still gender related biases that are present in STEM fields. I have learned a lot about these issues in a course I am currently taking. I have found immense inspiration in my Advanced Methodology course. The papers I have read in that course, and the discussions I have had with my professor and peers, stay with me long after the class period ends. Most of the research we are reading deals with issues of gender disparity in the sciences in the education system. Some are simply trying to understand the problem, while others are testing innovative interventions aimed at helping solve these problems. The work is thought provoking and motivating. Although it is not stated as such, some of these articles are doing the work to uncover the modern day “woman problem” in STEM. However, what these articles do seem to lack is the inclusion of psychology as a science to be discussed in the context of gender disparity. What is made clear by this is that, more research needs to be done to look into gender disparity issues within psychology today. This work can be, and should be, both historical and empirical. These thoughts brought me to this second part of my project. I began to think about the “woman problem” and its possible presence in Bard’s Psychology department. The historical work that I have done thus far has given me a good foundation for understanding gender relations within psychology. The task of trying to uncover possible gender-related issues at my own school proved much harder. Some of the research that was covered in my Advanced Methodology course provides a good outline for tackling these kinds of questions. Furthermore, the research conducted by Alice Bryan and Edwin Boring seemed most pertinent to the type of information I would be looking at. Their articles, which were mostly data analysis and not experimentation, felt like a good jumping off point.

Reviewing the articles that Bryan and Boring published, I could see that most of the research they were doing was reviewing available archival data, so I began to think about this work by thinking, broadly, about my senior class and what I knew about them. I had vague knowledge of the topics they were interested in, and had known of some previous senior projects that were completed. I wanted to understand the general interests of the psychology department at Bard. I wondered if most students were producing senior projects that centered around experimental psychology, or applied psychology. Although I would have guessed that it was somewhere in the middle, I didn't know what the reality was. Since Bard's Psychology department is in the science division I thought it might be possible that the program attracted more students interested in the experimental psychological, rather than subfields like clinical and child psychology.. In terms of Boring and Titchener's views on psychology and science, I wondered what they would applaud and what they would critique about the program. Even if a majority of students were producing work that was considered experimental, I would guess that Boring and Titchener would still push for the program to be more scientific.

From these questions, I began to consider what resources I had available to me. I immediately turned my attention to the digital and physical senior project archives held in the Stevenson Library. I knew that I had access to past projects and would be able to view them easily. This access would provide me with a tangible way of understanding the topics chosen by past psychology students, thus giving me a real idea of what most students choose to study in this program. I started by only looking at one year of projects. There was so much to think about and consider from this small sample of projects. From there I decided to look back further. At first I thought it might be interesting to reach way back some fifty plus years. I was curious what the

makeup of the psychology students at Bard looked like before second wave feminism, before conversations about gender-disparity were taking place; back to a time when people like Edwin Boring sat at the top of the field. However, this proved to be far too much data to analyse in a year long senior project. I had to conceive of an appropriate amount of years to go back through in order to have something interesting to discuss. It was about that moment that illuminating information about the psychology department was given to me. About six years ago. Bard’s psychology department switched from being in the social sciences division, to the science division. How interesting. This prompted questions and discussions between Stuart and I into the possible changes that accompanied that move. I thought that it might be interesting to use this marker as a key date in the data I was looking at. I decided to collect data from the years 2006 to 2017, which would provide me with data from six years prior, and six years after this move. It would be fantastic if, after analysing the projects from these years, I could conclude that with the move, there were more students producing experimental senior projects. It would also be interesting if the makeup of the senior class, in terms of gender breakdown, changed as a result of this move. And of course, throughout the entire process I remained curious about what Boring and Titchener would think of all of this data.

All in all, I mostly based my work off of the work of Bryan and Boring. I was gaining access to readily available data and considering what the information meant. I collected data on the gender breakdown of each senior class, of the faculty working during those years, and information pertaining to the topics of each senior project. I predict that at an institution like Bard College, there will not be much of a “woman problem”. I predict that the gender breakdown of each senior class will be close to gender-balanced. I also predict that psychology’s move from

social studies to science will have no great effect on the makeup of the students in the program. In other words, I do not think this move motivated more students interested in pure experimental psychology to enter the program. The work discussed in this section is only in the very beginning stages. It is not a full study, but rather a exploration into some of my preliminary questions. I used that data to begin to have a conversation on the “woman problem” at Bard in general, and today.

### **Methods**

All of the data collected was obtained through the physical and digital archives at Stevenson Library at Bard College. The digital archives were obtained through the Bard Digital Commons. These archives only date back to 2011. The information gathered on older projects and physical copies were obtained in the library. Before beginning to collect the data, I set up an online database in which all of my data would be recorded. This database was organized by year. Categories collected were; Year Graduated, Student Name, Student Gender, Project Advisor, Advisor Gender, Advisor Area of Study, Title of Project and Abstract. I obtained Advisor Area of Study through the department page on Bard’s website. The most important categories recorded were Student Gender and Title of Project. These would be categories I focused on for observations made later about this data. Everything was recorded straight into the online database made in Google drive.

Loose definitions of “hard” and “soft” were conceptualized using various readings and previous definitions. Most importantly these definitions were based on the understanding of science and application put forth by Edwin Boring and Edward Titchener. “Hard” psychology was first and foremost defined as objective. This meant that the project was an empirical study

that was interested in understanding mental processes. They were projects that were apparatus heavy, and involved presenting stimuli to participants and recording reactions. Project proposals would not be considered hard because there was no actual study being produced. Cognitive psychology and neuropsychology projects would be considered hard. There was the potential for social psychology and developmental psychology projects could potentially be considered “hard,” however, clinical and abnormal projects were to be considered “soft.” “Soft” psychology was defined as subjective. These projects could be empirical studies, project proposals or social studies projects. The main criteria for a project considered “soft” was that they produced work that was applicable to some real world problem, and that they used the knowledge gained in the project to address a social issue. Clinical and abnormal projects were considered “soft.” Depending on the structure of the project, social psychology and developmental psychology could be considered “soft.” Finally, cognitive psychology and neuropsychology projects were only considered “soft” if they has explicitly referred to application or social issues. The understandings of these terms would be used to categorize each project using, first the title of the project, and if needed, the abstract of the project.

After all the data had been collected, I first focused on the gender breakdown of each senior class. I used students names to decipher their gender. Gender was easily deciphered from the names of the students. For the select few students whose names were ambiguous, I categorized them as “Unknown.” For the purpose of this study, that was appropriate. I did the same while categorizing the gender of faculty members. Using the definitions outlined above, my advisor and I categorized each project into a soft (application), and hard (experimental) group. Due to the nature of this project, there was no strict coding system in place. I am

providing examples of senior project titles and abstracts in Appendix A. From there, preliminary observations were made about the nature of gender in this particular psychology department.

### **Preliminary Observations**

I have collected the necessary information on all the students in the program for the last 12 years. The nature of this analysis is to review the data collected, and to make preliminary observations about the function of gender, if any, in Bard’s psychology program. I explain how I have come to understand these observations.

The first piece of the data that I looked at was the gender breakdown of each senior class for each year. I had categorized each student into “female,” “male,” and “unknown.” What I have observed is that, in general, there are far more women than men in the psychology department at Bard. This seems to hold true across all 12 years. This means that in every year, the number of female students outnumber the number of male students. Furthermore, for most years, this disparity seems to be quite large. For example, the year 2012 had 22 female students, 6 male students, and 4 students whose gender is unknown. For the year 2017, there were 13 female students and 5 male students. The percentage of women, as compared to men, in all years sits around 60-80% of the graduating class. This means that not only is psychology at Bard not male-dominated, it actually seems to be female-dominated. Considering all of the psychology courses I have taken at Bard over the last three and a half years, I can confidently say that this trend mirrors the look of the classes.

I was also interested in the gender breakdown of the psychology faculty over the years. From the data I have observed that across all years, the gender of the faculty seems to be either male-dominant or gender balanced. There have also been both male and female department

heads. While an interesting questions to ask, observations could not be made on the influence of faculty gender and area of study, on the students senior project ideas. In order to conclude anything from that data, one would have to come up with a statistical analysis plan that could possibly expose the interactions between all of these variables. Because this is only a beginning exploratory study, I have not done that here.

Finally, my last observation, concerned the nature of the projects themselves. Reviewing all of the projects, it is clear that most of them are somewhere in between the category of “soft” and “hard”. There do not seem to be many projects that are purely experimental. The only projects that would be, in this context, considered purely “soft” would be those projects in the social studies division. This is because there is no study being conducted. Most projects, even the ones that are experiment based, seem to comment on the implications of their findings. This is fairly evident from the descriptive titles that students give to their work. I conclude that most of the projects produced in the last 12 years generally deal in both experimentation and application.

### **Chapter Six: Conclusion and Discussion**

So why do I think that most of the projects being created by students in the psychology program at Bard College incorporate an element of real world application. I believe that Bard College as a whole attracts students who are passionate about and engaged in the world around them. The very first sentence in Bard College’s mission statement is reads as follows, “Bard College seeks to inspire curiosity, a love of learning, idealism, and a commitment to the link between higher education and civic participation.” (“The Bard college mission”). It states explicitly that it seeks to encourage it’s students to join together the knowledge they acquire in the classroom, with a dedication to being active participants in the world. Without a doubt these values are upheld by the students I’ve encountered here at bard, included those within the psychology department. I predict that most, if not all, students entering the psychology program have some interest in both experimentation and application. This is based on their interest in, and decision to attend a college that shares their investment in interdisciplinary learning. The psychology department as a whole also does a great job of upholding these values. As a transfer student I had to make up for some lost time and take many psychology classes simultaneously. This gave me broad exposure to a great variety of professors here at Bard. I can say with certainty that each professor, in their own way, encouraged the class to consider the real world implications of the work that we studied and conducted ourselves. This kind of teaching instilled in us, whether conscious or not, a curiosity about psychology's role as a science and as a means of understanding the world at large. Due to all of this, and considering the typical psychology student at Bard College, it is clear to me why most of the projects completed in psychology have at least some aspect of application in them. It would be surprising to find a student and project



that was so purely theoretical, with no contemplation given to what the results meant in a larger sense.

### **Limitations**

I found the process of identifying, observing and analyzing the data required for this study to be both rewarding and difficult. Although overall the patterns are easily identified, I found myself asking questions about the limitations about the work that I was conducting. Firstly, I would like to address my process of identifying the gender of each student and faculty member. For the sake of my project, I considered gender in the binary as it was viewed by Boring, Titchener and many others. This strategy worked in my favor in the context of this project, though I found myself having an internal struggle. The process of assuming gender felt somewhat backwards to me, an act I work consciously to avoid in my personal life. These assumptions erased the identities of students who do not identify within the binary, and I wanted to address this by stating that despite my being able to rationalize why having more limited gender identities for this project was necessary, I was not comfortable having to proceed this way, and I want to apologize to those students whose gender identities I assumed. On a side note, through my journey with this project, I have come to learn that Bard does not keep information on non-binary students on any records.

Another limitation to this work is that I provide no statistical analysis. I felt it was not necessary at this initial stage of this inquiry. Rather, I sought to simply explore the ideas and questions that came out of my historical work within a concrete and personal framework. Since my project brought up so many questions about myself as a woman and as a psychologist, I wanted to explore the answers by looking at the institution in which I was being shaped as such.

A logical next stage of research might involved statistical analyses to help identify and understand trends.

Finally, the most challenging limitation to this work has been creating a concrete definition for “soft” and “hard” psychological work. I had wonderful resources and spent many hours discussing the subject with my advisor, Rutherford, and others and I analysed the words of Boring and Titchener to try and find the answers. I've arrived at the beginnings of those definitions through a marriage of all of my sources, but I feel am still in need of greater concreteness.

### **Suggestions for Future Research**

Future research would certainly require deeper analysis of this data. This research would need to synthesize the data using statistical tests and analysis. By doing this kind of work, we would be able to gain an even clearer understanding of of how gender functions within and impacts the psychology program here at Bard College. My preliminary observations are tentative. I have concluded that, overall, there are more women than men in the psychology department. This seems to hold true for all the years I looked at. However, in future research, these numbers would need to be analyzed mathematically in order to understand their significance. This statistical process could be used to analyse both the gender breakdown of the student body, as well as the faculty. I also think that our culture has shifted its thinking on gender roles and identity, and it will be interesting to see how that plays out vis-a-vis the ideas presented in this paper. Certainly, further research would require considerable progress in the categorization of gender. As stated above in the limitations section, gender is fluid, and freely

expressed in various ways here at Bard and now widely in the world at large. Future research would have to find ways to understand and record this kind of data.

Additionally, I observed that most psychology senior projects seem to have an element of real world application. However, the definitions of “hard” and “soft”, “experimental” and “applied”, would need greater definition. This would require a longer literature review that included research examining these categories. It could also include more historical research, as a way of understanding this divide. In addition to a more well defined understanding of these concepts, a clear and concise coding system would need to be developed. I did not use a clear and objective coding system to categorize projects, but rather assigned my loose definitions of “hard” and “soft” to the titles of senior projects as a way of categorizing them. A coding system that was able to be understood by anyone would allow for better, and more objective categorizations of senior projects, and would eliminate interpretive and subjective elements. The coding system should be applied to both the title of the project, as well as the abstract provided. The titles provide a good amount of information on the projects since they are highly descriptive., however, in order to truly categorize the project, the inclusion of coding of the abstract is required as the abstract provides a more in depth and detailed account of the purpose of the project. The coding should include basic terms such as “clinical,” “cognitive,” “developmental,” “neuro,” etc., and could serve as a tool for other researchers to utilize to conduct similar studies at their institutions.

Finally, by extending this line of inquiry outside of Bard College, this research could provide more in depth and comprehensive understanding of this subject. Interesting knowledge may be gained by looking at how gender functions within psychology department at many

different kinds of universities. Broadening the scope of study would enable us to look at different kinds of institutions and different schools of psychological thought. It would be interesting to compare and contrast findings through a variety of different lenses. We could also aim for greater understanding of how environment and mentors contribute to the role of gender in psychology. The expansion of this research would also include moving outside of the college context, and into the lives of professional psychologists. Isolated experiments could examine the function of gender in modern American psychological practice. There might also be a way to conduct longitudinal research, following psychology students from their undergraduate studies, to their life beyond college. How do their interests change, and what professions do they decide to go into. Similar to my predictions about the role of gender within Bard’s psychology department, I would doubt that gender plays a serious role in the subjects and fields people choose to pursue. Psychology as a field has grown so much, and in this day and age psychology can be, and is, an element in many different professions. There are still experimental psychologists and clinical psychology, but now we also see psychologists working for social media companies, fashion brands, and in a variety of other industries. We have also seen shifts in the kinds of psychological professions that are dominant in the field. Clinical psychology is no longer at the bottom of the rung. In fact, the various subfields may not even be considered a hierarchy in the same ways they once were.

Finally, it might be interesting to go back to those simple and concise studies conducted by Bryan and Boring. As a society we have outgrown some of their dated and sexist notions, but I predict that we may find some factors that do still affect the professional lives of women today. Some of these unfortunate factors I predict might still affect women are “physical

characteristics” and “relation of marriage and children.” I do also predict that factors relating to access, such as family background, still play a major role in the professional lives of women. I do however, predict that some some factors; training, prejudice, employment/activities outside of the profession, probably have less of an impact now. I believe this would be the case because “psychology”, as a profession, can mean so many different things today.

### **General Discussion**

So what is the “woman problem” and does it exist at Bard? This was the question I had in mind when beginning this project. Although my questions evolved throughout my undertaking of this study, I would like to take a moment to think about the answer to my initial question. The definition of the “woman problem” seems quite clear to me. It was outlined eloquently by Rutherford, and the examples provided by Bryan and Boring solidified the meaning. At its core, the “woman problem” is the underrepresentation of women in high positions and a lack of “eminence” compared to men. This holds true when looking at the history of American psychology; women were underrepresented in high positions such as; deans and presidents of schools, department heads, leaders of psychological associations, etc, and they also lacked the status, reputation and honor that men had for doing similar work. My second preliminary questions was about whether the "woman problem" existed at Bard. My initial thoughts were no, and my observations about the program back that up. In terms of the underrepresentation of women within the program, I do not see that. We have a woman department head, and many fine female professors, and women are very well represented in the student population as well. I think this makes sense in the context of Bard College and in the professional climate of today.

This is why I suggest that future research take this question of the modern day “woman problem” out into the professional world of psychology.

I believe that Boring’s over simplified the factors that contributed to this problem. At the core of his beliefs is an idea that women and men are genetically predisposed to be interested in different forms and uses of psychology. For men, the goal was experimentation and to add to the greater scientific knowledge, and for women, the goal was to use psychology as a tool to better the lives of others. I do not agree with these beliefs. By understanding the factors affecting women in the field, and by examining the lives of some female psychologists, it is easy to see the numerous social, political, economic etc., causes of the “woman problem” that go beyond genetics. It is nonetheless true that the beginnings of American psychology saw many women enter the subfields of clinical and development psychology. Whether it was due to honest interest, or other more complicated reasons, the women within these fields made the best of their work there. They enriched the fields by practicing “hard” and “scientific” experimental psychology, while also using their findings to propel personal and social change. My preferred understanding of the early days of American psychology, involves bright and innovative women who found ways to penetrate a male dominated field, and often went above and beyond what their male counterparts were doing.

My senior project process somewhat mirrors the careers of these women, in that I started off in one direction, and then discovered something new which re-directed my energies. My ability to pivot has served me well along the way. I started out, gung-ho, on producing an empirical study that was vaguely related to gender, maybe sexual assault, attitudes and framing. About half way into my first semester, Stuart gave me an article written by Alexandra Rutherford

which completely changed the direction of this project. It honed in on exactly the things I was curious about in terms of gender. Boring's ideology and writings are opinionated and can be shocking, especially from a modern perspective, but I was fascinated by what Rutherford illuminated about the gender bias and constraints in Boring's time and onward. At first I thought I wanted to uncover the modern “woman problem” in American psychology through an exploration of Bard's psychology program. However as I dug deeper into the subject, the project transformed once again. It has really become a crash course on the history of American psychology, and more specifically, the history of women in psychology. Through the exploration of their work, the predominant question I found myself asking was “what is the commonality between these women,” and “does this tell us anything about the function of gender in American psychology today?” I think gender does still play a role in psychology, although I am hesitant to say definitively that there is a difference between men and women in regards to what they are interested in and what they study. The differences are greatly influenced by social constructs, and by the dominant ideologies of our time. With all this said, learning about these prominent female figures in American psychology has led me to more questions than answers. What a gift that is.

Going back to our old friend Boring, we find that, despite his insistence that objectivity is imperative for science and theory is the highest operating achievement, his writing often falls into subjectivity. In this way he is very inconsistent, and not always able to live up to his own standards, which required disengagement with the world in order to achieve objectivity. And that, I think, is where I have the most trouble with Boring. In today's interconnected and fast moving world, connection is everything. And by connection here, I mean, why not connect your

passion for science with your passion for self care with your passion for bettering the world, all at once.

I would like to return for a moment to the content reviewed and mentioned earlier in this paper. Throughout the semester we have encountered many articles that deal with the subject of gender and science. Most of these articles explore people's implicit biases pertaining to gender within the scientific context. Cheryan et al. tried to understand why some STEM fields are male-dominated, while others are more gender-balanced. Steinberg et al. considered the potential benefits, for both men and women, of depicting scientific work as more communal. Zitelny et al. asked if scores on the gender-science IAT predict actual behavior? These are only some of the research that we looked at. It is clear the magnitude of the “woman problem” described by Rutherford may have lessened, gender does still play a part in the educational and professional lives of female scientists. I find it encouraging to know that there are teams of scientists trying to understand these issues in a modern context, but also doing research aimed at fixing the problem. I was lucky enough to take this course during my final semester at Bard, while writing a senior project that dealt with some of these ideas. There is no doubt that this class influenced my project and my project raised questions I could take up in class, but the most exciting thing is that the breadth of inquiry that came about because of this combination of events has inspired greater interest in me to delve deeper into this subject.

I wish I had been taught about these women's lives and struggles. Yes I learned, and have knowledge about some of their work. Specifically, I can recall learning about Gibson's visual cliff studies, as well as the doll studies done by Clark. I have studied perception, memory, and child psychology, all fields that were greatly enhanced by the work of these woman. However, I



would have loved a psychology course focused on the history of the field, or a course on the role of gender within the field, not just gender differences within specific experiments and theories. If this project has pushed me to do anything, it is to continue to delve into the history of the subject I have become so passionate about over the past few years. Especially being a woman within the field, I feel it is my duty to learn about, and honor the important work done by women and to recognize the challenges they faced and overcame. I'm excited about the future for my peers and myself, as our interests lead us down many different paths. I'm excited about focusing on clinical work in the future, especially now, with greater insight into how beneficial the combination of a "scientific" approach with a philosophical perspective about bettering the world can be. I recall going into my moderation board having specified in my moderation papers that I was not interested in conducting research. I was questioned about this during my board and my answers may have seemed scattered and vague. In retrospect, I was struggling internally because I thought I had to choose only one path: experimentation or application, and that didn't sit right with me. Although this thesis is not an empirical project, it was created through research and a consideration of experimentation. It has shown me that, I do in fact enjoy the process of research, that I do find experimentation fascinating and important, and that I do want the work that I do to be applicable to the world that I am living in, and just now, entering into, as bright and enthusiastic psychologist.

## Appendix A

Examples of psychology senior project titles and their corresponding abstracts.

### Titles and Abstracts:

1. Putting Microaggressions under the Microscope: Examining the short-term effects of microaggressions in a college classroom
  - a. In 1970 Chester Pierce identified the term microaggressions as subtle insults toward African-American students that could be intentional or unintentional, conscious or subconscious, and verbal or nonverbal. In recent years following some of Pierce’s work, researchers have begun focusing on what exactly constitutes as a micro aggression, which spaces this form of racism manifest and the various effects it has victims. Most of the past findings indicate that microaggressions have detrimental effects to mental health and even effects students in educational settings. The current study aimed to explore whether microaggressions have immediate effects on self-esteem, mood, attitudes toward a professor and awareness of microaggressions when presented to students in a classroom. It was hypothesized that the micro aggression condition would show lower levels across all variables. The study consisted of two conditions: a neutral and microaggressed condition. Both groups were shown a video of a professor explain a successful college experience with one of the videos including five microaggressions followed by a survey measuring the variables of the research question immediately administered after the video. The current study only found students in the microaggressed group to have more negative attitudes toward the professor than in the neutral condition with no significance differences in self-esteem and mood. Yet, past studies have found microaggressions to be predictor variables of things such as self-esteem, anger and social anxiety. Taking into account the current study, one implication is that an accumulation of microaggressions may have larger impacts on individuals than one-time interactions. However, further research should be done exploring factors that are immediately influenced by microaggressions and lead to more long-term effects.
2. Cognitive Enrichment Intervention for Captive Orcas
  - a. The goal of the present proposal was to design a cognitive enrichment program to reduce stereotypy and physiological signs of stress in captive orcas (*Orcinus orca*). This intervention consists of an object discrimination and retrieval task, and was designed to simulate orcas’ behavioral need of hunting. Seaworld’s three parks were used as locations for each of the group conditions: the Intervention Group, the Increased Training Group, and the Control Group. The hypothesized

results demonstrate that the Intervention Group will show the smallest amount of stereotypic behavior at each interval of the experiment and that stereotypic behavior has a strong, positive correlation with blood serum cortisol levels, a physiological measure of stress.

3. Meditation-as-Therapy: How Buddhist Psychology Can Improve Health
  - a. This Senior Project is an investigation into the Buddhist practice of mindfulness meditation as having implications for health, stress, emotional, and attentional regulation, mainly through an analysis of Mindfulness-Based Stress Reduction. Chapter 1 explores psychological interpretations of Buddhism; both psychology and Buddhism are fields of study where interpretation and application of theories are necessary components of an insight process. An analysis of the Four Noble Truths, *anattā* (no-self) and meditation, is conducted in the context of the Western psychological tradition. The second chapter surveys the successes and criticisms of configuring mindfulness meditation as an operationally defined psychological variable. In Chapter 2, Mindfulness-Based Stress Reduction, Mindfulness-Based Cognitive Therapy and Dialectical Behavior Therapy are explained as methods for treatment intervention. The third chapter is an evaluation of current theories of the stress response including a discussion of allostasis, allostatic load, Han Selye’s general adaptation syndrome, the experience of emotion, and coping. The fourth chapter is a literature review of studies concerning the psychobiology of stress and mindfulness correlates. Changes in autonomic nervous system, the endocrine system, the limbic system, and the immune system can be observed in cases of chronic stress. Evidence that mindfulness practice can reduce the impact of such stress is evaluated. The fifth chapter is a phenomenological investigation of a 7-week Mindfulness-Based Stress Reduction program at Bard College. This entire project demonstrates the use and practicality of mindfulness meditation, both formally and informally, in the Western psychological tradition as a form of stress reduction and therapy.
4. Excluded from Humanity: the Effects of Implicit Dehumanizing Views Toward Black Individuals in the Media
  - a. Dehumanization—a process by which certain individuals and/or social groups are denied complete human status—has been researched extensively in psychology. Previous research on dehumanization has identified several social groups such as the poor (Haslam & Loughnan, 2014), immigrants, refugees (Esses, Medianu, & Lawson, 2013), women (Rudman & Mescher, 2012) and Black people (Goff, Eberhardt, Williams, & Jackson, 2008). Through frameworks such as the Infrahumanization theory (Leyens et al., 2003) and the dual model for dehumanization (Haslam, 2006), it has been found that out-groups may be implicitly dehumanized. The social group of interest to the present study is Black individuals. This groups tends to be denied “uniquely human,” or secondary

emotions, which subsequently qualifies them as animals; in their case specifically as apes. This specific phenomenon is known as “animalistic” dehumanization (Haslam, 2006). Furthermore, evidence suggests that the media may work as a mechanism through which dehumanization of Black people, as apes, is spread (Goff et al., 2008; Santa Ana, 2002). The present empirical study assessed the effects of implicitly dehumanizing towards Black people present in the media in a manner that, to my knowledge, has yet to be tested in the literature. Participants were randomly assigned to one of four conditions. They were either exposed to or not exposed to implicitly dehumanizing words towards Black individuals, and shown either a Black, or White assailant, followed by a dehumanization IAT and an explicit measures questionnaire. Results suggests that overall, people tend to associate Black individuals with apes, and that Black people, at least in this study, tend to so more than White people.

#### 5. Facial Emotion Recognition Impairments in Subclinical Depression

- a. Depression brings with it a wide variety range of symptoms. One of the least studied symptoms in depression is an impairment in the ability to recognize the emotions on the faces of others. Previous literature has shown both that many people without diagnosed depression still display some depressive symptoms as well as that the impairments in emotion recognition are an extremely common symptom. These impairments are frequently associated with an increase in the severity of other symptoms, which makes their presence in subclinical populations especially important to uncover. In this proposed study, 400 students who don’t meet the diagnostic criteria for depression would be tested on their ability to detect emotion (happiness and sadness) in rapidly presented, masked images of faces. Their detection accuracy would then be compared to their scores on the Beck Depression Inventory II. Subjects will score in the lowest range of scores of the BDI-II; from 0-13 (which is the “minimal depression” range of scores on the BDI-II) since higher scores would prevent them from participating in the study.

A negative monotonic relationship is predicted between subjects’ ability to detect emotions (measured using  $d'$ , a measure of discriminability), and their self-reported scores of depressive symptoms on the BDI-II. This predicted pattern of results is consistent with the idea that there is a causal relationship between emotion recognition impairments and the development of more severe depressive symptoms. Although this study is designed to show that the impairments exist in a subclinical population rather than prove causality, it may help direct future studies towards researching this connection in order to more accurately identify people at risk for clinical depression.

#### 6. Neurofeedback as a Treatment for Traumatic Brain Injury

- a. Since the first reports of neurofeedback as a treatment for traumatic brain injuries (TBI) in 1983, different studies have described the outcomes of neurofeedback therapies on various TBI symptoms, such as poor memory, impaired attention and behavioral problems. Reports on the efficacy of neurofeedback for moderate to severe injuries, however, have been absent in the literature. In the present study,

63 adults diagnosed with brain injury underwent a sequence of traditional treatment methods; 38 out of those 63 additionally received 20-30 neurofeedback sessions. Neuropsychological test scores were completed before and after the treatment and compared between the neurofeedback and non-neurofeedback groups. The results found considerable improvement across both groups, though this was significantly greater for those experiencing the neurofeedback treatment. Supplemental analyses within the neurofeedback group, including both the traditional neurophysiological and quantitative electroencephalographic measures, revealed no differences in the improvement across different severity categories and types of brain injury. Additionally, counter to previous conclusions, the outcome of the treatment did not depend on the amount of time passed between the injury and the beginning of the treatment. Overall, this suggests that neurofeedback is a promising treatment method for TBI patients from various backgrounds.

7. The Moderating Effect of Siblings on the Relationship Between Theory of Mind and Executive Function in Preschool Children
  - a. Theory of Mind and Executive Function are both crucial aspects of cognitive development that are seen to emerge between ages three and five. Past research has indicated there is a relationship formed between these two competencies, but the link is still unclear. The current study tests the hypothesis that this relationship is influenced by the presence of siblings. This study assessed 40 three to five year olds’ abilities on Theory of Mind and Executive Function tasks. The children with siblings were compared to only-children, specifically looking to see if older siblings have an effect. The results did not show that siblings had a significant impact on the relationship between Theory of Mind and Executive Function. However, higher scores on Theory of Mind tasks were correlated with higher scores on Executive Function Tasks.
8. Effects of Acute Nicotine on Larval Zebrafish Exploratory Behavior in a Complex Environment
  - a. The larval zebrafish is emerging as a useful model to assess neurobehavioral toxicity. A variety of behavioral assays have been developed to characterize normal behavior and the acute and chronic effects of a variety of compounds. To date, such behavioral assays have been limited to relatively simple behavioral measures (e.g., swimming activity in a single well). The present experiment describes methodology to assess exploratory behavior in 5 days-post-fertilization (5 dpf) larval zebrafish using a six-chamber, complex well-plate. In addition, the effect of acute nicotine exposure on exploratory activity in this complex environment was examined. Five dpf TU strain larvae were studied. Larvae were treated with either 0, 16.25 $\mu$ M or 48.25 $\mu$ M nicotine and were observed for 15 minutes. General Locomotor Activity, Zone Preference, Thigmotaxis (outer zone preference), Thigmotaxis Path Type, Chamber Transitions, and Latency to enter

the Center Zone were measured using a Noldus tracking system. These results demonstrate (1) the utility of this novel testing methodology, (2) that a low and high dose of nicotine increased exploratory behavior in a complex environment and (3) dose-dependent behavioral changes due to nicotine treatment, suggesting altered control of a specific type of exploratory behavior as compared to a general increase in behavioral activation. These results while inconsistent with the current literature on anxiety-driven behavior in other animal models may be explained by the intrinsic properties of larval zebrafish behavioral phenotypes and molecular and cellular differences in nicotinic receptor function.

9. I Am Not The Phantom Hand! Exploring the Effects of Illusory Ownership of an Other-Race Rubber Hand on Racial Identity In Racial Minorities
  - a. White American is generally accepted to be the culturally dominant race in America, though the psychological effects of racial imbalance are not fully understood. Such ambiguity invites the question of whether people of different racial backgrounds perceive racial bias differently. To explore this question, the present study primes individuals to perceive themselves as members of a different race using a Rubber Hand Illusion. While prior literature has found that the perceived ownership of an outgroup hand reduces preferential bias towards that outgroup for White Americans, (Farmer et al., 2014), I hypothesized that these effects would extend to Black Americans, which was yet unknown. I also extended my investigation to include a measure of racial identity bias (Knowles & Peng, 2005). Given American attitudes towards race, I predicted that this effect would be greater in Black Americans than in White Americans for both biases. The results indicate that the perceived ownership of an outgroup hand was different for White Americans and Black Americans. Surprisingly, participants using the opposite-race hand were more favorably biased towards their own race, suggesting an implicit opposition to being primed with the opposite race. This pattern was less prominent in Black Americans, possibly indicating that repeated exposure to similar, real-world experiences, such as beige colored “skin-tone” products, leads one to develop a resistance to changes in race-related biases and self-perceptions. As the mechanisms through which this might occur are not fully understood, future study might also consider the effects of race-neutral objects on both biases.

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