

**Proposal for Mentored Undergraduate Summer Experience (MUSE)**

**Summer 2011**

**Faculty Mentor:**

Name: Jason J. Dahling  
Title: Assistant Professor  
Years at TCNJ: 4  
Department: Psychology  
Phone: 609-771-2582  
Email: dahling@tcnj.edu

**Project:**

Working Title: Associations of Prestige with Gendered Occupations: Are Gendered Jobs Devalued?  
Type of Work: Empirical; IRB approval required

**Student Collaborators (1):**

Name: Melissa Gutworth  
Major: Psychology  
School Year:  
Credits:  
Graduation:  
Overall GPA:  
In-Major GPA:  
Housing:

## Project and Learning Plan

### *Intellectual Merit*

One of my primary research areas concerns how young adults make decisions about the careers that they intend to consider and explore. My research in this area focuses on how beliefs about the status and prestige associated with different fields shape students' career interests (Dahling & Thompson, 2010; Thompson & Dahling, 2010). The objective of the proposed MUSE project is to continue this line of research with my student collaborator, Melissa Gutworth, by examining how associations of status with traditionally male and female occupations influences students' interests in exploring these fields. Our expectation is that this project will help us understand how intertwined beliefs about gender and status preclude the exploration of careers that students might otherwise find rewarding.

The idea for this project originated in devaluation theory, a sociological and economic theory that suggests that women's work contributions are devalued relative to those of men. Accordingly, jobs that are historically dominated by women are expected to be seen as less important and prestigious than jobs that are historically dominated by men. Most research on devaluation theory has focused on the societal pay differences that have been widely observed between gendered jobs. However, little research has directly examined the psychological mechanisms that are proposed to cause these pay outcomes, i.e., that women's work is cognitively evaluated as of lower status than men's work. Further, the small body of research that has examined this question has used explicit measures of status biases in which participants are asked outright whether they see particular gendered occupations as having high or low status. Unfortunately, concerns about social desirability may motivate people to consciously respond differently to such questions relative to how they actually feel; for example, a person might hide his negative bias toward female-dominated work because such beliefs are not politically correct.

In contrast, our proposed method involves an *implicit association test* (IAT) to measure participants' implicit associations between gendered work and status. IATs are computer-based measurements that assess the strength of association between concept categories and attribute categories. In the proposed study, our concept categories will be "male occupations" and "female occupations," and our attribute categories will be "high status" and "low status." Participants will be presented with sets of stimulus words that they must correctly assign to the concept and attribute categories. Some of these stimulus words are status-related attributes (e.g., important, admired, trivial) and some are gendered occupations (e.g., firefighter, engineer, registered nurse; selections were drawn from the U.S. Bureau of Labor Statistics). As participants proceed through the IAT, their speed of assigning stimuli to categories reflects the strength of their status biases. Figure 1 below depicts the critical contrast in the IAT. The screenshot on the left shows the hypothesized pairing of male occupations/high status and female occupations/low status, whereas the screenshot on the right shows the alternative pairing of male occupations/low status and female occupations/high status. If participants are faster at categorizing stimulus words when the categories are presented as in the left screenshot, this result demonstrates that they have an implicit bias toward associating traditionally-male occupations with status. In contrast, if the participant can categorize stimuli faster when the categories are presented as in the right screenshot, this result demonstrates an implicit bias toward associating traditionally-female occupations with status. The difference in latencies between these conditions is used to quantify the strength of the bias for each participant. This approach is novel because it demonstrates the cognitive basis for an observed gender bias without relying on participants' explicit responses.

We will subsequently assess participants' career interests using the Vocational Preference Inventory, an established measure of interest domains that is used widely in career counseling.

We anticipate that implicit status biases toward gendered work will predict students' own interests in careers that fall within gendered career domains. Specifically, we expect to find that (1) implicit status biases persist toward gendered work such that traditionally-female jobs are devalued, (2) these biases do shape the careers that students are willing to consider for themselves, and (3) men with strong status biases will express the greatest disinterest in traditionally-female career domains.

#### *Role of Students and Mentor*

Melissa and I have been discussing this project for several months and she has demonstrated a lot of enthusiasm about taking on this level of responsibility. During February 2011, we will work together to assemble our measures for this project and apply for IRB approval. Melissa will also complete some preliminary readings as the semester progresses to help prepare her for working on the manuscript for this study. We tentatively plan to conclude the semester by collecting some pilot data for this project. During the summer, Melissa will be responsible for collecting data from student research participants and learning about implicit measures, a new methodology for her. Melissa will manage the data collection in my lab and we will have a minimum of three face-to-face meetings every week to go through components of the data analysis and produce a presentation and manuscript to submit for publication. Because Melissa has some prior experience with research, we will focus on developing new skills and experiences, primarily (1) getting practice with writing collaboratively, (2) gaining comfort with some multivariate statistics, such as moderated multiple regression and mediation analysis, and (3) learning about the editorial process. Given Melissa's aspiration to pursue a PhD, we will focus on developing these research competencies needed to strengthen her applications in fall 2011.

#### *Broader Impacts of Project*

There are several anticipated impacts of this project. First, given that Melissa intends to apply to PhD programs soon, this project will be a valuable boost to her applications and will leave her better equipped to start her graduate studies. We also hope that the results of this study will be published next year; our targeted outlet is *Journal of Vocational Behavior*, a competitive journal for career research. Publishing our findings will have several meaningful impacts; for example, another strong publication will contribute to my application for promotion in academic year 2011-2012. Melissa will also benefit from publication by getting early experience with the editorial and revision process that should help her publish her future graduate research.

*Figure 1. Screenshots from the Implicit Association Test.*



## Appendix II

### Itemized Budget

Category	Description	Amount
Student stipend	Melissa Gutworth	\$2500
Faculty stipend	Jason Dahling	\$1000
Student housing	Melissa Gutworth	\$1365
Project-related expenses*	Software, reference, measures	\$345
TOTAL		\$ 5210

\*Project-related expenses are as follows:

<i>Item &amp; Justification</i>	<i>Cost</i>
(1) One additional desktop license for Inquisit 3.0, the program we use to script and run the IAT program, purchased from Millisecond Software and installed on a computer in my lab space for data collection.	\$150.00
(2) One copy of the <i>Handbook of Implicit Social Cognition: Measurement, Theory, and Applications</i> (2010), a key reference book for Melissa to learn more about the methodology and background of the study, purchased from Amazon.	\$85.00
(3) Fifty test booklets and scoring sheets for the Vocational Preference Inventory, purchased from Psychological Assessment Resources, Inc. (item # WW-2542-TB), plus shipping costs.	\$110.00

### **Appendix III Past MUSE Award Report (2009)**

Although I did not receive funding in 2010, the MUSE support that I received in summer 2009 has lead to a variety of beneficial outcomes for me and my student co-author, Daniel Neyman. Dan successfully wrote a complete manuscript based on his findings that he submitted for consideration at the annual conference of the Society for Industrial/Organizational Psychology (SIOP), the primary body of professional affiliation in my field. The conference is international in scope, receives approximately 2,000 submissions per year, and is generally attended by over 6,000 members. Dan's paper was accepted at the conference in December 2009, and he traveled to Atlanta with me in April 2010 to present his paper to an audience of faculty and graduate students in my field. It is extraordinarily rare for undergraduates to present at this conference, so doing so represents a significant accomplishment for Dan. The reference for his presentation is:

Neyman, D.A., & Dahling, J.J. (2010, April). Narcissistic entitlement: Implications for organizational attraction. Interactive poster presented at the 25<sup>th</sup> Annual Conference of the Society for Industrial and Organizational Psychology, Atlanta, GA.

Dan also used the MUSE period to help plan a second independent study that he completed under my supervision in fall 2009. This project led to another accepted conference paper that Dan will present at the upcoming SIOP meeting in Chicago in April 2011. In aggregate, these experiences contributed to Dan's acceptance to the graduate program in Industrial/Organizational Psychology at the University of Akron, which is internationally ranked as a top-10 program in my field. The reference for this upcoming presentation is:

Neyman, D.A., Dahling, J.J., & Thompson, M.N. (2011, April). Social network centrality, career satisfaction, and career self-efficacy in college. Poster accepted at the 26<sup>th</sup> Annual Conference of the Society for Industrial and Organizational Psychology, Chicago, IL.

In addition to co-authoring the SIOP papers with Dan, the project that we administered during the MUSE period included several additional measures intended to contribute to a second paper that I wrote with a colleague at the University of Wisconsin – Madison. We completed the paper in fall 2009 and it was recently published in the *Journal of Vocational Behavior*, a top journal in my field and the #1 outlet for career-related research. The citation for the paper is as follows:

Thompson, M.N., & Dahling, J.J. (2010). Image Theory and career aspirations: Indirect and interactive effects of status-related variables. *Journal of Vocational Behavior*, 77, 21-29.

In sum, we were very successful with translating the support that we received from the MUSE program into tangible presentations and publications, and I am optimistic that I will be able to replicate this success with Melissa Gutworth in summer 2011 if we receive funding.