Sex-Types of Agricultural Careers

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Introduction

Students begin planning for their future careers from a very young age (Gottfredson, 1981). Careers are chosen based on perceptions of how similar a career is to a person's self-image. Students enrolled in school-based agricultural education (SBAE) are more likely to pursue careers in agricultural-related fields (Adedokun & Balschweid, 2008), with most students having a general idea of careers they would like to pursue by the time they reach adolescence, or grades 9-12 (Gottfredson, 1981). Shinar (1975) completed a foundational study for the theory of occupational aspirations, which presented a model of sex-types of careers. Shinar's original study of sex-types, or the masculine or feminine norm of a career, included few agriculturally related careers (Shinar, 1975). While completed almost 45 years ago, research continues to show occupational aspirations are influenced by images and relation to one's self-concept (Beal & Crockett, 2013; Blanchard & Lichtenberg, 2003; Cochran, Wang, Stevenson, Johnson, & Crews, 2011; Dinella, Fulcher, & Weisgram, 2014; Gottfredson, 1981; Gottfredson & Lapan, 1997; Junk & Armstrong, 2010). This study investigated the sex-typing and gender stereotypes of agricultural careers in order to better serve students in career choice by understanding their students' self-concepts and biases. This study addresses Research Priority 3, *"Sufficient Scientific and Professional Workforce that Addresses the Challenges of the 21st Century"* (Stripling and Ricketts, 2016, p.29).

Conceptual/Theoretical Framework

This study utilized Gottfredson's (1981, 1996) theory of circumscription and compromise (TCC), previously known as the theory of occupational aspirations. Building on Bandura's (1989) social cognitive theory, TCC provides guidance for why certain professions appeal to different groups of people through three components: (1) images and perceptions of self-concept and how these are developed; (2) the gradual circumscription of career options; and (3) compromise for less preferred careers (Gottfredson & Lapan, 1997). TCC emphasizes the importance of perceptions and preferences of gender roles in vocational choices (Gottfredson, 1981; Gottfredson & Lapan, 1997). Gender roles and relationships to personal self-concept are the primary elements of careers adolescents will compare when determining if an occupation is desirable or not. Overwhelmingly, people seek jobs that are harmonious with their self-concept and the image of themselves they wish to display (Gottfredson, 1981). Social systems influence aggregated norms of what makes up gender, social class, and intelligence, which therefore influence peoples' self-concepts. Overall, people have a significantly similar view of individual observations that stem from social norms. Occupational images have been shown to be unfluctuating between all groups of people (Gottfredson, 1981).

Methodology

The population for this pilot study consisted of students (N = 15) enrolled in a required, junior-level agricultural education course at the University of Florida in fall 2019. A 100% response rate was achieved. Five points extra credit was provided as compensation for participation. The instrument used in this study was an adapted from Shinar (1975). This instrument utilized a seven-point, semantic differential scale with 1 = masculine; 2 – 3= leaning masculine; 4 = neutral; 5 – 6 = leaning feminine; and 7 = feminine. While the scale was reproduced from the Shinar (1975) study, this instrument included 108 agricultural careers spanning the seven central pathways of agricultural careers, which include: agricultural mechanics, animal science, environmental services, food science, natural resources, plant science, and social systems (AgCareers.Com, 2019). For the purposes of this study, environmental services and natural

resources were combined. The list of careers was gathered from AgCareers.Com (2019). Industry experts from each pathway inspected a list of careers from their area to ensure validity. Furthermore, face validity was assured through review of the instrument completed by faculty. The instrument was distributed through Qualtrics. The results of this pilot study will be used to further refine the instrument, which will be distributed to an introductory communications course required for all incoming students in the College of Agriculture and Life Sciences at the University of Florida. The data were analyzed using SPSS version 25 for PC to observe descriptive statistics, which included frequency, mode, and percentage, were utilized to describe the population, as well as summarize the data by item. Individual items were ranked according to the mode, as it corresponded to the scale, and were categorized according to the observed sex-types. Internal reliability was determined using Cronbach's alpha coefficient which resulted in .93.

Results/Findings

The students who participated in the study were a majority juniors (*f* = 12; 80%), female (*f* = 13; 86.7%), were enrolled in SBAE in middle or high school (*f* = 13; 86.7%), were active members of the FFA or 4-H (*f* = 14; 93.3%), and were an average of 20.50 years old (Min. = 18; Max. = 24). Of the 108 items, the majority were determined to be leaning masculine careers (*f* = 50; 46.3%), followed by leaning feminine (*f* = 43; 39.8%), masculine (*f* =10; 9.3%), feminine (*f* = 3; 2.8%, and neutral (*f* = 2; 1.9%). Careers in the agricultural mechanics pathway were determined to be evenly leaning masculine (*f* = 5; 50.0%) and masculine (*f* = 5; 50.0%) with no careers reported as neutral or feminine. The majority of animal science careers resulted as leaning masculine (*f* = 12; 60.0%). Environmental services and natural resource careers were found to be leaning masculine (*f* = 15; 55.6%), while food science careers were evenly split between leaning feminine (*f* = 4; 50.0%) and leaning masculine (*f* = 4; 50.0%). Plant science careers were determined to be leaning feminine (*f* = 11; 47.8%). Finally, careers within the social systems pathway were leaning feminine (*f* = 12; 60.0%). All career pathways, except agricultural mechanics, included at least one career which fell as neutral or within the non-dominant sex-type. A table of the individual careers ranked by their sex-type will be presented.

Conclusions Implications/Recommendations/Impact on Profession

This information provides a necessary baseline and fills a gap in the literature on how agricultural careers are viewed by students. Knowledge on the sex-types of agricultural careers allows teachers or college faculty to better understand why students might be choosing specific majors and experiences, and, maybe more importantly, why they may not. The next step for this project is a larger sample of students in two required introductory agricultural communications classes within the college of agriculture (N = 450). Recommendations for practice include student awareness of social norms and stereotypes, which might prevent students from following their interests. Practitioners should encourage students to follow their interests and talents, regardless of social stigmas. Recommendations for research encompass larger populations both in and outside colleges of agriculture, as well as utilizing the instrument at universities in different regions. Although TCC indicates results should be similar regardless of age, ethnicity, or class, a variety of samples should be conducted, including adolescent age students, to confirm these notions (Gottfredson, 1981, 1996).

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