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Gender Stereotyping in an Agricultural Sample

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GENDER STEREOTYPING IN AN AGRICULTURAL SAMPLE

By

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Abstract

A vast wealth of social psychological research conducted over half a century has demonstrated the consequences of gender stereotypes. However, this research has significant limitations. Namely, generalizability outside of academia and the effects of social change. This study examined a non-academic population that has recently experienced significant gender role redistribution to overcome these limitations. Utilizing a full-cycle research approach consisting of both ethnographic and experimental methods, I examined three research questions: 1) how do gender stereotypes manifest within rural agricultural communities? 2) how is women's increased participation in agriculture related to changes in gender stereotype use? and 3) how do gender stereotypes in rural, agricultural samples compare to gender stereotypes in urban, university samples? The results of this study provide evidence supporting the development of more comprehensive and inclusive gender stereotyping measures, contribute to scientific knowledge about the variables affecting gender stereotype use, and provide insight into the benefits of examining subcultures in gender stereotyping research.

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Dedication

To my family – my mother, my father, my sister, my sister-in-law, my brothers, my brother-in-law, my partner, and my children. To my sestra: my role model, sounding board, proofreader, and receptacle for my every emotional outburst. To Baby H, for letting me see the world through the lens of motherhood at the peak of this study and for completing our family. To T, for being my partner in every way, for always challenging me, and for your unwavering loyalty. And most of all, to my big kids. You were two and three years old when I started the journey that led me to this moment and your patience and confidence in me is what has sustained me during this decade long journey. A, you inspire me every day with your passion *and* with your compassion. You show me beauty where I would not have seen it myself and have taught me that listening to your feelings is always right. S, you are the greatest example of being true to oneself that I have ever known. Your bravery is beyond anything that I have ever seen and inspires me to a level of bravery I never could have achieved without you. I love you all, always and forever.

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Chapter 1: Introduction and Literature Review

Gender stereotypes constitute a prevalent and persistent belief system that categorizes facets of life by biological sex (Liben & Bigler, 2002). Gender stereotypes define how society perceives that men and women differ (Broverman et al., 1972), what society desires in men and women (Eagly, 1987), and what society expects of men and women (Ridgeway & Bourg, 2004). Early research focused on gender differences in character traits and assumed that gender differences were innate and biological, and these differences were considered to be healthy and normal (Broverman et al., 1972). However, in the over a half century since the psychological study of gender stereotypes experienced its rapid emergence, researchers have significantly expanded the number of domains investigated and discovered a vast number of negative consequences associated with gender stereotype beliefs.

Research has found the domains within which people are stereotyped based on their gender are vast. Traits, skills, roles, behaviors, occupations, appearance, values, and social skills (e.g., Deaux & Lewis, 1983; Ruble & Martin, 1998; Signorella et al., 1993) are just a few of the well-studied domains that have been found to be affected by gender stereotype beliefs. Researchers often ask, and have been asking for decades, whether the degree to which a person conforms to gender stereotypes in one domain has a relationship with their degree to conformity in other domains (e.g., Deaux & Lewis, 1984; Spence, 1993; Liben & Bigler, 2002), but researchers have not found a consistent relationship.

Generally, the categorization of these gendered domains is accomplished by sorting characteristics into two dichotomous categories corresponding to masculine and feminine. In psychological research, these two categories are most frequently termed "agentic" (masculine) and "communal" (feminine). Agentic traits include characteristics such as competence, decisiveness, dominance, and power, while communal traits include characteristics such as warmth, kindness, sensitivity, and submission (Fiske &

Stevens, 1993; Okimoto & Heilman, 2012; Rudman & Glick, 2001; Tyler & McCullough, 2009). This contemporary conceptualization of two separate categories allows for individuals to be categorized as highly feminine or highly masculine, as well as high in both categories (androgynous) or low in both categories (undifferentiated).

Although researchers have developed theories and tools allowing for these various categorizations, the perceptions of individuals that women are only feminine and men are only masculine have changed little throughout the second half of the 20th century (Ruble, 1983; Werner & LaRussa, 1985). However, researchers have recently found some indication that stereotypes of women are beginning to weaken and that women are increasingly being perceived as agentic, in addition to communal, although this trend does not appear to extend to men, who are still perceived as only agentic (Diekman & Eagly, 2000; Spence & Buckner, 2000; Eagly et al., 2019). These findings must be taken with a grain of salt because other studies have found that these effects are largely dependent on the domain being stereotyped (Liben & Bigler, 2002; Haines et al., 2016).

Many theories have been developed in attempts to explain how and why gender stereotypes exist and persist. Some theorists posit that gender stereotypes exist as a way to understand and integrate gender-relevant information into cognition (e.g., gender schema theory, Bem, 1981; developmental intergroup theory, Bigler & Liben, 2006), while others suggest that gender stereotypes exist as a means to enforce the current gender hierarchy (e.g., backlash and stereotype maintenance model, Rudman & Fairchild, 2004; stereotype content model, Fiske et al., 2002b; Fiske et al., 1999b). A third popular theoretical approach focuses on how cultural and social cues influence the development of these beliefs (gender identity theory, Spence, 1984; social role theory, Eagly, 1987). Regardless of the approach taken, the overarching goal of research in this area is to understand *why* gender stereotypes are such a

prevalent and pervasive aspect of the human social experience. Understanding why gender stereotypes exist is a vital first step in addressing the wide range of effects related to these belief systems.

Negative consequences of gender stereotypes

Gender stereotypes include status rules that perceive men and women as having different levels of skills and value, and thus perpetuate inequality (Rudman et al., 2012), and researchers have acknowledged the broad consequences of gender stereotypes for over half a century (Eagly, 1987). The most widely known consequences of gender stereotypes are prejudice and discrimination. Prejudice is an emotional evaluation of individuals based on stereotypes about a group they belong to (Kite & Whitley, 2016). Judgements of individuals based on group membership are often made along the two fundamental dimensions of warmth and competence and elicit prejudicial feelings of pity or envy (Fiske et al., 2002a). In gender-based prejudice, men are stereotyped as competent, but cold, whereas women are stereotyped as warm, but incompetent. However, the context the judgement is being made in can affect the type of prejudice elicited (e.g., Deaux & Major, 1987; Fiske et al., 1999a). For example, mothers are perceived as likeable and warm within their mother role but are perceived as lacking likeability and warmth within a successful career (Benard & Correll, 2010). Similarly, men are perceived as competent in the workplace but are perceived as less masculine and having less leadership ability when they seek involvement within their homes (Vandello et al., 2013).

Prejudice is strongly linked to discrimination (Kite & Whitley, 2016). Stereotype beliefs can lead to differential behavior towards individuals who have membership within a stereotyped group, particularly when individuals do not conform to stereotype expectations. For example, research has demonstrated that agentic men are more likely to be hired than communal men, possibly because they are viewed as more competent than communal men (Rudman, 1998), and that employers are less

interested in interviewing and hiring female applicants compared to male applicants (Tyler & McCullough, 2009). Research has also shown that individuals will sabotage a competitor's chance of success if that competitor shows competence in sex-atypical skills (e.g., women being good at a skill stereotyped as masculine), but not those who show competence in own-sex skills (Rudman, 1998).

The negative consequences of gender stereotypes are not limited to judgements and behaviors directed toward the subjects of these stereotypes (i.e., the men and women being stereotyped), but also include effects within individuals themselves. Self-stereotyping, whether in the form of internalizing stereotypes or simply knowing that others believe them, can affect people's interests, ambitions, and performance. For example, the fear of being perceived as less masculine can affect the roles that men seek out. Research has shown that although men value careers that allow the flexibility necessary for balanced work-family involvement, they avoid seeking those careers out of fear that they will be perceived as less masculine (Vandello et al., 2013). Inversely, as early as in college, women expect to assume the majority of caregiving responsibilities (Looker & Magee, 2000) and begin planning to alter their future plans to accommodate family responsibilities (Coyle et al., 2015). Even individuals who explicitly rejected the validity of stereotypes can be affected by stereotypes (Betz et al., 2013). For instance, women have expressed less interest in personal power and maintained lower educational goals when they personally endorsed sexist beliefs (Rudman & Heppen, 2003), but they have also expressed less interest in "masculine" domains and leaderships roles when they were simply exposed to the sexist beliefs of others (Barreto et al., 2010).

Simply being reminded that women are stereotyped as performing poorly in math leads to women performing significantly more poorly on a math test than women who are not reminded of this stereotype (Steele, 2010). Similarly, children perform more poorly in opposite-sex-typed subjects (e.g., math, English, and sports) when their parents hold strong gender stereotype beliefs (Eccles et al., 1990).

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These findings represent only a small fraction of the immense wealth of research that has demonstrated the negative consequences of gender stereotypes. However, the findings in gender stereotype research have a number of significant limitations. Two of the most important limitations center around the generalizability of findings to non-university populations and the effects of social change on gender stereotype beliefs.

Gender stereotypes in non-university samples

In recent years, there have been many passionate pleas for psychological researchers to move beyond the undergraduate sample (e.g., Arnett, 2008; Henry, 2008; Henrich et al., 2010). In a meta-analysis of articles published in the three leading social psychology journals (*Journal of Personality and Social Psychology, Personality and Social Psychology Bulletin,* and *Journal of Experimental Social Psychology*), Henry (2008) found that undergraduate samples were used in 91.6% of studies and that the proportion of studies using undergraduates had increased from 82.7% in 1986. Peterson's (2001) extensive meta-analysis found that there are significant differences in the size of gender effects between university and non-university adult samples on a wide range of gender related phenomenon, such as perceptions of behaviors (Franke et al., 1997), group-based attitudes (Kite & Whitley, 1996), and occupational preferences (Konrad et al., 2000).

However, there is limited research on sample-based differences in gender stereotypes and the research that does exist shows a lack of agreement. Some researchers have found consistency across cultures in terms of gender stereotypes (Lockenhoff et al., 2014) and types of sexism (Glick et al., 2000), whereas others have found that cultural differences, age, educational level, and employment all contribute significant variance in gender role beliefs (Vad de Vijver, 2007). Interestingly, some researchers have noted that gender role stereotypes are more apparent in cultures that have lower levels

of power-equality (Best & Williams, 1994). This study will seek to shed some light on sample-based differences by examining how gender stereotypes manifest in a non-university sample.

Effects of social change

A number of major theories in gender stereotype research propose that gender stereotypes and their use and effects are based on the representation of men and women in particular roles (e.g., Bigler & Liben's (2006) developmental intergroup theory; Eagly's (1987) social role theory). The premise of these theories is that when only one sex is observed engaging in a particular role, trait, behavior, and so forth, observers develop a stereotype that that characteristic "belongs" to that sex. In other words, stereotype beliefs result because of the representation of two distinct groups (i.e., male and female) with particular behaviors and roles filled primarily by members of only one of those groups (i.e., communal characteristics by the female group and agentic characteristics by the male group). The major difference between developmental intergroup theory and social role theory is the developmental time period in which these beliefs develop (i.e., childhood for the former, adulthood for the latter). Under the reasoning of these theories, gender stereotypes should theoretically change as the gender-based role distribution changes. Social role theory in particular has been criticized due to the lack of change in stereotypes despite considerable change in gender-based social role distribution (i.e., more women in the workforce; Rudman et al., 2012). However, supporters of this theory point out that although the workforce gender distribution has changed, women are still primarily employed in stereotypically feminine occupations (e.g., caregiving, communal jobs; Koenig & Eagly, 2014). This study will utilize a sample that has experienced a significant increase in women's employment in a stereotypically masculine domain to examine how gender stereotypes manifest after significant social change in the realm of gender representation.

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Sample of interest

A non-academic population that has recently undergone significant social change in the form of gender role redistribution is rural agricultural communities. The field of agriculture has recently experienced a rapid growth in women's labor involvement (United States Department of Agriculture, 2019). Research into gender attitudes in rural areas began in the 1970's, along with the rapid increase in general gender stereotype research (Bock, 2006). However, that research is primarily restricted to sociology and anthropology, and has not yet been explored from a psychological perspective. Sociologists have conducted compelling research such as a recent study that found that women farmers face gender-based obstacles that can be overcome through the development of a feminine farmer identity (Keller, 2014), and another that found that rural men are less rigid in their gender roles beliefs, particularly in regard to parenting roles (Sherman, 2009). However, we know little about how social psychological constructs such as the warmth-competence dynamic manifest in rural agricultural communities, particularly in light of the recent dramatic increase in women's involvement in agricultural labor. Additionally, Eagly's (1987) proposition that gender stereotypes will evolve as role distribution evolves has seen little empirical support as of yet, but agricultural communities that have experienced recent rapid shifts in gendered roles are an excellent sample with which to examine this and related theories.

The United States Department of Agriculture (USDA, 2019) census data shows that from 2002-2017, women's contributions to agriculture have been increasing significantly in every division, with increases ranging from 31.57% (Mid-Atlantic) all the way up to 84.52% (Mountain). Despite currently having the lowest proportion of female agricultural producers of any division (27% compared to 33% to 43%), the Mountain division has experienced by far the largest increase in female farm operators of any division, potentially making this social change more salient in this division.

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Additionally, beginning in 2017, the USDA began collecting data on which gender makes decisions on farms as part of its census taken every five years. Prior to 2017, the USDA only collected data on farm operators, which sorely underestimated the contributions of women (USDA, 2019). By analyzing the USDA data at the United States Census Bureau division level, it becomes clear that women throughout the Mountain division significantly contribute to decision making on farms, particularly when contrasted with other divisions. For example, when it comes to decisions regarding day-to-day farm operations, 38% of those making decisions in the Mountain division are women. Out of 8 total divisions, only New England has a higher proportion of women making day to day decisions (41%). The Mountain division also ranks 3rd in the proportion of decision makers who are women for estate and succession planning, 2nd for land use or crops, 3rd for livestock, and 3rd for record keeping or financial management.

The established psychological gender stereotype constructs on which much contemporary research is based are presented as applicable to all men and all women but may not be nearly as generalizable as they are thought to be. For example, in academic samples, it has been well documented that men are stereotyped as being competent, but lacking warmth (e.g., Fiske & Stevens, 1993; Okimoto & Heilman, 2012; Rudman & Glick, 2001; Tyler & McCullough, 2009). However, in agricultural research, it is well documented that in addition to holding less rigid gender roles in parenting (Sherman, 2009), men also have caring, affectionate relationships with the animals that they raise (Bock et al., 2007). Within farming culture, caring about (not just caring for) animals is a crucial dimension of the identities of farmers (Tovey, 2003; Porcher, 2006). Positive interactions with animals are a source of enjoyment for farmers (Seabrook & Willkinson, 2000; Dockes & Kling, 2006) and the relationships that farmers have with their livestock can often be the equivalent of the pet-dog relationship that those in urban areas are most familiar with (attached attachment; Wilkie, 2005), although this depth of affection

is more common between farmers and their dairy cows and nursing calves compared to other livestock such as poultry (Bock et al., 2007). Given the well documented levels of warmth and affection displayed among men in agriculture, I speculated that the stereotype that men lack warmth may be less salient, or even absent, in rural agricultural communities.

Similarly, in academic samples, it has been well documented that women are stereotyped as being warm, but lacking competence (e.g., Fiske & Stevens, 1993; Okimoto & Heilman, 2012; Rudman & Glick, 2001; Tyler & McCullough, 2009). However, numerous studies have found that the agricultural responsibilities of women in North America demonstrate competence, strength, and skill, characteristics that run directly counter to gender stereotypes. In interviews with 27 farm wives, Boulding (1980) found that 25 out of the 27 operated heavy farm equipment (e.g., tractor), 18 fed cattle, and 16 harvested crops. The women she interviewed described riding snowmobiles during blizzards to feed cattle, castrating livestock, and nearly all of the women were skilled at installing and maintaining fences, including barbed wire. Similarly, Ghorayshi (1989) found that on over half of the dairy farms studied, women shared equally with their husbands in crop related tasks and assisted in construction and repair work, and nearly half of women were completely in charge of livestock related tasks. Throughout the world, women make up more than half of the agricultural labor force, often undertaking more tasks and working longer hours than men (Satyavathi et al., 2010). Given the well documented levels of skill and competence displayed among women in agriculture, I speculated that the stereotype that women lack competence may be less salient, or even absent, in rural agricultural communities.

These studies provide support for the possibility that gender stereotype constructs that have been well established in urban academic samples, such as the warmth-competence traits clusters, may manifest differently or be completely absent in non-university samples, such as rural agricultural communities. Therefore, I expected to find notable differences in the nature and use of gender

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stereotypes when comparing rural agricultural samples to urban academic samples. Further, I expected

that these differences could be demonstrated both qualitatively and quantitatively.

Chapter 2: Current Study

Ethnography can be an ideal method to demonstrate whether specific psychological effects exist within particular contexts (in this case, rural agricultural communities) (Bartholomew & Brown, 2019). Ethnography involves observation, dialogue, note-taking, and self-reflection, and can successfully demonstrate changes over time. Notably, it can also inform applications and support social change. It is important to point out that there is still a bias against ethnography within the field of psychology, which as a whole, prefers more positivist control in empirical methodology. Consequently, this bias can adversely affect funding and publication potential of research (Bartholomew & Brown, 2019) unless certain techniques are employed, which will allow for the benefits of ethnography to become apparent while still maintaining the preferred methodological control in this field. One such technique that would be ideal for this specific purpose is the implementation of a full-cycle research method. Prominent social psychologists urge the use of the full-cycle research method in creating a connection between real world social problems and laboratory-based research, particularly in the case of research on stereotypes and prejudice (Dasgupta & Stout, 2012). Full-cycle research methods involve cycling between qualitative and quantitative data collection methods, and are particularly useful for building, refining, and expanding theories in social psychology (Fine & Elsbach, 2000). Full-cycle research methods can be used to verify whether particular social psychological effects are present in naturalistic settings, consider alternate theories of the underlying processes, and provide support for theories through experimentation (Mortensen & Cialdini, 2010).

Full-cycle research methods can start with any step in the process but are defined by the movement through the steps of: (1) using a deductive qualitative method; (2) considering theories and past findings; (3) using a deductive quantitative method; and then (4) cycling back through these steps, as necessary. This technique allows researchers to identify a broader range of related concepts and

determine if these concepts strengthen the core theory or are separate areas of study (Fine & Elsbach, 2000).

The current study utilized a full-cycle research model to address three research questions:

RQ1: How do gender stereotypes manifest within rural agricultural communities?

RQ2: How is women's increased participation in agriculture related to changes in gender stereotype use?

RQ3: How do gender stereotypes in rural, agricultural samples compare to gender stereotypes in urban, university samples?

The full-cycle research design (Fine & Elsbach, 2000) of this study consisted of three phases: an ethnographic exploration of gender stereotypes within Mountain division states (phase 1), a quantitative comparison of rural and urban samples (phase 2), and a qualitative refinement of the findings (phase 3).

Chapter 3: Ethnographic Exploration (Phase 1)

Phase one consisted of ethnographic observation and dialogue-based data collection within public spaces in Mountain division states (i.e., Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and/or Wyoming), followed by analysis of the data and theoretical considerations. The goal of this first phase was to determine how gender stereotypes currently manifest among rural agricultural community members (RQ1: do warmth-competence gender stereotype clusters exist, what stereotype-based motivations lead women into farming, whether prescriptive and descriptive stereotypes align or diverge) and how women's increased participation in agriculture may be related to gender stereotype use (RQ2: has social change in gender role distribution affected the use of gender stereotypes or has the use of gender stereotypes affected the gender role distribution).

Method

Researcher Positioning

Background information on the researcher is vital because it can influence interpretation of the data, particularly in qualitative studies. During the two years when the majority of the data collection for this study occurred, I spent approximately half of my time in an urban area and the other half of my time in a rural, farming community. I am a woman and I became pregnant halfway through the data collection phase. Thus, I experienced interactions with community members first as an independent woman in her 30's, and later, as an expectant mother. There was a notable shift in my interactions between these two phases that allowed me to have interesting insights into how stereotypes are applied to women in both locations.

Participants

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In order to gain a comprehensive view of how behaviors differ between men and women of all demographics, the sample was restricted on only one criterion: residence within a rural county, defined by the United States Census Bureau as a county with a resident to farm ratio of less than 50 to 1, in one of the Mountain Division states (i.e., Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and/or Wyoming). Under this criterion, all residents in 140 counties across the 8 states were eligible for participation. However, for subjects under 18 years old, participation was limited to observation without researcher participation or interaction. The lack of a more restrictive exclusionary criterion was intentional and was intended to provide a wide-scope so as to obtain the most thorough perspective of this sample possible. Individuals who were not directly involved in farming activities were presumed to be intimately aware of the use of gender stereotypes within their own communities through (1) witnessing the activities performed by farmers within their communities and (2) direct interactions which do or do not utilize gender stereotypes. A total of 6 individuals were recruited in line with the current standards of qualitative research with the goal of obtaining data of both quality and depth. By limiting the number of participants to 6, I was able to spend extended periods of time interacting with my participants, building rapport and trust that led to a depth of dialogue that would not have been possible with a larger number of participants.

Recruitment was accomplished through purposive sampling in public locations (e.g., livestock auctions, libraries, farmer's markets, coffee shops) in agricultural communities and rural, agriculture themed social media pages and groups. In public locations, I approached potential participants and introduced myself to them. I explained that I was conducting a study and was interested in interviewing them. I would offer them a study information sheet and encourage them to contact me. On social media, my research assistants conducted searches of public groups and members to locate the social media profiles of potential participants using agriculture related terms (e.g., farms, gardens, cows, chickens).

Once a profile meeting the study criteria was located, I sent the potential participants a Facebook direct message inviting them to participate. The difficulty of accessing qualitative field settings can vary between different settings. Therefore, these particular locations were chosen for their ease of access given their nature as public locations that are frequented by a wide range of individuals. Additionally, I sought to establish rapport early in the recruitment process to facilitate a snowball sampling effect such that the individuals recruited in turn provided introductions to additional potential participants. My early rapport also helped to establish recruitment paths that began with a variety of individuals of different demographics (e.g., "starter" individuals who are both old and young, male and female, etc.) in order to gain a diverse sample.

To further illustrate my recruitment process, I will describe a typical afternoon spent recruiting participants. I visited a popular farmer's market in Wyoming and browsed the vendor booths just as I would if I were attending a farmer's market as a customer. This situation provided a natural avenue to begin conversations with the vendors. I would ask about their products and their role in producing the product. For example, I spoke with a woman who was selling apples. She told me about her small farm and how she grew the apples. During this conversation, I determined that she qualified for the study and I explained that I was conducting a study about gender stereotypes in agriculture. I gave her a study information sheet with my contact information and encouraged her to contact me. On a typical recruitment day I would have approximately ten interactions similar to this.

All participants were assigned a pseudonym from the Social Security Administration's list of the 100 most popular baby names over the past 100 years. Assignment of pseudonyms began at the beginning of the list (i.e., first most popular to the first participant) and aligned with the identified gender of the participants. The six participants were thus assigned the pseudonyms Patricia, Mary, Jennifer, James, Linda, and Robert. Patricia began working in agriculture in her 30's and is currently

still employed in the sector, having moved through 4 different jobs over the past two decades. Mary

grew up in a farming family but did not begin working in agriculture herself until 10 years ago. Jennifer

is the youngest of the participants, in her early 20's, and grew up in a farming community. After moving

to an urban area and earning her degree, she returned to her agricultural roots. James is a college

educated man in his 50's who runs a small farm. Linda is a woman in her 60's who grew up on a farm

and continued working on dairies until her retirement. Robert is a man in his late 30's who likewise

grew up on a farm but began working outside of the agricultural sector upon reaching adulthood,

although he continued to live within a farming community. Patricia and Mary's interviews were

conducted online; all other interviews were conducted in person. See table 1 for participant

demographics.

Table 1.

Phase 1 participant demographics

Participant ID	Occupation	Years active in AG	Upbringing	Gender	Age	Interview format
Patricia	Agriculture	Apx 20	Urban	Female	50's	online
Mary	Agriculture	Apx 10	Farm	Female	40's	online
Jennifer	Agriculture	Apx 1	Farm	Female	20's	In person
James	Agriculture	Apx 10	Urban	Male	50's	In person
Linda	Retired	Apx 40	Farm	Female	60's	In person
Robert	Hospitality	Apx 10	Farm	Male	30's	In person

Procedure

Data was collected using subject observation with moderate to active researcher participation

(Spradley, 1980). The goal of assuming a participant-observer role was to raise my own explicit

awareness in the situations I was observing in order to be keenly aware of what is happening within and around me. For example, when I was in a moderate researcher role, I sat alone having a drink at a coffee shop, and thus, was fully visible to the subjects while observing and recording the surrounding public behavior. In a virtual example, I joined and followed groups and pages on social media and observed interactions between other group members and followers. When I was in an active researcher role, I initiated and engaged in dialogue with community members. My dialogue with participants was mostly spontaneous and organic in nature. However, I did have a series of interview guide questions that I kept in mind and purposely addressed during my dialogues (see Appendix A).

Measures

The data collection procedures resulted in an immense amount of data that was recorded in a systematic and logical fashion. Organization of fieldnotes was vital (Chiseri-Strater & Sunstein, 1997) and experts (e.g., Spradley, 1980; Berg, 2007) recommend four types of notes: brief in-the-moment (condensed) notes, extensive after-event (detailed) notes, personal reflections, and analytic notes. I utilized all four of the recommended types of fieldnotes, with all four types being recorded each day that data was collected. I recorded condensed notes during the events being observed and then recorded detailed notes immediately after the completion of the observed event. I recorded personal reflections and analytic notes at the end of each data collection day. I practiced introspection for the personal reflections to assess my own feelings of the events observed. Spradley (1980) describes introspection as a tool to understand new situations and cultural rules. The analytic notes served as a place for me to consider how my ethnographic data aligned with, related to, and differed from past findings.

Throughout the note-taking process, I utilized Spradley's (1980) three principles in ethnographic record making: the Verbatim Principle (recording the exact words and phrases used by subjects), the Language Identification Principle (identifying the subject who produced the precise language used in the

field notes; i.e., whether the words are written by me as a person, me as a scientist, or by a specific, identified subject), and the Concrete Principle (using concrete language without generalizing or summarizing).

Data Analysis

Coding

I began my analysis of the collected data with a thorough review of the interview transcripts and notes. Per Adu (2019), I employed an interpretation-focused strategy for coding as my data primarily consisted of implicit markers. I then developed codes based on the information I was looking for to address my research questions. Specifically, I coded any data that referenced gender, stereotyped behaviors, traits, and activities, and changes over time. I applied these codes to the data, separated the relevant data from the full data set, and reviewed this new data set. Based on that review, I then developed additional codes to designate references to agricultural activities, familial activities, and religion. Additionally, I employed simultaneous coding, which allowed me to apply multiple codes to a single piece of data. For example, one participant mentioned that mothers in Mormon families did not participate in farming. Codes indicating gender, religion, and agricultural activities were all applied to this comment. Once all of the data was coded, I had my final set of relevant data and I tallied for frequency and case count.

Categorizing
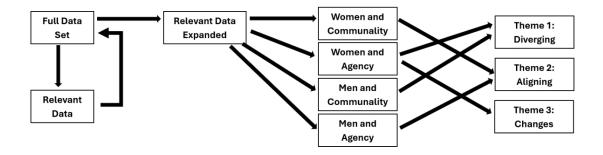
After thoroughly coding all the data and tallying the coding, I categorized the data into clusters. The clusters that I identified were communality and women, agency and women, communality and men, and agency and men. A number of patterns emerged from these clusters, allowing me to identify three major themes within the data: (1) stereotype use diverging from past research, (2) stereotype use

aligning with past research, and (3) changes in stereotype use over time. See Figure 1 for a visualization of this process.

Figure 1.

Phase 1 data analysis process

Findings

Overview

Inconsistent with previous research, I found that within the agricultural domain, agentic traits were applied to men and women at nearly the same frequency. Consistent with previous research, I found that within the domestic domain, communal traits were applied to women far more often than to men. Similarly, consistent with previous research, religion and parental status were often mentioned both in the application of communal traits and lack of agentic behaviors for women, but not men. Reproductive lifecycle also emerged as a pattern for the application of stereotypes to women. Women of childbearing age (often referred to as "mothers") more frequently had stereotypes applied to them. There were also identifiable patterns to the way that stereotypes were described as changing over time.

Participants spoke about differences between generations within their own families and changes in how they had been treated throughout their careers. Additionally, younger participants differed from older participants in their descriptions.

Theme 1: Diverging Use of Stereotypes

A prominent theme I found was that the use of stereotypes within the agricultural domain diverged from what previous studies had found in urban regions. The data revealed the nearly full rejection of established gender stereotypes regarding the physical capabilities and aptitudes of men and women, specifically within the agricultural domain. Women do not appear to be viewed as lacking competence and skill, and the views revealed that women participate in a great deal of physical labor. Male and female participants alike described women and men doing the same jobs on farms and ranches. Robert explained, "if [a job] had to be done, whoever was there to do it, did it." Patricia said, "I don't really see a lot of delineation in gender. I know women who work side-by-side with their husbands in dairies for cheese production, etc. One woman I met has a flock of Dorset sheep that she's managed all on her own." Jennifer described how when she first began to work on a farm, she worried about being "boxed into an office" as a woman, but within months, she was driving tractors and other heavy equipment.

As previous research suggested, I found that men in agricultural communities are not perceived to lack warmth and that they participate to a great degree in parenting responsibilities and caregiving of animals. Mary explained, "We have small kids… so if I am in the garden, [my husband] is making dinner, getting the kids ready for bed, coaching baseball practice, etc." Robert described the close, nurturing relationships that he, his brother, and his son developed with the livestock that they cared for in their farm. However, the absence of gender stereotypes appeared to be limited by domain.

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Theme 2: Aligning Use of Stereotypes

A second, contrasting theme I found was that within the domestic domain, the use of stereotypes aligned with past findings of studies conducted in urban regions. Established gender stereotypes were often applied to women in a caregiving capacity, specifically when using the terms "mom(s)" and "mother(s)." When I proposed this research, I considered the possibility of a relationship between religion and gender stereotype and based on these interviews, this relationship does appear to exist. Interviewees mentioned that the mothers in religious families did not participate in agricultural activities, specifically mentioning Mormon mothers. However, I further explored this topic in later interviews, and it appeared that the number of children within a household appears to be the relevant variable contributing to some men and women's conformation to gender stereotypes. Although, it still seemed possible that religiosity plays a role. Families with a larger number of children will, as logic would dictate, have a larger amount of domestic work related to child-raising (e.g., feeding, cleaning, schooling, etc.) because the addition of each child adds an equivalent addition of tasks. In these families, the "whoever was there to do it [man or woman], did it" attitude persisted. But despite this, women still did the majority of domestic work. In a Facebook message, Mary explained, "I have 5 younger brothers. My Mom helped in the garden but it wasn't her thing... My Dad decided what to plant and not to plant, what needed weeded, when to harvest, etc."

The interviews established that regardless of the level of rejection of other gender-based stereotypes, there was a consistent, yet implicit, endorsement of the belief that women are better suited for parenting work than men, among nearly all participants. This indicates that the rejection or acceptance of some aspects of gender stereotypes may come out of practicality rather than genuine belief.

Theme 3: Changes Over Time

Theme 3 provided insight into my second research question: How is women's increased participation in agriculture related to changes in gender stereotype use? Regarding the physical activities involved with agriculture, there does not seem to be much of a change. In many interviews, people spoke of women participating in grueling farm labor and of fathers and grandfathers performing childcare duties decades ago. There were indications that the rejection of gender-stereotyping within agriculture may have once based on necessity; when animals must be fed or risk starvation, when crops must be harvested or risk waste, the matter of who (man or woman) was completing the task was not nearly as important as the possibility of loss of livelihood.

There does appear to be a notable shift in regard to the agentic trait of leadership. Older participants rarely spoke of performing supervision of workers. However, Linda, the oldest of the participants, spoke of rampant sexism 20 to 30 years ago while she was working in a supervisory role in a dairy. The younger participants who held supervisory roles did not mention sexism or discrimination, even when prompted. This indicates that perhaps some gender stereotypes have been dispelled in terms of women having the competence to lead. However, this shift may be in line with broader cultural changes, and not specifically related to women's increased participation in this field. It is possible that the increased participation is due to women becoming more independent and performing the same tasks they always have, but in a formal, paid capacity, thus becoming visible in the USDA and census statistics. Additionally, it is possible that there has not been an increase in participation, but rather an increase in the willingness of women to self-report their participation. Rigid gender roles may have prevented women from being comfortable publicly admitting to their employment outside of the home, particularly in a male dominate field. As gender roles have become less rigid and women's employment outside of the home has become more common, it is possible that women began self-reporting their participation in agriculture more frequently.

Discussion

These findings support my speculation that the stereotypes of men lacking warmth and women lacking competence would be less salient in agricultural communities. In line with previous research findings that women working in agriculture display agentic traits through their active participation in physical labor and dangerous tasks (Boulding, 1980; Ghorayshi, 1989; Satyavathi, 2010), my interviewees consistently described these traits and behaviors. Also aligning with previous research findings that men working within agriculture display communal traits in their interactions and relationships with animals (e.g., Seabrook & Willkinson, 2000; Dockes & Kling, 2006; Bock et al., 2007; Wilkes, 2005), my interviewees spoke of these traits and behaviors. Additionally, there was evidence of men displaying communal characteristics within the domestic domain, supporting Sherman's (2009) finding that families within these communities hold less rigid gender roles in parenting. This contrasts with past findings that stereotypes of men as only agentic are not weakening in the same way that stereotypes of women as only communal are (Diekman & Eagly, 2000; Spence & Buckner, 2000; Eagly et al., 2019).

However, there were indications that stereotype use may be domain specific, as other research has shown (Liben & Bigler, 2002; Haines et al., 2016). Specifically, gender stereotypes were more frequent present in regard to women caring for children, with the stereotypes being more often applied in reference to "mothers" compared to "women." The well-researched belief that women are more naturally suited to child raising than men seemed to be present within this sample, despite the sample's rejection of other common gender-related beliefs. My personal reflections based on my condensed and detailed notes also provide insight into how parental status plays a role in the application of gender stereotypes. As I described in my positionality statement, I lived part-time within an agricultural community and became pregnant halfway through the data collection phase. My experiences with

community members began to shift when I became visibly pregnant. Men and women would go far out of their way to assist me, when previously I was treated as fully capable of carrying large items and utilizing equipment. This pattern of interaction continued after the birth of my child. It appeared that although I, as a woman, was considered capable of physical labor, I, as a mother, was not. This leads me to wonder whether the sexism and stereotypes that exist, perhaps in this area or perhaps broadly, are more linked to motherhood and reproduction, as opposed to biological sex.

Taken as a whole, these findings indicate that (1) the larger general sample of interest (agricultural community members) may use gender stereotypes to a lower degree than urban samples, but that (2) parental status may affect the degree to which gender stereotypes are applied.

Chapter 4: Quantitative Comparison (Phase 2)

This first (qualitative) phase informed the subsequent (experimental) phase of this study. The goal of the second phase was to investigate how gender stereotype use in rural, agricultural samples compares to gender stereotype use in urban, university samples, and if parental status affects the degree to which gender stereotypes are applied. Phase 2 involved the administration of a gender stereotype questionnaire and demographic measures to quantitatively examine the differences and the similarities between the samples.

Method

Participants

Participants (n = 243) were Prolific and Amazon Mechanical Turk workers. Three chose to have their data withdrawn from the study upon completion, 10 did not provide vital demographic information, and 28 failed the attention check, leaving 202 participants. The final sample included 132 women (65.35%), 67 men (33.17%), and 3 participants who declined to provide their gender (1.49%), with a mean age of 34.80 (SD = 11.95). The sample included 117 White (57.92%), 24 Asian (11.88%), 17 Latino/a (8.42%), 35 Black (17.33%), and 9 other race (4.46%) participants.

Materials

Demographic survey. Participants completed a demographic survey to collect the following data: identified gender, age, race/ethnicity, religion, and county of upbringing. County of upbringing was coded as rural or urban according to the USDA Economic Research Service's (USDA ERS, 2014) 2013 Rural-Urban Continuum Codes.

Stereotype use. The Occupations, Activities, and Traits – Attitude Measure (OAT-AM; Liben & Bigler, 2002; see Appendix B) is a well-established scale for measuring social attitudes about gender stereotypes in adults. Comprised of 3 sub-scales with 25 items each (10 stereotypical masculine, 10 stereotypical feminine, and 5 neutral), participants are instructed to rate occupations, activities, and traits on a 5-point scale ranging from women only to men only. The traits scale also includes an option for neither women nor men. Group 1 completed the OAT-AM as it was designed. Group 2 completed the OAT-AM with the prompts modified to reflect parental status (i.e., "women" was changed to "mothers" and "men" was changed to "fathers").

Procedures

Participants were recruited on the Prolific and Amazon Mechanical Turk (mTurk) platforms. Participation in the study took less than 10 minutes and all participants were compensated with $1.50. The study was administered online using Qualtrics. The study procedures were approved by the Institutional Review Board of the University of Nevada, Las Vegas, IRB# UNLV-2024-49.

Analyses and Results

Scoring

Participant responses were scored by coding responses of "Mostly Men (Fathers), Some Women (Mothers)" and "Mostly Women (Mothers), Some Men (Fathers)" as a 1 and responses of "Only Men (Fathers)" and "Only Women (Mothers)" as a 2. Responses of "Both" or "Neither" were coded as 0. Thus, higher levels of stereotyping were indicated by higher scores. As recommended by Liben and Bigler (2002), due to the possible relevance of different scores between the three domains, each sub-scale was analyzed separately.

Analysis of Variance

A series of one-way analysis of variances (ANOVAs) were performed comparing participants in four groups on the full scale and all three subscales. Group 1 was comprised of urban participants who completed the standard survey (Urban/Standard), group 2 was comprised of rural participants who completed the standard survey (Rural/Standard), group 3 was comprised of urban participants who completed the modified survey (Urban/Parental), and group 4 was comprised of rural participants who completed the modified survey (Rural/Parental). The means and standard deviations are presented in table 2. The ANOVA indicated significant differences between the four groups on the full scale [$F(3, 198) = 3.222$, $p = 0.024$] as well as the activities and occupations subscales. See table 2 for descriptive statistics and table 3 for ANOVA results.

Table 2.

Descriptive statistics for scales by group

	Mean	*SD*
Full scale total		
Group 1	13.72	18.97
Group 2	16.06	18.42
Group 3	25.08	24.62
Group 4	20.26	24.17
Occupation sub-scale		
Group 1	7.17	8.99
Group 2	7.75	8.91
Group 3	12.45	10.60
Group 4	10.11	10.88
Activities sub-scale		
Group 1	4.28	6.83
Group 2	6.03	7.40
Group 3	8.86	9.86
Group 4	6.49	8.67
Traits sub-scale		
Group 1	2.27	5.33
Group 2	2.28	3.78
Group 3	3.77	6.32
Group 4	3.66	6.39

Table 3.

ANOVA between 4 groups

	Sum of squares	*df*	*Mean square*	*F*	*P*
Full scale total	4657	3	1552.3	3.22	0.02*
Occupation sub-scale	1064	3	354.80	3.61	0.01*
Activities sub-scale	697	3	232.10	3.28	0.02*
Traits sub-scale	108	3	36.15	1.13	0.34

Note. $*p<.05$; $**p<.01$; $***p<.001$

Post hoc

     A post hoc Tukey's HSD test indicated that group 1 (urban participants who completed the

standard survey) had significantly lower levels of stereotype use (*M* = 13.72, *SD* = 18.97) than group 2

(urban participants who completed the modified, parental status survey), (*M* = 25.08, *SD* = 24.62,

p=.018). No other significant differences were found. See table 4.

Table 4.

Post Hoc comparisons by group for full scale

Comparison						
Group	Group	*Mean diff*	*SE*	*df*	*t*	*p*
Urban/Parental	Rural/Parental	4.85	4.53	198	1.07	0.71
Urban/Parental	Urban/Standard	11.37	3.85	198	2.95	0.02*
Urban/Parental	Rural/Standard	9.03	4.49	198	2.01	0.19
Rural/Parental	Urban/Standard	6.54	4.67	198	1.40	0.50
Rural/Parental	Rural/Standard	4.20	5.21	198	0.81	0.85
Urban/Standard	Rural/Standard	-2.34	4.63	198	-0.51	0.96

Note. All t-test were two-tailed. *p<.05; **p<.01; ***p<.001

T-tests

     A series of t-tests were performed to determine if any relationships between other variables of

interest and stereotyping existed within the data. Participants who completed the modified, parental

status survey had significantly higher levels of stereotype use (*M* = 23.49, *SD* = 24.46) than participants

who completed the standard survey (*M* = 14.59, *SD* = 18.70), *t*(195) = 2.92, *p* < .01. The effect size,

measured by Cohen's d, was d = -0.41, indicating a small effect. Additionally, participants who

identified as male had significantly higher levels of stereotype use (*M* = 25.12, *SD* = 21.61) than

participants who identified as female (*M* = 16.72, *SD* = 22.28), *t*(136) = 2.56, *p* < .05. The effect size

was d = -0.38, indicating a small effect. Lastly, participants who identified as a member of an organized religion had significantly higher levels of stereotype use (M = 25.23, SD = 23.99) than participants who identified as atheist or agnostic (M = 10.14, SD = 14.25), $t(195)$ = 2.92, p < .01. The effect size was d = 0.73, indicating a medium effect. When analyzed at the sub-scale level, all relationships between these the variables and the three sub-scales were significant except for sex with the activities sub-scale and condition with the traits subscale. See table 5.

Table 5.

T-tests between variables of interest

Dependent Variable	Independent Variable: Levels	*t*	*d*	*M*	*SD*
Full Scale	Condition:	2.92**	-0.41		
	Parental			23.49	24.46
	Standard			14.59	18.70
	Religion:	-5.48***	0.73		
	Nonreligious			10.14	14.25
	Religious			25.23	23.99
	Sex:	2.56*	-0.38		
	Female			16.72	22.28
	Male			25.12	21.61
Occupations Sub-Scale	Condition:	3.11**	-0.44		
	Parental			11.68	10.70
	Standard			7.39	8.92
	Religion:	-5.08***	0.70		
	Nonreligious			5.68	7.41
	Religious			12.20	10.38
	Sex:	2.72**	-0.40		
	Female			8.45	10.22
	Male			12.40	9.43
Activities Sub-Scale	Condition:	2.68**	-0.37		
	Parental			8.08	9.51
	Standard			4.94	7.07
	Religion:	-5.17***	0.69		
	Nonreligious			3.20	5.68
	Religious			8.76	9.25
	Sex:	1.87	-0.28		
	Female			5.89	8.72
	Male			8.24	8.15
Traits Sub-Scale	Condition:	1.87	-0.26		
	Parental			3.74	6.31
	Standard			2.27	4.79
	Religion:	-4.34***	0.54		
	Nonreligious			1.26	2.7
	Religious			4.27	6.75
	Sex:	2.73*	-0.37		
	Female			2.38	5.21
	Male			4.48	6.38

Note. All t-tests were two-tailed. *p<.05; **p<.01; ***p<.001

Discussion

The second phase of this study addressed RQ3 (How do gender stereotypes in rural, agricultural samples compare to gender stereotypes in urban, university samples?) and used an experimental research design to address this question, as well as a second question deemed relevant by findings revealed in the first, qualitative phase: Does parental status affect the degree to which gender stereotypes are applied?

Interestingly, rural and urban participants did not utilize gender stereotypes at a significantly different rate when asked about men and women generally. However, when urban participants were asked about fathers and mothers specifically, they applied stereotypes at a significantly higher rate than when asked about men and women generally. By contrast, rural participants applied gender stereotypes at roughly the same rate, regardless of whether they were judging men and women or fathers and mothers. In other words, parental status had a significant effect on the rate at which urban participants apply gender stereotypes, but not the rate at which rural participants apply gender stereotypes.

Past research has consistently found that men apply gender stereotypes higher rates than women, and this study yield that same result, both among rural and urban participants. However, it is worth noting that this study found that when compared at a sub-scale level, there is not a significant difference in the rates at which men and women apply gender stereotypes to activities, whereas there is a significant difference in the rates gender stereotypes are applied to occupations and traits.

It is worth noting that religion had the strongest relationship with stereotyping such that participants with a religious affiliation applied stereotypes at a significantly higher rate than participants without a religious affiliation. This effect should be explored in future research. This study had a few limitations, which may be able to be addressed in future research. Primarily, the recruitment of rural participants online was difficult. This may be due to the lower population of rural communities, or it

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may be due to internet accessibility or usage rates. I would encourage researchers interested in exploring rural and urban differences to utilize other recruitment strategies. Additionally, agriculture-specific occupations, activities, and traits should be included in any measures.

Chapter 5: Qualitative Refinement (Phase 3)

This study concluded with a third phase of a qualitative nature that was comprised of conducting follow up interviews with two of the original interviewees from phase 1. A form of member checking, this technique involved returning to the original source of data to test it for credibility (Lincoln & Guba, 1985). As such, I provided the results of phases 1 and 2 to the participants and recorded their reactions and comments. The perspectives of the original agricultural community interviewees allowed me to gain further insight into how parental status and religion may affect levels of gender stereotype use and provided support for my findings that these two variables have a strong effect on gender stereotyping.

Method

Two original interviewees participated in follow-up interviews. Participants being hesitant to challenge or differ from the results that are being shared with them can be a challenge when doing member checks (Kornbluh, 2015). Therefore, Robert, a man in his 30's, and Linda, a woman in her 60's, were chosen to participate in this phase due to their willingness to talk in depth during phase 1 and their confidence in their knowledge of the subject. Robert grew up on a farm and Linda worked in the dairy industry for 40 years. Interviews were conducted over a period of three days in person and consisted of spontaneous dialogue guided by probing questions related to the findings of phase 2. As in phase 1, I used condensed notes, detailed notes, personal reflections, and analytic notes to document my interactions and interviews. Condensed notes were recorded during the interviews and detailed notes were recorded immediately after the interviews. Personal reflections and analytic notes were recorded at the end of the day.

Data Analysis

I analyzed the interview notes in much the same way as phase 1, coding for references to gender and use of stereotypes, and then categorizing for references to men/women and communality/agency (Adu, 2019). However, for phase 3, I additionally focused on references to religion and parental roles. Once references of interest were isolated and categorized, I compared these references to the findings in phase 2, as well as prominent theories and past findings.

Findings and Discussion

Robert took a particular interest in the finding that urban participants apply gender stereotypes significantly more often to parents than men and women as compared to rural participants who applied the stereotypes at roughly the same rate regardless of parental status. Interestingly, he described a possible explanation for this effect similar to how "invisible work" is described in academic literature, by explaining that the jobs, chores, and activities necessary to survive on a farm are not invisible; that it is well recognized within agricultural communities that these activities are done by both men and women, both before and after they become parents. He explained that the addition of a child does not suddenly mean that certain tasks do not need to be completed. He mentioned that in large cities, it is possible to hire people to do these jobs, so perhaps people in urban areas just believe that mothers focus all of their efforts on caregiving. Robert demonstrated this by describing how his dad protected and comforted him after a life-threatening accident when he was six because his mother was out on the farm working.

Linda spoke again about the sex discrimination she faced in her career and added that having her "late life" baby did not seem to affect her treatment at work and her career as much as the two babies she had very early in her career. She had her last baby in her 40's and the first two in her early 20's. She spoke of being spoken down to and treated as if she was not capable of doing her job during her early pregnancies, but not experiencing this same treatment with her last pregnancy. Additionally, she was

unsurprised that women in urban areas had more gender stereotypes applied to them once they became mothers, explaining that if all anyone ever sees mothers do is take care of children, then of course they will think that is all women can do. Linda also talked about her mother's lack of involvement, both on the farm and with childrearing. Her father did both the farm work and the childrearing, although much of the childrearing was left to the older siblings.

The findings of phase 3 provided support for the findings of phases 1 and 2 and yielded a few new insights. First, there was a reiteration of the stories told during phase 1 involving women performing strenuous physical labor and men engaging in caregiving within agricultural communities. Additionally, neither Linda nor Robert was surprised that phase 2 found that religious affiliation is associated with higher gender stereotype use. Both participants mentioned that they believe that is because religious families have a larger number of kids. Both Linda and Robert provided possible explanations for the phase 2 finding that urban, but not rural, participants apply gender stereotypes significantly more often to parents than men and women. Interestingly, both of their explanations relied on the concept of representation.

Linda's stories about the differences in her experiences with sex discrimination over her life span suggest that age may serve as a protective factor for the discrimination women sometimes face when becoming mothers, or it may simply be a reflection of societal change in the reduction of sex discrimination over two decades. Future research would consider the possibility of age as well as mothers' representation in different domains as possible protective factors against sex discrimination and gender stereotyping.

Chapter 6: General Discussion

Through the use of a full-cycle research method (Fine & Elsbach, 2000), this study refined our knowledge of the variables that affect gender stereotype application, types of behaviors and roles that are stereotyped as masculine or feminine, as well as perceptions of gender differences. These findings can support the development of more comprehensive and inclusive gender stereotyping measures. Additionally, this study provides insight into how examining subcultures within the United States can benefit the field of gender stereotyping research, and research generally, through the contributions of additional perspectives. Perhaps most importantly, this study yielded insights that can be applied to other research and practice domains to support increased gender equality and equity.

Measure development. The agricultural community sample interviewed in the first phase of my study provided a wealth of potential behaviors, roles, and other characteristics, which can be integrated into current measures, or alternatively, be compiled to create a new measure of gender stereotyping. To my knowledge, no gender stereotyping measure specifically addresses the wide range of behaviors and roles that occur nearly exclusively in agricultural communities (e.g., farming, animal husbandry, barn and fencing construction, woodworking), despite over four decades of research indicating both women and men perform these tasks (e.g., Boulding, 1980; Ghorayskhi, 1989; Satyavathi et al., 2010). Due to these activities requiring physical strength as well as science and mathematics skills, it is likely that individuals unfamiliar with agricultural lifestyles would attribute these activities exclusively to men. However, my interviews revealed that agricultural community members attribute these activities to both men and women.

Additionally, perceptions of gender differences in rural agricultural communities differ from academic samples. Within urban communities, there is often a lack of appreciation for "women's work,"

or domestic duties. This is often referred to as "invisible work" and this devaluation of domestic work is absent in many other cultures (Daniels, 1987). It appears that in the United States, "invisible work" is largely an urban phenomenon. In urban communities, domestic duties may be underappreciated because they are frequently outsourced (e.g., take-out food, cleaning services, buying food at grocery stores, daycares, babysitting). This domestic duty outsourcing may very well serve to reduce the perceived importance of these duties and tasks because they are being completed by a stranger, out of sight, for a nominal fee. In rural agricultural communities, where the very survival of the family depends on this work, and where these tasks are performed within the home, these duties appear to be both recognized and appreciated. In rural agricultural communities, where domestic duties are not "invisible," women are viewed as more competent than they are in urban areas, even if their primary occupation relates exclusively to domestic, unpaid work.

Men are also viewed differently in rural communities. Men are stereotyped, primarily among university samples, as being competent, but lacking warmth (e.g., Fiske & Stevens, 1993; Okimoto & Heilman, 2012; Rudman & Glick, 2001; Tyler & McCullough, 2009). Due to the close relationships that men in rural communities cultivate with the animals they raise (Bock et al., 2007), they more frequently have communal traits such as kindness, nurturance, and sensitivity attributed to them. Participants in phase 1 provided many examples of men displaying these communal traits. In phase 2, participants did not use stereotypes at significantly different rates when judging men versus fathers. In phase 3, an interviewee described the comfort and nurturing he received from his father, aligning with Sherman's 2009 finding that men in agricultural communities hold less rigid gender roles in parenting With these new insights into the behaviors and roles performed by men and women as well as the perception of gender differences, we have a more comprehensive view of how gender stereotypes can manifest.

Social change and subcultures. Representation has long been theorized to be an important variable in the use of stereotypes (e.g., Eagly, 1987; Rudman et al., 2012) and the findings of this study provide unique insights into the relationship between representation and gender stereotype use. Specifically, how the influx of women into a historically masculine field (in this case, agriculture) may be related to beliefs about the roles of men and women that are unique to that field. Although it is not possible to definitively say that a prior lack of restrictive gender stereotypes is what allowed women to enter and succeed in the field of agriculture, this study was able to determine that agricultural community members *perceive* that to be the case.

Additionally, these findings indicate that stereotype use may manifest differently within subcultures (e.g., religious groups, gangs, communes, activist organizations) compared to what has been found historically within academia. Most notably, I expect that the application of competence stereotypes related to physical strength being applied to women in rural communities and the application of warmth traits related to caregiving being applied to men in rural communities is not an anomaly. Examination of gender stereotypes within other subcultures may reveal other deviations from the generally accepted gender stereotype clusters.

Applications. The finding that individuals in agricultural communities utilize gender stereotypes in a less prohibitive way (e.g., a way that imposes less limitations on the roles and behaviors acceptable for each sex), indicates that it is possible that the lessons yielded in this study could be applied to promote gender equality in other domains. Researchers interested in community action and social justice can take these findings and investigate ways to put them into practice throughout other fields where one gender is underrepresented. The clearest example would be to develop interventions aimed at increasing women's participation in science, technology, engineering, and mathematics fields, which are currently dominated by men. However, I see caregiving fields, currently dominated by women, as another

potential field of interest. Within the US, but not all western, industrialized nations, men take a less active role in the caregiving of their own children and do not often engage in caregiving occupations. However, this study indicated the possibility that this is not the case universally in the US. Rural participants shared many stories of men engaging in caregiving of their own children and further examination of what factors affect their willingness to engage in caregiving roles may yield findings that can be utilized to develop programs to increase men's participation within the family and within caregiving occupations.

Limitations and Future Directions

This study yielded a wealth of data about the types of behaviors and traits that are and are not gender stereotyped in agricultural communities, providing new knowledge that researchers can utilize to modify or develop new measures of gender stereotyping. However, a notable limitation of this study was that it did not utilize these unique behaviors and traits in the survey used in phase 2 to examine how they relate to other variables. Future studies should strive to overcome this limitation by developing and utilizing more comprehensive measures of gender stereotypes. These measures will further research in this field and provide opportunities for researchers to explore the relationship between these new dimensions of gender stereotyping with a wide range of other variables, and potentially discover other constructs underlying these belief systems.

This study was able to determine that agricultural community members believe that the increased representation and success of women in agriculture was possible because of the lack of restrictive gender stereotypes. This study was not able to determine if a lack of stereotypes was truly the factor that allowed for women's increased representation in agriculture, but its findings may provide indications as to how future experimental designs may capture the cause-and-effect relationship between gender representation and stereotypes. These findings indicate that prominent theories of gender stereotyping

that are based on the representation of men and women in particular roles (e.g., Bigler & Liben's (2006) developmental intergroup theory and Eagly's (1987) social role theory) may not be applicable to all populations.

Changes in the Boy Scouts of America organization could provide an ideal opportunity for theorists who posit that representation and gender distribution affect gender stereotype use to examine how changes in that distribution can actually affect these beliefs. The Boy Scouts of America began allowing girls to join in 2018, which resulted in the gender distribution within the organization shifting from all boys to partially girls. In May of 2024, the organization announced that they are changing their name to Scouting America, which will likely result in a further increase in the representation of girls within the organization. Researchers could examine how the gender stereotype beliefs of both adult troop leaders and adolescent troop members have changed, and continue to change, as the gender distribution within this organization shifts.

Additionally, these findings lend support to the investigation of the many other subcultures that exist within the US. It is likely that stereotype use differing from what has been found historically within academia could be discovered within many subcultures, providing further contributions to our body of knowledge about the nature and consequences of gender stereotypes. For example, future research may want to examine how gender stereotypes manifest within the LGBTQIA+ community. Similar to the present study, researchers could examine how members of this community utilize the established clusters of gender stereotypes and investigate any variables that may affect how that use does or does not conform to past research. Beyond that, a study of this type within the LGBTQIA+ community may provide insights into additional gender stereotype clusters, beyond the masculine (agentic) and feminine (communal) clusters we currently rely on. These insights can then be used to make modifications or

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additions to strengthen current theories or to develop new and more representative theories of gender stereotyping.

Finally, researchers in community action and social justice may use these findings to inform the development of equity-supporting interventions. The discrimination that mothers face in the workplace may be an ideal avenue of research to utilize the findings of this study. As discussed prior, in urban areas individuals apply more stereotypes to people labeled "mother" and "father" than those labeled "woman" and "man," and rural participants believe that this is because people in urban areas do not see people identified as parents doing work associated with competence. Urban workplaces may be able to overcome the discrimination mothers face by making children more present in the workplace. That could be done physically, by having on-site childcare and family events, or it could be done by simply bringing awareness to the parental status *and* competence of employees. Children often inspire and motivate their parents and the acknowledgement of this could dispel some beliefs that mothers are not competent.

The contributions of this study to the field of gender stereotype research lie within its implications for application and future research. The insight provided into underlying potential reasons for a lack of gender stereotype use (e.g., necessity) as well as the exceptions to this finding (e.g., parental status) can contribute to the development of equality-supporting interventions, provide support for expanding the types of samples examined within the US, and aid the creation of more accurate and representative measurement tools.

Interview Guide.

Gender in Agricultural Communities: Interview Guide

Dialogue with participants will be spontaneous and will assume a primarily organic nature. The questions below may be used to encourage participants to elaborate on topics of particular interest to the study. However, it is important to note that changes will be made to the questions so that the questions will be relevant to each specific participant. For example, a dairy farmer would not be asked about poultry, while questions posed to a rancher would be reframed to refer to "ranchers" as opposed to "farmers."

The purpose of the questions below is to collect the information necessary to ascertain one or more of the following: whether warmth-competence gender stereotype clusters are endorsed, whether stereotype-based motivations led the participant into a career in agriculture, whether prescriptive and descriptive stereotype beliefs align or diverge from the norm, and whether the recent increased participation of women in agriculture relates to gender stereotype beliefs.

LIVESTOCK

How would you characterize your relationship with your livestock?

Do you have a different relationship with different livestock? For example, chickens compared to cows. Or do you have a particular cow that you have a different relationship with than the rest of the herd?

Do you enjoy spending time with your livestock? What are your favorite livestock related activities?

Would you say that you care *about* or care *for* your livestock? That is, do you care more about the well-being and happiness of your animals during their lives, or more about their health for the purpose of sale?

How does your relationship with your pet dog compare to your relationship with your livestock?

What type of livestock related tasks to you regularly complete? For example, feeding, birthing, and castrating livestock.

PARENTING

Do you make decisions regarding how your children are raised? What proportion of these decisions do you make compared to your children's other parent?

What types of activities do you spend most of your time with your children doing? For example, education, feeding, cleaning, and just having fun.

Do you and your wife/husband have different duties when it comes to your children? Is there a particular activity that is primarily, or only, done by one of the parents?

Are there particular parenting duties that you believe are the responsibility of the father/mother?

FARM TASKS

What are your normal daily tasks on the farm? Can you describe what an average day is like for you?

Do you operate heavy farm equipment? For example, tractors, balers, and combines.

Do you build structures on your farm? For example, chicken coops, fences, and wind barriers.

What role to do you play in crop management? For example, planting, maintaining, and harvesting.

BIAS/DISCRIMINATION

Have you ever felt that being a male/female farmer has caused obstacles?

Do you feel like people treat you differently because you are a woman/man? Can you describe a situation in which this happened?

There has been an increase in women in agriculture over recent decades. Do you feel like this has changed how people treat you as a man/woman in agriculture?

MOTIVATION

Why did you choose to become a farmer? Tell me about when you first realized that you wanted to become a farmer.

Did you have a different career before you were involved in agriculture? If so, why did you choose to make the change?

Tell me about your family. Are or were any of your relatives involved in agriculture? What was their attitude towards you becoming a farmer?

Appendix B: Phase 2 Materials

Phase 2 Demographic Questionnaire.

Please type your age below: __

Please select your gender: male, female, other

Please select your race/ethnicity: Asian, Black, Latino/Latina, Multiracial, White, Other

Please select your religious identification: agnostic/atheist, Christian, Jewish, Muslim, Other

Please type the county and state where you currently reside: _____, _____

Please type the county and state where you have spent the largest portion of your life: _____,

_____

Measure of gender stereotype use.

Liben and Bigler's (2002) OAT - AM scale.

WHO SHOULD DO THESE JOBS?

Here is a list of jobs. We want you to tell us if you think each job should be done by men, by women, or by both men and women. There are no right or wrong answers. We just want to know who you think should do these jobs.

WHO SHOULD BE A(N):

Only Men 1; Mostly Men, Some Women 2; Both Men and Women 3; Mostly Women, Some Men 4; Only Women 5

1. dishwasher in a restaurant*
2. refrigerator salesperson
3. artist*
4. elevator operator*
5. interior decorator
6. auto mechanic
7. telephone installer
8. librarian
9. cook in a restaurant*
10. secretary
11. plumber
12. nurse
13. ballet dancer
14. hair stylist
15. engineer
16. police office
17. umpire
18. dental assistant
19. ship captain
20. florist
21. welder
22. electrician
23. manicurist
24. dietician
25. physical therapist*

WHO SHOULD DO THESE ACTIVITIES?

Here is a list of activities. We want you to tell us if you think each activity should be done by men, by women, or by both men and women. There are no right or wrong answers. We just want to know who you think should do these activities.

WHO SHOULD:

Only Men 1; Mostly Men, Some Women 2; Both Men and Women 3; Mostly Women, Some Men 4; Only Women 5

1. fly a model plane
2. knit a sweater
3. sew from a pattern
4. go to the beach*
5. wash clothes
6. fix a car
7. build with tools
8. play cards*
9. shoot pool
10. ride a motorcycle
11. fix bicycles
12. do gymnastics
13. practice a musical instrument*
14. read romance novels
15. practice martial arts
16. watch soap operas
17. baby-sit
18. shoot a bow and arrow
19. bake cookies
20. sketch (or design) clothes
21. grocery shop
22. draw (or design) cars
23. build model airplanes
24. sing in a choir*
25. participate in political activities*

WHO SHOULD BE THIS WAY?

Here is a list of traits. Please choose the option that shows who you think should be this way. There are no right or wrong answers. We just want to know who you think should be this way.

WHO SHOULD:

Only Men 1; Mostly Men, Some Women 2; Both Men and Women 3; Mostly Women, Some Men 4; Only Women 5; Neither Men Nor Women N

1. be emotional
2. be affectionate
3. be good at English
4. enjoy English
5. be cruel
6. be talkative
7. be appreciative*
8. be good at physical education
9. enjoy physical education
10. be gentle
11. be good at foreign languages*
12. complain
13. enjoy math
14. be good at math
15. be dominant
16. cry a lot
17. be neat
18. enjoy art*
19. act as a leader
20. try to look good
21. be good at science
22. enjoy science
23. be good at music*
24. study hard*
25. be brave

*Denotes items that are not scored (neutral items)

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Part-Time Instructor, University of Nevada, Las Vegas Spring, 2024
*PSY 240, Research Methods, Section 1004: 29 students

*PSY 360, Foundations of Social Psychology, Section 1004: 35 students
*PSY 360, Foundations of Social Psychology, Section 1005: 35 students
*PSY 490, Capstone in Psychology, Section 1008: 20 students

Part-Time Instructor, University of Nevada, Las Vegas   Fall, 2023
*PSY 240, Research Methods, Section 1005: 31 students
*PSY 240, Research Methods, Section 1005: 31 students
*PSY 360, Foundations of Social Psychology, Section 1008: 36 students

Part-Time Instructor, University of Nevada, Las Vegas   Summer, 2023
*PSY 240, Research Methods, Section 1003: 21 students
*PSY 360, Foundations of Social Psychology, Section 1002: 25 students

Part-Time Instructor, University of Nevada, Las Vegas   Spring, 2023
*PSY 240, Research Methods, Section 1005: 30 students
*PSY 360, Foundations of Social Psychology, Section 1002: 35 students
*PSY 360, Foundations of Social Psychology, Section 1003: 35 students
*PSY 490, Capstone in Psychology, Section 1011: 20 students

Part-Time Instructor, University of Nevada, Las Vegas   Fall, 2022
*PSY 240, Research Methods, Section 1004: 30 students
*PSY 360, Foundations of Social Psychology, Section 1003: 35 students
*PSY 360, Foundations of Social Psychology, Section 1004: 35 students
*PSY 360, Foundations of Social Psychology, Section 1006: 35 students

Part-Time Instructor, University of Nevada, Las Vegas   Summer, 2022
*PSY 240, Research Methods, Section 1003: 20 students
*PSY 360, Foundations of Social Psychology, Section 1002: 18 students

Part-Time Instructor, University of Nevada, Las Vegas   Spring, 2022
*PSY 240, Research Methods, Section 1006: 30 students
*PSY 360, Foundations of Social Psychology, Section 1006: 35 students
*PSY 360, Foundations of Social Psychology, Section 1007: 35 students

Part-Time Instructor, University of Nevada, Las Vegas   Fall, 2021
*PSY 240, Research Methods, Section 1006: 31 students
*PSY 360, Foundations of Social Psychology, Section 1007: 36 students
*PSY 360, Foundations of Social Psychology, Section 1010: 35 students

Part-Time Instructor, University of Nevada, Las Vegas   Summer, 2021
*PSY 240, Research Methods, Section 1003: 20 students
*PSY 360, Foundations of Social Psychology, Section 1003: 19 students

Part-Time Instructor, University of Nevada, Las Vegas   Spring, 2021
*PSY 305, Foundations of Perception, Section 1004: 35 students
*PSY 360, Foundations of Social Psychology, Section 1010: 35 students

*PSY 360, Foundations of Social Psychology, Section 1011: 34 students

Part-Time Instructor, University of Nevada, Las Vegas   Fall, 2020
*PSY 360, Foundations of Social Psychology, Section 1006: 34 students
*PSY 360, Foundations of Social Psychology, Section 1007: 35 students

Part-Time Instructor, University of Nevada, Las Vegas   Summer, 2020
*PSY 240, Research Methods, Section 1004: 25 students
*PSY 360, Foundations of Social Psychology, Section 1003: 20 students

Part-Time Instructor, University of Nevada, Las Vegas   Spring, 2020
PSY 101, General Psychology, Section 1001: 31 students
 PSY 101, General Psychology, Section 1002: 35 students
*PSY 240, Research Methods, Section 1007: 29 students

Part-Time Instructor, University of Nevada, Las Vegas   Fall, 2019
PSY 101, General Psychology, Section 1001: 37 students
PSY 101, General Psychology, Section 1002: 34 students
PSY 101, General Psychology, Section 1011: 36 students

Part-Time Instructor, University of Nevada, Las Vegas   Summer, 2019
PSY 101, General Psychology, Section 1003: 18 students

Graduate Teaching Assistant, University of Nevada, Las Vegas   Spring, 2019
*PSY 330, Foundations of Developmental Psychology: Section 1008: 27 students

*Indicates online course

RESEARCH AND WRITING TRAINING

University of Nevada, Las Vegas   2019
Responsible Conduct of Research Training

University of Nevada, Las Vegas   2019
Graduate College Rebel Writing Boot Camp

CITI Program   2017
Human Research, Social/Behavior IRB Basic Course

National Institutes of Health   2015
Protecting Human Research Participants training

RESEARCH EXPERIENCE

Graduate Researcher, Social Interaction Lab   2017-current
Director: Murray Millar, Ph.D., University of Nevada, Las Vegas

Graduate Research Assistant, Rebel Baby and Child Lab   2018-2019
Director: Jennifer Rennels, Ph.D., University of Nevada, Las Vegas

SONA Subject Pool Coordinator   2017 to 2018
Department of Psychology, University of Nevada, Las Vegas

Research Assistant, Media, Identity, and Social Attitudes Lab   2015 to 2016
Director: Shantal Marshall, Ph.D., Nevada State College

PUBLICATIONS

Millar, M., **Fink-Armold, A.**, & Lovitt, A. (2020). Disease salience effects on desire for affiliation with in-group and out-group members: Cognitive and affective mediators. *Evolutionary Psychology, 18*(3), 1-7. doi: 10.1177/1474704920930700

Barchard, K. A., Lapping-Carr, L., Westfall, R. S., **Fink-Armold, A.** Banisetty, S. B., & Feil-Seifer, D. (2020). Measuring the perceived social intelligence of robots. *Transactions on Human-Robot Interaction, 9*(24). doi: 10.1145/3415139

Millar, M., Westfall, R. S., & **Fink-Armold, A.** (2023). Effects of disease threat and attitude similarity on willingness to help: The mediating role of disgust. *Psychological Reports, 126,* 150-168. doi: 10.1177/00332941211043457

PUBLICATIONS IN PREPARATION

Fink-Armold, A. & Millar, M. (in preparation). Effects of individual characteristics and workplace prestige and sex-type on beliefs about sexual harassment prevalence.

Fink-Armold, A., Krum, A., Shope, M., & Barchard, K. (in preparation). Examining the psychometric properties of the Perceptions of Occupational Sexual Harassment scale.

ORAL PRESENTATIONS

Fink-Armold, A. (September 2020). Gender Stereotypes in Rural Agricultural Communities. Individual talk presented at the Department of Psychology Annual Research Fair, University of Nevada, Las Vegas. Las Vegas, NV.

Fink-Armold, A. (February 2020). Gender Stereotyping Research: A Call for Methodological Advancement. Individual talk presented at the 2020 UNLV Graduate & Professional Student Research Forum. Las Vegas, NV.

Fink-Armold, A. (June 2019). Contemporary Manifestations of Caregiver-Breadwinner Stereotypes within Future-Self Narratives. Panel presentation at the 2019 Society for the Psychological Study of Social Issues Annual Conference. San Diego, CA.

Fink-Armold, A. (October 2018). It all depends on my husband: The impact of stereotype endorsement and expected conflict on occupational and familial aspirations. Individual talk at the Department of Psychology, University of Nevada, Las Vegas. Las Vegas, NV.

Fink-Armold, A. (October 2018). You can't measure sh*t if you don't have a ruler: How to develop tools to study and solve evolving social problems. 3 Minute Thesis talk at the University of Nevada Rebel Grad Slam. Las Vegas, NV.

Fink-Armold, A. (October 2018). Pinterest-perfect supermom: How sex role stereotypes and social expectations limit the aspirations of millennial women. Individual talk at the 2018 Nevada System of High Education Southern Nevada Diversity Summit, Focusing on Gender: Equity, Identity, and Intersectionality. Henderson, NV.

Fink-Armold, A., Jenkins, M., & Carroll, L. (April 2017). The ABCs of psychology: Attitudes, behavior, and cognition. Panel discussion presented at the 2nd Annual Undergraduate Research & Creative Works Conference. Henderson, NV.

POSTER PRESENTATIONS

Fink-Armold, A., Krumm, A.E., Shope, M.M., & Barchard, K.A. (April 2019). Measuring perceptions of the prevalence of workplace sexual harassment. Poster presented at the 2019 Western Psychological Association Annual Convention. Pasadena, CA.

Fink-Armold, A. (February 2019). Beliefs about sexual harassment prevalence differ based on harassment type and workplace characteristics. Poster presented at the 2019 UNLV Graduate & Professional Student Research Forum. Las Vegas, NV.

Fink-Armold, A. (February 2019). Beliefs about sexual harassment prevalence differ based on harassment type and workplace characteristics. Poster presented at the 2019 Society for Personality and Social Psychology Annual Convention. Portland, OR.

Fink-Armold, A., Marshall, S. R., & Benson, W. (April 2017). Using representative expert models to increase implicit personal association with science, technology, engineering, and math (STEM). Poster presented at the Western Psychological Association 97th Annual Convention. Sacramento, CA.

SCHOLARSHIPS, AWARDS, AND GRANTS (TOTAL: $40,887.46)

Patricia J. Sastaunik Scholarship ($2,500)	2021-2022
UNLV Graduate Access Grant ($2,000)	2020-2021
Patricia J. Sastaunik Scholarship ($2,500)	2020-2021
UNLV Grant-In-Aid ($1378.08)	Fall 2021
UNLV Summer Doctoral Research Fellowship ($7,000)	Summer 2021
UNLV Grant-In-Aid ($1335.95)	Spring 2021
UNLV Grant-In-Aid ($1335.95)	Fall 2020
UNLV Graduate Access Grant ($2,150)	2019-2020

UNLV Summer Doctoral Research Fellowship ($7,000)	Summer 2020
UNLV Grant-In-Aid ($1,300.48)	Spring 2020
UNLV Grant-In-Aid ($867)	Fall 2019
UNLV Graduate & Professional Student Association Book Scholarship ($150)	Fall 2019
Patricia J. Sastaunik Scholarship ($2,500)	2018-2019
UNLV Graduate Access Grant ($1,800)	2018-2019
UNLV Graduate & Professional Student Association Travel Award ($400)	Summer 2019
UNLV Graduate & Professional Student Association Travel Award ($510)	Spring 2019
UNLV Graduate Access Scholarship ($660)	2017-2018
NSF Experimental Program to Stimulate Competitive Research ($5,000)	2015-2016
Nevada State College Seed Research Grant ($500)	Spring 2016

ACADEMIC SERVICE

Diversity & Inclusion Coordinator   2019-2020
University of Nevada, Las Vegas, Department of Psychology, Experimental Student Committee

Quantitative Emphasis Area Representative   2018-2020
University of Nevada, Las Vegas, Department of Psychology, Experimental Student Committee

Test item development and selection for:
- Supplemental materials for Weiten, W. (2022). *Psychology: Themes and Variations (11th ed.).* Cengage.
- MindTap Psychology for Weiten's Psychology: Themes and Variations, version 2.0

Peer-Reviewed Articles for:
- *Assessment*

Reviewed Conference Submissions for:
- American Psychological Association, Division 35: Society for the Psychology of Women

Reviewed Award Submissions for:
- Association for Psychological Science Student Caucus: Student Research and RISE Awards

COMPUTER SKILLS

Excellent knowledge of:
- Canvas, Blackboard, Microsoft Word, Excel, Outlook, Power Point, Qualtrics, SONA, R, Millisecond Inquisit, and IMB SPSS Statistics

Intermediate knowledge of:
- Photoshop, WordPress, and web design and maintenance

PROFESSIONAL AFFILIATIONS

- Society for the Teaching of Psychology

- Society for the Psychological Study of Social Issues
- Society for Personality and Social Psychology
- Association for Psychological Science

REFERENCES

Dr. Murray Millar, PhD
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Dr. Wayne Weiten, PhD
Department of Psychology
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Dr. LeAnn Putney, PhD
Department of Education Psychology and
Higher Education
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