

Introduction: Women make up 50.8% of the United States population [1]. Yet 14.2% of the top 5 leadership positions are women in the top 500 companies and only 4.8% are CEOs. Not only are women not equally dispersed in powerful positions, they are also underpaid making 78 cents to the dollar that men earn [1]. Having a good understanding of how female friendships and social networks work can help combat these vast differences of power. One way to change this is to change how gossip is viewed. Gossip is viewed as negative in the workplace, because it can lead to the fear of loss of managerial control [2]. Yet, gossip is one of the ways power may be dispersed in female-female friendships [3]. This is because females have evolved to share knowledge, such as which berries to pick, therefore female-female friendships have evolved to facilitated deep, knowledgeable friendships [4].

Not only is gender inequality in the workforce an issue in today's society, loneliness is as well. Loneliness can lead to a variety of maladaptive behaviors (e.g., social withdraw, hostility, etc.) and disorders (e.g., clinical depression, borderline personality, etc.). Friendship has been shown to decrease loneliness in individuals [5]. What makes friendship so powerful? To answer this question we need to take a functionalist perspective to understand the role of friendship in our lives. Additionally, no two people are the same; therefore we must also examine individual differences that may explain different investment strategies.

Hypotheses: The following hypotheses will be tested to add to the existing literature as well as advance our knowledge of friendships:

1. Close friendships will be acquired before any other type of friend.
2. There is variation among individuals in their friendship investment strategies once close friends are obtained.
3. Gender, personality, social status, and physical attractiveness predict this variation.
4. The type and level of gossip will differ according to type of friendship.
5. Individuals will shift their investment strategies in various scenarios.

Methodologies: To test these hypotheses undergraduates from Oklahoma State University (OSU) will complete a questionnaire I develop for course or extra credit through OSUs SONA system. This questionnaire will include a budget allocation task in which participants will spend tokens on types of friendships (i.e., close friends, friends, and acquaintances) in varying degrees of budgets (i.e., from low to unlimited). To validate this, we will ask participants to provide an estimate of the number of each type of friend they have. They will complete battery of questionnaires obtaining information about demographics, personality, social value orientation, gossip, intersexual competition, investment strategies, and reactions to scenarios of different conditions (e.g., illness, parenthood, etc.).

We will replicate these findings in community samples. Although the surrounding area of Stillwater, OK is extremely supportive of OSU, it is an underfunded university. It would be extremely beneficial to have funding from the NSF in order to compensate the community participants for their participation. Furthermore, funding is needed for traveling expenses in order to study more urban areas such as Oklahoma City and Tulsa that have a more diverse sample. Following the community samples, the hypotheses will be tested in the Tsimane' forager-horticulturalists sample. While the majority of research is done on modern samples, studying the Tsimane' will give us valuable insights to human nature that is mostly untouched by

the modern world. This will allow us to study a population that is experiencing environmental stressors much like our ancestors.

Expected results: For all populations I expect to find that close friends are the most important type of friend. There are differences in acquiring types of friends once a close friend is secured. Once friends are secured, the type and level of gossip will differ according to type of friendship. For example, an individual will be accepting of negative gossip about them from an acquaintance but not from a close friend. There is variation among perceived friendship budgets. Physical attractiveness, dominance and prestige, and other characteristics will determine these perceived budgets. These budgets, gender, personality traits, and social value orientation will determine investment strategies. Individuals will shift their investment strategies based upon the different scenarios (e.g., illness, parenthood, etc.). These results will lay the foundation to test more hypotheses about functionally relevant variables that predict even more individual differences in friendship investment strategies.

Intellectual Merit: My previous research experience (see personal statement) has prepared me to excel in my graduate work at OSU. I have co-authored two peer-reviewed articles and am comfortable presenting my work. Working under the expertise of Dr. Aaron Lukaszewski, will further the development of my research with an evolutionary perspective as well as having access to conducting research on various populations. While the majority of research is based upon Western culture, I will examine individuals from hunter-gatherer cultures similar to that of our ancestors. Since Dr. Lukaszewski has previously worked with the Tsimane' population [6], he can provide me with the resources needed to research this population.

Broader Impacts: Since more women are entering the workforce all over the world discovering ways to get a more equal power dynamic in the work force not only improve our society, but all societies. Additionally, in a time when loneliness is a problem for multiple age groups [7] understanding different investment strategies may lead to better counseling practices. For example if we know a close friend is a necessity, we can help the client to first focus on cultivating deep engagement relationships instead of focusing on having many acquaintances. I will present my findings at national and international conferences and publish peer-reviewed articles to promote more interest in the scientific community about friendships from an evolutionary perspective. I already and will continue to encourage the undergraduates in my lab to be involved in my research. Teaching them valuable tools such as how to create and test their own hypotheses cultivates an environment of learning and encouragement. Through this encouragement, I will mentor them so they can elicit change through their own research.

References:

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