Referent Power: A Look into Who Gives Power and Who Receives Power

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Abstract

Referent power is defined as the desire to closely associate with another, usually referring to the power of a cherished mentor. We predicted that members of marginalized (vs. dominant) groups will be more motivated to give referent power to high-status others in attempts to appease belonging uncertainty in academic domains. To test predictions, we administered surveys to 56 marginalized group members and 29 dominant group members. Contrary to predictions, we failed to replicate prior findings showing that members of marginalized (vs. dominant) groups feel more belonging uncertainty and are, therefore, more motivated to give referent power. Exploratory analyses show relationships between group identity and (1) aspects of empowerment and (2) types of traits deemed important in mentors. Contrary to predictions, marginalized and dominant groups did not differ in the numbers of people to whom they gave referent power or how much self-other overlap they felt. Consistent with the notion that referent power reduces psychological distance and facilitates feelings of belonging, we found participants with higher numbers of mentors were more likely to give referent power.

Keywords: referent power, marginalized groups, college students, mentors

Introduction

Racial disparities in higher education are pervasive and persistent. Black, Hispanic/Latino, and Asian students are enrolling in higher numbers than in the past, but are still lagging compared to White students. A study conducted by the National Student Clearinghouse Research Center indicates that of the students enrolled in higher education in 2010, 57.8% were White, 11.9% were Black, 11.4% were Hispanic/Latino, 4.8% were Asian, and of the remain 14.1%, 2.4% identified as having two or more races, 4.0% identified as other, and 7.7% did not share their race or ethnicity (Shapiro et al., 2010). Although more than half of the total number of students enrolled in higher education are women, a racial gap exists between the number of students who enroll in two- year institutions and four-year institutions (Shapiro et al., 2010). 45.1% of Asian and 45.9% of White students enrolled in four-year institutions, while only 36.6% and 36.3% of Black and Hispanic/Latino students, respectively, enrolled in four-year institutions. These rates switch when looking at two-year institutions with Blacks and Hispanic/Latinos

making up 48.5% and 50.8% of students enrolled and Whites and Asian making up 35.6% and 37.8% (Shapiro et al., 2010).

There are also disparities in student drop-out or non-completion rates. Asian and White students have the highest completion rates (63.2% and 62%), followed by Hispanic/Latino students (45.8%). Black students have the lowest completion rates (38%), with Black men, having the lowest completion rate at 33.5% (Shapiro et al., 2010). Given these statistics, it is important to understand factors that exacerbate and attenuate disparities in enrollment and completion rates in higher education.

The goal of this research is to examine whether students who are members of marginalized groups are more motivated than students who are members of dominant groups to give referent power to high-status others to increase feelings of belonging. To examine this possibility, we formulated two hypotheses. First, because members of marginalized (vs. dominant) groups feel more belonging uncertainty in academic domains (Walton & Cohen, 2007), we predicted that students who belong to marginalized (vs. dominant) groups are more motivated to give referent power to high-status others. Their motivation to give referent power can be seen in their (1) greater focus on the need to belong, (2) desire to identify with a greater number of others, and (3) feelings of more self-other overlap with one's closest mentors. Our second hypothesis states that students who belong to marginalized (vs. dominant) group members are more attentive to cues in powerful others that suggest that a high-status other can be trusted and will validate their position in a given domain. Validating students from marginalized groups requires that a high-status other (1) see and respect their unique skills and abilities, (2) understand their experiences as a marginalized group member including the pervasiveness of prejudice and discrimination, (3) has successfully helped others similar to them in a given domain, and (4) has the ability to include. To examine these two hypotheses, we will first discuss who belongs to groups that are marginalized in academic domains. We will then discuss conceptualizations of power and distinguish referent power from other forms of power. Our final section of the introduction will review theory and research on belonging and forward predictions that the giving of referent power to high status others may reduce feelings of belonging uncertainty.

Marginalized and Dominant Groups

Individuals who are categorized as members of a marginalized group belong to groups that are negatively stereotyped in society and that are underrepresented in valued domains. Members of these groups tend to receive poor interpersonal and economic outcomes when compared to members of dominant groups. These disproportionate outcomes are a result of discrimination and prejudice against members of marginalized groups (Crocker & Major, 1989). For our study, we have chosen students from four main marginalized groups, which include: women, LGBTQ individuals, people of color, and people from low socio-economic status families. Given the foregoing definition of marginalized groups, dominant groups would then be individuals who belong to a group that is not negatively stigmatized and who are typically numeric majorities in valued domains – Whites and White men, in particular. Individuals in dominant groups are not the targets of discrimination and prejudice; therefore, dominant group members less often face poor interpersonal and economic outcomes. In this study, dominant group members will be classified as White men who are able-bodied, straight, cis-gendered, and have a high or medium socio-economic status.

Power

        To understand referent power, we must first define power and articulate the different ways in which power differentials emerge. We define power as the potential to influence others in psychologically meaningful ways (French & Raven, 1959) through the giving or withholding of rewards and/or punishments (Keltner, Gruenfeld, & Anderson, 2003) and/or control of valued outcomes (Fiske, 1993). Rewards include anything that has a positive effect on one's life and is valued by an individual. Inversely, punishments involve anything that has an adverse effect and is disliked by an individual. We define power as the potential to influence, rather than actual influence, because we are interested in the effect of power on low power people. The behaviors, attitudes, cognitions, and effects of low power people can be influenced by how powerful people may potentially respond in the future, as well as their actual behavior. Thus, in the same way that an employee is meaningfully affected by how they anticipate how their boss will behave, students are influenced by potential behaviors they imagine, as well as actual behaviors, of academic faculty. Students will alter their actions regarding high power others in order to be rewarded or avoid punishment. For the purposes of this study, a reward will be defined as anything that has a positive effect on an individual's life and is valued by said individual and punishment will be defined as anything that has an adverse effect and is disliked by an individual.

        Power differential emerges in several ways. According to French and Raven (1959), there are the Five Bases of Power. People with power hold one or more of the bases. The first base of power is *legitimate power*, where person one (O) believes person two (T) has a right to influence them and O is obligated to accept the influence. The second base of power is *reward power*, where O perceives that T can administer positive valences and remove or decrease negative valances. The third base of power is *expert power*, where O attributes T with a high level of knowledge that can influence O. The fourth base of power is *coercive power*, where O expects to be punished by T if they fail to conform to T's influence. The final base of power is *referent power*, where O has a desire to closely associate with T (usually someone high in status or power). In the first four bases of power, T has prior power. In the fifth base, however, T gains power only after it is offered by O. The last of the five bases, referent power, has received the least amount of attention within research. We are interested in changing this and learning what motivates someone to willingly give another power over them, specifically in an academic setting.

        Referent Power. Referent power refers to the desire to identify with another by forming feelings of oneness (French & Raven, 1959). In this context, feelings of oneness are described as desires to share beliefs, opinions, and behaviors. As French and Raven note, this can take the form of thoughts like the following: "I am like O, and therefore I shall behave or believe as O does" or "I want to be like O, and I will be more like O if I behave or believe as O does." (p. 154-155). French and Raven's conceptualization of referent power, in terms of feelings of oneness, parallels conceptualizations of interpersonal closeness and self-other overlap that have been forwarded by relationship researchers Aron, Aron, and Smollen (1992). Aron et al. (1992) conceptualize interconnected selves in terms of interpersonal closeness. More specifically, interconnected selves refer to instances in which people feel psychologically, physically, and emotionally like another. One is said to have an interconnected oneself (or have included another in the self) to the degree that one's partner and oneself are perceived to share resources, perspectives, and characteristics.

Closeness is described as interconnectedness with another and intimacy as reciprocal self-disclosure which leads to feeling of one's inner most self being validated, understood, and cared by another (Aron, Aron, & Smollen, 1992). French and Raven's (1959) classification of referent power can be compared to Aron et al.'s (1992) description of closeness and intimacy in the sense that all require a person to feel that having shared self-aspects with their partner is critical. Importantly, however, there are also key differences between French and Raven's (1959) conceptualization of referent power and Aron et al.'s (1992) conceptualization of interconnected selves. Aron et al. (1992) state that feelings of closeness, intimacy, and interconnected selves emerge when there is reciprocal self-disclosure between partners. This suggest that both individuals must acknowledge the other's feeling for closeness and intimacy, before interconnected selves emerge. By contrast, French and Raven (1959) explicitly state that an individual can give referent power to another without referent power being reciprocated; thus, one person can desire feelings of oneness with another independent of the desires for closeness that the other person feels. In the present work, we will define "referent power" as feelings of oneness as well as feelings of closeness.

Belonging

Belonging is a basic human need. It calls for all aspects of the self to be acknowledged and appreciated by another to feel socially connected. Individuals who feel as though they belong demonstrate better mental and physical health (Baumeister & Leary, 1995), as well as higher levels of self-concept, self-esteem, motivation, and optimism (Walton & Cohen, 2007). The outcomes of belonging are also impactful within academic settings. Students who believe they belong have higher scholarly achievements, GPA, involvement, and motivation (Walton & Cohen, 2007).

Belonging Uncertainty. Members of marginalized groups often experience belonging uncertainty, or concerns about their social bonds and connectedness, that lead to members of marginalized groups to be more sensitive to issues regarding social belonging (Walton & Cohen, 2007). Belonging uncertainty can be felt in academia and professional settings alike. It takes a broad-based form where individuals who are experiencing belonging uncertainty have thoughts such as, "People like me do not belong here." (Walton & Cohen, 2007). The broadness of belonging uncertainty differentiates it from other similar topics like the fear of being stereotyped, perceived bias, and evaluative contexts. It is a concept that can be reinforced by a hypothesis rather than a belief. This means that members of marginalized groups will acknowledge instances that are consistent with the hypothesis that "I do not belong", while being skeptical of any evidence that is inconsistent (Walton & Cohen, 2007).

The presence of belonging uncertainty within a student's life can affect their performance. Prior research has shown that belonging uncertainty can directly affect intellectual achievements by reducing a student level of motivation as a result of not feeling socially connected to others. Students who are members of marginalized groups are at a higher chance of dropping out of school, having lower GPAs, not interacting with peers, and having fewer mentors due to being more at risk of feeling belonging uncertainty (Walton & Cohen, 2007).

Group Prototypicality and Status

In a group, prototypic group members have higher status and are given power to keep them in the group (Emerson, 1962). In academics, professors, advisors, counselors, and lab managers all have higher status than undergraduate students. Each possesses legitimate power

due to their status. Professors and lab managers are able withhold knowledge (i.e. expert power) as well as punish and reward the students they engage with (i.e. coercive power and reward power) (French & Raven, 1959). Prior research has shown that status, like that of a professor's, can only be maintained if the individual is valued, appreciated, and held to high standard by others (Fragale, Overbeck, & Neale, 2011). High status individuals are then thought to possess the qualities of a prototypical member of their group. This notion comes from the previous research which states that members of groups who are highly prototypical are usually admired and trusted by others within the group. Prototypical group members set the standards for how members within their group must behave, as well as standards for those who are not members but would like to join (Barreto & Hogg, 2017).

Overview of the Hypotheses and Research

Given the foregoing points, we predicted that, because members of marginalized (vs. dominant) groups feel more belonging uncertainty in academic domains (Walton & Cohen, 2007), students who belong to marginalized (vs. dominant) groups are more motivated to give referent power to high-status others (Hypothesis 1). We also predicted that students who belong to marginalized (vs. dominant) group members are more attentive to cues in powerful others that suggest that a high-status other can be trusted and will validate their position in a given domain (Hypothesis 2). To test these hypotheses, students from marginalized groups [i.e., LGBTQ, African American, Latinx, low socioeconomic status (SES)] and dominant groups (White, straight, men) completed a questionnaire that asked questions about feelings of belonging, mentors, student empowerment, and traits believed to be important in mentors. If, as suggested by Hypothesis 1, students from marginalized (vs. dominant) groups are more motivated to give referent power, we expected that they would (1) report more concerns about belonging (replicating prior work, Walton & Cohen, 2007), (2) identify with a greater number of others, and (3) feel more self-other overlap with one's closest mentor. According to Hypothesis 2, we also expected students from marginalized (vs. dominant) groups to prefer that mentors (1) see and respect their unique skills and abilities, (2) understand their experiences as a marginalized group member including the pervasiveness of prejudice and discrimination, (3) has successfully help other similar to them belong in a given domain, and (4) has the ability to include.

Methods

Participants

Participants (N=85) volunteered to participate in the study. When categorized by SES, 56 participants identified as having low SES (i.e. poor and working class) and 29 identified as having high SES (i.e. middle, upper-middle, upper, and wealthy class). When categorized by gender, 62 identified as female and 22 identified as male. We had 8 participants who identified as White males and 72 who did not. Participants' sexual orientation were as follows: asexual 2.4%, bisexual 12.9%, heterosexual 71.8%, homosexual 4.7%, pansexual/omnisexual 5.9%, and other 2.4%. Participants' race/ethnicity were as follows: Asian/Asian American 5.9%, Black/African American 12.9%, Latinx/Hispanic 20.0%, Pacific Islanders/Native Hawaiians 2.4%, Native American/Alaska Native 2.4%, White/European American 37.6%, and multiracial 21.2%   Participants from marginalized groups (e.g., LGBTQA people, people of color, people with disabilities, and students from low SES backgrounds) were actively recruited through social

media outlets, academic listservs, and public flyers. Study participants used the appropriate link within the recruitment information.

Measures

  Belonging. Two scales were combined to measure belonging. The first scale was the Sense of Social and Academic Fit (SOSAF), which is a seven-point 17-item self-report survey (Walton & Cohen, 2007). The items in this scale were intended to measure one's sense of belonging in an academic setting. Scoring for the SOSAF ranges from 17-119. Scores higher than 68 indicated high levels of belong in an academic setting. The second scale was the Belonging Uncertainty (BU) scale, which is a seven-point 3-item self-report survey (Walton & Cohen, 2007). The three items on this scale measured feelings of belonging uncertainty within an academic setting. Scores that were lower than 12 indicated higher levels of belonging uncertainty (Appendix A).

  Mentors, Referent Power and Preferred Mentor Traits. Participants completed two measures of referent power. First, participants identified the number of areas in which their current mentors worked. We then summed up the number of areas from which the participants recruited their mentors. Second, participants were asked to consider their most important mentor and completed the Inclusion of Other in the Self Scale (IOS). The IOS used seven pairs of circles that overlapped at varying degrees to signify levels of interpersonal closeness between another and the self (Aron, Aron, & Smollan, 1992). In addition, participants completed a 20-item survey indicating what traits a potential mentor should possess. Participants were asked to rate the importance of each trait when considering a potential mentor (e.g., 1 = extremely unimportant... 7 = extremely important) (Appendix B).

  Student Empowerment Scale. We used a 16-item scale that was adapted from the Organizational Empowerment Scale (Mathews, Diaz, & Cole, 2002). The items on the scale measured participants' sense of power within an academic setting (Appendix C).

  Demographics. Participants were given a questionnaire with questions regarding their university or college, gender, nationality, race/ethnicity, sexual orientation, religious preference, and social class. The answers within this section of the survey were used to identify marginalized group membership (Appendix D).

Procedure

  After logging on to the site with the survey, participants were prompted to the first page of the study which contained a consent form. They were asked to read over the form before continuing to the rest of the study; continuing onto the next page of the study implied consent.

  Participants completed all experimental materials online. This included measures of belonging, the giving of referent power, the rating of cues that are looked for in mentors, student empowerment, and demographic information. Each measure is described above.

  Participant Grouping. Based on the previous research, we developed three ways to divide participants into marginalized and dominant groups. Our first method categorized White males as being the dominant group and all other participants as the marginalized group. Past research has shown that White males are the least likely to face any form of discrimination within several domains. Our second method categorized participants by gender, with males being the dominant group and females being the marginalized group. Our third and final method used to categorize participants focused on socioeconomic status. Participants who identified as being

from families with middle, upper-middle, upper and wealthy incomes were categorized as the dominant group, while participants who identified as being from families with poor and working-class incomes were categorized as the marginalized group. We used contrast coding when coding for dominant (1) and marginalized (-1) group membership.

Factor and Reliability Analysis.

  Belonging. The SOSAF and BU were combined and used to measure feelings of belonging. All items from the BU scale as well as five items from the SOSAF were reversed coded so higher scores on these items indicated higher levels of belonging. All items were loaded on one factor to create a new variable that measures overall feeling of belonging. Cronbach's alpha for all items in the belonging survey was shown to be .878

  Empowerment. An adapted version of the Organizational Empowerment scale was used to measure student empowerment within an academic setting. Three items from this scale were reverse-coded to show that higher scores on these items indicated higher levels of empowerment. With the exception of two items that cross-loaded, all items were loaded on three factors to create three new variables. The names given to each variable indicated the subject focus of the items within the variable. The first variable included four items surrounding student choice and had a Cronbach's alpha of .675. The second variable included four items surrounding academic information and had a Cronbach's alpha of .601. The third variable included four items surrounding independent thinking and had a Cronbach's alpha of .521.

  Traits. A 20-item survey was created to measure the importance of certain traits when a participant is considering a potential mentor. With the exception of three items that cross-loaded, all items were loaded onto four factors to create four new variables. The names given to each variable indicated the subject focus of the items within the variable. The first variable included six items surrounding experience with diverse populations and had a Cronbach's alpha of .804. The second variable included three items surrounding demographic information and had a Cronbach's alpha of .823. The third variable included four items surrounding status and had a Cronbach's alpha of .512. The fourth variable included four items surrounding knowledge and ethics and had a Cronbach's alpha of .550.

<div align="center">Results</div>

Hypothesis 1

  To begin, we conducted a one-way between-participants Analyses of Variance (ANOVAs) to test whether feelings of belonging would be lower among marginalized group members than dominant group members (Walton & Cohen, 2007). However, we were unable to replicate these finding with statistical significance, although the means do suggest the aforementioned trend. Those with low SES reported lower feelings of belonging (mean=2.09) than those with higher SES (mean=5.11) but the difference was not significant (p=.983). Similarly, White males felt greater feelings of belonging (mean=5.19) than all other participants (mean=5.05), but the difference was not significant (p=.659). The lack of significant results was likely due to the small N. However, based on these results we estimated correlations to examine relations among variables independent of group status.

  Correlations. A Pearson correlation was computed to assess the relationship between group type and: (1) feelings of belonging, (2) number of mentors, (3) referent power, and (4) feelings of empowerment. Several relationships were found between group type and different

variables. A significant relationship was found between group type (dominant defined as high SES and marginalized defined as low SES) and number of mentors ($r = -.220$, N=85, p=.043.), such that participants who identified as having low SES also reported having more mentors We also found significant relationships between group type (dominant defined as high SES and marginalized defined as low SES) and our subscale of empowerment relating to student choice ($r=.261$, N=84, p=.017), as well as between gender and our subscale of empowerment relating to independent thinking ($r=-.215$, N=84, p=.049). Dominant (vs. marginalized) groups based on SES and women (vs. men) reported feeling more student empowerment in the ability to exercise independent choice. Additionally, we found significant relationships between number of mentors and referent power ($r=.234$, N=85, p=.031) such that those with more mentors reported greater feelings of self-other overlap with their closest mentor. Of greatest relevance to the notion that there are benefits to giving referent power, referent power was significantly associated with our subscale of empowerment relating to independent thinking ($r=.329$, N=85, p=.002); those with more mentors reported greater experiences of being encouraged to think independently.

Hypothesis 2

To understand how dominant and marginalized group members differ in rating the importance of various traits for a mentor we conducted a series of one-way between- participants ANOVAs. No significant effect of group membership existed for traits dealing with a mentor's experience with diverse populations [SES: $F(1, 79) =.03$, p=.868; gender: $F(1, 79) =.321$, p=.573; White men vs. all: $F(1, 79) =1.77$, p=.188]. No significant effect of group membership existed for traits dealing with a mentor's demographic information [SES: $F(1, 80) =.631$, p=.429; gender: $F(1, 80) =.107$, p=.744; White men vs. all: $F(1, 80) =1.21$, p=.275]. No significant effect of group membership existed for traits dealing with a mentor's status [SES: $F(1, 80) =.43$, p=.514; gender: $F(1, 80) =.273$, p=.103; White men vs. all: $F(1, 80) =1.53$, p=.220]. No significant effect of group membership existed for traits dealing with a mentor's knowledge and ethics [SES: $F(1, 80) =.69$, p=.409; gender: $F(1, 80) =.96$, p=.331; White men vs. all: $F(1, 80) =1.47$, p=.229]. Based on these findings, we conducted an exploratory correlation to see if a relationship existed between traits and other variables.

Correlations. A Pearson correlation was computed to assess the relationship between group type and a mentor's: (1) experience with diverse populations, (2) demographic information, (3) status, and (4) knowledge and ethics. Correlations also examined the relationship between trait variables, feelings of belonging, feelings of empowerment, number of mentors, and referent power. Several relationships were found. Significant relationships were found between group type (White men vs. all) and experience with diverse populations ($r=-.266$, N=79, p=.018); marginalized group members gave more importance to experiences. There was also a correlation between group type (White men vs. all) and demographic information ($r=-.265$, N=80, p=.018) indicating that being a member of a marginalized group is associated with greater importance being ascribed to having a mentor who shares demographic backgrounds. We also found a significant relationship between gender group type (males vs. females) and demographic information ($r=-.217$, N=84, p=.047), as well as a significant relation between gender group type (males vs. females) and status ($r=-.234$, N=84, p=.032); being marginalized group member is associated with greater reported importance of a mentor's status. A significant relationship was also found between demographic information and feelings of belonging ($r=.-322$, N=84, p=.003), such that the reported importance having a mentor who shares a demographics background is related to higher levels of belonging as well as status and our subscale of empowerment relating

to student choice (r=.349, N=84, p=.001). This shows individuals who see status as an important trait of their mentors feel they have more choice. There was also a significant relationship between diversity and number of mentors (r=.234, N=84, p=.032), suggesting that those with more mentors also rated more importance on traits relating to diversity.

Discussion

The purpose of this study was to examine whether members of marginalized groups were more motivated than members of dominant groups to give high-status others referent power to appease belonging uncertainty. We were also interested in examining whether members of marginalized (vs dominant) groups were more attentive to cues that suggested that a high-power other could be trusted to validate their position within a given domain.

Our results showed that when the dominant group is defined as middle, upper-middle, upper, and wealthy class and marginalized group is defined as poor and working class, marginalized group member report having more mentors than dominant group members. These results are consistent with our hypothesis. We believed that to appease belonging uncertainty, marginalized groups are more likely to identify with more mentors. Having a higher number of mentors allows students to learn about the qualities needed to become a prototypical group member to join the groups their already mentors belong to.

Our results also found that when the dominant group and marginalized groups were defined in these same forms, marginalized group members reported feeling lower levels of empowerment relating to student choice. We predicted that marginalized group members would feel less power regarding academic lives. This notion stems from the thought that students who feel like they belong within their academic domains will feel more empowered to make decisions. Several prior studies have shown that marginalized group members are more likely than dominant group to feel like they don't belong with in academia.

When we defined the dominant group as male and the marginalized group as female we found that female participants reported feeling higher levels of empowerment relating to independent thinking. These results were inconsistent with our predications and could be due to the limitations of our study. Our sample size included a disproportionate number of females to males, with female being the majority. These disparity in gender could have resulted in inaccurate results. Future research should seek to recruit equal numbers of men and women, within each ethnic group and socio-economic status group.

Consistent with the notion that the motivation to give referent power would manifest both in students having more mentors and having more self-overlap with their closet mentor, results of our study showed there to be a positive correlation between the numbers of mentors a student has and the amount of referent power they give. Importantly, this did not differ for marginalized and dominant groups, given that we failed to replicate the prior finding that marginalized group members experience more belonging uncertainty in academics than do dominant group members. But this finding does suggest a relationship between our different variables that were conceived of as measures of the motivation to give referent power.

Of greater relevance to the potential benefits of giving referent power, our results also showed that a positive correlation between the amounts of referent power a student gives and feeling higher levels of empowerment relating to independent thinking. These benefits are not group specific; rather they point to the importance of mentors for all.

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The results of our correlations show a relationship between group member type and the traits a mentor possesses. However, the ANOVAs performed on these variables did not show a statistically significant difference. The relationships indicated by the correlation, specifically, suggest marginalized group members prioritize diversity, demographic, and status based traits compared to dominant group members. As suggested previously, future research should seek equal participation within participants who identify as dominant group members and participants who identify as marginalized group members to better evaluate these relationships.

Participants who gave high ratings to their mentors' status also reported high feelings of empowerment regarding student choice. By our definition, a mentor's status is composed of open-mindedness, eagerness to teach mentees, willingness to work with mentees through challenges, and how well-known they are within their domain. This would suggest that participants who place high importance on their mentor having high status feel more empowered to make decisions regarding their academic careers than participants who do not place high importance on their mentor having high status. These findings are important to note because they suggest that a mentor's behavior, instead of their physical traits (i.e. having similar demographics and being from a similar background), is what leads to a mentee feeling more empowered. Future research should look to explore the relationship between mentor status and mentee empowerment.

Importantly, however, the results reported here are preliminary, as data collection is ongoing. As a result, the current number of participants is likely too small to provide reliable tests of our predictions. Thus, although our results did not replicate prior findings, the outcome of our preliminary analysis points to important potential relations to be fully tested and explained in future research and a complete population of participants; this will allow for critical tests of the relations between marginalized groups, belonging, and referent power. The relationship which is shown to exist within empowerment and several group types should be further studied for better understanding. Future studies should recruit equal numbers of dominant group members and marginalized group members to further explore the relationship between group types, belonging, and referent power.

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Appendix A

Belonging:
Please answer the following questions about *what [school name] is like for you.* Indicate the extent to which you agree or disagree with each statement using scale below. Please use the whole range of each scale.

Scale:

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Moderately Disagree	Neutral	Moderately Agree	Agree	Strongly Agree

1) Sometimes I feel that I belong at [school name], and sometimes I feel that I don't belong at [school name].
2) When something good happens, I feel that I really belong at [school name].
3) When something bad happens, I feel that maybe I don't belong at [school name].
4) People at [school name] accept me.
5) I feel like an outsider at [school name].
6) Other people understand more than I do about what is going on at [school name].
7) I think in the same way as do people who do well at [school name].
8) It is a mystery to me how [school name] works.
9) I feel alienated from [school name].
10) I fit in well at [school name].
11) I am similar to kind of people who succeed at [school name].
12) I know what kind of people [school name] professor are.
13) I get along well with people at [school name].
14) I belong at [school name].
15) I know how to do well at [school name].
16) I do not know what I would need to do make a [school name] professor like me.
17) I feel comfortable at [school name].
18) People at [school name] like me.
19) If I wanted to, I could potentially do very well at [school name].
20) People at [school name] are a lot like me.

Referent Power:
Pleases answer the following question.
NOTE: For the purpose of this study, a mentor is considered to be "an experienced person in a company or educational institution who trains and counsels employees or students".

Please think about all of your mentors, or people who you go to for advice and counsel. Indicate the roles or formal positions that your current mentors hold (select all that apply).
- Adviser
- Counselor
- Professor
- Lab Manager
- Alumnus/Alumna
- Graduate Student
- Peer

Consider the most important mentor that you have. This is the person to whom you go to most often for advice and whose opinions are most influential. Please select which pair of circles best describes your relationship with your mentor. (e.g., Overlapping between circles signifies your mentor's influence on you.)
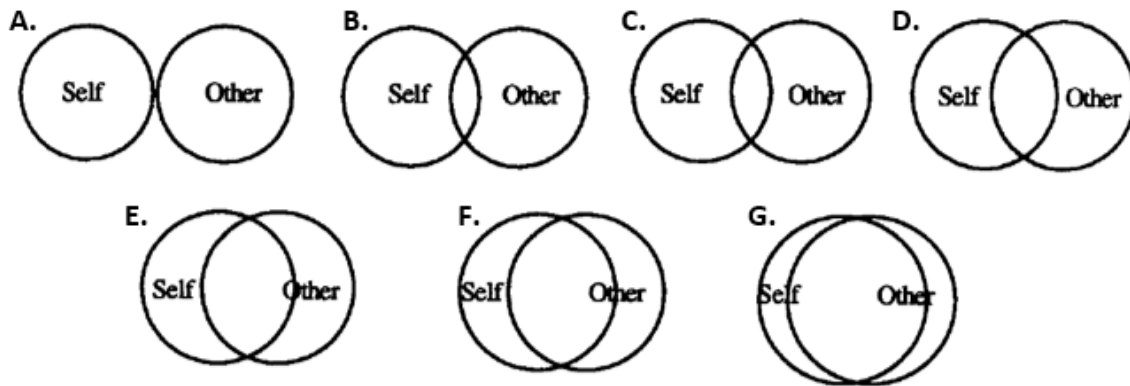
When you seek out a mentor, how important is it that your potential mentor have the following traits.

1. Well-known and respected within their specific domain

1	2	3	4	5	6	7
Extremely	Unimportant	Somewhat	Neutral	Somewhat	Important	Extremely

unimportant	unimportant		important		important

2. Knowledgeable in their specific domain

1	2	3	4	5	6	7
Extremely unimportant	Unimportant	Somewhat unimportant	Neutral	Somewhat important	Important	Extremely important

3. Reliable

1	2	3	4	5	6	7
Extremely unimportant	Unimportant	Somewhat unimportant	Neutral	Somewhat important	Important	Extremely important

4. Has experience mentoring students from diverse backgrounds

1	2	3	4	5	6	7
Extremely unimportant	Unimportant	Somewhat unimportant	Neutral	Somewhat important	Important	Extremely important

5. Honest

1	2	3	4	5	6	7
Extremely unimportant	Unimportant	Somewhat unimportant	Neutral	Somewhat important	Important	Extremely important

6. Willing to work with you through challenges

1	2	3	4	5	6	7
Extremely unimportant	Unimportant	Somewhat unimportant	Neutral	Somewhat important	Important	Extremely important

7. Is the same gender as you

1	2	3	4	5	6	7
Extremely unimportant	Unimportant	Somewhat unimportant	Neutral	Somewhat important	Important	Extremely important

8. Is eager to teach you the skills needed to succeed in their domain of expertise

1	2	3	4	5	6	7
Extremely unimportant	Unimportant	Somewhat unimportant	Neutral	Somewhat important	Important	Extremely important

9. Open-minded

1	2	3	4	5	6	7
Extremely unimportant	Unimportant	Somewhat unimportant	Neutral	Somewhat important	Important	Extremely important

10. Is the same race/ethnicity as you

1	2	3	4	5	6	7
Extremely unimportant	Unimportant	Somewhat unimportant	Neutral	Somewhat important	Important	Extremely important

11. Actively listens to your concerns and challenges

1	2	3	4	5	6	7
Extremely unimportant	Unimportant	Somewhat unimportant	Neutral	Somewhat important	Important	Extremely important

12. Respects you

1	2	3	4	5	6	7
Extremely unimportant	Unimportant	Somewhat unimportant	Neutral	Somewhat important	Important	Extremely important

13. Has access to useful resources

1	2	3	4	5	6	7
Extremely unimportant	Unimportant	Somewhat unimportant	Neutral	Somewhat important	Important	Extremely important

14. Is the same sexual orientation as you

1	2	3	4	5	6	7
Extremely unimportant	Unimportant	Somewhat unimportant	Neutral	Somewhat important	Important	Extremely important

15. Understands the experiences of people from your background

1	2	3	4	5	6	7
Extremely unimportant	Unimportant	Somewhat unimportant	Neutral	Somewhat important	Important	Extremely important

16. Empathetic

1	2	3	4	5	6	7
Extremely unimportant	Unimportant	Somewhat unimportant	Neutral	Somewhat important	Important	Extremely important

17. Shares similar political views as you

1	2	3	4	5	6	7
Extremely unimportant	Unimportant	Somewhat unimportant	Neutral	Somewhat important	Important	Extremely important

18. Experience mentoring students with similar backgrounds to your own

1	2	3	4	5	6	7
Extremely unimportant	Unimportant	Somewhat unimportant	Neutral	Somewhat important	Important	Extremely important

19. Is interested in your opinions

1	2	3	4	5	6	7
Extremely unimportant	Unimportant	Somewhat unimportant	Neutral	Somewhat important	Important	Extremely important

20. Trusts your judgment

1	2	3	4	5	6	7
Extremely unimportant	Unimportant	Somewhat unimportant	Neutral	Somewhat important	Important	Extremely important

Student Empowerment Scale:
Please answer the following questions. Indicate the extent to which you agree or disagree with each statement using scale below. Please use the whole range of each scale.

Scale:

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Moderately Disagree	Neutral	Moderately Agree	Agree	Strongly Agree

1) Students do not provide reviews of their mentors.
2) My mentor provides information on how academic goals can be achieved.
3) Students have a say in changing academic plans.
4) Students have discretion in how they prioritize their work.
5) My mentor does not encourage risk taking with regard to work production.
6) My mentor appreciates "thinking out of the box" behavior.
7) My mentor provided information on what we want to accomplish together in the future.
8) Students have a say in defining their research responsibilities.
9) Students have a say in the mentors to whom they may turn to for guidance.

10) My mentor provides students with information about academics.
11) While performing academic duties, students are not encouraged to use independent problem-solving skills.
12) Students have access to the information in their personal performance-files.
13) My mentor provides information on the reward structure in academia.
14) My mentor has established professional guidelines.
15) Students have a say in setting their own academic goals.

Appendix D

Please provide some basic information about yourself by responding to the following items:

- What kind of institution do you attend?
  - Four year public university
  - Four year private university or college
  - Two year public college or technical institute
  - Two year private college or technical institute

- You are an   _____ American Student   _____ International Student

- What is your gender?
  - Female
    - Biologically born female
    - Transgender Female
  - Male
    - Biologically born male
    - Transgender Male
  - Non-binary/Queer
  - Not listed
  - Prefer not to answer

- What is your race/ethnicity? (pick all that apply)
  - Asian/Asian American
  - Black/African American
  - Hispanic/Latinx/Latinx American
  - Pacific Islander/Native Hawaiian
  - Native American/ Alaska Native
  - White/European American

- What is your sexual orientation?
  - Asexual
  - Bisexual
  - Heterosexual
  - Homosexual
  - Pansexual/omnisexual
  - Other non-listed sexual orientation

- Religious Preference
  - Buddhist
  - Hindu
  - Jewish
  - Mormon
  - Muslim

- Christian
- Atheist
- Agnostic
- Other _____

o How would you describe the yearly income of your family of origin?
- Poor
- Working class
- Middle class
- Upper-middle class
- Upper class
- Wealthy class