

The Grapefruit Race: Demonstrating the Influence of Competition on Gender Differences in Intimacy

Mikki R. Hebl
Rice University

Eden B. King
George Mason University

Julie McGuire
Stanford University

Melissa Turchin
University of California at Berkeley

We present an interactive demonstration of factors that mitigate gender differences. Male and female volunteers pass a grapefruit from one classmate to the next using only their chins. The speed of task completion depends on its framing; when the volunteers believe the task is an exercise, women tend to be faster than men, whereas the opposite effect emerges when the task is framed as a competition. Student observers rated the demonstration positively and indicated positive learning outcomes regarding the context-dependent nature of gender differences in comfort with same-sex intimacy. This article offers an effective demonstration of gender differences in intimate behavior and illustrates a situation in which gender differences can be malleable.

In discussions of the psychology of gender, overarching differences between men and women are usually highlighted. However, most psychological phenomena, particularly those related to gender, depend on specific types of situational factors (Hyde, 2005). Thus, teachers of psychology should address not only broad generalities but also conditions that may moderate them. Students of the psychology of gender should learn of the general propensities of men and women in addition to the factors that may exacerbate or inhibit those propensities.

One consistent finding that may be useful in educating students about these issues is that men tend to

engage in less physical contact with men than women do with women in the United States (Hall & Veccia, 1990; Stier & Hall, 1984). For example, same-sex greetings between men have less intimate physical contact than those between women (Derlega, Lewis, Harrison, & Winstead, 1989). Several possible explanations exist for this tendency. Homophobia might be a barrier to intimacy in men's friendships with other men but not women's same-sex friendships (Bank & Hansford, 2000; Roese, Olson, Borenstein, Martin, & Shores, 1992). Men also tend to be oriented toward hierarchical, rather than symmetrical, relationships (Wood, Christensen, Hebl, & Rothgerber, 1997). Similarly, masculinity may be equated with competition (O'Neil, 1986). However, homophobia and preferences for hierarchical relationships may be reduced in a context in which men collaborate, rather than compete, with each other (Knight & Chao, 1989). For example, male athletes are often physically intimate with their teammates (e.g., patting backs, bumping chests together; Kneidinger, Maple, & Tross, 2001). Conversely, given their higher affiliation motivation (Mazur, 1989) and preference for symmetrical relationships, women may feel less comfortable than men in competitive contexts (e.g., Gill, 1988; Knight & Chao, 1989). Thus, gender differences in comfort with same-sex physical contact may differ depending on the competitiveness of the situation.

The topic of gender differences in comfort with physical contact is useful for the teaching of psychology because college students have direct experiences with and can relate to same- and cross-sex friendships. Focus on this topic may enhance understanding that contextual constraints can influence overarching gender differences. Educators have developed classroom activities that address gender differences (e.g., Hebl, 1995), as well as activities that deal with comfort with interpersonal space (Gibson, Harris, & Werner, 1993), but have not previously focused on conditions under which gender differences in comfort with physical intimacy change. The activity described here demonstrates that women can be more comfortable than men with same-sex intimacy when the task is framed an exercise, but their comfort changes when it is framed as a competition.

Method

Activity Participants

In the fourth week of classes, 63 undergraduate students from a psychology of gender course observed a 10-min demonstration. An additional randomly selected 60 students from the same class left class early for the purpose of creating a control group. Sixteen students (8 women, 8 men) volunteered to participate in a “group activity.”

Activity Materials

Instructors need two grapefruits of equal size, a stopwatch, and space for 8 people at the front of a classroom for this demonstration.

Activity Procedures

Volunteers participating in the demonstration left the classroom while the instructor asked the student observers to pay attention to the nonverbal behaviors of the men and women in each condition. After the instructor provided this advance organizing information, four male volunteers reentered the classroom and walked to the front of the room. The remaining volunteers remained outside of the classroom to prevent carryover or time effects. The instructor explained that:

For this task, you will need to pass the grapefruit from one person to the next until each person in your group has received the grapefruit. You must pass the grapefruit using only

your chin. If the grapefruit drops, you may pick it up but you still have to complete each pass. Please do not stop until the grapefruit has been passed to every member of your group.

After the all-male group finished the task, 4 female volunteers completed the same timed task. Next, the instructor divided the remaining 8 volunteers into two teams based on gender and presented slightly modified guidelines:

For this task, you will be separated into two teams by your gender. Whichever team passes the grapefruit between each of its members the fastest is the winner. However, you must pass the grapefruit using only your chin. If the grapefruit drops, you may pick it up but you still have to complete each pass. Please do not stop until the grapefruit has been passed to every member of your team.

Student observers cheered for the team that represented their gender. A teaching assistant recorded the time it took each group to complete the task. Discussion from the perspective of the team members and the observers of the demonstration and the postdemonstration evaluation measures followed. The instructor asked students to refrain from discussing the activity with other class members.

Activity Measures

Discomfort. Student observers rated activity participants’ comfort (reverse-coded), self-consciousness, awkwardness, anxiety, silliness, and ridiculousness on a 7-point Likert scale anchored by 1 (*strongly disagree*) and 7 (*strongly agree*). The average of these six items represented observed discomfort ($\alpha = .86$).

Subjective evaluation. Students reported their knowledge of gender and intimacy issues (“I know a lot about how men and women feel about physical contact with individuals who are their same gender”) prior to and following the demonstration with a 7-point Likert response scale anchored by 1 (*strongly disagree*) and 7 (*strongly agree*).

Students also responded to the following questions with a 7-point Likert response scale anchored by 1 (*strongly disagree*) and 7 (*strongly agree*): “This demonstration makes me think about the influence of context on behaviors,” “I enjoyed this demonstration,” “This demonstration was interesting,” “This demonstration was educational,” “This demonstration helps me think critically about gender issues,” “This demonstration taught me a lot about gender issues,” and “This demonstration should be used in future classes.”

Objective evaluation. Students responded to an ostensible test question (given the experimental conditions, this item did not count toward students' grades) regarding gender differences in intimacy several weeks after the activity: "Which of the following statements best describes gender differences in comfort with same-sex intimacy?"

1. Men are more comfortable with same-sex intimacy than are women.
2. Women are more comfortable with same-sex intimacy than are men.
3. Gender differences in comfort with same-sex intimacy depend on the situation.
4. There are no gender differences in comfort with same-sex intimacy.

Experimental Replication

To investigate the reproducibility of these findings, 109 additional undergraduates (54 women, 55 men) participated in one of seven competition or six non-competition trials. The procedures for this lab study were identical to those described for the classroom with four exceptions: (a) trials occurred in front of a single experimenter, not a classroom audience; (b) participants, not observers, rated discomfort; (c) participants did not complete evaluation measures; and as such, (d) the analytic procedure appropriate for the lab and teaching activity data differs.

Results

Activity Efficacy

Students' behavioral observations supported the efficacy of the teaching activity. An ANOVA revealed a main effect of gender, $F(1, 50) = 90.90$, $p < .01$, such that men ($M = 4.08$, $SD = 0.09$) appeared more uncomfortable than women ($M = 3.25$, $SD = 0.12$). In addition, an interaction between gender and type of task (competition or noncompetition) emerged, $F(1, 50) = 136.87$, $p < .01$. Students rated men as more uncomfortable when the task was framed as an exercise ($M = 5.66$, $SD = 0.12$) than when framed as a competition ($M = 3.90$, $SD = 0.15$), $t(51) = 12.25$, $p < .01$, whereas the framing did not affect ratings of women's comfort ($M = 2.50$, $SD = 0.13$, and $M = 2.60$, $SD = 0.13$). Similarly, when framed as an exercise, men were slower (145 sec) than women (18 sec). Conversely,

when the activity was framed as a competition, men and women finished in essentially the same amount of time (38 and 35 sec, respectively).

For the laboratory replication, an ANCOVA with gender of group and type of task as predictors (and group membership as a covariate) confirmed a main effect of gender, $F(1, 104) = 4.81$, $p < .05$, such that women reported feeling significantly more comfortable ($M = 2.94$, $SD = 0.18$) than men ($M = 3.48$, $SD = 0.18$). Direct comparisons confirmed that men felt more comfortable in a competitive task ($M = 2.69$, $SD = 0.36$) than in a noncompetitive task ($M = 4.34$, $SD = 0.44$), $t(54) = 5.48$, $p < .05$. Men finished faster than women in five of seven competition trials (71%). Of the six exercise trials, women finished faster than men in four (67%). The average task completion time was comparable to the classroom observations. When framed as a competition, men ($M = 26.86$, $SD = 19.97$) completed the task faster than women ($M = 34.71$, $SD = 10.44$). In noncompetitive trials, women ($M = 18.50$, $SD = 20.61$) completed the task faster than men ($M = 25.73$, $SD = 8.29$). The limited number of groups made significance testing at the group level inappropriate, but the direction of the results supported the expectation that situational constraints influence gender differences.

Evaluations

Students reported knowing more following the demonstration ($M = 5.62$) than prior to it ($M = 5.21$), $t(63) = -2.56$, $p < .05$. Responses to the subjective evaluation items were positive, with an average rating of 6.13 (range of $M = 5.71$, $SD = 0.76$ to $M = 6.44$, $SD = 0.74$). Many student observers and participants in the activity (60 out of 80) answered the question correctly (75%). By contrast, only 30 out of 52 students (58%) in the control group (i.e., the students who did not observe the demonstration) answered the same question correctly. The difference between these groups was significant, $\chi^2(1, N = 132) = 4.35$, $p < .05$.

Discussion

The results of our study support the use of the demonstration to illustrate the influence of situational factors on gender differences in physical intimacy. Consistent with research findings that men are less comfortable with same-sex physical intimacy (Hall & Veccia, 1990; Stier & Hall, 1984), female volunteers

in the demonstration appeared more comfortable with intimate behavior than did male volunteers. In addition, as suggested by Knight and Chao (1989), the competitive nature of the context moderated this effect. That is, women were more comfortable than men in the noncompetitive task, but less comfortable in the competitive task. Students reported they enjoyed and learned from the activity. Moreover, these students responded to a test question regarding moderators of gender differences more accurately than students who did not observe the demonstration.

To maximize the utility of the demonstration, class discussion might include:

1. *What happened?* Who was more comfortable (or faster) during the task overall, men or women?
2. *Why did it happen?* Are women more comfortable with same-sex intimacy than men? Why might framing the task as a competition change this? Are there other explanations?
3. *What are the implications?* Do you think most gender differences are consistent across all situations, or do you think they depend on context?

Although this demonstration is most directly applicable to courses related to gender, instructors of developmental psychology, social psychology, research methods, and statistics classes may find it useful. The simple 2 (gender: men, women) \times 2 (task: competitive, not competitive) design may provide a good example of simple research design. For this purpose, a discussion could also include an explanation of hypothesis testing and definitions of main effects and interactions.

In summary, we present an interactive classroom activity that effectively illustrates the influence of competition on gender differences in comfort with same-sex intimacy. Students' objective and subjective evaluations of the activity support its use in the classroom. As such, the task provides a demonstration to depict differences between men and women and to discuss contextual factors that moderate such differences.

References

Bank, B. J., & Hansford, S. L. (2000). Gender and friendship: Why are men's best same-sex friendships less intimate and supportive? *Personal Relationships*, 7, 63–78.

- Derlega, V. J., Lewis, R. J., Harrison, S., & Winstead, B. (1989). Gender differences in the initiation and attribution of tactile intimacy. *Journal of Nonverbal Behavior*, 13, 83–96.
- Gibson, B., Harris, P., & Werner, C. (1993). Intimacy and personal space: A classroom demonstration. *Teaching of Psychology*, 20, 180–181.
- Gill, D. L. (1988). Gender differences in competitive orientation and sport participation. *International Journal of Sport Psychology*, 19, 145–159.
- Hall, J. A., & Veccia, E. M. (1990). More “touching” observations: New insights on men, women, and interpersonal touch. *Journal of Personality and Social Psychology*, 59, 1155–1162.
- Hebl, M. R. (1995). Gender bias in leader selection. *Teaching of Psychology*, 22, 186–188.
- Hyde, J. S. (2005). The gender similarities hypothesis. *American Psychologist*, 60, 581–592.
- Kneidinger, L. M., Maple, T. L., & Tross, S. A. (2001). Touching behavior in sport: Functional components, analysis of sex differences, and ethological considerations. *Journal of Nonverbal Behavior*, 25, 43–62.
- Knight, G. P., & Chao, C. (1989). Gender differences in the cooperative, competitive, and individualistic social values of children. *Motivation and Emotion*, 13, 125–141.
- Mazur, E. (1989). Predicting gender differences in same-sex friendships from affiliation motive and value. *Psychology of Women Quarterly*, 13, 277–291.
- O'Neil, J. M. (1986). Gender-Role Conflict Scale: College men's fear of femininity. *Sex Roles*, 14, 335–350.
- Roese, N., Olson, J. M., Borenstein, M. N., Martin, A., & Shores, A. L. (1992). Same-sex touching behavior: The moderating role of homophobic attitudes. *Journal of Nonverbal Behavior*, 16, 249–259.
- Stier, D. S., & Hall, J. A. (1984). Gender differences in touch: An empirical and theoretical review. *Journal of Personality and Social Psychology*, 47, 440–459.
- Wood, W., Christensen, P. N., Hebl, M., & Rothgerber, H. (1997). Conformity to sex-typed norms, affect, and the self-concept. *Journal of Personality and Social Psychology*, 73, 523–535.

Note

Send correspondence to Mikki R. Hebl, Department of Psychology, Rice University, Houston, TX 77251–1892; e-mail: hebl@rice.edu.

Copyright of Teaching of Psychology is the property of Lawrence Erlbaum Associates and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.