

PERCEPTIONS OF APPROPRIATE BEHAVIOR BETWEEN STUDENTS AND ADVISORS IN ASTRONOMY

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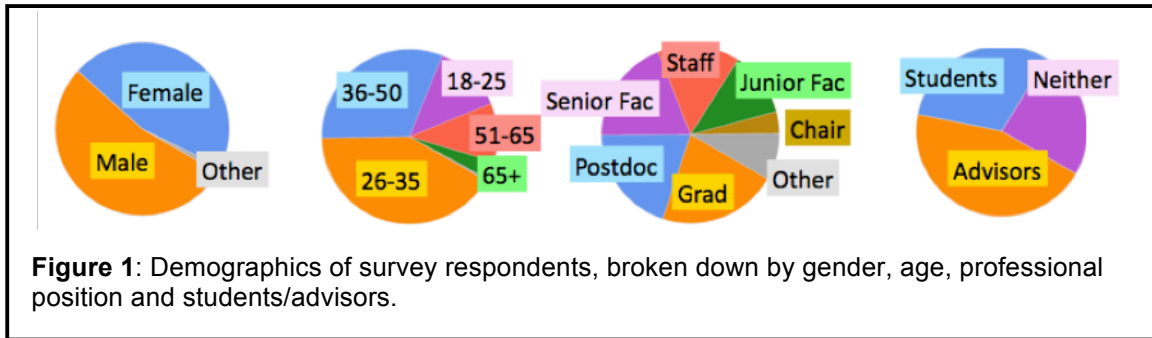
We have conducted a survey of astronomy researchers, academics and affiliates to examine how the perception of appropriate behavior between advisors and students varies according to gender, age and professional or personal status, using “grey-area” scenarios previously encountered by the authors. We find that there are substantial variations in the perception of appropriateness among astronomers as a group, with consistent trends arising in age and professional status. We also find that the perceived appropriateness of a scenario varies depending on whether advisor and student have the same or different genders, and argue that this may negatively affect female astronomy students and postdoctoral researchers in the current era of gender disparity.

1. INTRODUCTION

The relationship between student and advisor is a crucial one, providing positive development to both parties. For students, a good advisor is essential to learning scientific research techniques, navigating academic politics and expectations, and ultimately graduating and starting a career. For advisors, a good student provides the opportunity to expand one's research, build a scientific legacy and often achieve promotion or tenure. However, the openness of academia and the need for close relationships between students and advisors can lead to situations where perceived appropriateness may be difficult to judge for both parties.

Having served as both students and advisors in our careers, we have faced many “grey-area” scenarios in which a given behavior—either our own or one directed at us—was difficult to gauge. Is it appropriate for me to take a student to dinner? Would my advisor feel awkward if I gave her/him a gift? Can I ask my advisor/student why s/he has suddenly put on weight? These subtle and often innocent situations can nevertheless lead to misunderstandings, awkwardness and a degradation of the student/advisor relationship.

Our interest in learning how to clarify our own grey-area situations, and curiosity about how other students and advisors deal with similar scenarios, lead us to devise the online survey described in these proceedings. Our primary objective was to measure the degree of variation in perceptions among the astronomy community in these scenarios, and what (if any) trends might exist between subgroups within the community.



2. THE SURVEY

We constructed ten scenarios based on behaviors that we have experienced in our roles as students and advisors. For each of these scenarios, we asked respondents to assess the level of appropriateness on a scale of “appropriate”, “slightly appropriate”, “slightly inappropriate”, “inappropriate” and “not sure” for four pairs of gender roles: female advisor, female student; female advisor, male student; male advisor, female student; and male advisor, male student. These roles were randomized across scenarios and surveys to mitigate selection bias. The respondents were also asked to decide if the behavior was “more appropriate”, “as appropriate” or “less appropriate” if the scenario is slightly modified or clarified (e.g., student exhibits behavior toward advisor, student is a minor). In addition, a free-form response section was provided for respondents to indicate what actions could be taken to make the behavior more appropriate.

The survey was conducted online using Survey Monkey¹ during October 7-21, 2009. It was advertised through the CSWA, CSMA and AAS mailing lists; Facebook; and our own web pages and blog sites. A total of 579 respondents took the survey. **Figure 1** shows the breakdown in gender, age, professional status and student/advisor role based on collected biographical data. There were about the same number of male and female respondents, although males were overrepresented in senior positions (staff, faculty), much in line with current demographics (Bagenal 2004; Hoffman & Urry 2004). Most respondents were in the 26-35 (42%) or 36-50 (31%) age brackets. We had fairly even representation at all professional levels, with the overwhelming majority of respondents based in an academic institution (76%) and/or doing research as their primary work (84%). Just under half of the respondents reported that they were currently an advisor; just under a third reported that they were currently a student.

3. THE RESULTS

The full results of our survey are posted on our website.² Here, we briefly summarize some of the major trends we found in the data.

¹ <http://www.surveymonkey.com>.

² <http://www.browndwarfs.org/wia2009>.

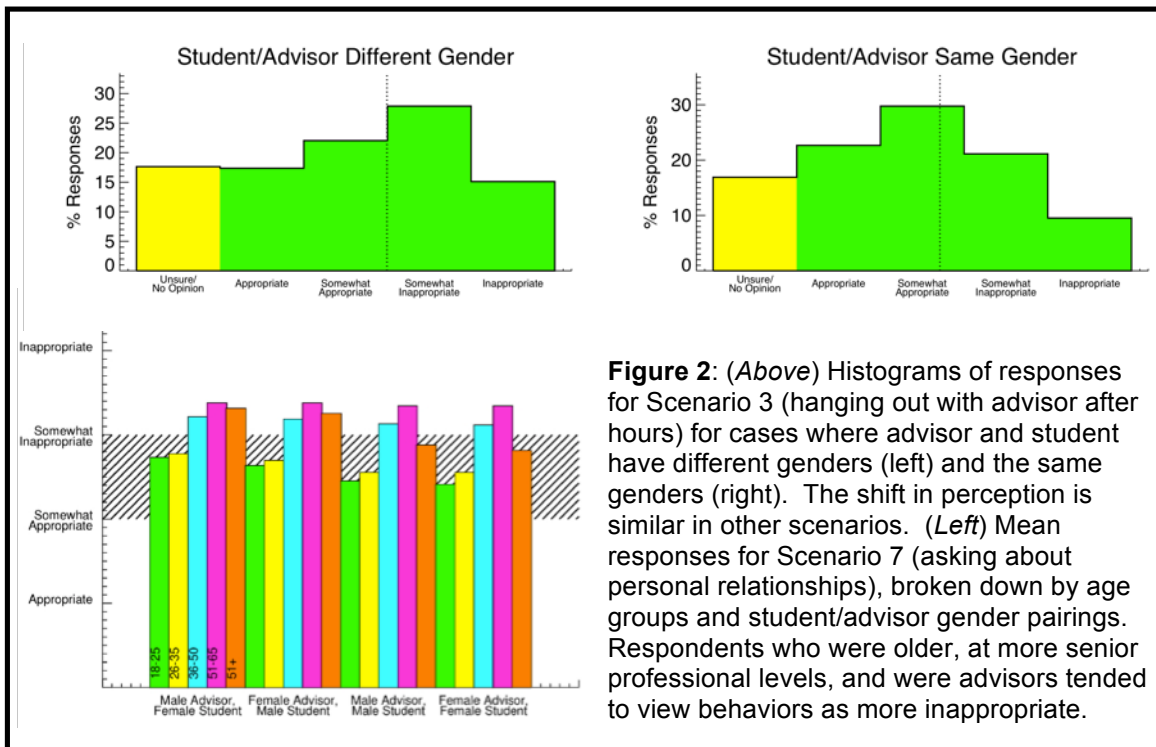


Figure 2: (Above) Histograms of responses for Scenario 3 (hanging out with advisor after hours) for cases where advisor and student have different genders (left) and the same genders (right). The shift in perception is similar in other scenarios. (Left) Mean responses for Scenario 7 (asking about personal relationships), broken down by age groups and student/advisor gender pairings. Respondents who were older, at more senior professional levels, and were advisors tended to view behaviors as more inappropriate.

Broad Variations in Perceptions: For nearly every scenario, respondents reported a broad range of perceptions, with most scenarios having roughly equal numbers in the four appropriateness levels (in addition, 2-3% of respondents typically answered “not sure”, and 10-15% typically provided no answer). Comments by the respondents indicate that this variation reflects clear differences in opinion. For example, in Scenario 3 (hanging out with advisor after hours), respondents stated: “After hours socializing is inappropriate in a professional non-peer relationship”; “Networking is an essential component of astronomy, and facilitating this is a major component of many conferences”; “It’s always going to be at least slightly creepy for the advisor hanging out with his/her students”; and “I find nothing inherently problematic with socializing between students and advisors.” Even scenarios that the majority of respondents judged as inappropriate (e.g., Scenario 4, late-night calling) showed a broad range of tolerance. This indicates that perceptions of appropriateness vary considerably in the astronomical community, even for situations that might be deemed “obvious”.

Trends in Age and Professional Status: Responses did not vary appreciably according to the genders of the respondents—men and women ranked scenarios with essentially the same distribution of appropriateness. However, interesting trends do appear when responses are broken down by age and professional status. In general, younger astronomers and those at earlier stages in their careers (students, postdocs) viewed behaviors as more appropriate (Figure 2). In many cases, this trend was “linear”; the level of perceived inappropriateness rose with every step in age and career level. These trends likely reflect greater sensitivity among more experienced astronomers to potentially inappropriate situations, and possibly more “conservative” values among older generations.

The Genders of Students and Advisors Matters: While several respondents commented that “*gender should make no difference*”, we did in fact find that, on average, scenarios were seen as more inappropriate for student/advisor pairs with different genders than pairs with the same genders (**Figure 2**). The specific genders themselves were unimportant—male advisors with female students were viewed identically as female advisors with male students. As perceptions of inappropriateness are often linked to conflicts between professional and romantic/sexual relationships, such a trend is perhaps not unexpected (this conclusion does carry a heterosexual bias, however; see below).

This trend may have negative consequences for female astronomy students. Respondents who were advisors reported the number and gender of their students over the past five years as part of the biographical survey. These data indicate that only 37% of female graduate students, and only 26% of female postdocs, have female advisors in our sample. In contrast, 66% of male graduate students and 72% of male postdocs have male advisors. This discrepancy largely reflects the disparity of gender representation at faculty and staff levels. Because of this, female students are more likely to face cross-gender student/advisor issues, including, as inferred from our survey data, increased perceptions of inappropriateness in various situations.

Limitations of the Survey: Despite the abundant biographical information and insights gained from this survey, it is important to acknowledge its limitations. First, many respondents argued that presented scenarios were too vague, and that “*the appropriateness of different behaviors depends on the details of the situation.*” This is an unfortunate limitation of a survey-style probe of complex social relationships that are determined not just by the personal character but also history and social environment. However, we argue that in many situations ambiguity is inherent, including the early stages of a student/advisor relationship and third-party views of these relationships. Our respondent sample may also be biased; 39% of professional respondents (postdocs, staff and faculty) were women, whereas the reported fraction in the field is closer to 20-30% (Hoffman & Urey 2004; Ivie & Ephraim 2006). We did not request sexual orientation information from our respondents, so we are unable to gauge its relevance to perceptions of appropriateness, particularly in regards to trends seen in same/different gender student/advisor pairings. Finally, we made no assessment of the role of cultural background, a prominent factor in the moral compass of most individuals. This may even be regionally important in the US, as reflected by one of our favorite survey quotes: “*Hugging is a borderline issue. Californians are huggers but this can be misinterpreted.*”

REFERENCES

- Bagenal (2004), *STATUS*, p. 13
Hoffman & Urry (2004), *STATUS*, p. 1
Ivie & Ephraim (2006), AIP Academic Workforce Survey