INTRODUCTION
This is the fifth in a series of reports derived from the fall 2006 study of the academic climate on the University of Michigan campus. The first and second reports assessed faculty experiences of their work environment\(^1\). The second and third reports addressed gender and race differences in career experiences generally thought to be related to faculty career satisfaction and retention. This report draws on the same data, that is, responses from science and engineering faculty as well as social science faculty to the 2006 climate survey. For detailed information about the full study and data collection procedures, please refer to the initial report. The purpose of this report is comparison of the gender and race differences in experiences of faculty mentoring—both mentoring from all faculty colleagues received by more junior faculty members (assistant and associate professors) and mentoring provided by senior faculty (full professors).

FINDINGS

Summary of Findings on Received Mentoring (Assistant and Associate Professors)
The results identify the importance of a mentor for assistant and associate professors, especially for white women and men of color. Having a mentor, either within or outside the University, was associated with less scholarly isolation and less felt surveillance for all faculty, and less felt exclusion, more felt influence over the department climate and more positive ratings of the department environment. However, one-third of faculty at the assistant and associate level reported that they did not have a mentor; about half indicated receiving some mentoring support from someone within their department. Moreover, analyses within the four race-gender groups revealed that having a mentor was primarily beneficial, in terms of a more positive work environment, to white women and male faculty of color and of no benefit to women of color.

The same analyses examining having a mentor within the department revealed again the importance of such a mentor for white women, but not for women of color. Having a mentor within the department also appeared to be of some benefit to men of color and white men, but less crucial for men of color than having a mentor either in or outside the University. It is interesting to note that having a mentor and having a mentor within the department were negatively associated with intention to leave only in the case of men of color.

Summary of Findings on Mentoring Provided (Full Professors)
These findings reveal that senior faculty engage in a good deal of mentoring activity, some with colleagues outside UM. They also suggest that mentoring by senior faculty may provide some benefits to them, although perhaps not as much as receiving mentoring provides their junior colleagues. The

\(^1\) All reports are available on the ADVANCE Program Web site: http://sitemaker.umich.edu/advance/faculty-climate.
number of mentees and the number of areas of mentoring within UM were both positively associated with experiences of felt influence in the department. Moreover, for all senior faculty, and especially men and white faculty, the number of areas that one provides mentoring was negatively associated with scholarly isolation. Scholarly isolation was also negatively associated with number of mentees for faculty of color, and lower felt surveillance for men and white faculty. These finding may point to a benefit from mentoring for senior faculty; alternatively it may be that those senior faculty members who are most integrated into, and experience the most influence within, their departments are also more likely to engage in mentoring of their colleagues.

It is important to note, however, that for senior faculty, especially white faculty, the number of mentees was also positively correlated with feeling excluded from important committees; this may indicate that the workload associated with mentoring precludes faculty from engaging in other service-related activities. Number of mentees was also positively associated with felt surveillance, particularly in the case of all white faculty and all men, suggesting that mentoring of junior faculty also brings with it an element of scrutiny from department colleagues.

Finally, mentoring activities were not significantly associated with work environment factors for all faculty of color and all women as they were for all white faculty and all men. Number of mentees and areas of mentoring did not differ by race-ethnicity or gender, so other factors are required to explain these differences. Perhaps because women and faculty of color generally experience less felt influence in their departments (see report four), they do not receive the same benefits in these areas through their mentoring that all white faculty and all men may receive. It is also possible that for faculty whose work environment is generally less positive, as we found was the case for women and faculty of color (see reports one through four), the mentoring experience is importantly different from those faculty members whose work situation is more positive.

CONCLUSIONS
Generally, receiving mentoring from faculty colleagues appears to be beneficial for science and engineering and social science faculty at the assistant and associate level. However, nearly one-third of the faculty at these ranks reported that they did not have a mentor. Having a mentor, either within or outside their departments, was associated with less scholarly isolation, less felt surveillance, less felt exclusion, more felt influence over the department climate and more positive ratings of the department environment for all assistant and associate professors. The findings hold especially for white women and men of color, and, to a lesser extent, white men. In contrast, there appears to be no benefit to receiving mentoring for women of color.

Senior faculty (those at the full professor rank) in the sciences and engineering and social sciences engage in a good deal of faculty mentoring and may benefit from that activity through more felt influence and less scholarly isolation. However, the benefits of faculty mentoring do not accrue to faculty of color and women faculty, perhaps because their experiences of the work environment are different.