Assessing the Academic Work Environment for Science and Engineering and Social Science Faculty at the University of Michigan in 2006:
Gender, Race, and Discipline in Retention-Relevant Career Experiences
Executive Summary

UM ADVANCE Program
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INTRODUCTION

This is the fourth in a series of reports derived from the fall 2006 study of the academic climate on the University of Michigan campus. The first report assessed data from UM science and engineering faculty in 2001 and 2006 about their experiences of their work environment; the second report assessed the same climate factors for both science and engineering and social science faculty in 2006. This report draws on the same 2006 data used in the second report; 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 within broad disciplinary groups (science/engineering and social science) in work experiences generally thought to be related to faculty career satisfaction and retention (opportunities for leadership and influence, service, allocation of resources, recognition and family responsibilities) for 2006 only.

FINDINGS

Summary of Factors that May Support Faculty Work

In both disciplinary areas, men (especially white men) reported a lower level of family responsibility than women. Although there were no differences in feeling excluded from important decision-making committees, women across disciplinary areas felt they had less influence over educational and faculty matters, as well as the department's climate and culture, than men. Moreover, in the sciences and engineering, women of color reported lower levels of felt influence over department educational matters and the department's climate than men of color and less felt influence over faculty matters than white women. In the social sciences, white women reported less felt influence concerning resource allocations than white men and women of color reported fewer instances of recognition through research award nominations.

Relationship of these Experiences to Job Satisfaction

We next examined the correlations between the factors that contribute to faculty members' success and their job satisfaction. Results of analyses with the full sample revealed that all factors but one (reported family responsibility) were associated with job satisfaction in the expected direction (all were positive with the exception of reported failure to nominate for an award). In addition, all but family responsibility, committee service, and failure to nominate for an award were associated with intention to leave (all correlations were negative). Similar results were found for the different race-ethnicity and gender faculty groups and suggest that all the variables assessed here, with the exception of family responsibility, play some role in faculty members' level of satisfaction with their jobs and whether or not they contemplate leaving the University.

PREDICTING JOB SATISFACTION AND INTENTION TO LEAVE
Factors that Predict Job Satisfaction and Intention to Leave UM
Given the relationship of these factors to job satisfaction and intention to leave, we conducted a series of regressions that would allow us to understand the relative importance of each of the factors considered in this report in predicting both job satisfaction and intention to leave. The overall regression model included a variable for each of the factors as well as the control (composite experience) and demographic (gender, race-ethnicity, and discipline) variables. Because job satisfaction is highly correlated with intention to leave, it was also included in the regression model predicting intention to leave.

 We further considered the variables assessing climate discussed in the first two reports and their relationships with job satisfaction and intention to leave. Those reports focused on two broad areas of the climate: experiences related to the University generally and experiences specific to faculty members' departments. Thus, two additional sets of regressions were run; one assessed the University-level climate factors and the other assessed the department-level climate factors. The models were first run on the entire sample and then run separately for men and women as well as white faculty and faculty of color (sample sizes were too small to conduct regressions by race and gender groups within disciplines).

Summary of Regression Analyses
Predicting Job Satisfaction
Many of the career-related and department climate factors were significant predictors of job satisfaction, which, in turn, was a significant predictor of intention to leave (see Figure 1 for a diagram summarizing the findings).   Satisfaction with resources, felt influence on the department climate, chair ratings, and experiences of scholarly isolation were important predictors for all, or almost all faculty groups. In addition, reported committee service and a gender egalitarian atmosphere were important for men and white faculty, reported positive climate mattered for women and white faculty, and reported failure to be nominated for an award were important for women and faculty of color.
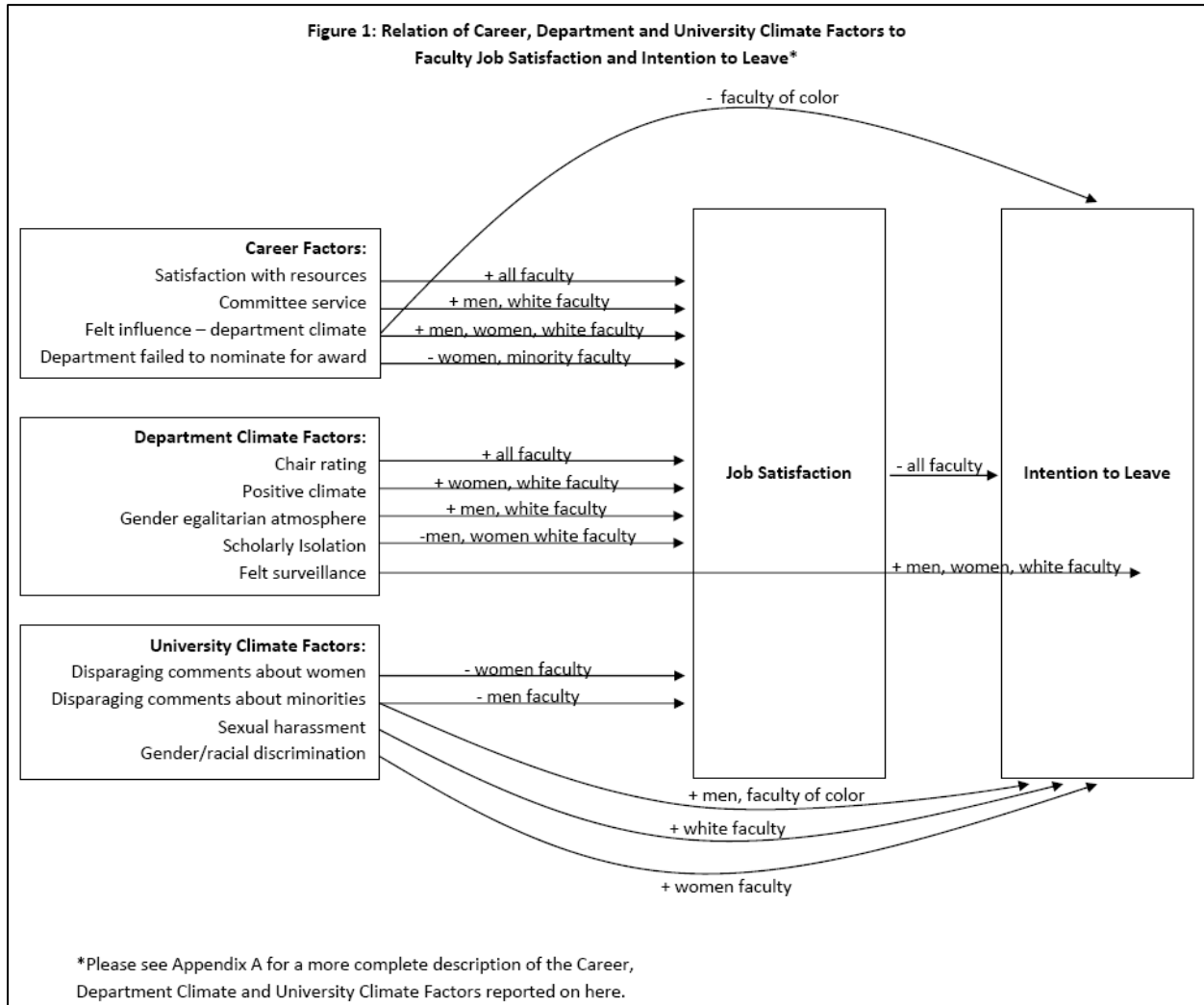
In contrast to the findings related to career and department climate factors, University climate appeared less directly related to faculty members' level of job satisfaction. Overhearing disparaging comments— about women for women faculty, and about racial-ethnic minorities for men faculty—were the only University-level climate variables predictive of job satisfaction. However, University climate factors figured much more prominently in faculty members' intentions to leave than career-related and department-level climate factors.

Generally, fewer factors predicted job satisfaction for faculty of color than white faculty. It is, however, important to note that the sample of minority faculty is much smaller than that for white faculty. Since in many instances the coefficients for white faculty and faculty of color are comparable in magnitude and size, it is likely that, with a larger sample, more significant findings would emerge for faculty of color as we observed for the white faculty sample.

Predicting Intention to Leave
One career-related variable, felt influence over the department climate, negatively predicted intention to leave for faculty of color and one department climate factor, felt surveillance, positively predicted intention to leave for all faculty except faculty of color. However, three University climate factors were significant predictors for intention to leave: overhearing disparaging comments about racial-ethnic minorities for men and faculty of color, reported experiences of sexual harassment for white faculty,

and reported gender-racial discrimination for women. Beyond these domain specific variables, job satisfaction was clearly a strong negative predictor of intention to leave for all faculty groups.

Figure 1: Relation of Career, Department and University Climate Factors to Faculty Job Satisfaction and Intention to Leave*

*Please see Appendix A for a more complete description of the Career, Department Climate and University Climate Factors reported on here.

CONCLUSIONS

These results demonstrate that job satisfaction is a key element to faculty retention, and that there are several things that can be done at the University and department levels to promote job satisfaction for all faculty and encourage them to remain at the University.

Several career-related factors addressed in this report are significant predictors of faculty members' job satisfaction and should be considered essential aspects of all faculty members' work lives. **Adequate resources** for scholarship, **opportunities for influence and leadership,** through, for example, important committee memberships, and ensuring that **faculty are nominated for awards** for which they are qualified are all things the University, at all levels, can provide its faculty members. Opportunities for influence may be particularly important for women, especially women of color, who reported fewer experiences of felt influence than men.

In addition, the findings suggest that there are other, specifically department-level, aspects of faculty work experiences and conditions that are important to their job satisfaction. In particular, departments need to ensure that their **climates are positive and promote gender egalitarianism,** that **disparaging comments about women and racial-ethnic minorities among faculty and students** are **not tolerated**, and that **faculty members' work is not marginalized**. Moreover, the findings point to the significant role department chairs play in promoting faculty members' job satisfaction, through ensuring a **positive department environment** and creating **department policies and practices that are fair** for all faculty.

These department-level work conditions are particularly important for women (especially women of color) who reported overhearing more disparaging comments about women, and rated their departments' climate and their chairs as less positive than men, and for faculty of color who reported overhearing more disparaging comments about racial-ethnic minorities than white faculty. We observed, in assessing change in these department climate factors over time, that mean scores for reported scholarly isolation were lower for all faculty (except women of color) at Time 2 compared to Time 1.

Beyond affecting job satisfaction, the analyses revealed several other factors that are directly related to faculty members' intentions to leave the University. University-level climate factors (including overhearing disparaging comments about racial-ethnic minorities, reported experiences of sexual harassment, and reported gender and/or racial discrimination) were important predictors of intention to leave. Here, again, the findings suggest a focus on women and faculty of color who reported more gender discrimination (reported by women), and more racial discrimination (reported by faculty of color, especially women of color). It is, however, encouraging to note that the campus may be improving on some of these dimensions: reports of sexual harassment by white women were significantly lower at Time 2 than at Time 1, and significantly fewer male faculty of color reported overhearing disparaging comments about racial-ethnic minorities at Time 2 compared to Time 1.

Looking particularly at departmental factors, experience of felt surveillance (e.g., feeling under scrutiny by colleagues, feeling that they have to work harder than colleagues to be perceived as legitimate scholars) also predicted faculty members' intention to leave directly for all but faculty of color; for faculty of color, felt influence over their departments' climates was a predictor of intention to leave. Again, these issues may be especially important for women, and particularly women of color, who reported more felt surveillance, and fewer experiences of felt influence over the department's climate than men.

Finally, it is useful to note that many of the same factors influence different groups of faculty members' job satisfaction and intention to leave. This pattern—of the same features benefiting different groups of faculty (groups differing in race, gender and discipline)—suggests that improvements in faculty experiences and the campus climate are likely to benefit all faculty, rather than benefiting some at the expense of others.