Introduction

As a talent pool, women are an under-tapped resource in academia. In 2006, women earned 40% of all doctorates in the sciences and engineering in the United States, yet constituted only 28% of assistant and associate professors, and 19% of full professors nationwide. (Burrelli 2008)

The ADVANCE Program at Brown strives to support the University in meeting its commitment to increase the recruitment, retention, and advancement of women faculty in science, technology, engineering, and math (STEM) disciplines.

Funded with a 5-year grant from the National Science Foundation, the ADVANCE Program supports new programs for faculty development to ensure that outstanding women have access to resources that support success at the highest levels in research, teaching, and academic leadership. Working with the Offices of the Provost, the Dean of the Faculty, the Dean of Medicine and Biological Sciences, and the Vice President for Research at Brown University, the ADVANCE Program awards grants for research and travel expenses, sponsors seminars and public lectures, supports opportunities for leadership development, and provides networking resources that enhance opportunities for collaboration. For more information about the ADVANCE Program and its initiatives, visit:

http://www.brown.edu/Administration/Provost/Advance

This Guide provides information about practices in hiring and promotion that, while unintentional, can put women (and minorities) at a significant disadvantage for success in academia. Specifically geared to department chairs of STEM disciplines, this Guide offers suggestions on how to avoid unconscious bias in evaluating faculty during recruitment and promotion, as well as how to structure departmental procedures to yield the highest quality research and teaching.
Contents

**Section I: Recruitment and Evaluation**

1. Gender Bias in Recruitment
2. Gender Bias in Letters of Recommendation and Evaluation
3. The Role of Department Chairs in Countering Gender Bias

**Section II: Supporting Faculty Members in Your Department**

1. Fostering a Departmental Culture of Mentoring and Implementing Family Friendly Practices
2. Helping Junior Faculty Obtain External Funding
3. Ensuring Faculty Success in Tenure and Promotion Reviews

**Appendix: Brown University Dual Career Protocol**
Section I: Recruitment and Evaluation

1. Gender Bias in Recruitment

Most gender-based bias in academic recruitment today is unconscious, but measurable. For instance:

- A study of postdoctoral fellowships awarded by the Medical Research Council in Sweden found that women candidates needed substantially more publications (the equivalent of 3 more papers in Nature or Science, or 20 more papers in specialty journals such as Infection and Immunity or Neuroscience) to achieve the same rating as men, unless they personally knew someone on the review panel. (Wennerås and Wold 1997)
- A study of over 300 recommendation letters for medical faculty at a large American medical school in the 1990s found that letters for female applicants differed systematically from those for males. Letters written for women were shorter, provided “minimal assurance” rather than solid recommendation, raised more doubts, and portrayed women as students and teachers while portraying men as researchers and professionals. Women’s successes were likely to be attributed to luck or timing. Men’s successes were likely to be attributed to skill, intellect, and ability. All letters studied were written for successful candidates only. (Trix and Psenka 2003)

Biases and assumptions can influence us in the following ways:

- Women and minority faculty members may be subject to different expectations in areas such as classroom/labatory presence, numbers of singly- or lead-authored publications, conference and professional association attendance and leadership, and international and national recognition.
- The work, ideas, and findings of women or minorities may be undervalued or unfairly attributed to a research director or collaborators despite contrary evidence in publications or letters of reference.
- The ability of females or minorities to run a research group, raise funds, and supervise students and staff of different gender or ethnicity may be underestimated.
- Assumptions about possible family responsibilities and their effect on the career path of a faculty member may negatively influence their evaluations and promotions, despite evidence of productive scholarship.
- Negative assumptions about whether female or minority faculty members “fit” in the department can influence their ability to form valuable collaborations and influence evaluations. (University of Wisconsin-Madison 2007)

2. Gender Bias in Letters of Evaluation and Recommendation

Recommendations for women, whether written by men or women are more likely to:

- Be shorter and contain fewer standout words [such as] outstanding, ground-breaking, or superstar
- Express more doubt and contain more grindstone adjectives such as works hard and diligent
• Be more likely to mention the personal life of the individual and, in most cases, the mention of gender is explicit (Urry 2009)

The effects of such gender bias in letters of recommendation can place women candidates at a significant disadvantage:

• In a national study, 238 academic psychologists (120 female, 118 male) evaluated a résumé randomly assigned a female or a male name. Both female and male participants gave the male applicant better evaluations for teaching, research, and service experience. Both women and men were more likely to hire the male applicant than the female applicant. (Steinpreis, Anders, and Ritzke 1999)
• Another study showed that the preference for males was greater when women represented a small proportion of the pool of candidates, as is typical in many academic fields. (Heilman 1980)

3. The Role of Department Chair in Countering Gender Bias

Department chairs play a key role in countering the effects of unintended bias in recruiting. The following are suggestions for specific actions in the candidate search and negotiation process.

The Search
1. Assemble a representative candidate pool:
   • Know the percentage of women and people of color who have earned PhDs in your field for the last 5 years. At a minimum, your candidate pool should reflect the percentage of women with PhDs in the field in the United States (Figure 1).
   • Actively seek out candidates. While Brown’s reputation will attract excellent scholars, take the initiative to find outstanding women and minority candidates by asking colleagues in the department and in the field for suggestions. (Valian 2008)

![Figure 1: NSF, Division of Science Resource Statistics 2009](image)
2. Evaluate the portfolios of each candidate with a awareness of gender bias:
   - Analyze letters of recommendation with an understanding that all referees (female and male) use language that tends to underrate women and overrate men.
   - Ensure that evaluative criteria is fair to both female and male candidates – singly and jointly authored publications, collaborations, interdisciplinary work, productivity, laboratory management experience, funding resources, teaching, and mentors. Consider the effect of gender-bias in lab culture as background to the publication rates of women candidates.
   - Ask whether the criteria your search committee is using to determine whether someone moves to the next stage of consideration, such as time to degree or time in rank, may be disproportionately or unintentionally favoring candidates who do not have family responsibilities.
   - Address the issue of gender bias with your search committee, identifying the common patterns of unconscious bias noted above, and convey the expectation that committee members will work to resist these patterns in their evaluation of candidates.
   - If women or minority candidates are not included on the committee’s short list, ask the committee to provide an assessment of the most competitive women/minority candidates in the pool and the reasons for their exclusion from the short list. (Valian 2008)

3. Design an interview process that gives all candidates a fair chance of success and that conveys Brown’s commitment to a diverse faculty:
   - Introduce candidates at the job talks in an equitable manner – i.e., if you highlight publications and awards in introducing male candidates, make sure that you do the same for the women candidates.
   - Encourage faculty members to attend all of the talks and ensure that all candidates meet with an equivalent number of senior members of the department during their interviews.
   - Convey to candidates the University’s support for women in science and engineering and its commitment to supporting diversity among the faculty. Provide information about the ADVANCE Program to all candidates.
   - Know which questions and comments are illegal. See the University of Michigan Human Resources Chart of Legal Questions [http://www.hr.umich.edu/empserv/department/empsel/legalchart.html] for examples of illegal questions in areas including:
     - Family status
     - Race
     - Religion
     - Residence
     - Sex
     - Age
     - Criminal arrests/convictions
     - Citizenship/nationality
     - Disability

Ask search committees who do not put forward a diverse short list to provide an assessment of the most competitive women/minority candidates and reasons for their exclusion from the final interview pool.

Valian 2008
• Provide each candidate with Brown University Family Friendly Policies for Faculty [http://www.brown.edu/Administration/ffpf/] (Figure 2) and talk with candidates about access to these policies and their impact on promotion.

![Brown University Family Friendly Policies for Faculty](image)

**Figure 2:** Brown University Family Friendly Policies for Faculty

- In making the final decision on which candidate is to receive the job offer, have the search committee go back through their originally stated criteria and discuss each candidate’s fit in the context of these criteria. Assess the degree to which your original pool of candidates and your short list represented current numbers of women and minorities in the national field. If your short list was not representative in this way, provide a justification for your selections and specify the factors that assure you that your selection process was unbiased.

**The Negotiation**

Provide and negotiate a competitive offer:

- Make sure you understand Brown University Dual Career Placement Protocol [http://www.brown.edu/Administration/ffpf/dualcareer/]. Offer Brown’s statement on the dual career placement protocol to your finalist and ask if they have questions about opportunities or the process at Brown. Do not probe the marital or partner status of the candidate.

- Remember, “top-tier universities and colleges increasingly find themselves competing with [less elite] schools—and losing—as [less elite] institutions use dual-career hiring policies to attract the most desirable candidates.” (Williams and Norton 2008)

- The financial terms of an offer can have a huge impact not only on the immediate hiring outcome, but also on the future career of a new hire. Initial equity in both the negotiated conditions and in the follow-through on the commitments made, are important factors in

Dual-career hiring policies are necessary to attract the most elite candidates.

**Williams and Norton 2008**
retention as well as recruitment. Average start-up costs for assistant professors in physics/astronomy, biology, chemistry, and engineering varied between $390,237 and $489,000 at private Research I universities in 2002. (Ehrenberg, Rizzo, and Jakubson 2003)

- To facilitate equity in negotiating an offer it can be helpful to provide all candidates with a list of things to discuss in the course of negotiations. (University of Michigan, ADVANCE Program 2008a) This list will vary by field, but it should include those items that will maximize the likelihood of candidate success in that field:
  o Assistance with partner/spouse position
  o Moving expenses
  o Salary (including summer salary)
  o Discretionary funds
  o Travel and conference support
  o Teaching release time
  o Teaching load and course development
  o Laboratory space and equipment
  o Laboratory renovations and location
  o Research assistance
  o Administrative and clerical assistance
Section II. Supporting Faculty Members in Your Department

1. Fostering a Departmental Culture of Mentoring and Implementing Family Friendly Practices

Mentoring
Mentoring is one of the most important determinants to faculty success:

- A 1996 John Hopkins Medical School study showed that formal interventions, such as assigned mentoring relationships (Figure 3):
  - Increased the percentage of women faculty (from 26% to 46% over a three year period) reporting that they knew and understood the criteria for promotion; and
  - Increased the percentage of women faculty (from 38% to 53%) reporting that they “felt like a welcome member of the institution.” (Sambunjak, Straus, and Marusic 2006)

In a 2006 survey by the Collaborative on Academic Careers in Higher Education (COACHE) [http://gseacademic.harvard.edu/~coache/info/], pre-tenure Brown faculty members indicated that “having a formal mentoring program for junior faculty” was one of the University’s top five “effectiveness gaps” – i.e., mentoring was rated as “very” or “somewhat” important to faculty members, but Brown’s implementation of the practice was rated “very” or “somewhat” ineffective.

- A study at the University of Minnesota Medical School showed that having a formally assigned mentor was the 2nd best predictor of high research productivity. (The top predictor was having a passion for research.) (Bland, Center, Finstad, Risbey, and Staples 2002)

Successful mentoring practices:

- Assign a mentor to every new faculty member from among senior members of the department. Meet with mentors individually or as a group to convey departmental expectations and suggest ways for them to support their junior faculty mentees.
- Offer opportunities for pre-tenure faculty members to learn about mentoring issues – how to approach departmental and external mentors, how to manage the first year, and how to access relevant department and University policies.
Host departmental seminars in which pre-tenure and mid-career faculty present current research and get feedback from their colleagues.

Invite pre-tenure faculty members to observe senior colleagues who are known to be excellent teachers.

Provide funds for mentors and junior faculty to have lunch together.

Periodically ask assistant and associate professors whether their mentoring needs are being met.

In annual reviews of associate and full professors, recognize faculty mentoring as a criterion for promotion and an important contribution of service. (University of Michigan, Office of the Provost 2004)

**Family Friendly Practices**

Why the need for family-friendly practices:

- A recent survey of more than “eight thousand doctoral students...indicated that...the academic fast track...(which we define as tenure-track faculty positions in research-intensive universities)...has a bad reputation—one of unrelenting work hours that allow little or no room for a satisfying family life...[M]en and women fill the doctoral student ranks in nearly equal numbers, and most will experience both the benefits and challenges of living in dual-earner households during their careers. This generation of doctoral students also has different expectations and values from previous ones, primary among them the desire for flexibility and balance between career and other life goals.” (Mason, Goulden, and Frasch 2009)

- Neither men nor women consider tenure-track faculty positions in research-intensive universities to be family friendly career choices. “Less than half of men (46%) and only third of women (29%) imagine jobs in these settings to be somewhat or very family friendly. Among new parents supported by federal grants (from agencies such as the National Science Foundation or the National Institutes of Health) at the time of the birth or adoption of a child, the perception is even stronger—only 35% of men and 16% of women think that tenure-track faculty careers at research-intensive universities are family friendly.” (Ibid)

How to create a family-friendly work environment:

- Schedule individual and departmental meetings as well as invited talks and lectures at times that are accessible to faculty members with family responsibilities—after 8:30 a.m. and before 5:00 p.m.

- In tenure and promotion processes, advocate for faculty members who have used family accommodation policies by communicating with Deans and notifying outside reviewers of Brown’s policies.

- Know and advertise to your department Brown University Family Friendly Policies for Faculty [http://www.brown.edu/Administration/ffpf/] (Figure 2), such as funds for care giving when faculty members are travelling for meetings or presentations.

- Make the use of family friendly policies a standard in your department, instead of an exception or a special privilege.

- Become aware of unconscious biases you may have regarding care giving and gender.
• Review and assess the current practices of your department as it relates to family care. How many female and male faculty have taken advantage of parental leave or tenure clock relief in the past two years? If the numbers are low, assess why department members are not utilizing these policies.
• Support practices and requests that allow faculty to integrate successfully work and family needs.

2. Helping Junior Faculty Obtain External Funding

Foster the development of junior faculty research and success in external funding competitions:
• Assign a departmental colleague who is knowledgeable about the participant’s proposed research idea and is willing to provide written input on selected portions of proposals in progress. Mentors should be ready to help junior faculty members deal with the politics of grant applications and make sense of rejections. (Arizona State University, Provost’s Office)
• Introduce junior faculty to program managers in their discipline for various award sponsors. Advise early career investigators on the strategies for developing productive lines of communication with program officers, such as emailing a 1-page description of her/his research followed by a phone call.
• Encourage junior faculty to seek advice from senior research leaders in their specialization on selecting suitable, quality journals for publication as it relates to their progress towards promotion.
• Form a departmental Research Development Committee of 2-4 mentors to provide critical readings of manuscripts, grant proposals, and faculty work. The committee assists junior faculty in successfully applying for external funding, selecting peer-reviewed and high impact journals for submissions, and improving the quality of manuscripts and the likelihood of publication for the faculty member and the department. (Radiological Society of North America 2009)
• Provide the opportunity to take a one-semester, one-course deferral.
• Hold brown bag research sessions that showcase the research of pre-tenure faculty.

ADVANCE Program Sponsored Project Support
The Research Opportunities Coordinator works with faculty to identify relevant award programs and provides a range of funding resources and proposal development tools (Figure 4):
• Sponsored Project Support
[https://wiki.brown.edu/confluence/display/advance/Sponsored+Project+Support]
A subject guide for identifying funding opportunities, this site includes links to relevant presentations, lists of external and internal funding opportunities, as well as funding databases and library resources.

• Funding Opportunities for New Investigators
[https://wiki.brown.edu/confluence/display/advance/Funding+for+New+Investigators]
Provides information on federal and private funding opportunities available to investigators during their first tenure-track position.

• Funding Opportunities for Women Scientists
[https://wiki.brown.edu/confluence/display/advance/Funding+for+Women+Scientists]
Includes a list of databases for finding grants and aggregate sites for both federal and private funding opportunities. There are also links to specific award programs for women faculty/post-doctoral fellows and graduate students.
- **University Resources for External Funding Support**
  [https://wiki.brown.edu/confluence/display/advance/University+Resources+for+External+Funding+Support](https://wiki.brown.edu/confluence/display/advance/University+Resources+for+External+Funding+Support)
  Provides a description of offices on campus that work with faculty during the grant proposal process.

![Figure 4: ADVANCE Sponsored Project Support Wiki](image)

### 3. Ensuring Faculty Success in Tenure and Promotion Reviews

Make sure that the procedures and standards involved in the tenure and promotion processes are clear to junior faculty. (University of Michigan 2008b) They should be able to answer these questions:

- What are the department’s formal and informal criteria for tenure/promotion?
- Who in this department can serve as adviser(s) for me as I move through the University and departmental processes?
- How should I build a tenure file?
- Who sits on tenure committees and how are they selected?
- How should I prepare for the annual review?
- How should I prepare for the third year review?
- Whom should I meet at Brown, in the discipline, internationally?

Meet with each faculty member who is coming up for review in any given year. Topics on which to focus could include:

- Discuss things you would like to have known as you were going up for tenure or promotion.
• Indicate how you see the faculty member’s accomplishments. Discuss goals for the future.
• Frame criticism in a clear and constructive way. Provide a written follow-up, summarizing the discussion.
• Consider having faculty members do a self-evaluation that would include statements describing research goals, teaching philosophy, and laboratory management strategies; lists of grants applied for and awarded; professional organization affiliations and leadership activities; conference presentations; and publications. (University of Michigan, ADVANCE Program 2008b)
• Discuss university policies intended to ease work-family conflicts such as stopping the tenure clock and teaching relief. Talk with both female and male faculty members who may be caring for children or parents. Refer to Brown University Family Friendly Policies for Faculty [http://www.brown.edu/Administration/ffpf/] (Figure 2).
Bibliography


Appendix: Brown University Dual Career Protocol

The ADVANCE Program strongly recommends that this statement be given by department and search chairs to all candidates who are finalists for faculty positions at Brown. Proactively distributing the statement to all candidates removes what can be an awkward and significant burden for candidates to raise the issue. Female and male candidates may be hesitant to introduce the issue if they are concerned that it will affect their candidacy. However, when it is time to make an offer, it is to your advantage (and Brown’s) to know if your top candidate is also seeking an academic position for her/his partner/spouse. You are also letting candidates know that the University acknowledges the challenges of job searches for academic couples. Dual career policies can make the difference in a competitive academic job market.

- **Policy on Job Placement Assistance for Dual Career Partners**
  [http://www.brown.edu/Administration/ffpf/dualcareer/]
  Brown University recognizes that recruiting and retaining excellent faculty requires that we offer job placement assistance for dual career partners. Brown does not have a specific dual career partners program. However, the University does offer resources to address concerns and questions for dual career partners. Staff members in both the offices of the Dean of the Faculty and the Office of Institutional Diversity may be helpful in offering advice and assistance. We encourage department chairs to contact the Dean of the Faculty and the Dean of Biology and Medicine for advice on dual career partner job placement assistance.

- **New England Higher Education Recruitment Consortium (NE-HERC)**
  [http://www.newenglandherc.org]
  Brown was one of the founding members of the New England Higher Education Recruitment Consortium (NE-HERC), a collaborative that now includes more than 50 institutions of higher education and affiliated teaching hospitals, including a number of the region’s largest employers. NE-HERC is a free database of job openings at member institutions, with a search engine that allows prospective employees to search for jobs by region, job type, or institution; the website also includes relocation resources and extensive information about local resources, including schools, childcare, cultural organizations, transportation, and so on.

- **ADVANCE at Brown Dual Career Wiki**
  [https://wiki.brown.edu/confluence/display/advance/Dual+Career]
  Provides extensive information on local area employment resources including links to university and college human resources jobsites.

- **Faculty Hiring Plan from the Dean of the Faculty**
  [www.brown.edu/Administration/Dean_of_the_Faculty/policies/policies-hiring.html]
  Provides specific information on Brown University faculty hiring procedures.