Increasing Women in Neuroscience (IWiN) Toolkit

Candidate Recruitment and Evaluation

Created by the Professional Development Committee of the Society for Neuroscience
The Problem: The Leaky Pipeline

2011 CNDP Survey of Neuroscience Graduate, Postdoctoral, & Undergraduate Programs

- Graduate Students: 52%
- Postdocs: 38%
- Non-Tenure Track Faculty: 40%
- Tenure Track Faculty: 29%
- Full Professors: 23%
Women were 24% of the faculty in 1998 and in 2011 were only 29% of the total.

In contrast, women represent approximately 40% of non-tenure-stream faculty members in AY2010-2011, a number that has remained stable during the past five surveys.
Growth of women neuroscientists in tenure-track faculty positions is slow (% total)

<table>
<thead>
<tr>
<th>Year</th>
<th>Graduate Student</th>
<th>Postdoc</th>
<th>Non-Tenure Track</th>
<th>Tenure Track</th>
<th>Assistant Professor</th>
<th>Associate Professor</th>
<th>Full Professor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td></td>
<td></td>
<td></td>
<td>15</td>
<td>23</td>
<td>20</td>
<td>9</td>
</tr>
<tr>
<td>1991</td>
<td></td>
<td></td>
<td></td>
<td>27</td>
<td>27</td>
<td>22</td>
<td>13</td>
</tr>
<tr>
<td>1998</td>
<td></td>
<td></td>
<td></td>
<td>24</td>
<td>32</td>
<td>27</td>
<td>19</td>
</tr>
<tr>
<td>2000</td>
<td>47</td>
<td>40</td>
<td>43</td>
<td>21</td>
<td>30</td>
<td>26</td>
<td>14</td>
</tr>
<tr>
<td>2003</td>
<td>50</td>
<td>42</td>
<td>43</td>
<td>25</td>
<td>33</td>
<td>28</td>
<td>21</td>
</tr>
<tr>
<td>2005</td>
<td>52</td>
<td>41</td>
<td>38</td>
<td>25</td>
<td>32</td>
<td>27</td>
<td>21</td>
</tr>
<tr>
<td>2007</td>
<td>52</td>
<td>44</td>
<td>44</td>
<td>26</td>
<td>36</td>
<td>28</td>
<td>21</td>
</tr>
<tr>
<td>2009</td>
<td>54</td>
<td>37</td>
<td>44</td>
<td>29</td>
<td>34</td>
<td>31</td>
<td>26</td>
</tr>
<tr>
<td>2011</td>
<td>57</td>
<td>38</td>
<td>40</td>
<td>29</td>
<td>34</td>
<td>32</td>
<td>23</td>
</tr>
</tbody>
</table>

*Data from ANDP and SfN Neuroscience Training Survey of Graduate, Postdoctoral, & Undergraduate Programs*
# The Leaky Pipeline: Across STEM

<table>
<thead>
<tr>
<th>Discipline/Field</th>
<th>PhD</th>
<th>Postdoc</th>
<th>Total Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroscience (1)</td>
<td>52</td>
<td>44</td>
<td>29</td>
</tr>
<tr>
<td>Physiology (2)</td>
<td>48</td>
<td>44</td>
<td>23</td>
</tr>
<tr>
<td>Chemistry (3)</td>
<td>-</td>
<td>-</td>
<td>14</td>
</tr>
<tr>
<td>Life Sciences (4)</td>
<td>49</td>
<td>40</td>
<td>32</td>
</tr>
<tr>
<td>Doctoral Univ (5)</td>
<td>-</td>
<td>-</td>
<td>30</td>
</tr>
<tr>
<td>Computer Science (6)</td>
<td>21</td>
<td>-</td>
<td>21*</td>
</tr>
<tr>
<td>Engineering (6)</td>
<td>20</td>
<td>-</td>
<td>10*</td>
</tr>
</tbody>
</table>

(1) = 2011 Neuroscience Training Survey of Graduate, Postdoctoral, & Undergraduate Programs  
(2) = Association of Chairs of Departments of Physiology 2007 Survey (The Physiologist 51:87, 2008)  
(3) = Chemical and Engineering News 2006 Survey (C&EN 84:58, 2006)  
(5) = American Association of University Professors Faculty Equity Indicators 2006  
(6) = NSF Survey of Women in Faculty S&E Positions 1958-2006

* Percentages are representative of tenured and tenure track faculty only
2009 Neuroscience Training Survey

“At the most recent rate of increase, it could take as long as four decades before women comprise 50% of the tenure-stream faculty members in neuroscience unless graduate programs become even more committed than they now are to a policy of gender equality in their faculty. A similar statement can be made regarding members of underrepresented U.S. racial and ethnic minorities among faculty in graduate neuroscience programs.”
What is Causing the Leaky Pipeline?

- Why has the representation of women in the professorate remained low at 25% tenure track female faculty and 21% female full professors?
  - Not due to a failure to recruit at the graduate student level.
  - A disproportionate number of women graduates fail to secure tenure track positions.
  - Fewer women are promoted from Asst. Prof to Assoc. and Full Professor.
The Leaky Pipeline: What Can Be Done?

• Understand Implicit Bias
• Employ Open Recruitment and Evaluation Practices (this module)
• Mentoring, Promotion and Tenure Practices
• Address Workplace Climate Issues
Recruiting Strategies to Increase Diversity

- Prime the pump – searching begins before position is available
- Search committee composition
- Job description – “open” searches
- Advertisement and active recruiting
- Promote awareness of the issues
- Interviewing tips
Recruiting Strategies to Increase Diversity

• Cast a wide net

• Open Searches: Define the position in the widest possible terms consistent with the department’s needs.

• Be proactive: Seek out people you think are right for the job, even if they're not actively looking.
Active Recruiting and Open Searches: A University of Michigan Success Story

The difference achieved by one UMich department
Qualitative Feedback on the Use of Open Searches at University of Michigan

"The open searches led to both a larger number of applicants AND a more diverse applicant pool."

"I was not sure if the ‘open search’ is the best way to attract the best candidates to apply for job. I am convinced now it is indeed an excellent strategy to add ‘new blood’ to our department."

"The open searches led to a department-wide discussion of all of the applicants. This has the added benefit of everyone on the faculty knowing the candidate and being invested in their success from their first day on campus."
Evaluation of Candidates and Reviewing Applications
Promote Awareness of Evaluation Bias

- Awareness of evaluation bias is a critical first step
  - Blind Auditions
  - CVs and Resumes
  - Letters of Recommendation
    
    *(see module 1, Implicit Bias for more information)*

- Spread awareness to entire search committee.
- Understand that evaluation bias can be counteracted.

Evaluation of Identical CVs: Gender

• When evaluating identical application packages, both male and female University psychology professors preferred 2:1 to hire “Brian” over “Karen” as an assistant professor.

• When evaluating a more experienced record (at the point of promotion to tenure), reservations were expressed four times more often when the name was female.


Science faculty’s subtle gender biases favor male students
Corinne A. Moss-Racusina, John F. Dovidio, Victoria L. Brescoll, Mark J. Graham, and Jo Handelsman, PNAS (2012)
Evaluation of Identical Resumes: Race

- Applicants with African American-sounding names had to send 15 resumes to get a callback, compared to 10 needed by applicants with white-sounding names.
- White names yielded as many more callbacks as an additional eight years of experience.

Why do race cues produce different evaluations? Ambiguity in Job Credentials: Race

- Identical resumes, but ambiguous fit of credentials to job (rather than ambiguous credentials)
  - A sample of white evaluators recommended
    - Black candidate 45% of the time
    - White candidate 76% of the time
- With awards - criteria can shift to meet the strengths of individual (white male) candidates if due diligence is not paid.

Evaluation of Fellowship Applications: Gender

“...the success rate of female scientists applying for postdoctoral fellowships at the [Swedish Medical Research Council] during the 1990s has been less than half that of male applicants.”

![Graph showing average rating of applicants as a function of their scientific productivity.](image)

Letters of Recommendation for Successful Medical School Faculty Applicants

Letters for men:
• Longer
• More references to:
  o CV
  o Publications
  o Patients
  o Colleagues

Letters for women:
• Shorter
• More references to personal life
• More “doubt raisers” (hedges, faint praise, and irrelevancies)
  o “It’s amazing how much she’s accomplished.”
  o “It appears her health is stable.”
  o “She is close to my wife.”

Critical Mass Affects the Use of Implicit Bias in Evaluations

• When there are many individuals, we differentiate among them and cannot rely on group-based schemas.

• In both experimental and field settings, increasing the female share of those being rated increased ratings of female applicants and employees.

If We Do Not Actively Intervene, The Cycle Reproduces Itself

Lowered success rate

Accumulation of disadvantage

Performance is underestimated

Evaluation bias

Solo status/Lack of critical mass

Schemas

Inertia
Focus on Multiple Specific Criteria During Evaluation

• Weigh judgments that reflect examination of all materials and direct contact with the candidate.

• Specify evaluations of scholarly productivity, research funding, teaching ability, ability to be a conscientious departmental/university member, fit with the department’s priorities.

• Avoid “global” evaluations

Candidate Evaluation Tool

Please indicate which of the following are true for you (check all that apply):

- Read candidate's CV
- Read candidate's scholarship
- Read candidate's letters of recommendation
- Attended candidate's job talk
- Met with candidate
- Attended lunch or dinner with candidate
- Other (please explain):

Please rate the candidate on each of the following:

<table>
<thead>
<tr>
<th>Potential for (Evidence of) scholarly impact</th>
<th>excellent</th>
<th>good</th>
<th>neutral</th>
<th>fair</th>
<th>poor</th>
<th>unable to judge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential for (Evidence of) research productivity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential for (Evidence of) research funding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential for (Evidence of) collaboration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fit with department's priorities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ability to make positive contribution to department’s climate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential (Demonstrated ability) to attract and supervise graduate students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential (Demonstrated ability) to teach and supervise undergraduates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential (Demonstrated ability) to be a conscientious university community member</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

http://www.umich.edu/%7Eadvproj/CandidateEvaluationTool.doc
Reviewing Applications

• Be objective
• Use clear ranking criteria
• Get input from institutional leaders
• Evaluate the interview process
Interviewing Tips

• Bringing in more than one female and/or minority candidate can disproportionately increase the likelihood that a woman and/or minority will be hired.

• Treat female and minority faculty applicants as scholars and educators, not as just female or minority scholars and educators.

• Ensure that all candidates will meet a diverse set of people so that they are more likely to meet someone like them.

Heilman, 1980, Organizational Behavior and Human Performance, 26: 386-95.
Van Ommeren et al., 2005, Psychological Reports, 96: 349-360.
Asking Non-Job-Related Questions Can Be Counter-Productive

In a 2007 study of candidates for positions at a Univ Michigan department, who withdrew from searches or turned down offers, several women mentioned that they had been asked illegal and discriminatory questions about their personal lives.

– One candidate reported that she did not answer truthfully (knew the “right” answer and gave it)
– One candidate reported that she resented the questions
Dual Career Issues Should Not be Discussed by the Search Committee

• Identify someone with whom the candidate can have a confidential conversation in which they could ask questions they don’t want to ask the search committee.

• Ensure all candidates know about dual career support mechanisms available at your institution.

• Support for dual careers enhances both recruitment and retention of men and women.
Top Mistakes in Recruitment

- Committee or faculty make summary judgments about candidates without using specific criteria.
- Committee does not have a diverse pool.
- The committee discussed information about the candidate that is inappropriate.
- Asking counter-productive questions.
- Telling a woman or underrepresented minority candidate that "we want you because we need diversity."
- The candidate does not meet others like themselves during the visit.
Cognitive Errors during Evaluation

- Negative stereotypes: far more evidence is required to be certain an individual has an “unexpected” attribute (competence)
- Positive stereotypes: earn extra points due to presumption of competence
- Raising the bar: happens during evaluation when candidate is member of group thought to be suspect/incompetent
- Elitism
- First impressions (dress, posture, laughter)
Mistakes During Recruitment

- The longing to clone: reproducing self, search committee members, retiring faculty member
- Good fit/Bad fit: Will we feel comfortable and culturally at ease?
- Provincialism: undervaluing something outside own province, circle or clan
Mistakes During Recruitment

Distorting and ignoring evidence:

- Extraneous myths (no qualified women or URMs) and psychoanalyzing candidate (candidate won’t come because too rural/small, salary too low)
- Wishful thinking (rhetoric, not evidence); holding to notion in spite of overwhelming evidence to contrary, allowing it to cloud cognitive processes
- Self-fulfilling prophecy: set up situations that spotlight person in positive or negative way
- Character over context: e.g., lack of awareness of implicit bias in teaching evaluations
- Premature ranking/digging in
- Momentum of the group
Mistakes During Recruitment

• These mistakes contaminate and undermine the credibility and equity of various evaluation reviews; they are magnified by bad practices at the organizational level
What Else Can Be Done?

• Make a high quality offer
• Employ family friendly work practices
• Equitable teaching, minimal committee work (at the start), a mentoring plan.
Conclusions

• Implicit bias affects evaluation.
• Cast a wide net.
• Open searches enhance recruitment of women and minorities.
• Use explicit evaluation criteria in selection of candidates to interview and in evaluation of candidates after the interview.
• Avoid cognitive errors during interview and evaluations.