

## ARTICLE

# Career Transitions for Faculty Members committed to Undergraduate Neuroscience Education

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This article highlights some of the critical issues that were discussed during a breakout session on career transitions at the 2014 Faculty for Undergraduate Neuroscience (FUN) Workshop at Ithaca College on Undergraduate Neuroscience Education: Challenges and Solutions in Creating and Sustaining Programs. Topics included: (1) transitioning from graduate school or a postdoc position to an assistant professor position; (2) preparing for promotion and tenure decisions; (3) balancing teaching, research, and service during a career in academics; (4) exploring alternative career options, including moving to another institution, taking on an administrative position, and working in industry; and (5) deciding when and how to retire. Much of the discussion focused on special challenges that women and minorities face in the academic environment. Participants offered valuable insights and suggestions for helping new faculty members prepare for reappointment, promotion, and tenure decisions, including utilizing networking connections within FUN for letters of

support and collaborative opportunities. These networking opportunities were also valued by participants who were in rather unique positions, such as transitioning from a purely administrative role back to a regular faculty position or handling the extra burden of being a chair or program director with essentially the same research and grant-writing expectations of a regular faculty member. The session proved to be enlightening for most participants and though several questions and concerns remained unanswered, several ideas and insights were shared by the participants and a sense of empathy for the unique circumstances many of the participants were experiencing provided an atmosphere of comradery and support that often emanates from these FUN workshop sessions.

*Key words: retention and reappointment; tenure criteria; career development; transitioning to leadership and administrative positions; gender equality; and retirement decisions.*

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Although enormous progress has been made to elevate the status of faculty members who are predominantly engaged in undergraduate neuroscience education since the initial Faculty for Undergraduate Neuroscience (FUN) meeting in 1991, there are several remaining challenges and some new and emerging ones that demand our attention. The breakout session on "Career Transitions" provided examples of all of these challenges and engendered insights that enriched our understanding and appreciation for the plight of many of our colleagues, particularly new faculty members, women, and those from underrepresented ethnic groups. Although the scope of the session was initially established to cover the entire spectrum of career development and transitions within the academic arena, most of the discussion focused on specific problems faced by individual participants. Many of these discussions centered on challenges faced by new faculty members, especially women from underrepresented ethnic backgrounds. As such, most of this article will focus on the early transitions, particularly relating to tenure decisions. However, this will be done within the broader scope of career transitions in academia, starting from becoming an assistant professor to deciding on when and how to retire, with both general and specific career choices that occur in the journey between these two milestones.

## TRANSITION AS A NEW FACULTY MEMBER

The competition for faculty positions at both research-intensive and primarily undergraduate institutions has become more intense than ever. This is especially true for the more elite and progressive undergraduate colleges and universities that expect their new hires to be outstanding teachers and researchers, including being successful grant writers. For colleges and universities, it is clearly a buyer's market. As was discussed at the FUN President's session at the Ithaca Workshop, we may be doing our students a grave disservice by encouraging them to pursue a career in academics, given that the number of Ph.D. recipients continues to overshadow the number of academic positions available. This trend became increasingly evident five years ago when *The Economist* reported that between 2005 and 2009, there were 100,000 doctorates awarded, but only 16,000 professorships available. This trend has continued so that there is now a huge backlog of postdocs, evidenced by the fact that the average time spent as a postdoc has gone from 1.5 years to more than 3 years over the past decade. Working longer hours for relatively lower wages as a graduate or postdoc student is no longer a rite of passage, but has now extended into the expectations of new faculty members as well. At a time when they want to start a family or to spend critical time

with their children, the academic bar has been raised significantly higher for many new faculty hires, because if they are not willing to make the needed sacrifices to excel, there are several others in waiting who are.

The examples of this in our breakout session were, at times, heart-wrenching. In some cases, the new faculty members were not only expected to continue a level of scholarship they established as a postdoc, but were given the less desirable courses to teach and, in some cases, time-consuming service responsibilities that tenured faculty members (often male) refused to do. Despite these hardships, those participants facing them have met the challenge, but at a cost of less family time and less than congenial feelings toward some of their colleagues. What is especially discouraging about these situations is that new, untenured faculty members often do not feel comfortable standing up for themselves and many are struggling to learn how to teach, something that graduate schools are notoriously poor at providing for most of their students.

**Recommendations:** Participants offered several specific recommendations to those struggling with their transitions into becoming a new faculty member and there also emerged several general ideas that have considerable merit for most new faculty members. First, we can all encourage graduate and postdoctoral faculty advisors we know to incorporate formal and informal workshops or seminars in preparing their students to teach. Although research is the predominant, and in too many cases, the only concern that a graduate/postdoctoral advisor may have, it is in the best interest of his or her mentee to gain tutelage in best teaching practices to help in their eventual transition into a faculty role. Providing opportunities for being a teaching assistant or for giving lectures now and then is helpful, but not sufficient. Designating a teaching mentor to provide instruction on how to teach is what is needed. Furthermore, finding these opportunities and allowing the graduate or postdoc student to teach an entire course is optimal.

A second recommendation would be to establish a faculty mentor program that pairs new faculty members with established faculty members who will serve as a faculty mentor. This should be formalized in a way that the mentor is given service credit as part of this workload. The mentor should be encouraged to be an advocate on behalf of the new faculty mentee, which should minimize chances that the new faculty member is being used inappropriately or discriminated by any members of the department.

A third recommendation would be to utilize established programs for assisting faculty in improving their teaching. Most colleges and universities have on-campus centers that offer help to both new and seasoned faculty members who seek help and advice in preparing and teaching courses. There are also external sources of help for new faculty members, such as Harvard Medical School's Curriculum Fellows Program.

A fourth recommendation is to utilize existing networks. It was clear from the genuine empathy and compassion shown by several of the more seasoned participants in our workshop that becoming networked with an organization

like FUN can provide an excellent safety net for new faculty members. This can include having FUN mentors to contact for questions, for help with reviewing grants or manuscripts, or for leads on best teaching practices, as well as an external source for letters of support. It was heart-warming for many of us to observe participants exchanging contact information with each other for precisely this purpose.

Finally, there are many good online sources that can be very helpful for new faculty members as they transition into their new roles as teachers and mentors. Clearly, the *Journal of Undergraduate Neuroscience (JUNE)* provides a wealth of information and ideas, ranging from developing courses and laboratory exercises to building a lab and a new program in neuroscience. There are several other sources that are helpful for transitioning into a faculty position, such as the posting of a symposium on this topic by Ortiz and Bavis (2006).

## PROMOTION AND TENURE DECISIONS

Perhaps one of the most stressful stages in the career transition of a faculty member comes during the decisions for promotion and, especially, for tenure. These are major milestones for both the faculty member and the members of his or her department. Some of the participants in the breakout session openly conveyed their angst about upcoming and pending tenure decisions. As this decision can cause a complete alteration in the course of one's career, the level of concern is justified. Interestingly, most of the worry came from faculty members whose department did not have explicitly clear criteria. Unfortunately, some departments purposely keep their criteria for promotion and tenure ambiguous, allowing for a great deal of discretion among tenured faculty members to weigh personal and political factors when deciding how well the applicant "fits" into the future directions of the department.

However, an even more disconcerting issue emerged in the discussions with some of the participants at the work shop. This had to do with the sense that gender discrimination practices were evident within some departments. Descriptions of how some of the female faculty members were given service and teaching duties that were clearly of an inferior status to those of their male counterparts were compounded by the already apparent gender gap in pay. Some of these teaching and service assignments (as well as starting salaries and start-up funds) were based on "objective" measures, such as number of publications at the time of initial appointment. Although this may seem justifiable to some, this scenario often digs a deeper hole for women and under-represented minorities at a critical time (the start of their careers) that simply perpetuates an already existing disparity. As indicated in a recent posting by the Society for Neuroscience (2015), the percentage of tenure-track positions held by women is still under 30% as of 2011. Clearly, the Society is acutely aware of the problem and is taking steps to help remedy this by ensuring that departments and programs utilize strategies for promotion and tenure that guarantee equal treatment for women and

underrepresented minorities. Although some of the discrimination that occurs in departments is unintentional, there is certainly a need for greater sensitivity to this issue than what has been given thus far.

**Recommendations:** In addition to the major recommendations to help new faculty transition into their jobs, namely providing a faculty mentor and networking support through organizations like FUN, it is imperative that departmental faculty members become educated in, and sensitive to, the various ways in which the promotion and tenure field is often slanted against women and underrepresented minorities. Subtle acts of discrimination, like being assigned to the least desirable classes or service responsibilities, need to stop. Pushing for explicitly clear criteria for promotion and tenure needs to be a priority. In brief, providing a supportive culture for all faculty members seeking promotion and tenure will help close the disparity in the percentage of successful women and underrepresented minorities when these critical decisions are being made. Again, there are several online sources for help in preparing for tenure and promotion, such as the one posted by Burnham et al. (2012).

## BALANCING YOUR CAREER

One of the most difficult decisions that a faculty member has to make is how to balance the multiple demands on their time, both at work and beyond. It is difficult *not* to be caught up in the never-ending pressure to keep at the cutting-edge of your field, while balancing your teaching, mentoring, and service duties, and reserving enough time for family and friends. This can be especially demanding for scientists, especially those involved with animal research, as our responsibilities are compounded by extra time ensuring that the vivarium is being managed properly, that all of the various forms are completed and filed, and policies and regulations are being adhered to by you and your students. Setting up lab classes and involving students in cutting-edge research is extremely time-demanding and is usually not appropriately appreciated by colleagues outside the discipline (including many administrators).

Several participants at the breakout session voiced their concern about providing appropriate balance in their professional and personal lives. Although finding this balance is most difficult prior to achieving tenure, there is always a high degree of internal and external pressures that make the career balancing act quite difficult, even for tenured faculty members. Not surprisingly, it was the women participants who voiced their frustrations in trying to balance their careers with raising a family. Sadly, their dilemmas in this delicate balancing act mirrored the statistics observed for the “leaky pipeline” of women obtaining their Ph.D. and then struggling to get tenure, and even the loss of women scientists who have attained tenure (for example, see Weston, 2011).

Clearly, there were many men and women participants who have managed to find a nice balance between career and family and between their various job duties at work. The key seems to be having realistic goals and expectations and finding supportive environments, both at

work and at home. Obviously, time management at work is often dictated by the expectations set by the department, so if scholarship and grant-writing is a high priority for your department, more time needs to be spent on this. On the other hand, if teaching effectiveness is a primary criterion for promotion and tenure, then the appropriate amount of time should be allocated for this. A good example, of how this balancing act can be maintained is described by Pain (2011).

**Recommendations:** Department chairs and senior faculty members need to take the lead in providing supportive environments for junior faculty. As successful Ph.D. candidates and tenured faculty members, we have already established high expectations of ourselves, and as an extension of this, of our new colleagues. However, the early stages of one’s career often coincides with the childbearing and child-raising years of one’s personal life and departmental policies, criteria, and expectations should be kept at a reasonable level to ensure that faculty members keep an appropriate balance in both their academic and personal lives. Happy and well-balanced faculty members make for a much more productive and collaborative department in the long run.

## ALTERNATIVE CAREER OPTIONS

Mid-career and senior faculty members are often encouraged to take leadership positions in the department or college. Although this can often be enticing, in terms of prestige, and in some cases, a salary increase, it often comes at a cost. Usually, the cost is a loss in research productivity. It is extremely difficult to keep on the cutting-edge of your field of interest without devoting much of your time to it each day, given that most areas of neuroscience move at an incredibly fast pace. As such, taking on a significant leadership role, especially at the senior administrative level (such as a dean), can often spell the death of your research career. Although there are several examples of successful administrators who have maintained an active lab while serving at various administrative levels, these are often at well-funded, major research universities in which a lab manager and highly qualified postdoctoral and graduate students are available to carry out the day-to-day research activities. It is far more uncommon to see this at smaller, predominately undergraduate institutes. As such, these decisions may have long-lasting consequences.

Interestingly, we had a few participants in the breakout session who were either contemplating making this move or hoping to transition back into a research position. The discussions with these individuals were quite revealing and the take-home message from those who have served as a full-time administrator for a period of a year or more found it difficult to re-tool back into the lab, and to some degree, the classroom as well. It can be done, but the bottom line message seemed to be that it would be very wise to test the waters of administrative responsibilities before plunging into them.

There were some discussions at the breakout sessions about other alternative career paths, such as transitioning into industry or non-profit organizations. However most

participants had a strong commitment to teaching undergraduate neuroscience, so most of the conversations were focused on becoming a successful academician.

**Recommendations:** Leadership positions, such as directing a program or chairing a department have several intrinsic rewards, but are quite demanding in terms of the time and commitment that need to be devoted to helping faculty members and students in sundry problem-solving scenarios. Nonetheless, this level of responsibility can provide a faculty member with a pretty good taste of what full-time administration would be like, without completely surrendering one's research and teaching programs. At higher senior administrative levels, however, the individual often becomes increasingly removed from the lab and his or her students to a degree that make it much more difficult to return back to the lab and classroom. One strategy described at the breakout session that appeared to be working quite well for at least one administrator who was returning to the ranks of a faculty member was that the returning faculty member partnered with a more junior faculty member to help him re-tool for the lab and classroom. This presented an almost reverse scenario of the aforementioned faculty mentorship program, whereby the junior faculty member now provides most of the mentorship. Obviously, there are many examples of successful transitions in both directions, but the conventional wisdom derived from the conversations at the breakout session was to ease oneself into the administrative path and progress up the administrative ladder one rung at a time until you are convinced that this is what you enjoy doing.

## TRANSITION INTO RETIREMENT

Although this topic did not generate much discussion amongst the participants at the breakout sessions, it is one that is bound to emerge toward the later stages of one's career. The reason this topic did not generate much discussion is that it is a more personal and individual-driven decision than most of the other topics that were discussed in the context of career transitions. We have all encountered friends or colleagues who have stayed at their jobs far too long, some of them lingering on far past their prime and essentially have become "deadwood." On the other hand, we also know friends or colleagues who have retired too early, and in some cases, to the detriment of the program or school from which they left and to their own personal well-being. Admittedly, although this latter case is less common in academics, it does point out the need to carefully plan a strategy to transition gracefully into retirement. It is always heartwarming to visit with colleagues who have managed to do this successfully, and leave their program with a solid foundation and enjoy a fruitful and fulfilling retirement.

Although retirement decisions for most people are driven almost entirely by economic considerations, in that they plan to retire as soon as it is economically feasible to do so, this should not be the sole determining factor in making this critical decision. Although we often dream of leaving the "rat race" (which has far too literal connotations for many of us in neuroscience) to pursue a less stressful,

and presumably more healthy life style, the opposite result may actually be the case. Longevity studies often show an increased life span for those who postpone their retirement, relative to those who retire earlier (although these results may be confounded by people who retire earlier due to existing health problems). Fortunately for many productive and highly functioning educators, there is no mandatory retirement in the U.S. (which is not the case in many other countries). For the most part, the lack of a mandatory retirement age is probably to the benefit of many of the senior educators as well as the programs they serve, although this positive aspect has to be weighed within the context of the potential negative impact it may have on thwarting ample opportunities for the next generation of teachers and researchers.

Clearly, deciding when to retire is an important decision and depends on several variables, including the individual's personal interests and social networks (i.e., is work your primary "hobby" and are your colleagues your closest social friends?), status of the lab, program, and department in which they are working (i.e., is this a good time to step down and will ongoing student projects be completed, will classes be adequately covered, and will the position be filled?), as well as personal aspirations (i.e., what are your plans for enjoying your retirement?).

Talking informally with some fellow senior FUN colleagues at the workshop revealed just how individually driven these decisions can be. Some have their retirements planned already (and in some cases 5-10 years in advance). Some are having too much FUN to even think about retiring! However, none of us want to be "coasters" or "deadwood" to our departments and so the major question that needs to be addressed seems to be "am I still contributing to the program in a significant way or would my retirement be a benefit for the students and my colleagues in the department"? This is not always an easy question to answer but most of us have gained enough wisdom to utilize critical social comparators to gauge our level of contribution. In the best scenarios, we should be able to plan our retirement for a time that works best for us, individually, as well as the students and colleagues with whom we serve. Oftentimes, the difference between a good educator and a great one is determined by the exit strategy employed, and this is usually one that will ensure the continued elevation of the program long after his or her departure.

**Recommendations:** Because deciding when and how to retire depends on the specific context, it is difficult to provide general guidelines for making this critical decision. However, there are several good sources that provide key questions that can help each individual decide what would work best for him or her. One concise, but insightful resource is offered by Riggio (2011).

In terms of institutional policies that might help senior educators gauge their relative contributions and productivity and at the same time provide incentives that would help mitigate the tendency of some tenured faculty members to rest on their laurels would be instituting a career-long promotion system. Colleges and universities that have done this have provided ample incentives for

senior faculty members to stay fully engaged in their careers, as they go up for regular promotions (e.g., Professor Salary Supplements), often based on the same criteria used for promotion from Associate to Full Professor. If a senior faculty member continues to excel in these evaluations, the decision to delay retirement is often met with enthusiastic support by colleagues. However, if one does not meet these standards, this should be an indicator that the time has come to let a new faculty member take over. For those of us who love our jobs, and take joy in teaching young minds and being engaged in meaningful research, the decision to retire can be a tough one, but eventually there will come a time when it will be in the best interest of both the individual and the institution he or she has faithfully served.

## CONCLUSIONS

Like all previous FUN workshops, the 2014 workshop at Ithaca College proved to be both enlightening and inspiring. The breakout sessions on Career Transitions was no exception, as the participants provided a wealth of wisdom and fresh new insights into problems that we have already faced, are presently facing, or will probably face in the future. Perhaps the most pressing issues discussed in these sessions concerned transitioning into a new faculty position and preparing for promotion and tenure decisions. There were a few poignant examples of hardships faced by women and underrepresented minorities that drove home the need for institutions to become more sensitive to why the makeup of most academic departments is not as diverse as it should be. There are clearly barriers that women and underrepresented minorities face that need to be removed to fix the "leaky pipeline" to ensure adequate representation of this important segment of our population is found amongst the tenured faculty in academia. Providing faculty mentorship with tenured faculty members who will advocate for the newly hired faculty member would help in this regard. This was underscored during the breakout sessions when many faculty members exchanged contact information in an effort to provide a professional network for these new faculty members and for other faculty members who were facing different career transition problems. This esprit décor is completely in keeping with the mission and spirit of being part of the FUN family and it is precisely what makes these workshops so special. Perhaps FUN could formalize networking programs for new faculty members or for those transitioning into new

positions in academia or industry. Resurrecting programs like SOMAS (Support of Mentors and their Students in Neuroscience) would go a long way in helping women and underrepresented minorities gain a stronger foothold when they transition from graduate school or from a postdoctoral position to a tenure-track position. These issues deserve to be taken under serious consideration by the new FUN councilors (many of whom were beneficiaries of the SOMAS program).

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