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VOLUME III No. 2 RESEARCH MENTORING

INTRODUCTION

The tragic suicide of a chemistry graduate student at Harvard last year has prompted a discussion among academics suggesting reform in the mentoring/advising relationship between graduate students and faculty in higher education. This issue of *Research Integrity* focuses on the issues related to mentoring relationships in research environments, especially in higher educational institutions.

The National Academy of Sciences provides guidelines for scientists and engineers suggesting that mentoring is a professional as well as personal relationship (Page 2). Pennsylvania State University has adopted a set of guidelines modeled after the University of Oregon highlighting good practices in graduate education including the responsibilities of mentoring for staff, faculty and graduate students (Page 17). Professor Vesilind, Duke University, distinguishes between what does and does not constitute the role of a mentor (Page 10). Also included are tools which may be helpful, such as, the student/faculty contract specified in "Establishing a Good Mentoring Relationship" by Professor Villarruel from MSU (Page 9) and a case study which depicts many issues associated with research mentoring (Page 5). In addition, the intricacies and milieus associated with mentoring people of color is emphasized by Professor Reed through interesting examples of his teaching experiences in the Department of History at MSU (Page 15).

As stated in the last issue of *Research Integrity*, there was a discrepancy between what departments should and actually do to prepare students to recognize and deal effectively with ethical issues. These findings are intricately tied to the concept of mentoring and provide a natural foundation to explore what it means not only to be a mentor, but to be mentored as well.



5th ANNUAL SYMPOSIUM FOR RESEARCH ETHICS

The 5th Annual Symposium for Research Ethics entitled, "Institutional Responsibility to Researchers: Promoting Ethical Practices" will be held Thursday, April 1, 1999 from 6:00 until 9:00 p.m. in the Lincoln Room at the Kellogg Center. Refreshments, light food and parking passes will be provided. Pam Green, Associate Professor of Biochemistry at Michigan State University will give the keynote address. There will also be a series of concurrent round table discussions focusing on: Informed Consent in Human Subject Research; Authorship and Publication Issues; Best Practices in Lab Notebooks and Data Management; and Conflict of Interest. In addition, there will be an opportunity to have your questions regarding research ethics answered by a knowledgeable panel of faculty and administrators.



ADVISOR, TEACHER, ROLE MODEL, FRIEND: ON BEING A MENTOR TO STUDENTS IN SCIENCE AND ENGINEERING

Contributed by
The National Academy of Sciences
*National Academy Press*¹

What is a Mentor?

The notion of mentoring is ancient. The original Mentor was described by Homer as the "wise and trusted counselor" whom Odysseus left in charge of his household during his travels. Athena, in the guise of Mentor, became the guardian and teacher of Odysseus' son Telemachus.

In modern times, the concept of mentoring has found application in virtually every forum of learning. In academics, *mentor* is often used synonymously with *faculty advisor*. A fundamental difference between

mentoring and advising is more than advising; mentoring is a personal, as well as, professional relationship. An advisor might or might not be a mentor, depending on the quality of the relationship. A mentoring relationship develops over an extended period, during which a student's needs and the nature of the relationship tend to change. A mentor will try to be aware of these changes and vary the degree and type of attention, help, advice, information, and encouragement that he or she provides.

In the broad sense intended here, a mentor is someone who takes a special interest in helping another person develop into a successful professional. Some students, particularly those working in large laboratories and institutions, find it difficult to develop a close relationship with their faculty advisor or laboratory director. They might have to find their mentor elsewhere — perhaps a fellow student, another faculty member, a wise friend, or another person with experience who offers continuing guidance and support.

In the realm of science and engineering, we might say that a good mentor seeks to help a student optimize an educational experience, to assist the student's socialization into a disciplinary culture, and to help the student find suitable employment. These obligations can extend well beyond formal schooling and continue into or through the student's career.

The Council of Graduate Schools (1995) cites Morris Zelditch's useful summary of a mentor's multiple roles: "mentors are advisors, people with career experience willing to share their knowledge; supporters, people who give emotional and moral encouragement; tutors, people who give specific feedback on one's performance; masters, in the sense of employers to whom one is apprenticed; sponsors, sources of information about and aid in obtaining opportunities; models, of identity, of the kind of person one should be to be an academic."

In general, an effective mentoring relationship is characterized by mutual respect, trust, understanding, and empathy. Good mentors are able to share life experiences and wisdom, as well as technical expertise.

They are *good listeners*, *good observers*, and *good*

¹ Used with permission.

problem-solvers. They make an effort to know, accept, and respect the goals and interests of a student. In the end, they establish an environment in which the student's accomplishment is limited only by the extent of his or her talent.

Advice for New Mentors

"For most people, good mentoring, like good teaching, is a skill that is developed over time. Here are a few tips for beginners:

- **Listen patiently.** Give the student time to get to issues they find sensitive or embarrassing.
- **Build a relationship.** Simple joint activities-walks across campus, informal conversations over coffee, attending a lecture together-will help to develop rapport. Take cues from the student as to how close they wish the relationship to be.
- **Don't abuse your authority.** Don't ask students to do personal work, such as mowing lawns, baby-sitting, and typing.
- **Nurture self-sufficiency.** Your goal is not to "clone" yourself, but to encourage confidence and independent thinking.
- **Establish "protected time" together.** Try to minimize interruptions by telephone calls or visitors.
- **Share yourself.** Invite students to see what you do, both on and off the job. Tell of your own successes and failures. Let the student see your human side and encourage the student to reciprocate.
- **Provide introductions.** Help the student develop a professional network and build a community of mentors.
- **Be constructive.** Critical feedback is essential to spur improvement, but do it kindly and temper criticism with praise when deserved.
- **Don't be overbearing.** Avoid dictating choices or controlling the student's behavior.
- **Find your own mentors.** New advisors, like new students, benefit from guidance by those with more experience."



MENTORING OF PHYSICIAN/SCIENTISTS

Contributed by

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How can one judge the quality of a mentor and the success of a training program? I believe this question is best answered by judging the success of the trainees. As students interview for training programs they should constantly ask themselves: "What does the mentor believe is the goal of my training?" The answer should be the success of the student. Many issues and conflicts that arise in the course of training can be resolved if the focus is kept on the success of the student. Also, the laboratory will benefit from a successful trainee.

Unfortunately, there are those occasions when a trainee can not make the transition into the research environment. In these cases the mentor must act to address problems early and develop a plan for the student. Should the student fail to accomplish in the laboratory, the mentor must act quickly to direct the student into a different environment or vocation. Delay in addressing these problems are damaging to the student's career, stressful for the mentor and trainee, and often deteriorate the morale in the laboratory.

As likable as many students are, the research environment requires the same character traits of those who are self-starters, internally motivated, and honest with their conviction to become researchers. This requires a great advance in the students' maturity, often for the first time when the reality of their career choice becomes apparent, i.e. no one can do their work for them. This requirement for labor in the laboratory will often challenge the student in their first laboratory experience (and another reason why I believe that laboratory experience is required in the undergraduate medical education). They (the students) are ultimately responsible for getting the most out of the opportunities

afforded them in the laboratory setting. In many cases, an ounce of action is worth a ton of theory; there is no substitute for putting the requisite time in the laboratory to develop the data and learn from the discoveries. Science does not advance in leaps and bounds; rather it is the summation of many failures and a few discoveries.

Mentoring requires adaptation to the skill level and academic, intellectual and emotional maturity of the trainee. This is particularly challenging with students whom have had their primary science education in medicine. I believe this is the result of the nature of contemporary medical education that provides limited opportunities for laboratory investigation and experience. Keen competition exists in medical education to gain access to the medical school curriculum. This has resulted in the education of medical students that are conditioned to “passive learning” rather than active exploration of testable hypotheses. Passive learning is ingrained in these students because the medical education tends to focus on acquisition and retention of information rather than focusing on what is *not* known (reduction/deduction) and scientific discovery through hypothesis generated research. In biomedical research, the physician-scientist potentially brings to research a number of important qualities that are not as commonly found in their Ph.D. counterparts. These qualities include an understanding of pathology, therapy, and the potential to translate basic science research into the clinical arena. It is therefore requisite of the mentor of a physician-scientist to promote active learning with emphasis on basic sciences and their potential translation into clinically testable hypothesis. Medical students, residents, and fellows must be reminded to approach the laboratory environment with the same devotion and ferocity that they would have for clinical medicine.

Research in America is built upon challenge and scientific dissent between mentors and trainees. More autocratic research environments (often found outside the United States) do not promote scientific dissent to the level seen in here. I am constantly impressed by the transformation of foreign visiting

scientist and postdoctoral fellows who train in the United States. I often wonder if the greatest trade deficits between the U.S. and other nations are those influences we will make on their scientific cultures when these trainees return to their country? Ultimate responsibility for the scientific integrity of the laboratory must rest with the director. This means the director must exercise judgement on the interpretation and reporting of data, perhaps contrary to the expectations of the trainee or even a colleague. Unfortunately, there is little substitute for experience and sound judgement by the laboratory director. Seldom should issues arise which cannot be resolved in the laboratory and require the decisions of external reviewers or referees. Mentors should develop plans with trainees that define the ownership, interpretation, and reporting of data that ultimately rest with the laboratory director.

I would like to comment on an often underutilized resource in mentoring, the senior faculty. I believe that junior faculty would benefit from the mentoring of a senior faculty member. Senior faculty can provide invaluable guidance to beginning faculty and few programs provide the structure for assignment of senior faculty to a junior faculty member. The success of a junior faculty requires early planning of research that must be focused, realistic, and intense. Many pitfalls await junior faculties who are not prepared to seek assistance with these challenges. Unfortunately, early identification of problems and plans for their resolution are not addressed until the time of annual review or consideration of tenure appointment. I can not think of any other profession where senior mentors are not assigned to junior personnel (Journeyman in the labor trades, senior executives in business, chief residents in medicine, senior partners in law enforcement, etc.).

Lastly, I would like to comment on what is perhaps the greatest influence a mentor has in a student's training, the example the mentor sets for the laboratory. Over the course of one to three years, students have ample opportunities to see you at your best, worst, and every thing in between. Optimism, strong work ethic, fairness, and predictability are important character traits that only a mentor can teach by example.

Like good parents and their children, mentors set the example for their students. Being a mentor is like having an extended family with many of the same challenges one has in his or her own family. Perhaps this is why successful mentors often develop life-long friendships with their trainees.



FROM THE EDITOR:
TEACHING RESEARCH ETHICS AT THE
POYNTER CENTER

For the past five years the Poynter Center for the Study of Ethics and American Institutions at Indiana University has engendered a sense of ethical responsibility for teaching research ethics by providing a workshop for faculty from different disciplines to discuss, debate and share ethical issues and provide important resources. To date, Michigan State University has sent fourteen faculty members and will send four more this year to the sixth annual workshop held May 26-29, 1999. In addition to the workshop for faculty members, The Poynter Center has also developed a workshop for graduate students which three MSU students have attended over the past three years. I was fortunate to be selected as one of 19 graduate students nationally to attend the Graduate Research Ethics Education workshop this past summer. Some of the issues presented at this workshop included: the responsible use of data in publication of research; data ownership; responsible sharing of data; ethical issues in the use of computers; social and environmental responsibilities of scientists and engineers; and ethical issues in the mentor-student relationship.

As part of our training, we were required to write a case study with discussion questions and commentary to be published in Research Ethics: Cases and Commentaries Volume 3 by Brian Schrag, ed. the Association for Practical and Professional Ethics, Bloomington: Indiana, 1999. This case study is presented here for your review.



WHAT A TANGLED
WEB WE WEAVE

Contributed by
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Bonnie Hogan, a doctoral student in the department of History and Philosophy of Science, is an active member of the Council of Graduate Students (COGS) at her University. She has a research assistantship with Dr. Todd Simpson, who is also her dissertation advisor. Ms. Hogan chose Dr. Simpson as her advisor because his research background was closely related to the topic on which she wanted to focus her dissertation. Although he offered helpful suggestions on her research, she was never able to develop the sort of relationship that with him that enabled her to discuss her long-term career plans and life goals. Due to his travelling schedule, Ms. Hogan found it very difficult to schedule any time with Dr. Simpson and impromptu meetings were impossible. When formal meetings were scheduled, he consistently interrupted their conversation by taking phone calls. In addition, Dr. Simpson frequently arrived late to scheduled meetings. Most of the feedback she did receive from him was in the form of written notes.

At the first COGS meeting of the year, Ms. Hogan met Dr. Maria Rodriguez a faculty member from Molecular Biology. Although she is not an expert in the field of History and Philosophy of Science, Dr. Rodriguez took an interest in Ms. Hogan's work. Over time, the two of them developed a rapport that made it possible for Ms. Hogan to begin to discuss the long-term issues that she could not discuss with Dr. Simpson. Dr. Rodriguez regularly scheduled appointments with Ms. Hogan and specifically arranged time to talk about Ms. Hogan's plans and goals for her future. Dr. Rodriguez also showed an interest in Ms. Hogan's work, and suggested articles and books that are relevant to her dissertation topic. Dr. Rodriguez also contacted some of her colleagues who are interested in Ms. Hogan's research topic and

arranged for them to meet.

Over time, Ms. Hogan and Dr. Rodriguez develop a mutually trusting relationship, and Dr. Rodriguez ultimately becomes her mentor (For discussion of positive mentor characteristics, see *Committee on Science, Engineering, and Public Policy* 1997: 8). Although busy with her own teaching, graduate students and research in Molecular Biology, Dr. Rodriguez agrees to be a member of Ms. Hogan's dissertation committee. She makes a point to meet with Ms. Hogan and help her identify ways to continue her research with another advisor, Dr. Patricia O'Halloran.

Dr. Simpson hired Ms. Hogan as a research assistant to help him with the literature review and proofreading necessary for a book he has contracted to write. As she is proofreading a draft of Dr. Simpson's work, Ms. Hogan finds approximately four pages of text that have been directly plagiarized from another author. She recognizes that a section of his chapter is taken verbatim from an article she reviewed earlier in her literature review for Dr. Simpson. She confirms the plagiarism by comparing Dr. Simpson's work to a copy of the original article.

Ms. Hogan realizes that this chapter is a draft that has not yet been sent to the publisher. At first, she does not know what to do. If she confronts Dr. Simpson with this information, what might be the repercussions? She wonders if she will lose her assistantship and, more importantly, what effect this situation might have on her future career? After contemplating her choices, Ms. Hogan decides to bring the plagiarism to Dr. Simpson's attention, so that he can correct the draft before publication. When she shows him the article from which he plagiarized, Dr. Simpson tells her to "grow up and understand that this goes on all the time. After all, no one ever gets hurt".

Ms. Hogan is in a dilemma. She cannot in good conscience continue to work with Dr. Simpson, but she does not want to throw away six years of graduate work. Ms. Hogan contemplates taking formal action against Dr. Simpson with the Intellectual Integrity Officer, but fears that would jeopardize both her research assistantship and her ability to finish her

degree. Frustrated and ready to quit, Ms. Hogan decides to talk with Dr. Rodriguez about her situation with Dr. Simpson. Dr. Rodriguez listens patiently to Ms. Hogan and gives her useful feedback as Ms. Hogan explores and evaluates possible options open to her. Dr. Rodriguez remains supportive throughout the ordeal as Ms. Hogan tries to figure out the best way to handle the situation. She leaves the final decision to Ms. Hogan, which fosters a sense of self-sufficiency. Ms. Hogan decides not to take any formal action against Dr. Simpson, at least until she has her degree in hand. (For further discussion see, "General Issues in Teaching Research Ethics" by Kenneth D. Pimple in Research Ethics: Cases and Materials, edited by Robin Levin Penslar, Bloomington, Indiana: Indiana University Press. 1995.)

Ms. Hogan approaches her department chair for permission to change advisors. When asked why she wants to change advisors, Ms. Hogan gives a vague and untruthful answer. The department chair agrees and Dr. O'Halloran becomes Ms. Hogan's new advisor. Although Dr. O'Halloran is not presently doing research in Hogan's area, her degree in History and Philosophy of Science and knowledge of Hogan's topic fully qualify her. This step enables Hogan to salvage most of her graduate work and research, and maintain existing relationships with other committee members from her department. Through Dr. Rodriguez's contacts and help, Hogan is also able to obtain funding for her research and ultimately finish her degree.

Dr. Simpson remains a tenured professor in the department of History and Philosophy of Science continuing to advise a cadre of graduate students.

Discussion Questions

1. What issues are associated with Ms. Hogan's decision *not* to blow the whistle against Dr. Simpson? She fears retribution, fears that all her work toward the dissertation will be jeopardized if she takes any action, fears future employability, fears that taking any action would have negative repercussions on her existing relationships within the department. Should these fears be the determining factors in her decision? Why or why not?

2. Does Ms. Hogan have other options (such as writing a letter to the dean of graduate research) besides taking “formal action”? Why or why not?
3. What responsibilities must Dr. Rodriguez consider in deciding what to do with the information about Simpson’s plagiarism, which Hogan shared with her in confidence? It would be important to check your own institution’s policies on this matter.
4. Did Ms. Hogan have an ethical or moral responsibility to tell the department chair the truth about Dr. Simpson when she asked for permission to change advisors?
5. Is it possible to have a “successful” mentor outside your field or discipline? Why or why not?
6. How might Ms. Hogan’s actions have changed if Dr. Simpson’s shortcomings were not egregious (i.e., plagiarism), but instead consisted of: repeated unprofessional behavior, such as having little (and poor) communication with Ms. Hogan; missing appointments and committee meetings; drinking alcohol during office hours; assigning inappropriate research projects; making gender slurs; skipping office hours; and, generally creating a difficult research environment? Should this kind of unprofessional behavior be reported? If so, to whom?
7. How can Dr. Simpson be held accountable for unprofessional behavior? Does Ms. Hogan have a responsibility as a graduate student to report Dr. Simpson’s unprofessional behavior? Would this action adversely affect her standing within the department? If so, how?
8. In light of the events presented in this case study, should Dr. Simpson advise graduate students? Why or why not?

Commentary

This case study is intended to highlight the differences between “advisor’s” and “mentor’s” and to show the positive effects a good mentor can have on a graduate student. Because mentoring can be construed differently across disciplines, clarification is needed. The National Academy of Sciences suggests that in academic settings, the term *mentor* is often simultaneously associated with the term *faculty advisor*. In this case, however, the research advisor

and mentor are not only two different people, but also come from different disciplines. “A fundamental difference between mentoring and advising is [that mentoring is] more than advising; mentoring is a personal, as well as, professional relationship (Advisor, Teacher, Role Model, Friend: On Being a Mentor to Students in Science and Engineering: 1).” Positive mentoring requires effort from both parties involved. A motivated graduate student helps the process of mentoring along, while the professor feels that she is not wasting anyone’s time. Unfortunately, there is no optimal formula for positive mentoring. Each situation is complex with many different factors entering the formula. Mentoring can differ on the basis of discipline, personality types, gender, ethnicity, knowledge of subject matter, and status of graduate student and professor.

The original concept of mentoring is an ancient one. Homer describes the first mentor as the “wise and trusted counselor” who is left in charge of Odysseus’ household during his travels (Ibid.). Athena acted as the mentor and became the guardian and teacher of Telemachus, the son of Odysseus. In the context of today’s higher education, mentoring has many different facets. A mentor’s primary responsibility is to help a graduate student and to take an interest in the student’s professional development. This responsibility requires patience, trust, effective communication, good role modeling, and understanding from both parties involved. It also requires that both the professor and graduate student fully understand the ethics of research and abide by federal and institutional regulations and guidelines.

Swazey and Anderson (1996) suggest that a good mentor be skilled in interpersonal relationships and genuinely interested in the mentee’s professional development. In addition, they suggest that the mentor be involved in teaching effective communication skills to the mentee. It is not surprising that research has shown that both faculty and graduate students consider mentoring relationships to be the exception rather than the rule (Friedman 1987).

An advisor, by contrast performs more narrow or technical functions such as “informal advising about degree requirements, periodic monitoring of an advisee’s research work and progress toward his/her degree” (Swazey & Anderson: 1996: 6). In addition, an advisor usually serves as the principle investigator and/or laboratory director for the project on which the graduate student is working. In this capacity, the advisor instructs the graduate student on design, methodology, literature review, proposal, and other aspects of the dissertation research.

This case study demonstrates the differences between advisor and mentor by suggesting that the two need not be the same person, or even come from the same discipline. Simpson’s egregious ethical mistake undermines his position as advisor. Simpson’s behavior effectively demonstrates the term “toxic mentoring” coined by Swazey and Anderson (1996). They cite four types of undesirable or “toxic” mentors:

- “Avoiders” – mentors who are neither available nor accessible;
- “dumpers” – mentors who force novices into new roles and let them “sink or swim”;
- “blockers” – mentors who continually refuse requests, withhold information, take over projects, or supervise too closely; and
- “destroyers or criticizers” – mentors who focus on inadequacies (from Darling 1986, quoted in Mateo et al. 1991: 76).

Although this case study raises several issues, such as whistleblowing, and the vulnerable position of being both an advisee and employee, it is important to underscore the differences between the mentor/mentee – advisor/advisee relationship as it may affect the ethical environment for both faculty member and student. Effective communication is paramount in both relationships. Interestingly, a survey of graduate students recently conducted at our university reported that just over half of all graduate students surveyed (52%, with 40% agreeing and 12% strongly agreeing) believe that communication between faculty and graduate students is satisfactory. While that result is

gratifying, the survey raises questions about why 48% found communication between graduate students and faculty unsatisfactory.

A positive mentoring relationship between faculty and graduate students can be an important asset to the graduate school process. If properly mentored, graduate students can expect to grow academically, professionally, personally and develop the skills necessary to become mentors themselves in the future. The mentor/mentee relationship cannot be ignored in higher education and should not be confused with the advisor/advisee relationship.

References

Advisor, Teacher, Role Model, Friend: On Being a Mentor to Students in Science and Engineering. Committee on Science, Engineering, and Public Policy. National Academy Press. 1997:1.

Friedman, N. Mentors and Supervisors. IIE Research Report No. 14. New York: Institute of International Education. 1987.

Mateo MA, Kirchoff KT, Schira MG. Research Skill Development. In Conducting and Using Nursing Research in the Clinical Setting, eds. MA Mateo and KT Kirchoff. Baltimore: Williams & Wilkins. 1991.

Swazey, Judith P., and Anderson, Melissa S. “Mentors, Advisors, and Role Models in Graduate and Professional Education”. *Association of Academic Health Centers*. Washington D.C. 1996.



ESTABLISHING A GOOD MENTORING RELATIONSHIP

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The following set of questions come from a "mentoring log" that I have developed during my tenure at M.S.U. The purpose of this questionnaire is to help develop a trusting relationship between faculty and graduate students and to facilitate a mentoring relationship that is mutual. I hope you find the following set of questions helpful in determining what is important in the mentoring relationship, and encourage you to use all or part of this format when building mentoring relationships. Please note that this format can be used for both graduate students and faculty.

- Tell me about your previous educational experiences. Start with your undergraduate school and bring it up to the present. Of all the educational opportunities you have had, what have you enjoyed the most?
- Why did you decide to enroll for your graduate training at M.S.U.? What will keep you here?
- What do you want to get out of your educational experiences here at M.S.U.? What do you believe your training will help you to do in the future?
- What are your strengths? Tell me about the things that you believe you do well.
- Now, tell me about your weak points. What would you want me to know are areas of difficulty for you?
- With what kind of person do you work best?
- Have you had other mentors, supporters, and advisors? Tell me about them (i.e., what did they do that you liked? In what ways were they most effective in helping you? What did they do that you didn't like?).
- Are you a person who will tell me how you feel (or how you are doing), or will I need to ask?
- How important is it to you that you and I be friends?
- What is the best way for us to work together? Do you prefer me to initiate or will you arrange our meetings together? How often would you like to meet or talk by phone?
- Tell me about your career plans. What do you want to be doing five years from now? Ten years from now?
- What are your expectations with respect to this mentoring relationship? What do you expect from me? What do you think I expect from you?
- Is there a particular skill or competency you would like to learn?
- What do you want to accomplish in the next 6 months? What can I do to help?
- Do you prefer to work and plan as we go, or have the plan worked out in detail before we begin?
- Can you think of anything else that I should know about you, anything that would make a difference in our partnership?
- What tangible things can I do to support you in your graduate experience?



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<http://www.msu.edu/user/gradschl/integrity.htm>

MENTORING: TURNING PEBBLES INTO DIAMONDS²

Contributed by

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May Sarton, in her book *The Small Room*, observes that "The relation between student and teacher must be about the most complex and ill-defined there is".³ Sarton's experience was in a small undergraduate liberal arts college. I suspect that had she tried mentoring graduate students she would have soon recognized that such a relationship is even more complex and challenging. The mentor of graduate students has all the responsibilities of the undergraduate advisor, but must also facilitate the transformation of the student into a professional. An undergraduate advisor relinquishes the role when the student graduates. But with mentoring graduate students, the protégé can (and often does) stay in contact with the mentor for the rest of his or her life. In addition, the mentoring process takes place over time during which the character of the student changes markedly, so the process is not only complex, but is dynamic as well.

One way to try to define this relationship might be to suggest what mentoring is not. Mentoring is not paternalism. Paternalism refers to a relationship between unequal parties where the "parent" imposes his or her will on the "child" because the parent supposedly knows far better what is to the child's benefit. Although mentoring has been sometimes unjustly accused as being nothing but paternalism, this is an inaccurate characterization because the relationship between mentor and protégé is a voluntary

one — either party can disengage at any time — unlike the parent/child relationship.⁴

But if mentoring is not a paternalistic relationship, what is it? A clue might be found in the origin of the word. The name "mentor" comes to us from Homer's epic the *Odyssey*. The goddess Athena, worried about the state of Odysseus' household, disguises herself as his trusted friend Mentor in order to advise his son Telemachus. Most likely then, the translation of "mentor" from classical Greek is closest in meaning to "advisor" in English. But the modern meaning of mentoring is more complex.

If we search for analogies, the coach/players relationships might be a model. The coach and players both work hard, and the coach succeeds when the players win. Or perhaps the mentor/protégé relationship is more like a master craftsman/apprentice relationship, where the craftsman, if the apprenticeship is successful, has helped to produce another craftsman who would be competitive in the skill of the craft.

There is something mysterious about this process of creating competition. Social Darwinism would suggest that the master would have no economic advantage in passing on the secrets of the craft. There are in fact a few cases in history where professionals have been loath to pass on their knowledge. Perhaps the most notorious case occurred in the 1600's when two brothers, both named Peter Chamberlen, attained a reputation for being able to assist women in difficult labor. Their services were sought by the rich and powerful, and they amassed great personal wealth. Because they insisted on performing the operations unassisted, rumors developed that they were in possession of a secret that greatly facilitated childbirth. In fact, the secret that the Chamberlens refused to share was that of the obstetrical forceps.

The secret continued to be jealously guarded until a son, Hugh Chamberlen, sold the secret to the Amsterdam Medical College, which sold licenses to physicians for large sums of money. Eventually two physicians at the medical college, believing that withholding such information was criminal, revealed the secret. But Chamberlen had the last laugh. The secret Hugh Chamberlen had sold was a totally worthless one half of obstetrical forceps. The unwillingness

² An earlier form of this paper was presented at the Graduate Research Education and Teaching Symposium, University of Oklahoma Health Sciences Center, Oklahoma City, 1998.

³ May Sarton. *The Small Room*. W.W. Norton & Co., New York, 1961.

⁴ Joan Callahan "Academic Paternalism" in *A Professor's Duties* Peter J. Markie (partially edited), Rowman & Littlefield, London, 1994.

of the Chamberlens' to share such knowledge with students and colleagues (even after its "sale" to the College) must have resulted in the death and suffering of countless women and infants.⁵ But this is a most unusual case. In perhaps millions of other mentor/protégé interactions the mentor takes joy in watching the protégé succeed. Such "laying on of hands" is characteristic of the professions. Recently, the local American Society of Civil Engineers chapter met at Duke. These practicing engineers came to the campus mostly to have a chance to get to know the students and offer advice and expertise in their professional development. I asked them why they took time away from their jobs to volunteer to speak with engineering students. As I suspected, they had not given this much thought. It simply is what one does as a professional engineer. It is part of the debt one pays to the people who helped pave the path to professional engineering.

So how does one become an effective mentor of graduate students? Perhaps we can simply list the attributes of good mentors. However, this approach is not without precedent, and I always find such lists unsatisfying. Describing the characteristics of a good mentor is like describing how one rides a bicycle: sit down on the seat; grasp the handlebars; pedal with your feet. These are all good instructions, but of little value without actually getting on the bicycle and trying it out. The rules on riding a bicycle are useful only if one is interested in learning to ride the beast. Similarly, one has to be interested in becoming a mentor if one wishes to be a successful one.

The Mentor as Friend

Some leaders in the collegiate teaching profession advise strongly about maintaining a strict business-like relationship between the student protégé and the professor mentor. A professor should not have *any* casual relationships with students, that such relationships "conflict with our

fundamental obligations as professors"⁶ and the ethics of the relationship require that the professor remain "dispassionate", avoiding any appearance of partiality. The professor should "not seek to be their psychiatrist, friend, or lover".⁷

I firmly agree about the psychiatrist and lover part, but I am not sure about the evil of friendships between students and professors. Too often we tend to be overly cautious and to keep students at a distance, not offering them the encouragement and support they need. One educator has observed that "there are far too many students in our courses for whom learning has been a humiliating experience. It is remarkable in how many ways teachers unwittingly exacerbate [students'] lack of self-esteem".⁸ One way of encouraging students to higher levels of achievement is to offer friendship as a part of the professorial role.

Richard Baker, in a wonderful description of the book *A Small Room* by May Sarton, presents a convincing case for friendship between professor and student. There are times and situations, he argues, where friendship is exactly what is needed in the mentoring relationship. Such a friendship does not have to be destructive or result in unjust impartiality. A small note of encouragement, a friendly gesture, making time during a busy schedule for "hanging out", asking an underachieving student to chat, answering e-mail, paying attention to their extracurricular activities and achievements are all indicators of friendship, and they mean a great deal to students. As Baker concludes, "The key ethical point... is that the professor — both inside and outside the classroom — should act as a friend".⁹

⁶ Peter Markie *A Professor's Duties* Rowman & Littlefield, Lanham MD, 1994, p. 74.

⁷ Stephen Cahn *Saints and Sinners: Ethics in Academia* Rowman & Littlefield, Totowa NH, 1986, p. 35.

⁸ Joseph Katz "Does Teaching Help Students Learn?" in B. A. Kimball (ed) *Teaching Undergraduates* Prometheus Books, Buffalo NY, 1988 p. 177.

⁹ Richard Baker Jr. "Ethics of Student-Faculty Friendship" in *Ethical Dimensions of College and University Teaching: Understanding and Honoring the Special Relationship Between Teachers and Students* Linc. Fisch (ed) New Directions for Teaching and Learning, Number 66, Summer 1996, p. 32.

⁵ D. T. Atkinson *Magic, Myths and Medicine* The World, Cleveland OH, 1956.

But there is a difference between “friend” and “pal”. Remember that the teacher/professor/mentor has a special power relationship with the student. The professor will be called on to evaluate performance and to do this “dispassionately”. An advisor or mentor cannot be a pal. A professor trying to be a pal will destroy the fragile relationship between student and professor that is such an integral part of education.

Student-Specific Mentoring

The mentor’s relationship with the protégé must be student-specific because different students need different kinds of mentoring. Sometimes these needs are obvious, but often they are not. To get started, some gross generalizations are useful. For example, there is a significant gender difference in what undergraduate students expect from an advisor, as shown in the table. I suspect this holds for graduate student mentors as well.

Female students on average, expect the advisor to get to know them as a person and to establish a working relationship. Male students, on average, want the facts, and depend on the advisor to be right about those facts.

Although this table shows a statistically stunning difference between what men and women expect from an advisor, we have to be careful about unwarranted generalization. More men than women want concrete and directive suggestions, yet a significant fraction of women also want concrete and directive suggestions. However, a significant fraction of women still expect such help.

Similarly, one third of the men expect the professor to take the time to get to know them personally. What this means is that the advisor cannot easily predict, based on some characteristics such as gender, how best to serve the students’ needs. All students should be treated as individuals by allowing them to set the tone for what the relationship will be like. It is always best to allow the student to lead the way.

WHAT STUDENTS EXPECT FROM AN ADVISOR¹⁰

Percentage of men and women students who expect an advisor to...

...take time to know me personally.
30% of Men 72% of Women

...share my interests so that we have something in common.
31% of Men 58% of Women

...know where to send me to get information.
48% of Men 51% of Women

...know the facts about the courses.
64% of Men 43% of Women

...make concrete and directive suggestions.
66% of Men 23% of Women

Responding to Personal Problems

One of the most difficult mentoring situations occurs when students seek help with serious personal problems. The best option often is to recommend that the student seek professional counseling from the university counseling service. This advice is to the benefit of both the student and the professor, and the professor has an ethical responsibility not to try to do amateur psychiatry. It is sometimes useful to have the telephone of the university counseling service handy to give to the student in need, and at times it will be necessary to call the counselor and explain the situation. If an uncomfortable situation develops in an office, getting up and simply opening the office door is effective. The message should be clear. Some instructors will always keep their office doors open just to prevent the possibility of a student claiming that something untoward had happened in the office.

¹⁰ R. J. Light *The Harvard Assessment Seminars* Harvard University Press, Cambridge MA, 1990.

The Toxic Mentor

The relationship between the mentor and protégé can be a mutually satisfying and even rewarding one, but it can also be the cause of great anguish and pain. Perhaps it is wise to ask if the mentor/protégé system is a good one, or if some other system would be better. Consider, taking the lead from John Rawls, an “original position”¹¹ of both professors and students in a department where every faculty member is to advise every student equally. With time, would the students not seek out one or several professors with whom they have the greatest rapport and whose advice they begin to value? And would the professors not begin to identify those students they most would like to work with and in whom they see the greatest potential? In other words, the “original position” is an unstable situation, and students will eventually migrate to those professors who they most want to have as their mentors. It therefore appears that the mentor/protégé system is a natural outcome and is not one that is synthetically imposed on us.

Ideally, therefore, the student becomes a professor’s protégé by mutual consent. But the world is often not ideal, and professors can become mentors by other means. For example, the availability of funds can force a student to choose or change a primary advisor, or the professor may leave the university, again forcing a change in advisors. Finally, the process is dynamic and a relationship that seemed to be excellent in the beginning of the student’s program can sour as new responsibilities and requirements are imposed. Thus it is possible for students to have what Stephanie Bird calls *toxic mentors*.¹²

Students caught in a trap with a toxic mentor can either graduate fast, or try to change the primary advisor. Neither is easily done. Many faculty believe that they make investments in students and that the student should then show loyalty in not shopping around for a new primary advisor, taking the news of disloyal behavior personally and often vindictively. But sticking it out is equally destructive

to both the mentor and protégé. The best advice would be to put off the decision to choose the advisor for as long as possible to get a better sense of what mentoring skills various faculty have.

The University’s Role in Improving the Quality of Mentoring

The university can enhance the mentoring skills of its faculty by establishing programs organized through the graduate schools. A number of universities have developed such programs, including Syracuse University, the University of Michigan, Wayne State University, the University of California at Berkeley, and California State University in Fresno.¹³ Some insights from these programs might be useful:

1. Universities should establish policies that would allow graduate students to have the option of selecting separate mentors for research and teaching even if not all students want this freedom and not all faculty members accept this role division.
2. The graduate school must be the focal point for establishing a mentoring program. These programs cannot be established and maintained on a departmental basis.
3. The university should provide rewards and appropriately recognize faculty participation in a mentor training program.
4. Members of the graduate school dean’s office must develop regular feedback sessions with students. At the University of Michigan each department is regularly evaluated and the process always begins by asking the graduate students for their opinions on what is happening in the department.
5. The university should create awards for exemplary mentoring. At Wayne State University, an award was inaugurated for the Outstanding Graduate Mentor, patterned after one at Arizona State

¹¹ John Rawls *A Theory of Justice* Belnap Press, Cambridge 1971.

¹² Stephanie Bird, MIT, at a seminar on mentoring for women in science, Duke University, 1997.

¹³ N. A. Gaffney (Ed) *A Conversation About Mentoring: Trends and Models*, Council of Graduate Schools, Washington DC, 1995.

University. The Wayne State award requires a nominating letter from the departmental chair, a statement from the nominee accepting the nomination and stating his or her philosophy on mentoring, and at least three letters from present or past graduate students. The first year the competition was held, over fifty-two nominations were received! Although only three letters of support were required, two of the nominees received over fifty letters from past and present students! The university publishes and distributes to all faculty and graduate students the winner's nominating letter and the statement by the nominee, as well as excerpts from the supporting letters.

6. Mentoring should become part of the tenure and promotion process. At the present time, Duke's tenure dossier contains undergraduate student evaluations but no input from graduate students. Letters should be solicited from past graduate students asking their opinions on mentoring and these letters should be included as part of the dossier.
7. All Ph.D. students should be asked to complete exit surveys, asking them to assess the experience they had with their mentors and other faculty in their department.

These are all good ideas and if implemented can no doubt improve the mentoring process at any university. But we have to be realistic. If a faculty member, especially a senior faculty member, does not wish to spend time helping students, then there is little a university can do to improve the situation. Mentoring does not come from a guidebook, a set of rules, or even from incentives. Mentoring comes from the heart. It's sort of like the old saying: "Never try to teach a pig to sing. It won't work and it annoys the pig".

Conclusion

When does mentoring cease? Do the protégés, upon graduation, break the umbilical chord and trundle off on their own? I suggest that this actually does not occur. A mentor is like a tattoo, it stays with you forever. Whatever becomes of you professionally, you will always be known as "so-and-so's student".

As an anecdote, I offer the difficulty former graduate students have in calling their mentors by their first name. It took me ten years after graduation before I could muster up the courage to call my mentor, Dr. Daniel Okun¹⁴ by his first name. Why not, I kept telling myself. I was a professor just like him, and he probably would have liked the more familiar salutation. But there was something that prevented the conversion to the familiar. He is a special person. He always will be. He is my mentor.

Let me conclude with a story, one I read in one of the *Chicken Soup for the Soul* books.¹⁵ It goes like this:

One night a group of nomads were preparing to retire for the evening when suddenly they were surrounded by a great light. They knew they were in the presence of a celestial being. With great anticipation, they awaited a heavenly message of great importance that they knew must be especially for them. Finally, the voice spoke. "Gather as for them. Finally, the voice spoke. "Gather as many pebbles as you can. Put them in your saddlebags. Travel a day's journey and tomorrow night will find you glad and it will find you sad." After the light departed, the nomads shared their disappointment and anger with each other. They had expected the revelation of a great universal truth that would enable them to create wealth, health and purpose for the world. But instead they were given a menial task that made no sense to them at all. However, the memory of the brilliance of their visitor caused each one to pick up a few pebbles and deposit them in their saddlebags while voicing their displeasure. They traveled a day's journey and that night while making camp, they reached into

¹⁴ Former chair of the Department of Environmental Sciences and Engineering, University of North Carolina at Chapel Hill.

¹⁵ John Wayne Schlatter, quoted in *A Second Helping of Chicken Soup for the Soul*, Jack Canfield and Mark Victor Hansen, Health Communications, Deerfield Beach FL, 1995.

their saddlebags and discovered every pebble they had gathered had become a diamond. They were glad they had diamonds. They were sad they had not gathered more pebbles.

Our job as professor is to encourage our students to fill their saddlebags with pebbles, and we hope they all turn into diamonds.



PLEASURES AND PROBLEMS: REFLECTIONS ON MENTORING STUDENTS OF COLOR

Contributed by,
Harry Reed, Ph.D.
Department of History
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Most academics tend to agree on some positives about the mentoring process: enhanced student performance; a more rounded relationship between faculty and student; and a greater appreciation for diverse learning styles. Critics of the process might cite: new pressures on the student teacher relationship; increased time and tasks in the teaching environment; and the possible intrusion of nonacademic personal dimensions in the learning. The questions may be exacerbated when students of color are added to the equation. Earnest individuals might question their own ability to relate to special circumstances attendant on being a student of color; failure to understand completely certain traditions of the academy; skepticism about seemingly unnecessary tasks and strictures; and unspoken assumptions about race, gender, ethnicity, and class. Thus, mentoring students of color may be perceived more often as a problem than as a natural extension of the teaching/learning continuum.

During my career and as a faculty person of color I have witnessed and entertained some of the above concerns. On balance, however, I would argue that the opportunity to mentor students of color is more correctly assessed as a

relationship of pleasure and pain. Pleasure in the achievement of understanding subject matter, winning scholarly competitions, and constructing a new life-long friendship. Pain also has been part of the experience. Having to inform the student that, despite your best collective efforts, no progress was being made toward completing the degree. Or, acknowledging my own inadequacy when admitting to a student that I could not help them to become a historian.

My task here is to share some of the dimensions of mentoring students of color that I have experienced. Initially, some relationships started in an atmosphere of ambivalence. I was not the major professor but I afforded some familiarity in what was an atmosphere of indifference, confusion, and sometimes hostility. One male student adopted me as a surrogate father. We had almost daily chats about music, family, homesickness, and, oh yes, academics. In this instance, it was usually the student trying out research proposals, paper theses, or analysis of course reading material. My function in these sessions was mostly to listen, offer encouragement, and pose questions that he might expect in the seminar room. We never discussed this process. It evolved naturally as I began to understand that the sessions were sounding boards to bolster his confidence for the seminars.

But, the sessions gave me a foundation to offer constructive criticism when necessary. I remember a session where the student oscillated between anger and embarrassment over the grade received on his first book review. He was at first reluctant to let me read it, and when I affirmed the instructor's grade he felt betrayed. How could I, as a person of color and someone that he had spent hours discussing the book with, agree with that majority professor? The answer was relatively easy: good scholarship has no color dimension. But, it took dinner at my house to calm him down to the point where I could help him see that several of the points he made in our talking sessions were not part of his review. Over dinner we talked about discourse, how it incorporated thinking and writing, as well as talking. Later, we had the opportunity to talk about his essentialism.

Mentors must be sensitive that students of color often stake a claim to authenticity and particular learning/research agendas to the detriment of the disciplinary craft. This often manifests itself in inquiries about the necessity of studying a topic and course outside of the student's racial, ethnic, and gender parameters. I have found it relatively easy in historical work to negotiate those strictures. My discussions have usually followed the line of acknowledging context as an important dimension of any historical event. Blacks, women, Native Americans, Latinos do not exist in vacuums. Most humanities and a considerable portion of social science research illumines interactions between various members of the human species. Admitting that context is an important, although not the most significant, determinant of historical interpretation can produce interesting and spirited discussions of disciplinary craft.

Claims of authenticity can be a troublesome presence in the classroom. Often students of color feel the need to defend or define certain cultural practices or correct the naivete of majority students and professors. As Michael Eric Dyson discovered, students of color feeling the need to defend their turf can hold a class hostage that can disrupt rather than enhance the learning process.¹⁶ As Dyson also discovered, the frustration he felt attempting to work with the claims to authenticity also stimulated him to conceptualize his work on Malcolm X. Further, it gave him the opportunity to (shape) student explorations of cultural lag, myth making, and hard analysis.

Exclusive research agendas, I only want to do work on people of color, preferably my own group, are a variation of the authenticity impulse. Rather than despair, mentors need to listen carefully and be innovative. One of the most pleasurable yet intense working relationships ensued when I encountered a young man eager to explicate the revolutionary consciousness of American slaves. In the absence of primary testimony from slaves and therapy session

¹⁶ Dyson, Michael Eric *Making Malcolm: The Myth and Meaning of Malcolm X* New York: Oxford University Press, 1995.

notes we had to explore how to get at that mindset, if, indeed, such a mindset existed. We initially turned to the scholarship he knew and had rejected on comparisons between black American slaves and Jewish concentration camp inmates.¹⁷ We decided to interrogate the theory and practice of hell scholarship in a different way. We established a loose baseline on how people in life threatening circumstances might act. We next turned to works on slave personality formation, religious conversion literature, and the works on other people of color making significant transitions in their status. I was amazed at the amount of reading the student was willing to pursue and his growing sophistication with interdisciplinary research. In the end, he never completed the study but he was willing to desert the comfort of racially exclusive research. He had uncovered stimulating avenues to new research that emphasized multifactored causation and multifactored explanation.

Ultimately, one of the most rewarding mentoring relationships I have had is with a young black female who told me pointblank that she did not want me on her Ph.D. committee. Such a relationship places major pressures on the mentoring relationship. In part, it calls for the ability to be critical in the face of possibly damaging the personal relationship. While it may be necessary to listen while the student criticizes ones colleagues the mentor must possess the integrity to confront the mentee about misinterpreting certain interactions. For example, students of color may often mistake social ineptitude and rudeness for racism. This is a difficult issue to walk students of color through.

Having been in the situation of listening to a colleague and friend being accused of racism I responded positively to her request. She needed, she said a friend and sounding board in the department and later in the profession whom she could trust at a personal and professional level. I function as a good listener, cheerleader, and sometime critic. It works well, in part, because she is a bright, energetic, growing young professional. It works well at the personal

¹⁷ Elkins, Stanley *Slavery: A Problem in American Institutional and Intellectual Life* Chicago: University of Chicago Press, 1959. see also Eugen Kogon *The Theory and Practice of Hell* New York: The Berkley Publishing Corporation, 1958; and John Blassingame *The Slave Community, Plantation Life in the Antebellum South* New York: Oxford University Press, 1974.

level also because she is the age of one of my daughters and because I respect her struggles to balance family, personal, professional and political dimensions that have an impact on her life.

I suggest the success of mentoring students of color requires a willingness to go the extra mile if necessary. To illustrate, several years ago I received a call from a student in California to talk about his first job after his undergraduate studies. Although happy about his position he was disturbed that he had been subpoenaed to appear in a case from his college days. He needed a place to stay during the trial, which we expected to last only a single day. On trial day I dropped him at the court and went to my office to begin my day. About three hours later I received a call from the young man saying that he had won the case because his accuser failed to appear. But, there was an outstanding warrant for traffic tickets and the bailiff was ready to transport him to the county jail if he could not pay the \$300 in fines. He, of course, did not have the money. I went to the court and paid the fines for my embarrassed former student. He was doubly shamed because having just gotten his first full-time professional position he did not have the money to pay me back immediately. It took him more than a year to remove the debt but the more important consideration is that we have remained in touch through the present. We still have long conversations about his work life, the newest books he has read, contemplating marriage, his continuing contact with other former students.

In closing, the gratifying results of negotiating the problems and pleasures of mentoring students of color are similar to the goals undergirding our best educational hopes. If, as professionals we attempt to enhance our students abilities as critical thinkers and to assist them in internalizing a commitment and a methodology for life-long learning, those goals do not change simply because we mentor students of color. In 1989, Yvette Alex, a black graduate student at Ohio State University said "That graduate school is an independent exercise and can be isolating."¹⁸ It would appear to me that a commitment to research integrity compels both students of color and mentors to work

diligently toward reducing that sense of isolation in pursuit of the greater goals of enhancing scholarly qualities and making the academy a more humanistic institution.



GUIDING PRINCIPLES FOR GOOD PRACTICE IN GRADUATE EDUCATION¹⁹

Pennsylvania State University

The following guidelines are adapted from a statement of principles endorsed by the Graduate Council of Pennsylvania State University in 1996. The document reflects some concerns outlined in a similar document prepared by the Graduate School of the University of Oregon.

Working relationships between faculty, staff, and students are an important component of graduate education at Penn State. The quality of these relationships can make or break the graduate school experience. The development of a positive learning environment depends on a shared vision of educational values, objectives, and expectations. It is the joint responsibility of faculty, staff, and students to work together to nurture this vision, and to encourage freedom of inquiry, demonstrate personal and professional integrity, and insure a climate of mutual respect. The following six principles are essential elements in a productive environment for graduate education at Penn State.

¹⁸ Magner, Denise K. "Minority Students Say the Road to the Professorate Can Be Rocky," *The Chronicle of Higher Education* November 15, 1989.

¹⁹ Used with permission.

- **Understanding the work environment.**

Faculty, staff, and students must each take the initiative to learn the policies, rules, regulations, and practices that affect them, their work, and the units in which they work. Graduate program handbooks, pertinent University publications, funding agency references, and other resources can typically be obtained from graduate program officers, the Internet, registered student organizations, department faculty, other students, faculty advisors, and thesis committee chairs.

- **Academic honesty, professional integrity, and confidentiality.**

These qualities are the responsibility of the all faculty, staff, and students. Each member of the graduate community must endeavor to adhere to the highest level of these ideals in all their personal and professional activities.

- **A clear course of study.**

The student and his/her faculty advisor should develop and agree upon a clear plan of academic study and the responsibilities associated with it. Careful planning and discussion throughout a graduate program are the best ways to avoid later misunderstandings and problems.

- **An atmosphere of openness.**

Students and faculty must work to establish and maintain an environment that is open, sensitive, and encourages free discussion between members of the graduate community. Clear, two-way communication is a critical ingredient in a successful graduate experience.

- **Acknowledgement of intellectual rights and property.**

Students and faculty should discuss issues associated with academic freedom, intellectual

property, authorship, and publication as a part of the student's academic plan. Resolution of these issues early in the graduate program is often the best way to avoid later disputes.

- **Opportunities for evaluation.**

Evaluation, reflection, and feedback are integral parts of the academic process. These items should be a regular part of every graduate program. Early, frequent, and constructive feedback help to prevent small differences from becoming serious problems.

While these six principles are not exhaustive, they do reflect a spirit that can make the graduate education process at Penn State more rewarding and productive for everyone.



We continue to invite contributions, comments, suggestions, letters and articles for future editions from faculty, graduate students and administrators. Please contact the editor, Julie Reyes at: reyesjul@pilot.msu.edu.



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PARTIAL LISTING OF RESOURCES REGARDING MENTORING

- Adams, Howard G. Mentoring: An Essential Factor in the Doctoral Process for Minority Students. National Consortium for Graduate Degrees for Minorities in Engineering and Sciences, Inc. (GEM), 1992.
- Burke, Ronald J., Carol A. McKeen, and Catherine S. McKenna. "Sex Differences and Cross-Sex Effects on Mentoring: Some Preliminary Data," *Psychological Reports*, Vol. 67, 1990: 1011-1023.
- Burke, Ronald J., Catherine S. McKenna, and Carol A. McKeen. "How Do Mentorships Differ From Typical Supervisory Relationships?" *Psychological Reports*, Vol. 68, 1991: 459-466.
- Bushardt, Stephen C., Cherie Fretwell, and B. J. Holdnak. "The Mentor/Protégé Relationship: A Biological Perspective" *Human Relations*, Vol. 44, No. 6, 1991: 619-639.
- Carden, Ann D. "Mentoring and Adult Career Development: The Evolution of a Theory" *The Counseling Psychologist*, Vol. 18, No. 2. April, 1990: 275-299.
- Darling, LA. "What to do About Toxic Mentors" Nurse Educator, Vol 11, No. 2: 29-30, 1986.
- Edlind, Elaine P. and Patricia A. Haensly. "Gifts of Mentorship" *Gifted Child Quarterly*, Vol. 29, No. 2. Spring, 1985: 55-60.
- Gilbert, Lucia Albino, and Karen M. Rossman. "Gender and the Mentoring Process for Women: Implications for Professional Development" *Professional Psychology: Research and Practice*, Vol. 23, No. 3, 1992: 233-238.
- LaPidus, Jules B., and Barbara Mishkin. "Values and Ethics in the Graduate Education of Scientists" In Ethics and Higher Education, Edited by William W. May, American Council on Education, Macmillan Publishing Company.
- Newby, Timothy J., and Ashlyn Heide. "The Value of Mentoring" *Performance Improvement Quarterly*, Vol. 5, No. 4. 1992: 2-15.
- Noe, Raymond A. "An Investigation of the Determinants of Successful Assigned Mentoring Relationships" *Personnel Psychology*, Vol.41, 1988: 457-478.
- Research Student and Supervisor: An Approach to Good Supervisory Practice, Council of Graduate Schools. Washington, D.C., 1990.
- Roberst Priscilla, and Peter M. Newton. "Levinsonian Studies of Women's Adult Development" *Psychology and Aging*, Vol. 2, No. 2. 1987: 54-163.
- Schockett, Melanie R., and Marilyn Haring-Hidore. "Factor Analytic Support for Psychosocial and Vocational Mentoring Functions" *Psychological Reports*, Vol. 57. 1985: 627-630.
- Swazey, Judith P. and Melissa S. Anderson. Mentors, Advisors, and Role Models in Graduate and Professional Education, Association of Academic Health Centers, Washington D.C., 1996.
- Wigand, Rolf T., and Franklin S. Boster. "Mentoring, Social Interaction and Commitment: An Empirical Analysis of a Mentoring Program," *Communications*, Vol. 16, 1991: 14-31.



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