

Minutes*
[Amended as noted February, 2001]

**Senate Research Committee
Monday, December 18, 2000
1:30 - 3:00
300 Morrill Hall**

Present: David Hamilton (chair), Melissa Anderson, Esam El-Fakahany, Jerry Flattum, Eric Klinger, Scott McConnell, Richard Poppele, Barbara Van Drasek

Regrets: Victor Bloomfield, Daniel Brewer, Leonard Kuhl, Mark Paller, Sharon Neet

Absent: Robin Dittman, Phillip Larsen, Susan Miller

Guests: none

Other: none

[In these minutes: policy on postdocs (appointment, benefits, terms of employment, etc.); Intellectual Property Policy acknowledgement; discussion of statement on research using animal and human subjects; policy on secrecy in research]

[NOTE: The January 22, 2001, Minutes of the Senate Research Committee contain extended discussion of item 3 in these minutes and sharp disagreement on the part of University authorities with the text proposed by the subgroup.]

1. Policy on Post-Docs

Professor Hamilton convened the meeting at 1:35, reviewed the agenda, and turned to Associate Dean El-Fakahany to lead a discussion of the elements that might go into a policy concerning post-doctoral appointments. Dr. El-Fakahany had earlier provided to Committee members a set of recommendations concerning post-doctoral appointments from the National Academy of Sciences. The discussion focused on those recommendations, which are these:

1. An important first step is for institutions to take a census of their post-doctoral populations.
2. Institutions should classify all postdocs in a distinctive and appropriate category that embraces their unique institutional position. A useful general statement about the role of the postdoctoral appointment comes from the National Academy of Sciences book "Enhancing the Postdoctoral Experience for Scientists and Engineers": "The postdoctoral experience is first and foremost a period of apprenticeship [after obtaining the Ph.D.] for the purpose of gaining scientific, technical, and professional skills that advance the professional career."

* These minutes reflect discussion and debate at a meeting of a committee of the University of Minnesota Senate or Twin Cities Campus Assembly; none of the comments, conclusions, or actions reported in these minutes represent the views of, nor are they binding on, the Senate or Assembly, the Administration, or the Board of Regents.

3. If they have not already done so, institutions should establish explicit policies regarding the appointment, training, compensation, benefits, evaluation, and career guidance of postdoctoral scholars.
4. In particular, institutions should establish a minimum salary/stipend level for all postdocs.
5. Institutions should adopt guidelines for the duration of postdoctoral terms.
6. There should be a general progression, as a postdoctoral term lengthens, toward more senior status, with commensurate pay and benefits.
7. The institution should periodically review the balance of interests among postdocs, advisers, departments, and the institution in order to assure that the legitimate educational needs and career interests of postdocs are being met.
8. Institutions should not encourage unlimited growth in the postdoctoral (or graduate student) population in the face of limited employment opportunities.
9. Institutions should maintain a postdoctoral office or officer to provide guidance, logistical support, information on postdoctoral policies, opportunities for continuing education, and registration information for all postdocs. The institution should also designate an ombudsperson or other representative to provide counsel for postdocs (and advisers) and help arbitrate grievances.
10. Institutions should encourage each of their divisions and programs to examine their roles in the education and training of postdocs and in maintaining high standards of mentoring.
11. Institutions should require evidence that funding for a postdoc is available before PIs are allowed to hire postdocs on research grants.
12. The institution should receive and keep on file a letter of appointment or contract signed by the postdoc, adviser, and institutional representative. The letter should be accompanied by a statement of goals, policies, and responsibilities applicable to postdoctoral education, including the skills the postdoc should plan to develop to meet career objectives.
13. The institution should ensure that postdocs have guidance in career planning.
14. Institutions should ask advisers to prepare a written evaluation of their postdocs' progress/performance at least once a year.
15. The special needs of foreign nationals should be addressed by a contact person in an existing or new office of international services. This person should have expertise in visa and immigration policies.
16. Each institution should encourage and financially support a postdoctoral association that serves the social, informational, and logistical needs of postdocs and provides a mechanism for them to communicate with institutional leaders.

Dr. El-Fakahany said he wished to obtain opinions from the Committee on what a policy might consist of. At present the University has no policy and no office to deal with post-docs but it should help post-docs as much as possible because they are at a stage in their lives where they are seeking professional growth.

Apropos point number 2, Dr. El-Fakahany noted that a post-doctoral appointment is defined as a transient stage in educational development. The University has several categories in which a post-doc might be appointed; to achieve the census called for in point number 1, all of the categories must be added together. Committee members discussed for some while the problems that exist in identifying all the post-docs at the University and mentioned several points:

-- There are probably a number of people in functionally-equivalent positions outside the bench sciences who may be appointed as post-docs or in equivalent positions.

-- A post-doc may carry funding that does not come through the University so Human Resources would not count the individual; Human Resources may need to change job descriptions and positions in order to obtain an accurate count of post-docs.

-- There will need to be some critical element in position descriptions so they can be counted; in some cases, it would otherwise be difficult to discriminate between post-docs and some P&A appointees.

-- PeopleSoft may have a function that will identify post-docs. In spite of the problems with PeopleSoft it is a very sophisticated program that has been reviewed by many universities. The question may be whether or not the University has identified people as post-docs. It should be possible to have a note in PeopleSoft for post-docs whether or not they carry their own funding.

-- What is a post-doc? According to the recommendation from the National Academy of Sciences, Dr. El-Fakahany said, a post-doc is someone who has obtained a Ph.D. or equivalent (not a terminal degree, which in some fields may be a Master's degree) and who is acquiring additional training in a temporary position at the University and who is not renewed on a year-to-year basis for an extended period of time.

-- Is a post-doc a student? How the individual is classified--as a student or as an employee--has tax implications. The University would not want to put someone in a category that is bad for them or for the institution. At the University of Iowa, for example, post-docs come under the jurisdiction of the Graduate School; representatives of post-docs here, however, have indicated they do not want that arrangement and want to be distinguished from students. They are in between being students and being employees.

-- Some post-docs at the University carry employee costs (FICA, etc.) while others do not. The University, Dr. El-Fakahany said, wants all post-docs to be treated the same in this respect. Human Resources could be asked to have a way to identify post-docs, to track their placement and progress, and to work on unifying benefits (including such things as access to email, use of the libraries, and so on). Professor Hamilton expressed a concern regarding the availability of flexible financial resources that could be used to cover post-doc fringes not covered by individual awards or fellowships.

-- Are post-docs from on campus or brought from outside? Ideally, they come from outside the University but there is a mix of people from both inside and outside the University; some finish their doctoral studies here and stay on.

-- There should be definitive letters of appointment for post-docs that identify the source of funding and conditions for continued appointment; right now those things are more word-of-mouth. There are few records and little protection for post-docs.

-- Dr. El-Fakahany said that since most post-docs are in the life sciences the minimum salary for a post-doc should be that provided for by NIH: \$26,000. There would not be a maximum and some disciplines do offer higher stipends. Is this minimum too high? There is no intent to price some fields out of the market. It was noted that graduate research assistants can be paid more than \$26,000 if one calculates their rate on a per-hour basis. The post-doc salaries can be increased, however, with years of experience; NIH has such a scale. Dr. El-Fakahany said the University would encourage rewarding

excellence; departments set salaries in different ways, with some linking increases to faculty increases and others not. He said the University wants the PI to be free to reward outstanding performance.

-- How many post-docs are there at the University? About 800, although that is an uncertain figure. The figure also says a lot about the institution; at the top research universities the ratio between funded post-docs and faculty is 1:1 or greater. Minnesota is nowhere near that ratio; other places have a lot more post-docs per faculty member.

-- The recommendations, Dr. El-Fakahany agreed, would provide for professional development for post-docs and help them get jobs in the future, which should be a good selling point.

-- These recommendations can help those outside the bench sciences learn what a post-doc can be or should be. There is a sense that a post-doc outside the bench sciences is different from those in the bench sciences.

-- A very important item is number 5, which calls for a limit to the post-doc appointment. At present the University requires the term be no more than three years, although the rule is not well enforced. The University needs clearly to state that the post-doc is transient and the individual should not stay at the University but should seek an appointment in the field. The proposal being considered, Dr. El-Fakahany reported, is that the total post-doctoral experience must be five years or less; someone could come to the University with two years' experience and stay no more than three years. This would say one cannot be a post-doc for ten years.

Are there other job categories an individual could go to, such as in the P&A ranks? There are, and that would have to occur if the three-year limit is enforced. That happens now and those who have the jobs are neither fish nor fowl; some are here much longer than three years and then become P&A staff for a very long time.

Some Committee members agreed that limiting post-doc appointments and identifying them as a training period is a good idea; it was also argued that the limit should not result in laboratories being harmed. A post-doc may be in the middle of working on a major effort and should not be automatically terminated; the limit should serve as a check-point, with options, rather than requiring someone be pushed out the door. At the same time, people should not be exploited.

On the other hand, the longer someone is here, the more integrated in the lab they become, the more likely they may have brought in their own funding and are a part of the lab--they are beyond being transient and are no longer in a training period. They may transfer to another appointment status, but then questions about space and support are raised; departments generally do not have extra space so the person is squeezed in somewhere.

-- Can the Big Ten compete with the private institutions? The privates are very good in encouraging post-docs to become independent. The worry is more about the person who stays five years and who has no hope of getting a job in a competitive market; that is one reason to limit the duration of the post-doc.

The remainder of the recommendations, Dr. El-Fakahany said, bear on having a central office to keep track of and advise post-docs, on setting policy for their evaluation and setting the terms of their appointment. Some Committee members thought that Human Resources should be involved only to the

extent of keeping records and tracking, not in the judgmental aspect of evaluation; the latter should reside in the Graduate School and programs. A suggestion was made that the post-doc office or main contact person should actually reside in the Graduate School rather than Human Resources.

What does he wish from the Committee, Professor Hamilton inquired of Dr. El-Fakahany? Suggestions about the document and policy items, Dr. El-Fakahany said. His office will work on the recommendations, to polish them, and will return to the Committee with a more advanced draft.

This is not just about setting policy, Mr. Flattum commented, but also about building community; he urged creating a website for post-docs. Professor Hamilton agreed and said that not much has been heard about the faculty one-stop that is being set up; a similar one-stop could be created for post-docs.

Professor Hamilton thanked Dr. El-Fakahany for his report and asked that a draft policy be brought back to the Committee.

2. Intellectual Property Policy Acknowledgement

Professor Hamilton next distributed copies of the acknowledgement page from the Intellectual Property policy and asked if there were any adverse reactions to it. If not, he said he would like a motion to approve it. Approving this document, he commented, is a little strange because it is required by federal law; the University MUST require signatures on it, but it will likely be better received by the faculty if it has the approbation of a deliberative body such as this Committee.

How is this brought to people for signature, Professor McConnell asked? In various ways, Professor Hamilton said: in training sessions on the responsible conduct of research, all PIs are asked to sign it, as are all new faculty members. Graduate students, post-docs, faculty, and anyone else who might generate intellectual property are required to sign and abide by the policy. The policy is very liberal, Professor Hamilton added, but there are nonetheless people who bridle at signing anything.

Does federal law require signature or compliance, Professor Poppele asked? Signature, Professor Hamilton said. The University's statement is "on the edge" of what is required; the federal government wanted several pages while the University wanted less than a page because it was thought that would be less problematic.

Professor McConnell suggested that the administration should think about how to obtain the signature incidental to hiring. He then observed that the University has a standard, in the statement, that passes accountability to employees. Many employees are to be cognizant of this but he said he was uncomfortable with the institution saying "you are responsible for" something that may change without notice and that may be very complex. The University, he maintained, has a substantial obligation to notify employees of their responsibility. Professor Hamilton agreed and noted that Sponsored Projects Administration and Oversight Analysis and Reporting share an FTE who is to track changes in federal and state regulations concerning research and broadcast them to the University. It is, he added, very difficult to get people to go to websites to read policies.

3. Review of Research Using Animal and Human Subjects

[NOTE: The January 22, 2001, Minutes of the Senate Research Committee contain extended discussion of item 3 in these minutes and sharp disagreement on the part of University authorities with the text proposed by the subgroup.]

Professor Hamilton next called on Professor Klinger to remind the Committee of the genesis of the report prepared by Professors Brewer, Conte-Fine, and Klinger. Professor Klinger recalled that last spring, in the discussion of Internal Review Board (IRB) issues, there was a realization that IRB members sometimes not only discharge their responsibilities concerning the protection of human subjects in research but they also reject projects on grounds of scientific merit. Some saw that as the IRB exceeding its boundaries. As a result, he and Professors Brewer and Conte-Fine were asked to serve as an ad hoc subcommittee to draft a statement to identify the circumstances when an IRB or IACUC (Institutional Animal Care and Use Committee) can render judgment on scientific merit.

The statement of the subgroup (Brewer, Conte-Fine, Klinger) is as follows:

It was agreed that evaluation of scientific merit by bodies appointed specifically for the protection of human or animal subjects is appropriate only when a proposal has not already undergone a formal review by qualified peers. In the absence of qualified peer review, the following further considerations should apply:

In the case of human subjects, merit review is appropriate if the proposed procedures are such that there is a foreseeable nonzero risk of significant physical or mental harm for any individual subject or if, statistically, such harm from the proposed procedures is known to occur more often than with exceeding rarity.

In the case of animal subjects, procedures that inflict pain or suffering warrant merit review. Simple use and painless killing do not warrant merit review if the animals are reared and bred specifically for research use.

In the case of higher animals or animals not bred for research use, suffering includes social and physical constraints that significantly interfere with normal species-specific patterns of behavior.

There was a difference of opinion regarding whether merit review, when indicated, must be performed by bodies from outside the University of Minnesota.

None of the exemptions from merit review recommended above would alter current policies regarding reviews focussed on protections for human or animal subjects.

There is a major academic freedom question involved, Professor Klinger said; some questions cannot be investigated without animal or human subjects. If a committee reviews research proposals it can infringe academic freedom; at the same time, academic freedom can collide with the need to protect the rights of research subjects. This statement tries to sort out those conflicting rights.

A major reason this issue came up with the Committee, Professor Hamilton recalled, was a concern on the part of some about research conducted without prior peer review; another was a concern about the use of animals in teaching, Professor Poppele said. Professor Klinger agreed but pointed out that the statement does not try to address Professor Poppele's point. He commented that IACUC and IRB

do not have jurisdiction over animals used in teaching but Professor Hamilton corrected him; the two groups have jurisdiction over protocol and their focus is on protection, not on the science.

Professor Hamilton said he worries that there are research projects that have not had scientific merit review. Dr. El-Fakahany said such projects should be reviewed. Professor Klinger said the subcommittee disagreed: if faculty research is subjected to review by a faculty committee that infringes on academic freedom.

But one must submit research proposals to peer review when applying for a grant, Professor Hamilton objected. That is because one is seeking funding and the granting organization has the right to require such a review, Professor Klinger responded. In the case of unfunded research, faculty have the right to pursue projects without being second-guessed by their colleagues.

If unfunded research uses human subjects how does one establish a consent procedure, Professor McConnell asked? Professor Klinger said informed consent is a question separate from whether research can proceed without peer review; there is nothing in the subcommittee statement that opposes protection of research subjects. So the IRB is not to assess merit but is to ensure that informed consent is obtained, Professor McConnell inquired? Professor Klinger said that was correct. There must be protection for research subjects; the question is whether, in ensuring that protection, there must also be evaluation of scientific merit. If the subjects are fully informed and the investigator wants to proceed, it is no one else's business if he or she decides to do so. There are, he added, boundaries concerning the extent and nature of the risk, however.

Professor Hamilton responded by saying that "I almost completely disagree." If one is asking people off the street to sign forms but who do not realize the implications of what they are signing, harm can result. That is an error in obtaining informed consent, Professor McConnell said.

The statement does not address animal studies, the endpoint of which is sometimes death, Dr. El-Fakahany said. There is, in that case, irreversible harm so there must be certainty that the research will produce useful results. Who is to decide that, Professor Poppele asked? This is a very important point, he said, and he agreed with Professor Klinger that this was about the right to do research; no one can say "that is an invalid idea."

Historians can do research at no cost to humans; others do research using human subjects that give not only their time but perhaps more. When one does research on human or animal subjects, Professor McConnell commented, the effort is bigger than the individual researcher. At that point, standards of the larger community most likely need to be considered; in some instances, would not these standards require an evaluation of the scientific merit or promise of proposed research?

There are standards for pain and suffering where judgments must be made, Professor Poppele said, and it is possible there is overlap between those standards and issues of scientific merit, but if the standards are met, whose business is it to decide if the research will be conducted? There are "futile cycles" in research that demonstrate nothing new but in which subjects may be harmed (and this point has nothing to do with teaching), Professor Hamilton said. Who decides something is a "futile cycle," Professor Poppele asked? What criteria are used? That is decided in peer review, Professor Hamilton responded, and the criteria vary with the discipline. Why would anyone do such research, Professor Klinger asked? That is not the question, Professor Hamilton said; they do it.

Is it the view of some that all research should be subject to peer review, Mr. Wink asked? Because there are a lot of sponsored projects without peer review, such as ones funded by industry or small foundations. They are interested in doing good things and moving their agendas forward, not in elaborate processes of review.

The social context for academic freedom in this matter, Professor McConnell reflected, is that our society does not, at this point, object to killing animals if certain conditions are met and if there has been a judgment of scientific merit. There must be a serious purpose. The subcommittee is concerned about academic freedom but he said he would like an explanation of how one could justify to the public that this "was only one faculty member's idea" but it led to animal deaths.

Numbers and statistical design must be provided for review by IACUC, Professor Poppele pointed out. These do NOT get to the question of whether the research plan has scientific merit; they speak only to scientific PRACTICES, he said. So they speak only to the method, not what the scientific question is, Professor McConnell summarized. Professor Hamilton agreed and said they only ask about pain and suffering.

Does this answer Professor Klinger's concern, Professor McConnell asked? Professor Klinger said he did not believe an IRB or IACUC should substitute its judgment for that of the investigator on methodology but said the answer to this question was not clear. The greater problem is too few subjects. [Clarification from Professor Klinger: "The discussion had moved to the question of avoiding the use of unnecessarily large samples of subjects. My remark then was that in most research the problem wasn't too many but rather too few subjects, thus unduly limiting statistical power."]

Professor Hamilton said that in a separate message Professor Klinger made clear his concern that an IRB or IACUC made judgments on the value of research in his area, even though they were not qualified to make such judgments, and stopped research. That practice should be halted, in Professor Klinger's view. Professor Klinger agreed with that assessment and reported that while it had not happened to him, it had to colleagues and students. In some cases, the IACUC or IRB did not NOT approve a proposal but they made the process so cumbersome that students gave up on the research idea because they encountered bureaucratic delays.

That is a major issue, Professor Hamilton agreed, and is a separate issue. The Committee must deal with the process for obtaining approval for research protocols at a later time.

Professor McConnell observed that sometimes the boundaries between protocol review and merit review are soft; sometimes IRB or IACUC feedback may relate to scientific merit. The groups go beyond the boundary if a project meets standards but is still rejected. The IRB or IACUC must be pulled back in those circumstances, he said.

This will be a topic to discuss with Moira Keane, Professor Hamilton said, and will be brought to a later meeting: how to structure the bureaucracy so the process works better. Professor Hamilton agreed to a request from Professor Klinger that a statement of general guidelines for the IRB and IACUC will come from the Committee; all of those involved in the process will take part in the discussion.

4. Policy on Secrecy in Research

Professor Hamilton next reported that on close scrutiny of the existing policy on secrecy in research, the only changes he had to suggest were editorial. The Committee approved his suggestions unanimously.

Professor Hamilton adjourned the meeting at 3:00.

-- Gary Engstrand

University of Minnesota