

Minutes of Faculty Senate Meeting

May 9, 2001

Professor Howard Howland, Neurobiology and Behavior and Speaker: "There are no photos or tape recorders allowed during the meeting. We have no Good and Welfare speakers that we know of at this time. The Chair would like now to call on Professor Charles Walcott."

1. REMARKS BY CHARLES WALCOTT FOR DEAN ROBERT COOKE

Professor Charles Walcott, Neurobiology and Behavior, Associate Dean and Secretary: "Bob Cooke is suffering from a ghastly illness, very much like what I went through. I hope I did not give it to him. Anyway, he is not with us this afternoon, so I am the official substitute, therefore, which is a hard role to play. There are two basic items he wanted to bring to your attention. The first is that there is an issue which is going to be discussed this coming fall having to do with grades and grade inflation and such matters at the Law School which is going to require some discussion. The second is the result of Slope Day, and here are the casualty figures as it were. Comparative figures for the two years; it's not much different this year ([Appendix 1](#)). There is an increase of one that had severe alcohol intoxication on Slope Day. This is an issue which I think disturbs some of us, because the borderline between this state of affairs and an irreversible state of affairs, the possibility of there being a death, is something that is very real and is of great concern. So there will be a faculty committee which will work with Susan Murphy's office this coming fall to try and see if there are some constructive suggestions we might make to try and reduce these numbers in the future, because they really are, it seems to me, quite serious. That's the essence of what Dean Cooke would have said, just in a more eloquent form than I."

Speaker Howland: "The Chair now calls on Provost Biddy Martin for remarks."

2. REMARKS BY AND QUESTIONS FOR PROVOST MARTIN.

Provost Biddy Martin: "Good afternoon. First of all, I would like to thank all of you, since this is the last meeting of the year, for your cooperation. I want to thank the entire Senate, Bob Cooke, and the UFC and the Local Advisory Committee in particular for what, it seems to me, has been a very cooperative year. I want to just give you a quick update on the searches that are still ongoing. We will be able to announce the interim Dean of the College of Engineering at the beginning of next week. For those of you who don't know, we have decided to continue searching for a Dean of Engineering, but we will make an announcement about an interim Dean probably on Monday, but certainly at the beginning of the week. The search committee for the new Dean of the Graduate School has come up with a list of two candidates that they wish to send to the President for a decision. I guess those are the two primary searches for which you might wish to have an update. Our dean reappointment reviews and decisions are ongoing, but will be concluded soon. So if you have questions about any of those matters, I'll be glad to respond to them or any other matter."

Professor Peter Stein, Physics: "In the many years that I have been watching and following the faculty salary progression from year to year, I don't remember it ever having been May and not having an official report from the administration as to what the Endowed Faculty rate pool was going to be or what the policy was. Generally,

we have had some presentation by the administration and the Provost before this stating what, in fact, decision had been made. I just wondered why that was."

Provost Martin: "I'm thoroughly confused, Peter. You mean the results now that the improvements have been made?"

Professor Stein: "No, we have just never heard anything. I mean, we used to hear early in the year. We used to hear what the faculty raise pool was going to be. We have not had any such report."

Provost Martin: "Well, I'm surprised you haven't heard about it through your college, but on the endowed side, the faculty raise pool was 7% in the colleges with the expectation that the colleges contributed an additional 1%."

Professor Stein: "That has not been reported as far as I know."

Provost Martin: "Speak to your deans and department chairs. They have already implemented it. They certainly should have announced it in some form or another. That, of course, doesn't mean that everyone will receive that amount in salary increase, but that is the largest pool we have been able to provide for a very long time."

Professor Stein: "Let me express concern again. In fact, I knew that number some time ago, because I happen to be the faculty trustee and was also a member of the Financial Policies Committee. Roughly a month after the Trustees had made that decision, I sent a letter to you and the President indicating some concerns I had. I asked to circulate that letter to the Financial Policies Committee, and I was told I may not do that because of the vows of confidentiality and that that number you just quoted was a secret and was not to be released to the campus. On a number of occasions, I have asked for permission to tell the committee that I was on, the FPC, that that had been the decision and that was denied. I express some concern about that and the communication between the administration and the FPC and the Senate on that matter."

Provost Martin: "Well, I have to admit I don't exactly know what you are talking about. There is an agreement and it's also legally binding that we not announce our intentions in advance. We're not allowed and our peers are not allowed to do that. So that is true that up to a certain point the amount of the pool had to remain secret. We are now beyond that point, and in fact we are so far beyond it that the salary program has been implemented, and we are now getting back from the colleges the results of that implementation. So it certainly is no longer secret. As to your having been told that you couldn't tell the FPC what you knew as a trustee, that was probably accurate information you were given at the time at which you requested to be permitted to give the information out. But it would not have been true for a very long time, so perhaps you should have checked back or somebody should have alerted you. I just don't know enough about it, but it is the case that we are not permitted to announce in advance what our salary increases will be. That is true of all other institutions, not just here. So at the point at which you learned about the pool at trustee meetings, it may well be the case that at that point it was still too early for you to announce it to other groups. I just don't know. I think you should check it out with Barbara Krause and Jim Mingle."

Professor Stein: "It's not the Trustees I'm concerned about. I mean I have been watching this for a long time, and there generally has been discussion between the administration and the FPC about the size of the pool, that number that you just quoted. This year there had not been any discussion of that either with the FPC or the size of the pool was not publicly announced."

Provost Martin: "Well, you know, here is what I would say about it. Perhaps there have been announcements in the past at a point in time which we didn't follow exactly this year for whatever series of reasons. I have to confess I don't see this as a serious concern. When you make a request that we make an announcement to the Senate at a particular point what the pool is for that year, absolutely fine. Once it goes out; that's the pool; everybody knows; it will be announced here as well as in the colleges. It doesn't matter to me; no one is hiding anything. What we did was give out the highest pool humanly possible. That's what the faculty asked us to do;

that's what we did. We convinced the Trustees to increase the pay out on the endowment, and we raised tuition in keeping with what the faculty requested in order to make salary increases as high as we could. This is the first year of the program; it's also going to be the highest. We put as much money into the faculty pool as we possibly could and the result on the endowed side was 7%, with 1% expected from the college deans. There is no secret about it. In fact we are proud of it. So that's my response."

3. APPROVAL OF THE MINUTES OF THE APRIL 11 SENATE MEETING.

Speaker Howland: "I would like now to call for approval of the minutes of the April 11 Faculty Senate Meeting. Any addendum remarks? Hearing none, the minutes are approved. The Chair would now like to call on Associate Dean and Secretary Charles Walcott for a Nominations and Elections Committee Report."

4. REPORT FROM THE NOMINATIONS AND ELECTIONS COMMITTEE: CHARLES WALCOTT ASSOCIATE DEAN AND SECRETARY OF THE UNIVERSITY FACULTY.

Professor Walcott: "This is a big one, because we have a substantial number of new nominations to the various and assorted committees ([Appendix 2](#)). We still have a few people to find, but by and large, our success has been good. I am very grateful to all of you for your suggestions and your willingness to serve. One committee that we have had a particular difficulty and are still having a particular difficulty with is that of Faculty Representative to University Assemblies. It has proven very difficult to get people to be willing to serve on that committee. I think it is an important one, because that is where general university issues come up, things that are of some slight importance and interest to some of us, as for example, parking and things like that often come through the Assemblies, rather than the faculty side of things. So if anybody here is possibly willing or able to serve on the University Assembly, I would love to know your name and I will do what I can to see that you go through the nomination process with all deliberate speed. (LAUGHTER.) That's my report."

Speaker Howland: "The Chair now calls for unanimous consent of the acceptance of the report. Hearing no objections, it is accepted. Thank you very much. The Chair would like now to call on Professor Abby Cohn and Professor Mike Kotlikoff, members of the Task Force on Professorial Titles for a discussion on Professorial Titles.

5. DISCUSSION OF PROFESSORIAL TITLES: PROFESSOR ABBY COHN AND PROFESSOR MIKE KOTLIKOFF, MEMBERS OF THE TASK FORCE ON PROFESSORIAL TITLES.

Professor Abby Cohn: "Thank you. We are here today to really just give a progress report ([Appendix 3](#)). I wanted just to touch on where we have been, where we are and where we are going. You'll remember that Bill Fry, who is Chair of the Task Force, presented the charge to the Task Force at the February 14 meeting. Bill, in fact, is in Brazil right now, and that's why I am here representing him. I think there is some injustice in that, but (LAUGHTER.) OK, so the actual charge to the task force is on the faculty web site. I brought the most relevant part ([Appendix 3](#)) which is what we are supposed to be doing, which is consulting with deans, faculty, the Faculty Committee on Academic Freedom and Professional Status of the Faculty, review the current professorial titles and their history and formulate recommendations. The expected timetable is one you'll see that we have not kept.

"We have had biweekly meetings since November, and we have considered two main issues. We have considered the question of long-term, non-tenured professorial appointments, and we have also been considering the possibility of additional options for faculty approaching retirement. You heard about those issues most recently at the April 11 meeting when the sub-committee presented the possibility of a proposal along the

lines of Senior Professor. That sub-committee is now being chaired by Danuta Shanzer and Don Cooke, who is also very active and an important member of that committee.

"What I want to focus on for a couple of minutes is the question of the appropriate set of professorial titles. In fact, the question of the appropriate set of professorial titles is a perennial issue that comes up. I understand that it last had university wide consideration in 1982. This is an issue for which the impetus for discussion often comes from the deans. Since we are a faculty committee, and we take that very seriously, we have been moving both very carefully and deliberately in considering this very complex set of issues. That is what accounts for the apparent slow pace of our progress to date. Two of the central questions we have looked at are the appropriate titles in terms of employment both for individuals who are carrying out teaching and service functions in clinical studies and also individuals who find themselves in a wide array of research functions at the university. We have been considering in, I would say, excruciating detail the situation both at Cornell as well as our peer institutions.

"What I want to do now is talk briefly about where we are at and where we are going. One of the main constituencies that finds issues around these two titles is the Vet School, since they have very large clinical programs as does the Law School, the Business School and some of the other programs. In fact, the issue of clinicians comes up primarily in the professional schools. The Vet School also finds itself in the situation of being one of the colleges where this issue of research titles is also quite important. In fact, we have been working in parallel with the Vet School as they have been considering some hypothetical proposals along the lines of these two titles. I am going to ask Mike Kotlikoff if he would just briefly update us on what has been going on in the Vet School, and then I will tell you where we are going."

Professor Michael Kotlikoff, Biomedical Science: "Thanks, Abby. I'm here because Rob Gilbert is in Albany."

Professor Cohn: "Mike is a member of the committee, so he doesn't get off scott-free."

Professor Kotlikoff: "I think there is a W. C. Fields line there some place. I just want to talk about what we have been doing at the Veterinary College. Almost two years ago now, a faculty committee was empowered to look at this issue, and they issued a report in December 2000 calling for establishment of a Clinical Track, and that came with a document describing various aspects of that proposal. Shortly before that time, the University Task Force that Abby has talked about was constituted and we were discussing similar issues, and we developed a homologous proposal for a Research Track for individuals that are primarily single function, soft-money individuals in research. We have met, as Abby said, in the Task Force quite a bit and have discussed a lot of these issues. At the same time, in the Veterinary College, we put forward two specific proposals and have begun discussions about those proposals. First there was a meeting with the General Committee, which is a committee of the faculty of the Veterinary College, and that led to discussions of the proposals and modifications of the proposals. We then went to all of the departments, that is members of the Task Force, Rob Gilbert and myself as well as Rick Hackett who is chairing the Veterinary College Committee on the Clinical Professorships, met with the departments and discussed these and again modified the documents. Then we have had two open faculty meetings where we have discussed these issues in detail.

"So where are we currently? At those meetings a number of issues were raised that addressed concerns about the issues that I have listed here ([Appendix 4](#)). They were concerns about the impact on future faculty makeup of specific departments, concern about how this plan for these proposals would be implemented, potential effects on gender equity, issues about financial impact, and concerns about why can't we just solve this with more faculty positions. There were specific requests for some kind of implementation plan. So at this point, what we have decided to do is, rather than call for a vote on a very important, a very critical issue, is to try and get together data that would look at how this would be implemented and have a kind of impact study. That will take some time; we'll then come back to the Veterinary College faculty and then re-engage this issue in the fall and either bring a proposal forward to the Task Force of the Faculty Senate or not, depending on the outcome of those deliberations."

Professor Cohn: "So, while we do have some specific proposals that the committee is working on, we see working in parallel with the Vet School and any other colleges that may become engaged in this issue as very, very crucial. If there is not broad based support, the committee will not move forward with a proposal. The committee has agreed to continue next year; that was not our original plan, but we will. Assuming there is impetus for further discussion, we are anticipating having a faculty forum in the fall. Based on the input from that forum, then we would bring any possible recommendations that grow out of the process to the Faculty Senate sometime in the fall."

Speaker Howland: "Thank you very much. This report is open for discussion."

Professor Stephen Vavasis, Computer Science: "I'm just curious whether this issue is best settled at the level of the Faculty Senate or maybe individual colleges would have more flexibility and more choice?"

Professor Cohn: "In fact, we have given a lot of consideration to that issue, and we are thinking that probably a one-size-fits-all solution may not be the way we want to proceed. Any modification of Professorial Titles does have to be approved by the Trustees. So it really is a university wide faculty matter for those reasons, but in fact what seems right in a particular college indeed may be quite different. That's one of the central factors we have been weighing."

Professor Manfred Lindau, Applied Engineering and Physics: "Can you briefly explain what the rationale is to various specific professorial titles or specific kinds of professors rather than the general professorial title as we have now?"

Professor Cohn: "The crucial factor is that on the endowed side both teaching and research are considered to be a central component of any tenure track appointment, and on the state side, depending on the appointment, extension can also be a component. There are no single function tenure track or tenured appointments at this university. What is at issue with both the research positions and the clinical positions is that the kind of work these individuals do and the demands that they meet make a standard sort of tenure track (tenurable) appointment very problematic in many cases. So what has happened, historically, is that individuals playing these very, very central and important functions for the university have in some ways been marginalized. In the case of these clinicians who are carrying out these functions, they typically are in Lecturer or Senior Lecturer positions, because teaching is a very central component of what they do, but that doesn't address all of what they do. On the research side the titles that are typically used are Research Associate and Senior Research Associate. These titles, first of all, are perceived, and I would agree with this perception, not to carry the prestige that should go with that and often are even misunderstood as titles. They cause problems on the research side because of competitiveness at some of our corporate and federal funding agencies, since there are some restrictions on the P.I. on grants and so on. They also cause very serious competitiveness issues with respect to some of our peer institutions. The idea of what Michael mentioned is that it is not just enough to say, 'Should we have more FTE's?' It's really a question of having job categories and both hiring and retention policies that are a good fit with the duties and expectations that go along with those positions."

Professor Francis Kallfelz, Clinical Sciences, College of Veterinary Medicine: "With respect to some of the comments you made, my feeling is that all faculty should be actively involved in the creative activity of academics. The direction that creativity takes can vary among various faculty members, just as it does between English, Physics, Chemistry and so forth and so on. As far as Clinical Professors are concerned, I feel that it is perfectly acceptable for Clinical Professors to be conducting clinical research, which, when conducted using the scientific method and using appropriate approaches, should be every bit as valuable and as important as more basic types of research and should equally qualify Clinical Professors for consideration for indefinite tenure, as do more basic positions. So I basically disagree that there is a fundamental difference in the types of activity that should be done by clinical faculty and other faculty."

Professor Cohn: "I think I would just comment that, in fact, precisely those sorts of issues are very much college

internal issues. That is—what constitutes the set of duties and responsibilities with what we take to be the multi-faceted nature of the tenure track, tenured appointments (and I would hark back to the comments made earlier) that is in fact at the level that we expect to see variation across the colleges. Our understanding, both from the deans who reported to our committee as well as a number of faculty that we have consulted in a number of colleges, is that not everyone shares your particular assessment of that situation. But we would expect that it would be at the college level that those sorts of matters would be discussed. There is not an easy answer to that question."

Vicki Meyers-Wallen, Biomedical Sciences, College of Veterinary Medicine: "I attended at least one of the forums. I was away for the other. My perception of the faculty sentiment at that forum was not that we actually asked for this and that there is actually a large body of opinion that is not really in favor of this at this time. I don't think that is a matter of small changes in the proposal. I think there is a fundamental question of whether professors deserve tenure for doing clinical work and clinical research just as if they were an English professor or whatever. I think this is not going to be an easy road."

Speaker Howland: "Is there anybody who hasn't spoken who wishes to speak?"

Professor Lindau: "I would think it would be important for example to keep some consistency with the Medical School in New York. If here at the Veterinary School you have faculty members who are conducting research and doing quantitatively not as much teaching as they would in other colleges, I think that is appropriately comparable to what you have in any kind of medical school. So I wonder if inventing new titles for this really makes a lot of sense."

Professor Cohn: "In fact, the Medical School makes use of a much, much wider array of titles than the Ithaca campus has available to it. In fact they have a large array of non-tenure track professorial titles that we do not have. So, in fact, this is one of the things we looked into—is to what degree should this parallel hold. All of these points are precisely the kinds of points that we have been deliberating at great length. In fact, if the Vet School and the other colleges that have shown (at least individuals from these groups have shown) interest, such as the Law School where there is also evidently quite a bit of interest, if there is not a constituency among the faculty, that is one or more colleges that really are pushing for these things, it will not go anywhere at the level of the faculty. And we as a committee have no interest in promoting a proposal that is not representative of least a significant constituency of the university faculty. I do hope if it does continue that all of you will come and discuss precisely these points at a faculty forum."

Speaker Howland: "Thank you very much. We have exhausted our time on this subject. The Chair would like now to call on Professors Kay Obendorf, Risa Lieberwitz and Peter Loucks, members of the University Faculty Sub-committee for a resolution to establish a Standing Committee of the Faculty Senate on the Campus Climate. Professor Obendorf."

6. RESOLUTION FROM THE UNIVERSITY FACULTY COMMITTEE TO ESTABLISH A STANDING COMMITTEE OF THE FACULTY SENATE ON CAMPUS CLIMATE: PROFESSOR KAY OBENDORF, PROFESSOR RISA LIEBERWITZ, AND PROFESSOR PETER LOUCKS, MEMBERS OF THE UFC SUB-COMMITTEE.

Professor Kay Obendorf, Textiles and Apparel and member of the University Faculty Committee Sub-committee: "What I am bringing today is the proposal to establish the Campus Climate Committee as a committee of the Faculty Senate. Now many of you will remember that this was started as an ad hoc committee across the campus to deal with some of the climate issues that were being experienced, I think about two years ago. This was on an ad hoc basis, and what we are bringing to you now is a resolution to establish the committee as a permanent, ongoing, standing committee of the Faculty Senate ([Appendix 5](#)). I want to talk a little bit more about that when I get to some of the structure."

"The role of this committee is to really address climate and to have broad discussions to encourage, support and facilitate the dialogue, to facilitate communication between the governing bodies of the campus and the various offices that have responsibilities that deal with climate and these various issues and then it would also act to facilitate and publicize some of these things. This is a much broader discussion of campus climate rather than taking a policy or kind of governance type of approach.

"The structure is very difficult when you are looking at something as broad as the campus climate, because that really deals with the structure of the entire campus. So as we were thinking about how to structure this, looking at the structure of the existing Campus Climate Committee. We have various groups involved in this. We have all the governing bodies, the Faculty Senate, the Student Assembly, the Graduate and Professional Student Assembly, the University Assembly and Employee Assembly. So all the governing groups are involved and also a variety of offices. We have the Vice Provost for Diversity and Faculty Development, the Dean of the Faculty has been involved; the Vice President for Student and Academic Services, the Dean of Students, the Director of the Office of Assemblies, the Director of Minority Education Affairs, the Office of Workforce Diversity, Equity, and Life Quality, the Lesbian, Gay, Bisexual, Transgender Resource Center, the Student Affairs and Diversity Section of Campus Life, the Director and body of Cornell United Religious Work, Gannett Clinic and its psychological and counseling services, and the International Students and Scholars Office. It is a very wide array, so in thinking about how we might approach this, we really discussed two things. One, should it be a Faculty Senate Committee or should it be a more administrative committee and come under the Vice-Provost's Office and be under Bob Harris? We thought that we would propose to you that the Faculty Senate take this responsibility and to do it collaboratively with the assemblies and linking it to the offices that have these designated responsibilities. So, really as Pete Loucks said, we are bringing to you the proposal. Do you want the Campus Climate Committee to be a Faculty Senate Committee? And it is one in which you take the leadership, but we do it collaboratively. We don't make up the whole committee; we just provide a link in working with the Assemblies. The various Assemblies are very enthusiastic about doing this with the Faculty Senate. They accept that premise.

"Membership becomes very complex in how we try to deal with membership, because it wouldn't have the usual membership of a Faculty Senate committee which would be drawn from the faculty. We are drawing some members from the faculty, some from the Student Assembly, some from the Graduate and Professional Student Assembly, some from the Employee Assembly and so on. Then we need faculty from the Faculty Senate, and representing that we also need to link it to the administrative offices. So we have some of the offices there, for example, the Vice Provost for Diversity and Faculty Development and linking again with the Office of the Assemblies, and then we need some link to the Vice President of Student and Academic Services or Dean of Students or someone from that arena. We also need to create a link to the Human Resources in the Office Workforce Diversity, Equity, and Life Quality. We wanted to get this diversity plus keep the committee small enough that it could function, so we have arrived at this membership. In fact, the Student Assembly is so enthusiastic they have already named their members for next year. They are thinking about summer and closing this out. Needless to say, the Assemblies are on board with this if you so decide. This is the proposal. A lot of the details are there, but I think the basic thing I'm bringing to you is - does the Faculty Senate want the Campus Climate Committee to be a Faculty Senate Committee in collaboration with the other Assemblies and with linking it to the various offices that have responsibilities?"

Speaker Howland: "Thank you. This is the resolution before the house. It is now open to discussion."

David Grubb, Material Science: "From the way you describe it, its functions and membership, I don't see why it shouldn't be a University Assembly committee. If it is so wide, the broadest possible reach of the university, that's what the University Assembly is supposed to do with members from all the Assemblies. You mentioned in the very beginning that you were wondering whether to have it a Faculty Senate committee or an administrative one, but you didn't mention having it an Assemblies committee."

Professor Obendorf: "Yes, we did have those discussions with the Assemblies, and the representatives for the Assemblies are, it is my understanding, in agreement with this. But your proposal is a valid one. There are more

ways to do this than the one I'm proposing. This is the one I'm proposing for the consideration of the Faculty Senate."

Professor Joe Ballantyne, Electrical and Computer Engineering and At-Large Member: "I have very uncomfortable feelings about the proposal, because if I read the first sentence, it implies that at Cornell we do not have a respectful, inclusive, diverse community where we learn through reasoned, sustainable, and civil discourse and therefore, we need to do something about it. I see on the second page that we have quite a number of people who spend their full time apparently looking at these issues. I note that four of the fifteen members are probably members of the faculty and I don't see why it should be a faculty committee or I wasn't aware that we were in such a bad state of affairs, that we do not carry on civil discourse."

Professor Clare Fewtrell, Molecular Medicine: "I chair the Faculty Senate Affirmative Action Committee and I'm also a member of the current Campus Climate Committee. My question concerns the co-chair of the committee. From the first proposal that I saw, I understood that the co-chair would be selected from the membership of the committee and wouldn't necessarily be a faculty member. As we discussed, I think this is a committee for the whole university and Bob Harris is there in his position as Vice Provost, but he is also a faculty member. So I wonder if you could tell me what the rationale is for limiting the second chair position to a faculty position?"

Professor Obendorf: "I can dare say that I have so many versions of this on my computer I might have to add to my hard drive. It has evolved over time, and this is one of the things that was evolved, and it was one of the things to strengthen it as a Faculty Senate committee. I don't think we had any amendments for this proposal, so it's open for you all to discuss it."

Professor Steven Shiffren, Law School: "It seems to me as you presented this that there is a communitarian civil — civility aspect of this committee which is captured by the concept of climate which does make me a little nervous in part, because I like unreasonable dissent. Another theme seems to be to promote campus dialogue among groups that are housed in different places and so forth, and that theme I think is enormously valuable, and I could care less what administrative structure is used to do it just so long as it works. I wonder whether I am right in worrying that concerns about campus climate is the thrust of this committee or whether it's more in the direction of just trying to facilitate dialogue and encourage people getting together in various kinds of ways that would be constructive."

Professor Obendorf: "You're right; climate is important."

Professor Richard Talman, Physics: "I have more nearly a point of order. It looks to me as though this is to be a committee of fifteen people of which only two it looks to me are members of the Senate, so it's really not in order for the Senate to be establishing a committee in which it forms such a tiny minority."

Speaker Howland: "Point of order caught my attention. (LAUGHTER.) I think the Senate can do as it wishes."

Professor Talman: "The Senate cannot form a committee of the vice presidents for Human Resources. We can respond to the request of some other university body to cooperate with the formation of such a committee, but we cannot form such a committee."

Speaker Howland: "I will ask our parliamentarian, but I do believe the Senate can make any motion it pleases and pass that motion whether or not it's enforced or enforceable is another thing."

Professor Stein: "I'm not sure if I agree or disagree with my esteemed colleague from Physics that this is unconstitutional, but it certainly does seem a tad unusual to have a committee of the Senate where only two of fifteen members are members of the Senate. It seems odd, and I wonder why you decided to do that. It seems much more natural for this to be an Assembly committee or perhaps it would be more appropriate that the committee report directly to the President. I don't understand the significance of it reporting to the Senate or in what sense you think of it as a committee of the Senate. Why that particular structure and not, say, reporting to

the President or reporting to the University Assemblies? I address that question to the person who was presenting it."

Professor Obendorf: "There are many ways to do this, several of which you all have proposed and have been thought about. I believe that the Dean of the Faculty, Bob Cooke, started this Campus Climate Committee ad hoc and Bob Cooke feels that it is appropriate for the faculty to provide leadership. The Assemblies feels that it is appropriate for the faculty to provide leadership if we so wish. This is your opportunity to make that decision."

Speaker Howland: "One more."

Professor Richard Baer, Natural Resources: "I would think that it might be more appropriate for the Senate to deal with lack of diversity of ideas at the university. I have written and spoken about this before. Incidentally, the long memo that I sent out to our previous Provost, the President and the Deans, I didn't even have an acknowledgement that it was even received after writing about a 20 to 30 page double-spaced memo. I think we ought to as faculty sometime discuss the fact that, for instance, our Government Department looks more like an outpost of the left wing of the Democratic Party. Diversity of ideas—Human Development and Family Studies doesn't want diversity."

Speaker Howland: "Sorry, I have to"

Professor Baer: "What? This is a very serious issue and I would like just to finish, please. I think that would be within the domain of the faculty to think about is that we don't seem to really welcome diversity of ideas at this institution. We like political correctness a great deal. I like what we have done on diversity in other areas. But I think we ought to give some serious attention to a lack of diversity of ideas. That is what would make this a better university and help us live up to our motto of being non-sectarian."

Speaker Howland: "I'm afraid we have exhausted the time for discussion. We should move now for the vote unless I hear some motion to the contrary. Fine. The motion is before you. Is it clear?"

Professor Terrence Fine, Electric Engineering: "What is the motion?"

Speaker Howland: "The motion is contained in the text that was distributed beforehand. There are several handouts and there are the set of overheads that we have seen for the motion to create such a committee."

Professor Fine: "What is the motion?"

Professor Obendorf: "I move to establish the Campus Climate Committee with the leadership of the Faculty Senate as described in the document that you have seen."

Speaker Howland: "It's a motion from the committee. It needs no second. Are you ready for the vote? All those in favor say 'aye'."

AYE.

Speaker Howland: "All those opposed?"

NO.

Speaker Howland: "We are going to have to have a count. Would you count this side, and I'll count this side. All in favor please raise your hands? All those opposed? The motion passes 27 to 22. The Chair now calls on Professor Susan Piliero, Chair of the Educational Policy Committee for a discussion of evening prelims and compression of the academic calendar."

7. EDUCATIONAL POLICY COMMITTEE–DISCUSSION OF EVENING PRELIMS AND COMPRESSION OF ACADEMIC CALENDAR: PROFESSOR SUSAN PILIERO, COMMITTEE CHAIR

Professor Susan Piliero, Education and Chair of the Educational Policy Committee: "Thank you for giving me some time to discuss an issue that you've "never discussed before," which is evening prelims. We have had long discussions in the Educational Policy Committee this semester on evening prelims, and the overall concern that we think it's embedded in, namely, the compression of the academic calendar. You hopefully have had an opportunity to read the discussion document that was sent to you in the materials last week ([Appendix 6](#)). Since there may be visitors to the meeting today, I am going to review some of the big ideas in the discussion paper.

We first took a look at the ad hoc Committee on Student Stress that was chaired by John Ford, who was the Dean of Students, as you know. A couple of years ago he chaired the Committee on Student Stress, and in June 1998 the committee published a report in which it said that, 'Of all the class and exam scheduling factors contributing to unusual student stress, evening prelims seem to place the heaviest burden on students.' We started with that as perhaps an unexamined assumption or at least one that might need further explication. So we took a look at that and what we found was that it is not a simple fact that evening prelims in themselves are stressors for students, but that the issue is a little bit more complicated than that. I'll go into those issues in a minute.

"As a committee we saw that there were indeed some very good reasons for having exams in the evening. Some are purely logistics, because we happen to be a campus that has large classes and multiple section classes and so forth. There are also good reasons pedagogically, at least, that we felt we needed to explore and put forth and make clear. Some of the pedagogical reasons for having the exams that are longer than a class period would be to allow extended time to have open-ended or higher order questions and especially problem solving. This is a campus that has a high number of courses in engineering, in the sciences and mathematics where high level questioning is valued. As one faculty member who wrote in the faculty forum said, 'Unless we are training future *Jeopardy* winners, we really want to have students who can actually think and have time to formulate the problem, as well as formulate the solution and perhaps argue the merits of the solution.' That was certainly one good reason for having the evening prelim.

"Another reason was test anxiety, and this is in some of the feedback we got from students whom we surveyed. Having extended time to take a test without having the burden of watching the clock so much, as would happen in an in-class exam, is very important to many students, and while they don't love evening exams, they tolerate them because they can have the extended time. The number of students with disabilities, and I should also mention (I didn't have it in the report) the increasing number of international students who may take a longer time to appropriately decode the instructions and the contextual language of a problem is something that needs to be considered. They shouldn't be burdened with a time constraint that could alter the construct validity of the exam. Obvious logistic reasons are you've got 800 people and all these sections and where are you going to give the exam? We have a lot of lecture halls, but not many of them are available for extended periods; they have classes coming in right after your 50 minute period. So what are you going to do?

"One of the things we did was to take a look at the number of evening prelims, because there is, I think, a perception among many on campus that the number of evening prelims is growing without bounds every year. It turns out that that is a misconception. It's actually remarkably constant. It's about 550 exams per academic year, and that has been true over the last several years. However, that having been said, if you take a look at who is the beneficiary of this kind of scheduling, it seems to fall disproportionately on certain students, notably Engineering. It's more than 28% in Engineering that courses have evening prelims or evening prelims are engineering prelims. If you take engineering and math and sciences; it's over 70%. Also most of them are at the 100 or 200 level. So if you are a freshman engineering student, you have a lot of evening prelims. Not to pick on Engineering, I teach math and all my exams are evening prelims. But it is kind of interesting.

"One thing that does appear to be growing, although I can't provide you with hard facts, because the printout is

about this thick, but it does look like more and more students are taking advantage of courses that are being offered in the evening ([Appendix 7](#)). During this particular semester, the total student enrollment in classes ending after 4:30 is over 3,600 students. So that's a lot of evening time, and that's, of course, Mondays and Wednesdays. Another data point is that current scheduling has minimized conflicts for many students but has not eliminated them, so there still are some conflicts. I am sorry that Bob Cooke is not here, because he has done yeoman's work, crunching numbers, night after night, weekend after weekend. I said, 'You act like a graduate student. You're working on all these numbers.' But one of the things he has been able to do is take all the freshmen schedules for this year. I think this is for the fall 2000 semester [Appendix 6 - Evening Prelim Report]. He took a look, and what this means is how many students had no days between two exams. In other words they had two exams scheduled exactly the same night. OK? It turns out there are only 98 evening prelims who have that conflict.

Ninety-eight students.

Professor Piliero: "Ninety-eight students, right, who had two evening prelims scheduled on the same night at the same time. That doesn't sound bad when you think about how many thousands of students you have. Over half of those were in Engineering, I should point out, but fewer than 100 had the conflicts. If you start now to look at the number of students that have one day, and I'm not even sure how they could have one day between two exams, since you are only supposed to give evening prelims on Tuesdays and Thursdays, now you are over 100. If you look at two days, so I assume that's the Tuesday/Thursday split, now all of a sudden you are at over 800 and so on and so forth. So one of the things that we were interested in looking at is how many have that kind of problem and it turns out there are a lot more students who have hectic weeks during the semester. From the feedback we have gotten from students, it's not simply having an evening prelim, but it's when you have two or three in one week, where havoc is caused in your schedule and you drop everything else to prepare for these exams and then you never catch up. In terms of outright conflict, Dean Cooke is fairly certain that we can work on that and we can actually get that down to zero or near zero. That is encouraging. We might be able to think of how to avoid some of these situations with some negotiation between the parties. The certain weeks that we were looking at - it seems that there are a couple of very bad times, like late September and mid-November. We all know these weeks, because we feel the stress as well. Those are some areas where some rethinking about that kind of schedule one has every single semester could be useful."

"As I said, in the surveys that we did which were fairly informal and mostly limited to math, engineering and science, there were very mixed feelings about evening prelims. Some students really like evening prelims. A huge issue for some students is the fact that they have to work as part of their financial aid package, and they need to work during the day. They need to work between 8:00 and 4:30 so for them, evening classes and evening exams are very useful for them to sort of manage their world. That is something that, to be honest, we hadn't really considered in a serious way. Some students feel more alert and focused in the evening taking their exams. That's easy to do if you get up at 10:00. Not all students felt that way. Some students . . . I mean this was very mixed, about half-and-half. Definitely most of them said that they would tolerate evening exams to have the extended time, but if there were a way to figure out how to have longer exam periods and not have to have them at 7:30 at night, they would be thrilled to have that."

"Several students wrote that there should be consistency between what you state in your course objectives and how you assess, and this is course design. If you are emphasizing problem solving and higher order thinking, but you are giving the multiple choice tests-'get it all done as fast as you can in fifteen minutes'-there can be a perception of a disconnect between the assessment method and the stated objectives of the course. Other students actually said that they really liked the in-class exams, because you couldn't go in deep on anything, so that was actually a real plus for daytime exams."

LAUGHTER.

"I don't really want to go with that. Another point is that evening exams should be substitutes for in-class exams

and not an addition to the course schedule. If you are giving three evening prelims, and they are 90 minute prelims. We'll do the math. That's 3×90 ; that's 270 minutes. Well, if you are meeting four times a week for a 50-minute period, that's 200 minutes. So by giving your evening exams and then teaching in those classes that you have freed up, you've added a week to the schedule, but it's during the same time, so it's like this. You are cramming 15 weeks of instruction into 14 weeks. That could create some stress for students and for faculty. We know about the free time scheduling, and so we have that problem.

"The overall problem of compression to the calendar is something that we really feel needs to be addressed. The number of days already is at the minimum number of days required by the Board of Regents. In the spring I think we actually have a couple of extra days, but the fall term is at its minimum; we cannot go any lower. We have very few Friday afternoon classes except for the valiant efforts of some science departments. Saturday morning classes are very rare now; there are very few 8:00 and 3:35 to 4:25 classes. I think that fewer than 10% of all classes on campus are in this time slot and at 8:00 it's fewer than 5%. I think I've got that right. So when are you supposed to give your exam is the problem. So let me stop at this point and ask for some discussion before we talk about recommendations that we came up with."

Professor Stein, Physics: "I have a question. I don't see how there could be. . . It seems to me-can we have the chart that shows the mean time between classes and the distribution of the time between prelims?"

Professor Piliero: Of the prelim?"

Professor Stein: "Yeah. The one before those."

Professor Piliero: "Oh, the table."

Professor Stein: "Yes. I'm at a loss to see how there could be anything except zero, two, five, seven and nine. We have a rule that you could only give prelims on Tuesday and Thursday."

Professor Piliero: "Unless there is an exception made. You can get an official approval."

Stephen Vavasis, Computer Science: I believe that CS100 typically has an evening prelim scheduled for Monday during the fall semester by special arrangement with the registrar.

Professor Stein: "OK, thank you."

Professor David Delchamps, Electrical Engineering: "My question is do prelims tend to cluster anyway, whether they are evening or daytime prelims, and I'm wondering why the report focuses on evening prelims as being stressful? It is not the evening that is the stress factor. In fact, evening may be a stress alleviator."

Professor Piliero: "Right. That's one of the reasons we wanted to have the discussion, because in the re-accreditation report, one of the factors that was being examined in the report was the notion of evening prelims and whether they should exist at Cornell. If they cause stress, it would be important for us to get rid of them. However, the point here is that they are not necessarily stressful just by the fact that they are in the evening, and secondly there are some valid logistical and pedagogical reasons for giving prelims in the evening. So, to make a rule that says that you can no longer be giving evening prelims, we might want to tread carefully there. I would like to just present the recommendations, if I could."

Professor Subrata Mukherjee, Theoretical and Applied Mechanics: Most students in my sophomore math classes like longer (1.5 hour) prelims. They would rather take a 1.5 hour evening prelim than a 50 minute prelim during class. I think ideally they would like a 1.5 hour prelim during the day, but they know that this is practically impossible to schedule.

Professor Piliero: "These are the recommendations that we came up with and I encourage you to think about

them for yourself and discuss them amongst your departments. There are alternatives to standard 90-minute exams. That's certainly one thing to think about. Giving short in-class exams more frequently might take the stress and weighting off of any particular evening prelim. We will be looking to further minimize conflicts, but we are also going to see if we can work with the clustering issue that we brought up. The calendar compression phenomenon may be something that we need to explore further. Just the number of contact hours that courses meet is an issue - that contact hours are at a minimum, and lectures are very full, with faculty trying to cram more things in to each lecture, it seems to be a problem and the committee would urge no more compression of the academic calendar for the time being. If reviews are important, since we already have the evening prelims, maybe if faculty look at other times to have the reviews, and reviews at 8:00, or 3:30 to 4:25 may be viable for some students."

Speaker Howland: "Thank you very much. The chair would like to call on Provost Biddy Martin and Vice Provost Robert Richardson for a report on the decision concerning the Ward Center."

8. REPORT ON DECISION CONCERNING WARD CENTER: VICE PROVOST RICHARDSON.

Vice Provost Robert Richardson: "Mr. Speaker, thank you very much, and I also want to thank Bob Cooke for giving us an opportunity to discuss this. This is the first time actually that there has been an opportunity for me to discuss the Ward Center with the Senate. Last Friday morning the President and Provost met with Dr. Kenan Ünlü and told him that the university's decision was not to apply for re-licensing of the TRIGA reactor in the Ward Center, and that we would be moving to decommission. In part of the conversation, the President said that we would extend his contract for three more years and he would be expected to supervise the decommissioning process. Immediately after that meeting the President and Provost contacted some of the faculty whose research would be most immediately affected by the shutting down of the TRIGA reactor and followed through on the recommendation of the LAC Committee that there be support given for the transition period, assistance in the transition period, for the people who are affected. We also will have Mary Opperman, Vice President in the Human Relations Office, find positions for all the staff in Ward who will be affected by the decision.

"Now after the March Senate Meeting, we thought a great deal about the issue of the Ward Center and paid close attention to that discussion, but I was surprised to discover that there are a lot of people that think the whole issue was part of a hidden agenda by the President and Provost to create space for a particular department or unit. Let me assure you that that is absolutely untrue. The TRIGA reactor and Ward Laboratory was not on the radar screen of the President or the then-Provost, Don Randel, when John Silcox and I first started considering the issues related to re-licensing. I insist that the responsibility is mine. The blame or the credit associated with the decision must fall on me. It's not part of any grander plan that is involved. If the issue then whether or not Paul Craven and the rest of the dedicated staff in Ward who have been working with Dr. Ünlü these years have been doing their job, I wouldn't be here today, because that would not have been the decision. They, in fact, have done a wonderful job of serving the Cornell community. They have been very user friendly, and Dr. Ünlü has served the Cornell community well. I find that the issue that is most important is related to re-licensing because that is a 20-year decision we are making at that time. When we apply to re-licensing we have to go through all the conditions for the reactor itself and its equipment and its control system and control electronics. They have to have a structural engineer study the condition of the facility itself and when, and I have no question about whether it will be an if, the community requires an environmental impact statement, and you only have to look at the Op Ed page of yesterday's *Ithaca Journal* to be most assured that there will be a request, a demand, by the community. This is the article, if you haven't read it yet, by Fred Elmer. I disagree with most of the article by the way, but he is a local, reactive, Green activist. One will be required and it will be controversial. Controversial-and that environmental impact statement, such as the Lake Source Cooling, cost \$1.5 million. Simpler ones like the North Campus dormitories cost \$1 million. We also might be required to have an environmental impact statement even if we decommission, because there are environmental issues related to removal of the fuel.

"In thinking about the question in 2003, which is coming up pretty close so at the re-commissioning John and I talked at length. John made a number of phone calls to various other reactor sites and ran across what was just going to be I think the worst nightmare an institution might have and that is an unlicensed reactor sitting on the campus with the fuel in it. And there are places where that has happened. The nearest one is SUNY Buffalo, which has had fuel in an unlicensed reactor since 1994. Because it requires a high level of security, we have a choice of either having to pay for not doing any research or having a chain link fence and 24 hour security on the property. So before deciding whether or not it was even an option to re-license, we had to find out whether or not there is a path for removal of the fuel at that point. Dr. Ünlü and I disagree on the results of looking at that. I can assure you that SUNY Buffalo isn't just voluntarily holding that on their campus now. There is a rate that is limited at which the fuel can be transferred to the facility at INEEL in Idaho. At the present time, we were in a queue on the waiting list for the year 2011 to remove what now is 40 years worth of spent fuel that sits in the reactor in the ground. By then it will be 50 years worth of spent fuel underground. We discovered it would be possible to write to INEEL to apply to advance the date. After finding that out, John Silcox visited Dr. Ünlü and told him the likely outcome was going to be that we would be closing the reactor. They discussed issues such as the placement of the staff there and his own personal issues. He has children that are going to finish at Ithaca High School, and we indicated that we would do everything that we can to find another position for him on the campus. After that conversation, I sent the letter to Dr. Dirkmatt in Idaho, and also in order to have an independent source of technical information, hired Howard Aderhold, former reactor operator and he served as an interim director of another lab, to obtain technical information.

"A few weeks later at my request Howard Aderhold, tried to get information about the facility at INEEL and was told that they had been instructed by someone from Cornell that they were no longer to talk with him that he had no standing in the University and that my letter was a forgery, that I had not signed it and had not sent it. I then contacted them and sent a 'to whom it may concern' letter saying that Howard Aderhold is a consultant working directly from my office. Also last spring before this action was taken I told Persis Drell that we would be asking the LAC to conduct a review of the Ward reactor. In September I delivered a charge to the LAC. I want to put a list up here ([Appendix 8/Richardson overheads](#)) - these people deserve an enormous amount of credit, because that's one of the hardest working committees I've ever seen on this campus. They met a minimum of 30 hours each with everybody they could think of, everyone who wrote letters to them, people that were on the list of the users that are there. I indicated the ones who are engineers in blue, because it is not the case as reported in the *Cornell Sun* last week that is was all engineers. Only four of them had their appointments in the Engineering College. It is true that there are engineers and other people in the natural sciences, so that we might be (I say we because I fall in the category of natural scientists) considered cultural barbarians. Anyhow, it's not all engineers. This group met for more than 30 hours each, and many spent a lot longer time than that. I went to many of their meetings, but any time when it appeared that my presence would constrain or distort the conversation, I absented myself from the meeting. In the month of January when they were putting in a lot of work and thinking about the report, they kicked me out. In no sense were they beholden to me or was my hand in this. If you note, Persis ..."

Speaker Howland: "You are running out of time."

Richardson: "OK. Let me do one important thing, because one of the issues that happened since that meeting was that there was a group from an advisory panel for the division of DOE that supports this, called NERAC, and it was widely discussed and this is, in fact, their report. They came to see me, called themselves a tribunal, and in that discussion (there is a serious distortion of the conversation I had with them in that report) they said 'Look, we can solve all your problems. We want to declare Cornell one of the five regional centers, and you will have substantial support to cover everything that you want to do to pay for the services that you would be offering and expand your base of operations.' And I said, 'What are the other requirements associated with it?' And I have outlined in yellow, because this is in the report; this is still there: 'Provide training and educational experiences for undergraduate and graduate students in nuclear engineering and in applications to nuclear science and technology.' At that point in the conversation I said, 'We can't agree to that. We do not have enough faculty to offer courses in nuclear engineering. And this would be a regional facility; they would come from all over. 'And

there is not a single department in the Engineering College that intends to make any appointments in this field. I have, discussed with chairs of various engineering departments and with the Dean, the long-term plans of the Engineering College. It's just not in the cards, and it's not in the authority of the central administration to say yes, we will teach those courses. That's the major hang-up that is associated with that.' They said, 'Well, what do you have against having a facility? You have CHESS and Arecibo. These are user facilities.' And I said, 'Yes, they are user facilities. CHESS is supported by our synchrotron, and we have on our faculty seven of the world's best accelerator designers that keep it current. It logs between 10 and 20 thousand user hours a year. Ward logs 226 faculty user hours and a little over 300 external user hours a year. Arecibo is the world's largest radio telescope. Once again, we have seven faculty members actively involved in it. It has just completed a remarkable upgrade that has increased the bandwidth of the detector by 100 MHZ. It's not in the same scale. Ward is 40 years old. I cannot fathom any upgrade path for the reactor itself. We can do some improvement in the instrumentation.'

"Therefore, my conclusion is that the reactor has far too little use. I think there is small chance that demand will increase significantly in the next decade and for me significantly would be a doubling or tripling of the number of users. The possession of the nuclear fuel is a significant liability to the university if we are not using it effectively. This is the stuff that is central to international treaties. It's what my counterpart at Princeton, who is a former director of the Office of Science at DOE, Will Happer, says, 'Oh, you mean you've got the weapon's grade stuff.' That's what in the pool there. I think the space occupied by the Ward Center is too valuable to justify its current use. 'I urge that we decommission the reactor and shut down the Ward Center.' This is the final paragraph of my letter to the President. And my proposal for that use (and I don't know how many years it is going to take) is that as soon as it is possible that it be used for storage space so that we can go to the south side of the engineering quadrangle and renovate those buildings one at a time, because they are in need of renovation."

Speaker Howland: "Thank you. Since we don't have items in Good and Welfare, we have time for discussion."

Professor David Hammer, Computer Engineering: "I would like to respond to a couple of the points there ([Appendix 9](#)). I believe and many other people believe that this decision ought to be reconsidered or considered further, because it is based on a whole collection of incorrect and misleading information, such as that there is a window of opportunity for the elimination of the fuel; such as there is inadequate utilization and issues concerning cost. Then I would ask, if the surge space is really the issue as the Vice Provost is now telling us, is it worth having in the near term a few dozen extra desks in order to deprive people in four colleges on this campus of the use of a very valuable facility? I am going to skip this U graph because of the short time, but will just say that yesterday we received a letter from someone at INEEL that says that there really is no such things as a window of opportunity."

Vice Provost Richardson: "And my consultant today called up, and we will have to disagree on that."

Professor Hammer: "I think we ought to discuss it. You ought to let us come and talk with you and the Provost."

Vice Provost Richardson: "I am willing to talk with you."

Professor Hammer: "Facility utilization: there were 718 undergraduates who used the facility in the last academic year. Now for the price, so to speak, that's a pretty good utilization. In particular, there were 300 Physics 208 students who came and did experiments in that facility. There may or may not be a lot of other facilities in the university that invite undergraduates in large numbers, and there may or may not be a lot that would have undergraduates performing experiments in a facility at the university, but very few of them cost somewhere between \$200,000 a year and zero to run. There is also research going on. There are a dozen faculty members from four colleges doing research in the area, some of which is acknowledged by the Provost to be excellent research. There are also a lot of New York State Corporations involved who are . . . in fact we got a phone call this morning — 'Are you still going to be operating next month. We want to come in.' There is really a lot of intended use for this facility. So the real question that I would like some consideration of is - the fact that the Dept. of Energy is prepared to accept all of the operating costs, take on all of the operating costs, and if so the cost of

continuing the center will be zero or close to it. Whereas, the cost of implementing this recommendation is estimated to be something like \$7 million over the 10 year period that it might take to completely decommission the facility and enable the space to be used over again.

"What is it good for? It's good for an awful lot of research that is going on in there now and research that could be going on in there, if it survives and if certain facilities that are in progress now are finished. The Nuclear Energy Research Advisory Committee has said that the diversity and quality of research is really excellent at this facility. It is the broadest and most attractive of their facilities and is one that they are especially interested in keeping. Even the decommissioning contractor in his letter to Jack Lowe, saying what it would charge for the eliminating the fuel, said the quality of the WCNS operation was readily apparent. Nobody is arguing that it is an excellent facility.

"I'm not going to get into the discussion of whether there may or may not be a resurgence for nuclear power, but I would like to bring up this question of the use of the surge space. In the short term, there may be a half dozen or a dozen desks that could be used because of the requirement to change the license, even during decommissioning the license would have to be changed, using more of the space. It seems to me that it makes no sense at all to sacrifice an outstanding facility for 6 to 12 offices for a couple of years. You may go on 4 years and you may get some more space, and then in 10 years you may get a lot more space. But we don't know what is going to happen with that space, and it seems to me again that it is unreasonable for the university to be eliminating a facility which is used by faculty when we don't know what we are going to do with it. Thank you."

Speaker Howland: "Any response?"

Professor Hammer: "Excuse me, I think there should be a response to some of the new things that were added."

Speaker Howland: "We have a response here."

Vice Provost Richardson: "The NERAC commission's report is just a recommendation. It is not money. It is not true that we would receive the \$250,000 check. I do not doubt though that in the coming year the \$250,000 would come, but it's still not . . . I want to plot this because its very important relates to the part that I agree with. This is a plot of the number of university research reactors in the United States since 1980, and in 1980 there were 65 of them; in 2001 according to the *Ithaca Journal*, there's 26, but we think there are only 21 of them in going through our count. You'll notice that's a perfectly straight line and it's one that has followed the student interest and the funding in the field. The data there is almost too small. You don't have to be a social scientist to know that there is something that is governing the smoothness of that. It's two per year. That's the rate at which reactors have been shut down. And I'm going to guarantee you that there are not 40 empty reactor buildings across the country. In most of the places those building are now in active use again. And the reason for this slow-down, this steady rate, is that's the rate at which the fuel casks for transporting the fuel become available. You have to use an approved fuel cask to make that move. There is no such thing as a window of opportunity at INEEL itself, there are just only so many casks that are approved to transport it and that's what the issue is, and that's why SUNY Buffalo is still waiting."

Speaker Howland: "Professor Ünlü."

Dr. Kenan Ünlü: "I would like to make just three comments, because I know that time is limited; I know other people would like to make some comments as well. First of all, the NERAC committee report is approved April 30, just this past Monday, and now they are ready to give us \$250,000 if we apply at the end of this month. The money will start this July. That's one fact. The second fact is that we have a letter from DOE and two sources one from the headquarters and the other one from the INEEL indicating that there is no concept like the window of

opportunity. They can receive fuel anytime, starting 2002 or 2003. And third, with all due respect to Professor Richardson, I wish that you would ask and listen to me instead of listening to a contractor, and we will get the papers for the proposals, for the reports I have given to you . . ."

Vice Provost Richardson: "I've read them."

Dr. Ünlü: ". . . which all of them are backed by either NRC or DOE or the exact sources."

Speaker Howland: "Ladies and Gentlemen, I am sorry. We have reached the hour of adjournment."

Number of students treated for severe alcohol
intoxication on Slope Day

<u>Site</u>	<u>2001</u>	<u>2000</u>
Gannett	27	23
Cayuga Medical Center	4	7

Task force on Professorial Titles: Progress report

I. What we have been doing:

Charge for the Task Force - presented to the Faculty Senate February 14, 2001, by Task Force Chair Bill Fry (attached)

- biweekly meetings since November
 - consideration of need for additional titles for long-term non-tenure track professorial appointments
 - consideration of additional options for faculty approaching retirement – possibility of introducing the title of "Senior Professor" - as presented to the Faculty Senate by the Subcommittee on 4/11/01, currently chaired by Danuta Shanzer
- Appropriate titles and terms of employment for
 - teaching and service functions in a clinical setting
 - research functions

- Consideration of situation at Cornell University, as well as peer institutions

II. Where we are at:

- Update on the actions in the Vet School:
Mike Kotlikoff
- Draft proposals in committee

III. Where we are going:

- Anticipate continued discussion and vote in Vet School on proposals that could serve as prototypes (in early fall)
- Continuation of Task Force deliberations
- If there is impetus to move forward, Faculty Forum on ideas that have grown out of the Task Force deliberations (in early fall)
- Based on input from the Faculty Forum, possible recommendations to the Faculty Senate (mid or late fall)

Charge for Task Force on Professorial Titles

From Cornell's founding, a strong and independent professorate has shaped the character of this institution. Historian Carl Becker has described with eloquence Cornell's 'freedom with responsibility.' This cherished tradition of academic freedom is dependent upon free and open inquiry and mutual respect in exercising that inquiry. Our most durable structural guarantee of freedom of inquiry has been the institution of indefinite tenure. The high standards for the awarding of this unique protection and the equally high standards for its revocation have served well the interests of the university.

A number of emerging pressures in the contemporary research university suggest that we examine whether the traditional tenure-track professorial titles should be augmented with any carefully defined non-tenure-track professorial titles. If so, what additional titles might be appropriate, if any? What relationship (and transitional paths) should exist between the existing professorial titles and any new titles? What pathways, if any, should exist between these new titles and the traditional ones?

Stimulated by inquiries from some of the college deans, the Dean of the Faculty appointed an *ad hoc* committee to discuss these issues and possibilities with the college deans. Associate Dean Walcott's synopsis of those discussions identifies the needs the deans find the current array of titles does not at present adequately address. Their suggestions include professorial titles without indefinite tenure, but with a defined single function responsibility, in particular, teaching, clinical practice, or scholarship and research. These would not change the current and traditional tenure-track professorial appointments that carry dual responsibilities for two among teaching, scholarship/research, and outreach.

Federal law has uncapped retirement age. This presents an especially challenging situation in higher education because of our valued tradition of indefinite tenure. Should we create a new professorial title that recognizes the right of a tenured faculty member to participate in the legally allowable extension while permitting a reduced workload and correspondingly reduced salary and benefits? This would legitimize the retention of one's professional identity and institutional and collegial relationships while allowing the university to reduce its financial commitments.

The Dean of the Faculty has appointed a Task Force on Professorial Titles to develop proposals appropriate to the issues and questions described above. Because any proposed additions to the current professorial titles and roles will surely be of deep interest to the entire faculty and likely to have long-term implications for the university, the Task Force should:

1. consult with the deans, faculty, and the Faculty Committee on Academic Freedom and Professional Status of the Faculty;
2. review the current professorial titles and their history in the context of tenure;
3. formulate recommendations and engage the community in dialogue, e.g. a University Faculty Forum early during the spring, 2001, semester; and

bring recommendations to the Faculty Senate for debate at its March 2001 meeting so that any changes endorsed by the Senate might be considered by the Board of Trustees in May 2001.

REPORT ON VET COLLEGE DELIBERATIONS

Process at Vet College:

1. Faculty Committee formed to consider issue of Clinical Professor titles at College of Veterinary Medicine. Issued Report December 2000 calling for establishment of a Clinical Professor Track.
2. Homologous Research Track proposal developed with consultation and suggestions from University Task Force.
3. Meeting with General Committee of the Vet College to discuss Clinical and Research Proposals. Documents modified following these discussions.
4. Meetings with all Departments and Baker Institute faculty to discuss documents. Documents further modified following these discussions.
5. Two open Faculty Fora in April, 2001 to discuss general proposals.

Current Status

Issues raised at Faculty Meetings and Fora:

1. Impact on future faculty makeup of specific Departments
2. Request for specific implementation plans
3. Potential effect on Gender Equity issues raised
4. Financial impact
5. “Why can’t we just get more FTE’s”

Decision made to respond to the specific requests for more information, rather than to vote on an issue of this potential impact without full deliberation. Current plans are to prepare an impact report for faculty consideration.

Project that we will have a vote in the Fall of 2001 by the full Veterinary College faculty.

Resolution to Establish a Standing Committee of the Faculty Senate on Campus Climate

Mission Statement:

The Campus Climate Committee will facilitate efforts on campus to create and to institutionalize a respectful, inclusive, diverse community where we learn, through reasoned, sustainable, and civil discourse. The committee will pursue actively the challenge of breaking down barriers and promoting greater interaction across the campus community. Diversity and collegiality among students, staff, and faculty are central to maintaining the high standards of excellence that characterize Cornell. The principal task of the Committee is to actively engage members of the Cornell community in a campus-wide effort to create a respectful, inclusive environment in which to live, learn, and work.

Role:

1. Encourage, facilitate, and support dialogue across ability, age, class, family status, gender, nationality/ethnicity, race, religion, sexual orientation, veteran status, political positions, and other differences on issues of diversity. Where appropriate the committee will draw on the expertise of the various academic units that have special expertise.
2. Facilitate communication among self governance bodies and university offices and committees.
3. Facilitate and recommend actions based on assessments of climate reflecting the broad campus community.
4. Publicize efforts to improve climate and increase diversity on campus to the broader community, highlighting progress and successes.

Structure:

The Campus Climate Committee, which is a committee of the Faculty Senate, draws on the self-governance structure across the campus. This includes the following self-governance bodies:

- Faculty Senate
- Student Assembly
- Graduate and Professional Student Assembly
- University Assembly
- Employee Assembly

The Campus Climate Committee links to and provides advice to administrative offices. Positions involved are:

- Vice Provost for Diversity and Faculty Development
- Dean of Faculty
- Vice President of Student & Academic Services
- Dean of Students
- Director of the Office of Assemblies
- Director of Minority Educational Affairs
- Director of the Office of Workforce Diversity, Equity and Life Quality
- Director of the Lesbian, Gay, Bisexual, Transgender Resource Center
- Director, Student Affairs and Diversity, Campus Life
- Director of Cornell United Religious Work
- Director of Gannett Clinic (Psychological and Counseling Services)
- Director of International Students and Scholars

This list is not exclusive of other offices, organizations or groups with whom the committee may need to work. The committee should develop those links necessary to accomplish their work and to be inclusive of all aspects of the campus community.

The Campus Climate Committee will report on a regular basis (at a minimum annually) to the Faculty Senate and the respective Assemblies.

Committee members are selected through the self governance structure of the campus community combined with members from the administrative structure of the university. Each constituent governance group selects designated representative(s) on this committee by its usual processes. The committee may have a subcommittee structure that draws on persons beyond the Campus Climate Committee membership. The membership structure is as follows:

Membership:

- 1) Member selected by the University Assembly
- 2) President of the University Assembly or designated member
- 3) Member selected by the Employee Assembly
- 4) President of the Employee Assembly or designated member
- 5) Member selected by the Student Assembly
- 6) President of the Student Assembly or designated member
- 7) Member selected by the Graduate and Professional Student Assembly
- 8) President of the Graduate and Professional Student Assembly or designated member
- 9) Member selected by the Faculty Senate
- 10) Chair of the Faculty Senate Committee on Affirmative Action or designated member
- 11) Dean of Faculty
- 12) Vice Provost for Diversity and Faculty Development
- 13) Director of the Office of Assemblies
- 14) Vice Pres. of Student & Academic Services, Dean of Students or designated member

15) Vice President for Human Resources or designated member (Office of Workforce Diversity, Equity, and Life Quality)

Members selected by the student assembly or by the graduate and professional student assembly will serve one-year renewable terms. Members selected by the Faculty Senate, the University Assembly, or the Employee Assembly will serve three-year terms, with a lapse in service required before reelection to the committee. Terms of members from each constituency should be staggered. Designated member will serve for at least a period of one semester to provide for full involvement in on-going discussions of the committee. Using the option of designated members, the various administrative offices should set up a rotation process so that various members of these offices have an opportunity to serve at various times. This rotation should occur after continuous service on the committee for three years. Each office would establish the procedure for rotation and selection of the designated member.

The committee will have co-chairs with the Vice Provost for Diversity and Faculty Development being one co-chair; the other co-chair will be selected from the faculty according to the normal procedures of the Faculty Senate Committee on Nomination and Election. The elected co-chair should serve no longer than two years without a break in service in this role.

This committee and its accomplishments will be reviewed by the University Faculty Committee after two years, reporting to the Faculty Senate within the third year.

Submitted by UFC, Subcommittee

Professor Kay Obendorf
Professor Risa Lieberwitz
Professor Peter Loucks

5/1/01

Discussion of Evening Prelims and the Compression of the Academic Calendar

Susan C. Piliero, Chair

Faculty Senate Educational Policies Committee

May 3, 2001

In June 1998 an ad hoc committee chaired by John Ford, Dean of Students, published a report on the topic of Student Stress. The committee sought to identify the common sources and types of stress, and develop strategies for reducing its harmful effects.

One recommendation of the Committee to prevent or reduce stress was the limiting and regulating of evening prelims. According to the report, "Of all the class and exam scheduling factors contributing to unusual student stress, evening prelims seem to place the heaviest burden on students."

The Senate Educational Policies Committee has explored further the issues surrounding evening prelims, and submits that the issues may be more complicated than the mere existence of evening prelims.

1. There are valid pedagogical and logistic reasons for having examinations that are longer than a class period. Pedagogical reasons include the assessment of creativity and/or problem solving, especially "real world" problems; reducing test anxiety by offering extended time; and accommodating students with disabilities who require extended time. Logistic reasons include testing multiple sections of a large course at one sitting; and reserving large lecture rooms to schedule extended testing.
2. The number of evening prelims *scheduled through the Registrar's office* has remained relatively constant over the last several years. From 1995 to 1999, the number of evening prelims in the academic year has totaled 525, 545, 568, 547, and 554, respectively. The majority of these prelims are for engineering, science, and mathematics at the 100- and 200- level. The number of evening courses and subsequent student enrollments in such courses has increased. During the current semester, the total student enrollment in classes ending after 4:30 p.m. is 3,654¹
3. There is a growing body of "best practices" associated with evening prelims that can help to reduce the stress associated with evening prelims, such as published make-up dates early in the semester, and cooperation among those faculty who teach large courses.
4. Current scheduling has minimized conflicts for many students, but has not eliminated them. This is the case for more disciplines than for others: for example, while an analysis of freshman schedules showed that 98 students had scheduled evening prelim conflicts, more than half of these conflicts were for students enrolled in the College of Engineering.

¹ This does not include 875 students enrolled in physical education classes ending after 4:30 p.m.

5. The real stress associated with evening prelims may not be that they occur in the evening, but that they cluster during the semester, and some students have two or three evening exams in one week.

For the Fall 2000 term, of those freshmen who were registered for courses that held scheduled evening prelims, here is the number of days between prelims for individual students²:

# of days	# students
0	98
1	24
2	706
3	249
4	163
5	1031
6	0
7	1737
8	13
9	773

6. During the Fall 2000 semester³, the number of students sitting for scheduled evening prelims peaked on 9/28 and 11/16 (between 2700-2900 on each evening). Nearly one month elapsed between the start of the semester and the first scheduled evening prelim, indicative of the compression of workload that occurs as part of the academic cycle.
7. The disposition of students to evening prelims is mixed. An informal written survey of 200+ students enrolled in Chemical Engineering, Physics, and Mathematics courses during the spring 2001 semester⁴ revealed that, while some students dislike evening prelims, others find them essential for juggling the demands of classes and work. Some students feel they are more alert and focused in the evening, while for other students, the opposite is true. Many students surveyed preferred having extended time for testing, and therefore tolerate evening prelims. Some like the kind of testing that can be conducted during extended periods, and find that such exams are more consistent with stated course objectives than are exams that can be adapted to a 50-minute class period.
8. One clear outcome from the results of the surveys conducted this spring: students view prelims as valuable checkpoints that enable both instructors and students to assess their progress and focus on problem areas, and prefer prelims to final exams only. Overall, it appears that Cornell students value early, frequent, and varied assessment.
9. Evening examinations should be substitutes for in-class exams, not additions to the course schedule. For courses with 3 evening 90-minute prelims, the net gain in contact hours is 270 minutes. For a 4-credit course with four 50-minute lectures per week, this

² Analysis by J. Robert Cooke, Dean of Faculty

³ Ibid.

⁴ Surveys conducted by Professors M. Duncan, R. Galik, and S. Piliero.

can be translated as more than one extra WEEK of classes compressed into the regular semester.

10. Faculty legislation requires that review sessions CANNOT be scheduled after 4:30 p.m. on any day unless an alternate session is made available for those with conflicts, except as approved by the College Dean.
11. Finally, it should be noted that the semester has undergone a considerable amount of compression, which has created a stressful schedule for the entire academic community. The number of days in the semester, for example, is at or close to the required minimum. Friday afternoon or Saturday classes are increasingly rare, resulting in a horizontal compression of the school week. Furthermore, classes offered at 8:00 and 3:35 account for a small percentage of the 3,000 classes offered each semester. With the free time policy eliminating the hours of 4:30 – 7:30 for undergraduate instruction, the academic day is compressed vertically. It is little wonder that conflicts have become ubiquitous.

Recommendations

1. The Faculty is urged to weigh the potential advantages of evening examinations versus the stress these exams may cause for many students. Alternatives to evening prelims, such as more frequent in-class assessments, could both relieve some of the stress of taking heavily weighted evening exams and provide more frequent feedback to students.
2. Efforts to minimize conflicts for students with evening prelims should be increased. As well, analysis of common course loads for students in engineering, mathematics, and the sciences may identify areas where adjustments in the evening prelim schedule could relieve some prelim clustering.
3. Much of the analysis is based the official evening prelim schedule. Additional data to capture evening exams, including make-up exams, that are not on the official evening exam schedule should be collected and included in the on going analysis.
4. A guide on best practices for courses with evening prelims should be developed and made available to the faculty.
5. Further exploration of the "calendar compression" phenomenon should be encouraged. At a minimum, the Committee recommends that any further compression of the semester should be discouraged.
6. If review is considered an important aspect of instruction, the Committee encourages the faculty to schedule reviews as part of the course design, and hold them during normal class meeting times, thus ensuring that conflicts are eliminated and faculty and students are not burdened with additional evening meetings. Alternately, the faculty is encouraged to explore other time slots during the day that are known to be underscheduled, such as 3: 35 - 4:25 p.m. and 8:00 - 8:50 a.m., to hold review sessions.

“Of all the class and exam scheduling factors contributing to unusual student stress, evening prelims seem to place the heaviest burden on students.”

- Committee on Student Stress, June 1998

Pedagogical reasons for having examinations that are longer than a class period:

- To allow time for open-ended/higher order questions, problem solving
- To reduce test anxiety
- To accommodate students with disabilities

Logistic reasons for evening prelims:

- To test multiple sections at one sitting
- To reserve large lecture rooms for extended testing periods.

The number of evening prelims (~550) *scheduled through the Registrar's office* has remained relatively constant. Primarily

Engineering, science, mathematics
100- and 200- level courses

During the current semester, the total student enrollment in classes ending after 4:30 p.m. is 3,654.

Current scheduling has minimized conflicts for many students, but has not eliminated them

Number of Days between Evening Prelims For Freshmen Students, Fall 2000

# of days	# students
0	98
1	24
2	706
3	249
4	163
5	1,031
6	0
7	1,737
8	13
9	773

Peaks for scheduled evening prelims were 9/28 and 11/16 (~ 2,700-2,900).

Place graph here

The disposition of students to evening prelims is mixed:

- Can help with the demands of classes and work.
- Some students feel more alert and focused.
- Extended time is a plus
- Extended testing format may be more consistent with stated course objectives
- Cornell students value early, frequent, and varied assessment.
- Evening examinations should be **substitutes** for in-class exams, not additions to the course schedule.
- Faculty legislation requires that review sessions CANNOT be scheduled after 4:30 p.m. on any day unless an alternate session is made available for those with conflicts, except as approved by the College Dean.

The semester calendar has been compressed:

- the number of days is at or close to the minimum.
- Few Friday p.m. or Saturday a.m. classes
- Few 8:00 a.m. and 3:35 p.m. classes.
- Free time from 4:30 to 7:30

1. The Faculty is urged to weigh the potential advantages of evening examinations versus the stress these exams may cause for many students. Consider alternatives.
2. Efforts to minimize conflicts AND prelim clustering should be increased.
3. A guide on best practices for courses with evening prelims should be developed and made available to the faculty.
4. The "calendar compression" phenomenon should be explored further.
5. Any further compression of the semester should be discouraged.
6. Schedule reviews as part of the course design, and hold them during normal class meeting times, or underutilized daytime class periods.

Local Advisory Council

Membess 2000-2001

Barry Carpenter	Chemistry and Chemical Biology
Joseph Burns	Theoretical and Applied Mechanics, Astronomy
James Gossett	Civil and Environmental Engineering
Susan Riha	Earth and Atmospheric Science
Dale Bauman	Animal Science
Persis Drell	Physics (Chair F99-F00)
James Thorp	Electrical and Computer Engineering (Chair S01)
Charles Walcott	Neurobiology and Behavior
Larry Walker	Agricultural and Biological Engineering
Robert Buhrman	Applied and Engineering Physics

The LAC unanimously recommends that Cornell move to decommission the TRIGA reactor and phase out the Ward Center activities. We recommend that the administration be proactive in addressing the transitional inconvenience of current users as they transfer their research to other facilities, and in helping the staff whose jobs will be affected. The LAC recommends that Cornell maintain the Co⁶⁰ source at an appropriate local facility. These recommendations are independent of any proposed schedule for fuel removal from the reactor

Richardson's Summary

- The reactor has far too little use.
- There is small chance that the demand will increase significantly in the next decade.
- Possession of the nuclear fuel is a liability to the university.
- The space occupied by the Ward Center is too valuable to justify the current use.

I urge that we decommission the reactor and shut down the Ward Center.

The URR proposals to become a regional user facility should request and DOE should fund:

- Capital outlay spread over the 5-years to bring the URR and its research instrumentation capabilities up to state-of-the-art in selected areas of specialty
- Base support for a technical staff to construct, operate and maintain the equipment that is needed by prospective reactor users
- Base support for reactor operations and maintenance.

Each regional URR facility should:

- Provide regional and national, as appropriate, universities, hospitals, other non-profit entities and industrial users with state-of-the-art neutron sources for nuclear engineering research and research applications of nuclear science and technology
- Provide training and educational experiences for undergraduate and graduate students in nuclear engineering and in applications of nuclear science and technology
- Provide reactor users with all equipment and staff support needed to perform their research
- Actively seek enhanced linkups with other URRs and reactor and neutron source facilities at national laboratories
- Provide public outreach education for non-collegiate groups and professional organizations.

The regional URR user facilities would be expected to work with staff and researchers from other URRs to identify research and educational opportunities that could begin at the lower power URRs and feed into regional user facilities and/or national laboratory reactors.

Regional University Training & Education Reactor User Facilities

The DOE should provide funding beginning in FY02 to initiate establishment of up to three geographically distributed regional university training and education (T&E) reactor user facilities. By virtue of their lower power levels and 8-hr/5-day operating schedules, the T&E reactors are somewhat less expensive to operate. The support funds needed for three facilities should be about the same as for one regional URR research facility.

The DOE should provide funding beginning in FY02 to initiate establishment of five geographically distributed regional URR user facilities. These facilities should be selected from peer-reviewed proposals submitted by universities having the following qualifications:

- An acceptable operational and safety record for the URR over the past five years
- Core faculty using the URR for research and training and education
- An operating steady-state power level of at least 500 Kwt
- Capability (with staff augmentation, as needed) to perform extended 24/7 operations as required for experiments
- Established or indications of willingness to establish collaboration/service agreements with educational institutions, national laboratories and industrial users
- Many or all of the following
 - multiple beam ports
 - in-core irradiation access
 - ex-core irradiation access
 - beam port filters/instrumentation for
 - neutron activation analysis
 - neutron scattering
 - radiography
 - medical applications
 - isotope production with receiving, handling and shipping capabilities
- Capability (with staff augmentation, if needed) to provide assistance and support to facility users
- Desirable (but not necessary) to have gamma irradiation and hot cell facilities.

DOE should provide a 5-year commitment of support to each of the selected regional URR user facilities. The host universities must be committed to operation of the URR through the 5-year program support period, and must demonstrate that substantial institutional support comes from the university and will continue through the program support period. This university support can be in the form of faculty and staff salaries, student scholarships and fellowships, and research dollars obtained from other than DOE to pay for URR services.

budgets (this includes fringe benefits and indirect costs and excludes the University of Missouri-Columbia research reactor). These expenditures are specifically for the operational aspects of these nuclear reactors at each university site as well as safety and licensing activities; i.e., staff salaries as well as materials and supplies related to operation.

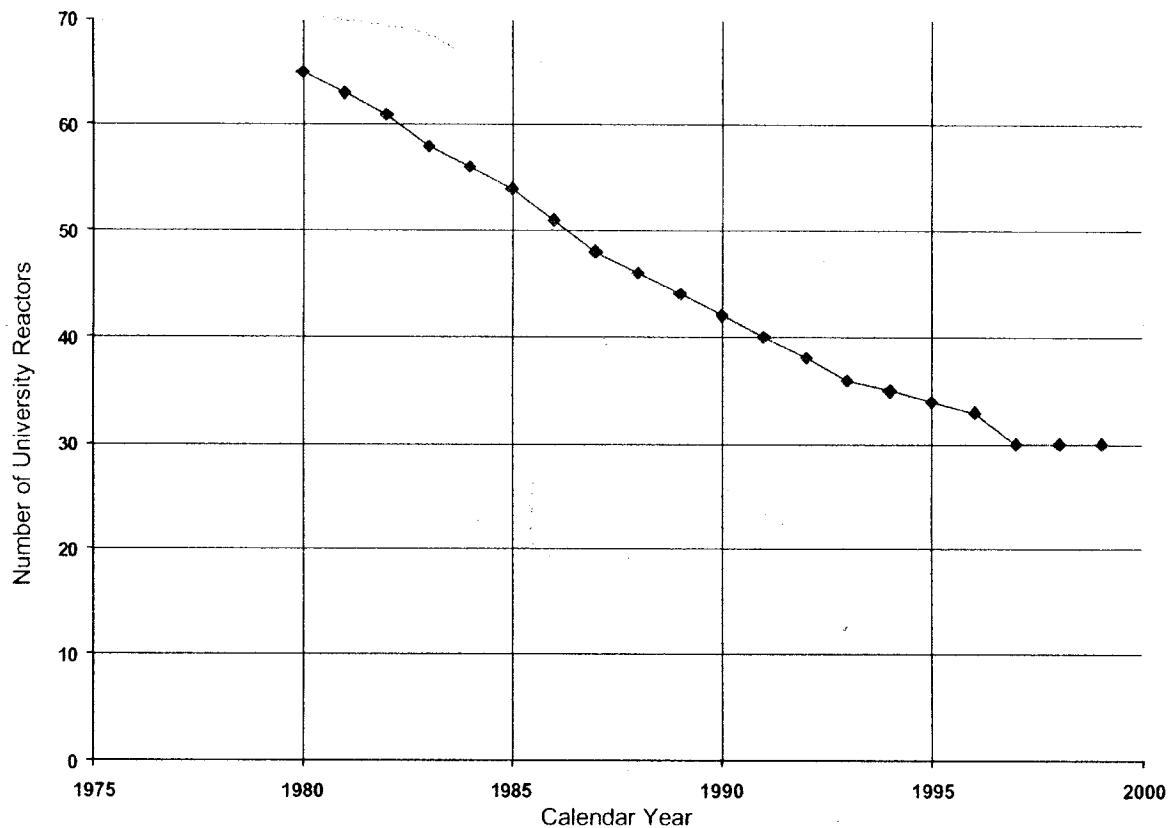


Figure 4: Population of University Research Reactors in US (Source - Office of Nuclear Energy)

The panel believes that university reactors:

- Are vital for advancement in knowledge in the nuclear science and engineering education at the graduate level and provide powerful tools for the advancement of many other disciplines;
- Provide undergraduate and graduate students with an otherwise unobtainable 'hands-on' educational experience, allowing for discovery of nuclear fission reactor processes, understanding of critical nuclear systems and interaction of radiation with matter, which enriches their general and technical education (as well as providing for professional nuclear reactor operators with advanced certification);

The Decision to Decommission Should be Reconsidered

**The decision to decommission the TRIGA
was made on the basis of incorrect and
misleading information**

- "Window of Opportunity" for fuel removal
- Inadequate utilization
- Cost

Is “surge space” really the issue?

WINDOW OF OPPORTUNITY FOR FUEL REMOVAL

There is no such thing*

- However, this appears to have prompted the initiation of the decommissioning decision process in spring 2000.

*Verified unequivocally by DOE officials in January 2001 and again in May, 2001.

FACILITY UTILIZATION

- Undergraduate Instruction in AY 00-01
(718 total)

300 Physics 208 students (experiments)

155 Art, Archeology and Analysis

235 Engr 150 + Geology 302 + Others

28 full semester course students with labs
(NSE 403 and NSE 121)

(AY 99-00, 561 students participated)

- Research: Robert and Suzanne Kay,
Peter Kuniholm, Kenan Ünlü,
Bing Cady, several others; 3 grad
students (+2 in Fall)
- "Extension"/Service: Many NY corporations
Corning, Kodak, Imaging and Sensing
Technologies, Westinghouse, Northrop
Grumman, GE- Reuter Stokes, Etc.

FINANCIAL CONSIDERATIONS

- This year's operating cost will be fully assumed by DOE out of FY01 funds if we are allowed to apply by May 31, 2001
- Additional research reactor infrastructure funds are being pushed in both houses of Congress for future years
- If so, the direct cost of continuing WCNS is close to 0
- The cost of implementing the recommendation to decommission the TRIGA but retain gamma cell is estimated to be at least \$7M over 10 years.

THE FUTURE FOR WCNS

- Nuclear Science – The diversity & quality of research lauded by the nuclear energy research advisory council - April 2001
 - The decommissioning contractor hired by Cornell, NAC International, wrote to Jack Lowe that "The quality of the [WCNS] operation was readily apparent."
- Nuclear Engineering - There appears to be a resurgence of interest in nuclear power. Cornell can play a role in training the best nuclear engineering students only with a facility to attract them

SPACE

- Short term "surge space" (Duffield) is evidently the real motivation for trying to close WCNS.
- It makes no sense to sacrifice an outstanding, valuable facility for 6-12 offices for 2 years
- Long Term

Plans are currently unknown except for the suggestion that "the next major building of the Engineering College" could be placed behind Upson & Kimble.

Cornell Faculty and the New Engineering Dean should participate in such plans
WCNS should not be eliminated on the basis of uncertain plans, if at all

Decommissioning Decision should be reconsidered

- Faulty basis
- Poor timing
- Final decision should be delayed for time to have

Proper peer review of research
Full internal review of space use options
Involvement of all stakeholders

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e-mail: rcr2@cornell.edu

April 16, 2001

President Hunter R. Rawlings III
300 Day Hall
Cornell University
Ithaca, NY 14853

Dear President Rawlings,

This letter concerns the pending decision regarding the re-licensing of the nuclear fission reactor in Ward Laboratory. I discuss considerations important to the university, and then recommend that we cease the operation of the reactor.

The reactor at the Ward Center for Nuclear Sciences has served the Cornell community, the State of New York, and national industry for 40 years. My conclusion that it should be closed is particularly poignant because the staff of the Center, under the leadership of Dr. Kenan Ünlü, continue to provide excellent service to users. The Office of Nuclear Science and Technology of the Department of Energy is especially anxious that Cornell keep the facility active. The Director of that office as well as members of his advisory committee have visited Cornell to urge the continuation of reactor operation. We have received a very large number of thoughtful supporting letters from Cornell alumni, industrial users, and Cornell faculty. In addition, the University Faculty Senate has recently passed a resolution reaffirming its 1996 recommendation that Cornell University operate the nuclear reactor, gamma cell, and associated analytical facilities as the Ward Center for Nuclear Sciences. The vote on the resolution was 36 in favor, 19 opposed, and 9 abstentions.

During the Fall Semester of 2000 a committee of the University Faculty Senate, the Local Advisory Committee (LAC), undertook a thorough review of the Ward Center at my request. Briefly, my central charge to the LAC was to answer the question of whether it is in the best interest of Cornell University to keep Ward Center as an active university facility. In the interval between mid-September and mid-January the ten members of the LAC invested an average of more than 30 hours each in the task. In considering the value of the current and potential future research and training at the Center, the LAC interviewed a large number of Cornell faculty and staff. Their report is attached.

(http://www.cornell.edu/UniversityFaculty/forums/WardCenter/Ward_LAC_finalRept) Quality of the research was discussed at length in the private meetings of the LAC. They unanimously recommended "..that Cornell move to decommission the TRIGA reactor and phase out the Ward Center activities." There were many faculty members who disagreed with the LAC report. Many of their letters are stored on the Faculty Senate Web page. (<http://www.cornell.edu/UniversityFaculty/OnLineForum/main.html>)

A second major Faculty Senate Committee, CAPP (Committee on Academic Programs and Policies) sponsored a Senate meeting on the Ward Center. The public presentation of

the activities of the faculty who have been using the Ward Center was quite informative. However, there was no attempt to present an objective and impartial assessment of the quality of that work, nor would that public venue have been an appropriate setting. CAPP recommended that the LAC report should stand and concluded that the proper role of the Senate is to provide a venue for all concerns to be heard. Charles Walcott's minutes of the public meeting (<http://UniversityFaculty.cornell.edu/FSminutes/2000-01/Feb21minutes.html>) are a very important record of the discussion. Walcott's record is particularly meaningful because it contains copies of the transparencies presented during the forum discussion.

TRIGA stands for Teaching, Research, Isotope, General Atomics. The Cornell TRIGA reactor was manufactured by General Atomics and 'went critical' (got turned on) in January 1962. Much of the theory underlying the design of the TRIGA reactor was due to a Cornellian, Mark Nelkin, later a professor in our Department of Applied and Engineering Physics. The design is particularly brilliant because of its inherent safety. The fuel is alloyed in a matrix containing Zirconium hydride. This fuel design has the important property that its prompt temperature coefficient of reactivity is negative and large. This means that the neutron multiplication rate decreases instantly as the fuel temperature rises and that this decrease is very sensitive to any increase of temperature. Since an increase of reactor power increases the fuel temperature, power excursions are limited by the special nature of the fuel. Thus, human, electronic, or mechanical operations are not required to guarantee the reactor safety during operation.

In the academic year 2002-03 the reactor must either be re-licensed with the Nuclear Regulatory Commission (NRC) or be decommissioned, also under NRC approval. The formal preparation for either decision is complex with numerous reports required. The NRC requires a detailed inspection of the effects of aging on the facility. Any degradation of the surrounding structure must be repaired. The electronic equipment for reactor operation and control will be inspected. Some of the older portions of the control circuitry will have to be replaced in the near future. Safety records, procedures, and equipment will be examined. An Environmental Impact Statement is required, including public review.

If we decide to continue the operation of the reactor, the details of the annual renewal assurances must be updated and revised with special care. We need to assure the NRC that we reserve sufficient funds to pay for the decommissioning of the reactor, estimated in FY99 as \$4.01 million including 25% contingency. The decommissioning expense is a delayed obligation of the university and will need to be faced eventually, either via closure of the reactor to build a more modern facility (an unlikely situation) or to cease all reactor activity.

If we choose to keep the reactor open there is an additional commitment. The fissionable materials and fission products that accumulate in the fuel elements must be securely protected with extraordinary care to prevent loss by theft or by release into the environment. Were we to decide to cease operation and no longer keep the Ward staff we would still have to maintain a continuous high level security of the installation until all irradiated fuel is removed. Such removal is likely to take at least the same several years

required today. If federal funds are not available at that time Cornell will have to pay for the removal of the irradiated fuel. Today the DOE has funds to assist universities in disposing of the spent fuel and waste. The DOE has a disposal site in Idaho that still accepts the material. Even this year the Idaho congressional delegation has questioned the Secretary of Energy about when the State of Idaho might expect to be able to move the stored nuclear waste to the proposed national facility in Nevada.

There are three main reasons why Cornell might want to operate a nuclear fission reactor: 1) training of students; 2) research of the university faculty and staff; and 3) public service to industrial and governmental users. The LAC has analyzed all three. Much of my discussion is taken directly from their report.

With regard to training, the economic need for the United States to revitalize nuclear engineering training and to build new power reactors has been widely discussed in the last year. I agree with the arguments. New power reactors should (and probably will) be built in the coming decade and there will be an attendant demand for students trained in the field. However, Cornell no longer has substantial academic or research activities in nuclear science and engineering and has not since the mid 1970s. In the mid 1990s, the College of Engineering disbanded the Nuclear Science and Engineering Program that had been in existence as a separate academic unit since 1977. The program termination was in response to Cornell's sub-critical and noncompetitive position in the nuclear engineering area, particularly in terms of student enrollments and sponsored research activities. The graduate program was also put on probation by New York State in 1994 because the number of students and faculty was too small. The program is even smaller now. Of the five full time faculty directly associated with the program in 1993, only three remain on the Cornell faculty and only one still lists fission reactors as a main activity. The graduate field currently lists six faculty members of whom only three are actively involved in any aspect of nuclear engineering. There are fewer than six graduate students (including three Ph. D. students). The facility offers orientation tours in several introductory courses; but only a very small number of students take courses that make extensive use of the reactor. At the present time no department has any plan to make an appointment in the field. There is negligible chance that any department will choose to do so in the next decade regardless of whether or not Cornell's reactor remains open. It is important to note that the TRIGA reactor is of a completely different design from power reactors used for the production of electricity.

The logged usage by Cornell faculty of only 226 hours for an entire year (FY 2000) represents a serious under utilization of this facility. The use is highly subsidized with no fees charged to Cornell users in most cases. The main application is neutron activation analysis (NAA). The technique is used for analysis of the elemental composition of matter, especially for the detection of trace quantities of elements. Specimens are irradiated in the reactor producing radioactive nuclei as neutrons are captured. Thereafter, the energy of the photons emitted in the decay of the radioactive nuclei provides a unique signature of each element. The current NAA work done by Suzanne and Bob Kay on rocks Suzanne has obtained in the Andes and that by Peter Kuniholm studying ancient tree rings has been especially interesting. Both projects have received a great deal of recognition. Both projects have also involved many students and

collaborators working in the Ward Center. For the most part, Cornell faculty perform NAA studies at Ward Center because it is free and readily accessible. The significance of the Kay and Kuniholm projects is an exception. Citing the LAC report, "Little competitively reviewed, externally funded research has been done with the reactor for years. Much of the work, especially that for outside industry, is routine. Since the inauguration of Ward Center in 1996, its research base has grown somewhat across campus, and signs for the future are generally positive. Many people across campus have good impressions about the facility. On the other hand, very few if any young faculty are enthusiastic about the science, about devoting their own careers to building or improving the facility, or about utilizing the reactor heavily."

The NAA technique is not unique to the Ward Center. It is readily available, for a price, at other university or private facilities. The NAA method is being displaced by other more modern analytical techniques such as Inductively-Coupled Plasma Atomic Emission Spectroscopy (ICP) and X-ray Fluorescence Spectroscopy (XFS). The latter two typically cover a wider range of elements and are frequently more sensitive. Similarly, other uses of neutrons at the Ward Center such as radiography, instrument calibration and radiation induced defects are available at other facilities.

Proponents of the Ward Center argue that new techniques and new research activities are likely to be important in the future. Again, I quote the LAC report, "...With respect to the potential of expanded neutron beam capabilities of the reactor, most of which have been in consideration or under development for quite some time, in some cases for decades, there is not an engaged and energetic group of faculty who are willing to champion and support their development. Nor can a compelling case be developed from the LAC interviews that more substantial use of the reactor will develop if these capabilities are indeed eventually established, nor that they would have a major, enabling impact on Cornell research programs." The two new uses most frequently cited are Boron Neutron Capture Therapy (BNCT) and neutron diffraction studies of structures. Both are highly implausible as important programs at the Ward Center.

In BNCT, boron is attached to enzymes which are released into the brain or other organs affected with a tumor. Subsequently the patient is placed in a neutron beam. The boron captures neutrons and the cancerous growth is destroyed by radioactive decay in the resulting nuclear reaction. The method works but is cumbersome. Clinical facilities, even for animal research, are very expensive. The scheme is not new. Clinical trials of BNCT were conducted at Brookhaven National Laboratory (BNL) and the Massachusetts Institute of Technology (MIT) during the 1950s and 1960s. Those trials were unsuccessful and had unacceptable clinical toxicities. Through the following decades research was directed toward more careful measurement of radiation dosage and more careful control of the drug distributing the boron in the brain. Work was conducted in numerous facilities worldwide. Despite a great deal of publicity about the benefits of the method in the early 1990s, the amount of supported research has declined. In 1999 DOE's Biological and Environmental Research Advisory Committee (BERAC) reviewed the BNCT research supported by the agency. BERAC recommended that DOE cease the support of clinical trials of BNCT. (<http://www.er.doe.gov/production/ober/berac/bnctfnl1199.html>)

Subsequently, the BNCT clinical facility at Brookhaven was shut down. The National Cancer Institute of the NIH now has only two active grants in this field.

With regard to diffraction measurements, the neutron beam intensity at Ward Center is not large enough to make such measurements competitive with other facilities. The Ward TRIGA is a 500 kW reactor. Ward's power level is only 5% of that at the weakest reactor in the United States being used for diffraction measurements. Major facilities at NIST and Oak Ridge have powers of 20 MW and 85 MW respectively. It is highly unlikely that Cornell users will choose Ward for structure studies. It is also unlikely that DOE would award a competitive grant for the expensive modifications and new equipment required for diffraction spectroscopy.

Industrial concerns used the TRIGA reactor for the largest amount of time in 2000. They paid for 311 hours of use. Our rate is quite competitive and our staff is user friendly. The fees paid by external users are an important source of income for the Center. The principal applications have been NAA, controlled production of defects, radiography, and instrument calibration. The external users have written very enthusiastic letters of support for the Ward Center. The service we provide is both valuable and important to them. However, the activity is routine and the services are available elsewhere. External user service is also subsidized by the university in the sense that it does not reflect the true cost of operation of the facility. The value of the assistance we give to industry must be balanced against the long term needs of Cornell.

If we ignore, for the moment, the operation and maintenance (O&M) costs for running the Ward Center and the more important opportunity costs associated with other uses of the space, the Center has an annual operating budget of \$500,000 (AY'00-'01). The University pays \$200,000 of the budget. The Center anticipates an income of \$240,000 from external users. (It received \$215,000 in AY '99-'00.) The remainder of the income is derived from external grants paying for equipment and safety upgrades, from endowment income (\$21,000) and internal user fees (\$7,000). The historical average for external funding for research at the laboratory has been roughly \$250,000 per year (in year 2000 dollars). (A misleading graph was presented at the University Faculty Meeting implying an almost exponential increase in the growth rate of funding. The graph showed \$623,000 in federal funding received in the current year. The funds were not the annual income but income for three years. Most of the funding is not competitive. That is, most or all of the applicants to this particular program received awards.) To summarize, it currently costs the central administration \$200,000 per year in direct funding to support the center. The additional costs for O&M, reported to DOE by the Ward Center are \$270,000 per year, though that number might be too high by a factor of two. The indirect costs returned to the university for research conducted at the Ward Center are less than \$80,000.

Dr. Ünlü has pointed out that there are two authorization bills before the Senate, S.242 and S.472, which are intended to provide financial relief to universities with research reactors and programs in nuclear science and engineering. Neither bill is an appropriation bill. The money is not available until both houses of congress have passed the appropriation bills. S.474 is evidently the authorization bill for the long standing

programs of the Department of Energy in nuclear science and engineering. S.242 is a program earmark that would authorize the Department of Energy to set aside \$30M to support nuclear engineering training at universities. The bill directs the Secretary of energy to fund graduate fellowships and assist young faculty in programs of reactor science and engineering. It is not clear how S.242 would affect Cornell with our absence of such programs.

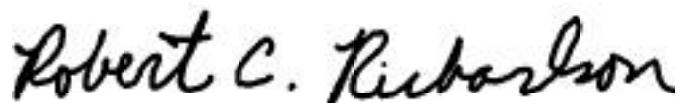
The national trend in research reactor operation has been a downward spiral since the peak in funding in the 1960s. There has been a steady decline in the number of active research reactors from a peak of 60 down to 25 today. Even if the pending authorization bill, S.242, fails to be supported the funding for university reactors is unlikely to decline further. The country has a great deal of interest in maintaining at least the present minimum level of training. For Cornell, the funding relief, if any, is likely to be temporary and in the form of further assistance in operating equipment and for the expenses involved with re-licensing. We do not have the programs in nuclear science and engineering for which the bulk of the legislation is intended.

The most important consideration for Cornell is the long term use of the facilities and space occupied by Ward Center. The immediate questions of financial support of the Center should be set aside. Do we want to have the TRIGA reactor and the associated responsibilities at the site of Ward Laboratory for the next 20 years? My answer is "no." There is no path for significant improvement of the current facility. The reactor power could be doubled at large expense but the progress stops there. The reactor would be destined to be an increasingly out of date research tool. At the same time, the building has a gross space of 33,000 square feet. Ignoring staircases, toilets, and rooms for building support there are more than 16,000 square feet of space that can be used for offices and research laboratories after the reactor is decommissioned and the irradiated fuel is removed. The land upon which the Center sits is very valuable to Cornell because of its close proximity to the Engineering Quadrangle. Eventually the space can be used for the next major building of the Engineering College. In the meantime the building can be used as 'surge space' for engineering faculty when much needed renovations are made to other buildings on the Engineering Quadrangle. We will never be able to use the site for planning another building unless we begin the lengthy decommissioning process well in advance.

I repeat here the summary recommendation of the LAC: "The LAC unanimously recommends that Cornell move to decommission the TRIGA reactor and phase out the Ward Center activities. We recommend that the administration be proactive in addressing the transitional inconvenience of current users as they transfer their research to other facilities, and in helping the staff whose jobs will be affected. The LAC recommends that Cornell maintain the Co⁶⁰ source at an appropriate local facility. These recommendations are independent of any proposed schedule for fuel removal from the reactor." I concur with the recommendation. It is especially important that we be proactive in helping the staff who will be affected and in assisting in the transition for those who must transfer research to other facilities.

My succinct summary is that we can no longer warrant spending DOE and Cornell funds to subsidize the TRIGA reactor. The reactor has far too little use. There is small chance that the demand will increase significantly in the next decade. Possession of the nuclear fuel is a liability to the university. The space occupied by the Ward Center is too valuable to justify the current use. I urge that we decommission the reactor and shut down the Ward Center.

Respectfully submitted,

A handwritten signature in black ink that reads "Robert C. Richardson". The signature is fluid and cursive, with "Robert" and "C." being more formal and "Richardson" being more flowing.

Robert C. Richardson
Vice Provost for Research