

EXTRACT FROM FACULTY SENATE DISCUSSION

ON BIOLOGICAL SCIENCES

Wednesday, November 11, 1998

2. QUESTIONS FOR THE PROVOST

Professor William Lesser, Agricultural, Resource, and Managerial Economics: "My question has to do with our ongoing discussion about the structure of the Biological sciences. We have had two opportunities to discuss and we will be completing that discussion today. During that period we've had the opportunity to get a broad view from the faculty and other administrators there about what their perceptions of the issues and solutions are. And this afternoon, Vice Provost Garza will be presenting his synopsis of the issues and the possible applications and remedies thereof. What we haven't really heard from is the view of the central administration regarding these matters, which takes on critical importance because you all are going to be making the final decision. Therefore, I was wondering if you could kindly answer three questions. First, what are the major current limitations regarding the teaching and research in the biological sciences that are leading to this consideration? Two, how can this structural change remedy those problems? And three, what do you hope to receive from the Senate discussions in this area? Thank you."

Provost Randel: "Maybe I should take them in inverse order. What we seek from the discussion of the Senate, indeed, what we have been seeking from the discussions in various other orders, is a sense of the Faculty's view on how we ought to proceed on this matter. And in that sense, I clearly can't give you a view of what the central administration is going to do because we partly await the outcome of this discussion as well as many others. I think after this one, we will begin to proceed to set down on paper what we ought to pursue. The second one is about the Division itself. The fact is that any decision that is taken as to whether to have a Division or not have a Division is merely the first of many decisions that will need to be made, and all that follows is going to entail a good deal more discussion on the part of the Faculty. Having a Division or not having a Division is not going to make us good in biology. Which brings me to the first question which is why should we be thinking about this at all? And that is because (a) Cornell has a very considerable investment in biology already; and (b) is probably the science of our times. The rate of change in those fields is astonishing. The amount of work that is being done in them increasingly affects every other science that we are in. We have had a powerful Physics Department for a very long time. There have doubtless been many years in that glorious history when physicists wouldn't have taken much of an interest in biology and now they find themselves compelled to. And one could go on and on. Our motives here are simply to be as strong in the biological sciences as we have been in a variety of other fields and will need to be if we want to be a distinguished university in the years to come. We have pockets of great strength in these fields and we have other sectors in these fields where we are not as strong as we need to be given the changes that have taken place in biology. So the goal of the entire enterprise of which this is really only a part, and a part which will not fix the problem, is to be as good as we can possibly be in fields that we cannot afford to ignore."

Speaker Pollak: "Other questions?"

Associate Professor Randy Wayne, Plant Biology: "Since J and K are options that we are discussing today, actually, it's just administrative structure. It has nothing to do with biology necessarily. If the Trustees gave you the opportunity to revamp the Provost's Office, given the choice of J and K, what would your questions be to them?"

Provost Randel: "I guess I haven't really understood the question."

Professor Wayne: "If the Trustees gave you an option to divide your office into small departments without a large group that goes straight to the Trustees or to have one powerful person with groups that were ill defined, what would your question be to them?"

Provost Randel: "I think that's a trick question (laughter). I think that the scales of these two problems are incommensurable and its hard to imagine how an answer to that question, if I could figure out what it could be, would be relevant to the questions before."

5. PRESENTATION ON THE DIVISION OF BIOLOGICAL SCIENCES

Cutberto Garza, Vice Provost: "The update I provided that was posted on the web was in two parts, for those of you have not had an opportunity to look at it. The first outlined the salient goal strategies, concerns, and views that have been expressed most often by the various groups whose input has been received. The second outlined the key characteristics of the options that remain under consideration. I hope you reviewed part one. The two options that remain have been narrowed down from approximately eight that have been presented to or by the faculty in the past two weeks. The two are most similar to options A and C that were presented at an earlier meeting. Both, however, have been modified in response to input from the faculty and from various college administrators. The options remaining have been labeled K and J with the hopes that we wouldn't get to Z.

"Although the focus of the reorganization is the present Division of Biological sciences, I want to stress that any reorganization must acknowledge the context of the broader life sciences. This broader context and the on-going program reviews will undoubtedly influence the implementation of any decision that may be taken. It is very important, also, for me to stress that it is not my intent to signal, or send any signal, that minimizes the expected impact of the ongoing program reviews on future strategies for assuring greater collaboration across colleges in curricular matters or in research and extension activities that relate to the life sciences. This is especially true in determining future directions in the broader life sciences that are reflected in new hires, faculty performance reviews, and ultimately in tenure decisions and investments that relate to facilities and other infrastructure.

"Thus, both options that I will present assume that the central administration will play a major role in convening the units on the Ithaca campus with interests in the life sciences. Among the aims of this convening role are to implement campus-wide planning in the life sciences, assuring enhanced coordination of searches in new hires; promote effective mechanisms for anticipating new directions; and facilitate campus-wide initiatives in teaching, research, and outreach, in all of the life sciences. The on-going program reviews are expected to inform how all of these aims can be met most effectively. Now it's also extremely important to acknowledge that selection of an administrative structure -- in fact it was raised by one of the questions today -- is only the first step of a complex problem. The implementation of any decision will require your involvement and especially involvement of departments/sections that would be affected by any decision taken most directly.

"Now even a cursory review of the two remaining options suggests that many details will require faculty input. I listed some examples of that input on the Web. If you have not had a chance to review that, I certainly would request that you do so. Before going on, I would also like to take this opportunity to thank the faculty that are here, and those that are not, for their help and support in this last phase. I have to again stress how useful it has been to get your input and to stress to you how thoughtful and how civil that input has been throughout this process. I think that the faculty that participated in that are to be commended.

"Let me begin by going over the options that we have before us. The first option, Option J, is most similar to Option A that had been presented before. It eliminates the Division and creates new departments,

reporting to the colleges, or college: (1) Molecular and Cell Biology reporting to either Arts and Sciences or CALS, and a similar reporting structure for (2) Genetics and Development, (3) Ecology and Evolutionary Biology, and (4) Neurosciences and Behavior; (5) Physiology to the Vet School; (6) Bailey Hortorium to CALS; (7) Plant Biology to CALS; and (8) Microbiology to CALS. Now, the discussions have not been held with the colleges solely responsible for the units numbered 5 - 8. Thus, how these units would be managed has not been entirely determined, nor have their prerogatives as departments been discussed. In essence, this would provide us with four main divisions at most, but we really have anywhere from 3 to 8 departments that would be created that could emerge from this reorganization. These 3 to 8 would follow the usual university models in hiring, promotions, etc. The major exception would be that the departments with dual-college affiliation would not be permitted to offer a separate undergraduate major. This also requires some discussion since faculty lines for at least four of these departments come from two colleges. We might have two co-equal deans, or a lead dean with a secondary dean, and the responsibilities have not been worked out for either the lead dean or the secondary dean. If indeed, we were to go with an option like this.

"The undergraduate biology major would be retained as a single major under the administrative responsibility of a Director of Undergraduate Studies. Under this option, the Director would be appointed by and report jointly to the deans of Agriculture and Life Sciences and Arts and Sciences. A structure would be developed by these two colleges that would enable the director to receive the full cooperation of core departments in the designing and staffing of the teaching program, and provide the support necessary to enlist the participation of biologists throughout the University. The intent of this is to make sure that there is a much wider University participation in the biology curriculum than currently occurs, or is perceived to occur. A committee would advise the Director of Undergraduate Studies with representation coming from departments responsible for core curriculum and representatives from departments of other undergraduate majors in the life sciences. Among this group's major responsibility would be the full integration of all of the campus biologists in the biology major teaching program. Lastly, the third major component of this would be the committee to advise the University in the area of basic biology. The Provost would appoint this committee and it would be made up of senior members of the Cornell faculty, deans from selected colleges, and external senior scientists from both the public and the private sectors. Members of this group with Cornell affiliations would be expected to meet more frequently. Given the wide University interest in achieving greater coherence across the life sciences, however, I fully expect that the role and composition of this group will be rethought once we have all of the biology program reviews or life science reviews completed.

"I'll move on then to the other option, Option K. This retains the Division of Biological sciences with a Director appointed by the Provost. The Director of the Division would be responsible for allocating faculty lines and resources that are assigned to the Division. The intent is not to create another autocrat. I think we'll keep the ones we have; let's not try to create anymore. The intent, when we say 'responsible for faculty lines,' is that those would be determined by an Executive Board that would advise the Provost. That board would be appointed and chaired by his or her designee. Its members would be the deans of the College of Arts and Sciences, CALS, and at least one other college, and the Director of Biological sciences. Once those resources are assigned to the Director, one would expect to hold the Director accountable for their use.

"Now, one would expect that the development of faculty lines assigned to specific areas of scholarship, the development of search plans for new faculty, the allocation of resources for major facilities, would all be done after consultation with the board with a final decision of the Director being reached in consultation with his or her faculty. Existing sections will be organized into areas of scholarship that would be led by individuals appointed as Associate Directors, to stress responsibilities to the Division as a whole, and secondarily, to narrow areas of scholarship. It is my expectation that we would try to limit those areas to

three or four, certainly from the number of eight that is present now, to try to create a culture that would be more responsive to the rapid change in biology and would enhance the training of our students for their future rather than for our past. We would retain a single undergraduate major. An Associate Director of Undergraduate Studies would be appointed by and report to the Director of Biological sciences. The structure would be developed, in this case, by the Executive Board, to accomplish exactly the same aims that I reviewed for you under the previous option. In terms of getting wider participation of all biologists on campus, a committee would be chaired by the Associate Director for Undergraduate matters. The committee would here consist again of the various representatives and be responsible for the undergraduate major, but also representatives of other departments with majors in the life sciences, in the effort to achieve wider collaboration in the biology major teaching program involving all biologists on campus.

"Lastly, a committee to advise the University in the area of basic biology, having the same function and composition that I described earlier, but here again, expecting that both the role and composition will change once the program reviews are over and we are able to determine how best to achieve the type of collaboration and cooperation across colleges that I described earlier."

Speaker Pollak: "Okay, we'll open it up to comments, questions, queries?"

6. DISCUSSION OF BIOLOGICAL SCIENCES

Professor Howard Howland, Neurobiology and Behavior: "I'd like to speak at the podium. This is the last scheduled discussion before the fate of the Division of Biological sciences is decided. We have two options before us, and each is frustratingly vague in its detail. But its purport is clear: Option J will abolish the Division, Option K will preserve it. Thus, in this short time, I propose we examine whether the Division should stand or fall. Dr. Garza identifies the concerns of the stakeholders and from these, it's clear who supports J and who supports K. He writes of the Deans' concerns. 'College responsibilities for implementation of research and teaching activities presents strong arguments for keeping the reporting structures as closely tied to the colleges as possible.' Thus clearly, the Deans support Option J, the dissection of the Division in their departments and their colleges. What are the implications for the sections? Close ties of my section, the section of Neurobiology and Behavior, to CALS may implement the recommendations of the Dean of CALS that, and I quote, 'Investments in the Neurobiology program should be monitored and focused by the college so as to maintain teaching capacity and research activities that support the College's mission, such as the control of insect pests.'

"On the other hand, were Neurobiology and Behavior to fall into the Arts College, it is unclear how our mission would be framed or in the words of the recent Humanities report, how our section might be 'reoriented in a more intellectually challenging direction when the bounds of its disciplines were reconceptualized.' Those who believe that the sections of the Division will be preserved in several colleges are, I think, in for a rude awakening. But their faith is nothing compared to those who think that the biology curriculum, which serves the largest major in this University, will survive the breakup of the Division. I have chaired the Curriculum Committee of the Division, and served as a representative on the CALS Curriculum Committee. I know the pressures to which the biology curriculum is subjected. If the Division is dissolved, I predict that within ten years, that curriculum will look as if it has been put through a meat grinder. The figure of a Director of Undergraduate Studies in Option J, who must go with hat in hand to the deans and department chairs to attempt to hold together what pieces of the biology curriculum he or she can, is worthy of a Russian novel. The person who takes this job must either be a cynic or a suicide.

"So who then favors Option K, preserving the Division? The administration knows that the large majority of the faculty of the Division favor its retention. Why? Because we endorse the goals that, as Garza says,

'Nearly everyone endorses.' One, enhancing basic biological sciences at Cornell and two maintaining a single, strong undergraduate major. We believe that only an intercollegiate structure can coordinate and nourish biology and only such a structure can maintain a strong, undergraduate major in the biological sciences. Listen to the advice given to us by the External Review Committee, hand-picked by the President. They wrote, 'We recommend that there be designated a Vice Provost for biological sciences, responsible for guiding the development of the biological sciences at Cornell.' And, 'It will be argued that the establishment of integrated, strong leadership for the biological sciences at Cornell would violate traditional administration patterns in funding possibilities and hamper established missions of some of the Colleges.' To that assertion, we reply with a question. They ask, 'Does Cornell want to become the intellectual leader first in research and teaching in the 21st century, or is Cornell too timid and too hampered by tradition to meet this challenge?' And the Deans, according to Garza, think that, 'Strong departments most often develop and support strong academic programs.' Well, our Division of Biological sciences was once strong and it did develop and sustain strong academic programs. It even sustained a strong undergraduate program in the last ten years, when its Directorship was failing. Is this not a mark of a successful organizational plan that can carry on even when its Directorship was weakened to the point of near incapacitation?

"Ladies and Gentlemen, this is an historic decision that holds the seeds of success or failure of the University in the next century, to say nothing of the current Presidency that is rushing to this decision. Seldom has come before this body such an illogical, parochial, ill-thought-out and, in its effect, downright destructive proposal of Option J, which would abolish the home of basic biology on this campus, scatter its parts to three colleges, and throw away more than 30 years of progress in unified biology at Cornell. With all my heart, I urge the administration to reject it."

Professor Douglas Haith, Agricultural and Biological Engineering: "I canvassed my faculty this morning, and, in fact, we had a meeting about this. It was a little bit embarrassing to see that the reaction of my faculty was basically, 'How can there be two such terrible alternatives offered to our faculty?' And I had no real good answer to that because to a man or a woman, our faculty found both of these alternatives extraordinarily defective. Option J is defective primarily because of its devastating impact on the undergraduate program. Just being teachers, we could not understand how an effective undergraduate program could be organized under that context. On the other hand, we were just as unhappy with Option K. The reason we were so unhappy with that is we frankly could not understand how a University organized around strong colleges, strong departments, who long have had traditions for the excellence of their academic programs wanted to go with some new, extra-college, extra-department structure, in which now we would be putting power into something that none of us understands. We don't understand the implications of where that would go. I know that some of us had real concerns about what its implications might mean for our own departments and our own college graduation requirements, and they seem severe to us. The final thing that my faculty asked me, and I didn't have an answer for this either, is why wasn't the most reasonable option proposed? Of course, everyone wanted to know what that was, as do most of the rest of our faculty. Why wouldn't all the goals be satisfied by putting the Division of Biological sciences into a college, left unsaid which college? I understand it would be a very problematic issue. I realize it would take extraordinary courage on the part of the administration to do that, but if the entire Division were in a single college, I maintain that all of our goals would be accomplished, and I could not answer my faculty's question as to why that alternative was not proposed."

Speaker Pollak: "Next?"

Professor Ray Wu, Biochemistry, Molecular, and Cell Biology: "I would like to point out that in the Biological Sciences Division, there are about 100 faculty members; whereas there are 400 faculty members in CALS for

a total of 500 faculty members. The Division of Biological Sciences would, in a way, cause a division between the faculty of the Division and the faculty of the College. In fact, many of the Ag college faculty members are doing basic research, so I think that the decision is quite arbitrary. So, I'm in favor of J, which should unify all of biology into one group and don't call it a division. I think that the teaching part could be organized as it is now and it shouldn't suffer if it's organized correctly."

Speaker Pollak: "More comments?"

Robert Lucey, E.V. Baker Professor of Agriculture and Senator-at-Large: "They've mentioned 'outreach' through the document, but they don't define it. It doesn't fit any of the categories, in my mind, and I'd like a clarification on that."

Vice Provost Garza: "Extension and other activities that relate to external bodies. I'm going to make sure that all three missions were represented rather than speaking only to our mission in the life sciences to teaching and research. Most of the Division, by now, is devoted primarily to those two missions. Looking at the broader life sciences, though, we need to keep that firmly in mind."

Professor Lucey: "You'll need to do a better job than you've done so far."

Vice Provost Garza: "Well, there are lots of details, I grant you. We just have not had the necessary capabilities to get to that point. I certainly am very anxious to get this decision made so that we can bring greater specificity to either option."

Associate Professor Jeff Doyle, Bailey Hortorium: "After Professor Howland's comments, what I have to read is going to be a bit bland in comparison, but it is along the same lines. That a substantial majority of the Division faculty rejects models that eliminate the Division has been quite clear from the beginning, from the first hostile receptions of the Task Force Report to the period when written commentaries were accepted, and in meeting with Vice Provost Garza most recently in the open University Faculty Forum. Of course, we've never been asked to vote formally, either as individuals or even as units on this important subject. Despite this, models proposing the elimination of the Division continue to crop up regardless of the number, seriousness or vehemence in the objections of the Division's faculty and in the absence of faculty support for such models. Option J is the latest of these. I find Option J to be flawed for two major reasons. First, eliminating the Division poses unknown and largely unexplored and unconsidered risks to the major. These concerns have been articulated by many people, particularly Professor Howland's group, from the earliest stages of this process. I have yet to hear any refutation from those who favor elimination of the Division. Like all the incarnations of the Task Force recommendations, Option J assumes that the major can be maintained unscathed by the creation of a new interdepartmental bureaucracy. Yet Option J states that several current sections, such as the Bailey Hortorium and the section of Plant Biology, may be permitted to have their own majors. This is an honest admission, the first in the history of this model. But separate departments are likely to pursue separate paths, not only in research, but in teaching and advising as well. As I pointed out previously, the effect on a single biology major is significant because faculty in these sections advise a disproportionate number of students in the largest program of study major, in general biology. Several are also part of the small cadre of freshman faculty advisors in the Division. Second, Option J will further balkanize, not unify, basic Biology at Cornell. As pointed out in the meeting two weeks ago by Professor Paolillo, the original Task Force recommendation included a research institute that was meant to fill the void left when the Division was eliminated. Although the institute concept had many flaws, and I am glad it has been eliminated, there is no comparable unifying entity in Option J. I therefore believe that Option J will further neither of the two principal missions for which the Division was created, to maintain a unified undergraduate major, and to unify basic biological research. Both of these areas are as critical today as they were at the time of Morrison's report, I thus urge the administration to reject Option J and all other

models in which the Division of Biological sciences is eliminated and move forward with whatever reorganization of the existing Division is warranted."

Professor Peter Stein, Physics: "Peter Stein, junior Senator from Physics (laughter). It is indeed, an historic moment, and I feel goose bumps. I feel like I'm in 1861 listening to a historic debate between Lincoln and Douglas. We have on the one hand, the abolitionists and on the other hand, the preservationists, and both of them indicate dire consequences if we adopt either course, that the Union cannot stand if we adopt the other course. But the problem, it seems to me, that while in the Civil War, the issue was slavery or not slavery, it doesn't seem to me that the real issue that we ought to be addressing is Division or no Division. The real issue that isn't discussed a lot, even though Vice Provost Garza did refer to it extensively in his remarks, the real issue is that we have 500 people, 500 faculty members on this campus, some of whom are in my own department, who do biology, and yet the word 'biology' is used to describe what 100 people do in the Division. It seems to me that the fundamental problem is what ought we to be doing on this campus, here in Upstate New York, not with the Medical School that has a long-standing tradition of applied biology, with a pre-eminent Vet College and 500 faculty members, what ought we to be doing in biology in the next millennium? And that, to me, seems to be a question that we have hardly addressed. And I have the feeling that somehow, what we're talking about, what everyone is talking about, is the form rather than the function. And the question is does form follow function? Or does function follow form? It seems to me that what structure we have should depend on the grand vision for how the efforts of these 500 faculty members are organized, what they ought to be doing. Somehow we should come to that conclusion, and then it will be clearer to see what sort of structure we need to carry that out. It really does seem to me that this is an historic moment, but it's the wrong historic moment. We're asking the wrong question at this historic moment. The question we really ought to be asking is, 'How are we going to do this emerging new science of biology in the 21st century, what is it we want to do, and how do we need to be organized to do it?' Not the inverse question of 'How ought we to be organized' and then 'What science will we do?' As one of my favorite Vice Provost's says, the question is not what science do we do with the structure that we have, but what structures do we need to do the science? First we have to know the science and then we can know the structure. And, as I wrote to him in a letter, it seems to me as a non-biologist, that we may be in the problem of first deciding on a skeleton, and then deciding on whether it is a mouse or a horse that we want to build."

Professor Richard Galik, Physics: "Rich Galik, the younger but senior Senator from Physics (laughter). One thing that I think is a hallmark of the last few decades and will be of the next few, is the flexibility and cross-pollination (no pun intended to the Department of Botany), between applied and basic, between various aspects of Biological sciences, that will be necessary. I really see that Option J makes that more difficult. Option J will make departments that tend to make things more parochial. I also sit on the College of Arts and Sciences EPC and I've sat on the FCR and its EPC for the University, and I have to agree with the speakers before that having individual departments with houses in both Arts and Ag will make a very difficult time."

Speaker Pollak: "Other comments? Any new comment before we recognize any previous speaker?"

Professor Richard A. Baer, Natural Resources: "I have a question. One of the concerns of our department is how service courses will be provided that students of Natural Resources need? And I have a question for those of you in biology. Which model is more likely to work well in terms of providing Biology instruction to people who will not be biology majors but who will need biology to do Natural Resources to or to do other work that we do in the Ag College?"

Speaker Pollak: "Who would like to address their opinion on this?"

Professor Robert Turgeon, Plant Biology: "I teach the introductory biology course for non-majors. My personal preference is to go with the Division. It can't help but bring us together and formulate the general curriculum that could be delivered to people outside. I don't think that we have any other mechanisms to do it. And I think it would be a lot easier than individual structures."

Speaker Pollak: "Other comments?"

Professor Elizabeth Earle, Plant Breeding: "We've been hearing a number of fairly compelling or at least impressive arguments for retaining the Division. I think what concerns people that would grant the validity of those arguments is that Option K seems to raise or heighten the wall around the Division, separating it from 400 other biologists on campus. I mean, it's not so much about having your Division -- that might be a matter of concern -- but separating it more from the Colleges and putting those biologists in a distinctive reporting relationship with the Provost could be very troublesome and I think it should be thought through very carefully before we go in that direction."

Professor Emeritus Robert Sweet, Fruit and Vegetable Science: "I'd like to speak to the roots of how we came to have a biological sciences group as far as CALS is concerned. It started when Sputnik went up in 1957, which created an enormous response from the public, and typically, the politicians responded by throwing money at it. And the money was for research but it was for basic research, and the applied, problem-solving research that was typical in CALS at the time, did not qualify. There were groups that felt that their work was more basic and (these were the attitudes of my colleagues in CALS) they felt hampered by being tied to Agriculture and wanted out, but those positions were obtained from public funds on the basis that they were going to help agriculture, either through teaching or research or outreach. There were years of acrimonious debate, and finally a compromise was reached and Dean Hull backed it. CALS faculty could, on their own option, decide to be associated with biological sciences primarily or stick with their departmental arrangement. This allowed a significant number of faculty to become more divorced from problem-solving research and there was no concern at that time about teaching undergraduates. It wasn't even considered. This was a split between applied research and basic research, and here's the money. The money dried up, and here we are. I am pleased that one of the concerns is teaching and teaching at the undergraduate level. The question that was raised over here about service courses for people who are not planning to be biologists but need training, these are issues of great importance. I don't know the best way to do it, but we shouldn't forget our roots. We chased money and money still will play an important role in what happens to biology at Cornell. I wish it well."

Professor Richard Harrison, Ecology and Systematics: "Professors Howland and Doyle seem to invoke a majority rule of democracy as one of the reasons for keeping the Division as it is now. The majority of faculty within the Division favor that option. It is also the case that a vast majority of the faculty of the Division of biological sciences are also passionate about defending their current turf, namely the section in which they reside. And I think that one of the difficulties of the Task Force was that we could come to no resolution of how, within a Division, how Biology could be reorganized such that we would not be fragmented into eight sections. I would contend that eight sections even within a Division are as evil as eight Departments cutting across a college. What we need to confront in a decision about this structure is how we can bring biologists together and I think that there is a lot of resistance within the current Division, even should it be retained, to congeal it into two or three or four units. And Vice Provost Garza has alluded to that problem and talked about the fact that we might have anywhere from three-eight units within a future Division or three-eight departments within Option J. And whichever option is decided upon, I think that it is essential that we reduce the number of units that represent basic biology on this campus."

Speaker Pollak: "Any other comments?"

Professor Becker: "There is just one thing that I wanted to address that was said earlier, that wouldn't it be nice if only we could just pick one of those options and then we could go work on the details. I just don't think that's terribly responsible. The only way you can decide which one is best is by confronting head-on the detailed implications, for example, for the undergraduate major. If it isn't spelled out exactly what are the responsibilities of the people in these departments that don't have their own major, if their responsibilities to the major aren't spelled out-- particularly for the departments that could have their own major -- what are their responsibilities to a joint major? And what incentives are you going to offer people if there isn't a formal responsibility to contribute to the major? What incentives are you going to offer to people to cross-list courses or to teach extra courses or service courses. So I think that without having a detailed statement of how the curriculum would look like under Option J or Option K, it's hard to take the big leap and commit either way."

Professor Wayne: "I'll ask this just one last time for the Provost to take a vote on Option J or Option K and an option for no change of everyone in the Division."

Professor Joseph Ballantyne, Senator-at-Large: "I'm persuaded by the arguments that I hear that the undergraduate curriculum would be best served by the central presence of something like a division, Option K. I'm also concerned that, as you pointed out, Option K seems to have the flavor of raising the walls between the 100 in the Division and the 400 outside the Division. And it seems to me that a modification of Option K, which provided for some kind of more permeable barrier on the research level, would be very important. I compare it with the relationship that exists in Engineering and the Physical Sciences, where we do have, through the Material Science Center and the Nanofabrication Facility, a lot of interchange among departments and across colleges in research because of these centers. And I'm inferring that the extent to which that has occurred, say with the Biotech Center is not as great as it might be. And if Option K could be configured so that a very permeable interface between the Division and what's outside the Division could exist, and we can draw folks into common research efforts, then I think that it would be a good situation."

Professor Ron Hoy, Neurobiology and Behavior: "I think that are problems with Randy Wayne's suggestion that no change should be one of the options."

David Shalloway, Greater Philadelphia Professor in Biological Sciences: "I just want to support both Ron Hoy's comment and the comment by Rick Harrison and say this in a slightly different way. First off, I think it's important that both these options, as flawed as they may be, in my view are better than what we've got. So we are making progress, whether it's the right question or not, because what we've got doesn't really work. This talk about the Division's Undergraduate program as if it's such a great thing and that this Division as a unit is making coherent decisions. A point of fact is that it is pretty well accepted that the Division has calcified into sections that are just as well departments that preserve their own boundaries at the level of faculty hiring, at the level of research direction, and the level of what undergraduate courses are taught, and how they are taught. The main point that concerns me and other people in my section is that we need some serious change here and that a Division itself -- preserving the Division or eliminating the Division -- as I said both of these are better than we've got if by preserving the Division, we strengthen the Division. But it's important that if the Division were to be preserved, this decision would not be taken as a decision to preserve the status quo. The Division has been unable to do the hard things that need to be done. It has been unable to unify groups, it has been unable to be flexible and change direction in terms of changes in the science that have occurred, and it has been unable to direct the Undergraduate Program. I won't bore you with details, but I think that those within the Division who have been involved in this understand that sections stand on their own turf. So what has been encouraging to me about what has been going on in the last months has been the involvement of the central administration. I know that there are these voices that say, 'Let us biologists handle this ourselves,' but frankly, we have not done a very good job of that and we

need a kick in the pants. I hope that the involvement of the central administration will not end, and Bert Garza indicated that it wouldn't. I think it is essential that we get as many external reviews as we can get. We need as many people as possible outside our internal group to bring some objectivity and to break the Division outside of the mold it has been stuck in."

Professor Terrence Fine, Electrical Engineering: "I am so confused by this that I find myself in agreement with the junior Senator from Physics (laughter). I don't understand how to craft the structure since I don't know what the ultimate intellectual goal is. What is the unity of biology? Is it a counterpart to all of the physical sciences? It seems ridiculous to treat all of the physical sciences as one program. Is biology a more narrow focus for you? It's hard to believe with 500 faculty members. I don't think you could find 500 faculty members to agree to a narrow focus on anything. What I don't understand is how to think of this at an intellectual level when we're talking about what is trying to be achieved here. I don't understand that, therefore I don't understand what makes sense here. Now, do I believe that a Division is the right thing? Given that there have been so many changes in biology since the Division was formed, one can be skeptical that the same structure is going to service the rather radical change in intellectual outlook of the past 30-35 years in biology. But how that should change, I have no clue."

Speaker Pollak: "Okay, I'll open it up to comments even from previous speakers."

Professor Doyle: "We heard from representatives of the three largest sections in the Division, all endorsing some kind of merger system in which there would be a smaller number of sections, that's Biochemistry, Ecology and Systematics, and Neurobiology and Behavior. The question I have is if there are problems in the Division how, and somehow these problems will be solved by merging, are they talking about merging with each other? I'm from a very small section, the smallest in the Division, and I don't have problems with the current Division structure. We've been very successful and I don't see how we're going to be more successful by merging with anybody else. And I'm very curious if these larger sections are just interested in merging with one another to form bigger units, or are they pointing the finger somehow at the small sections as being the problem, Genetics and Development, for example, or Microbiology, or Bailey Hortorium? I'm not sure I understand what the point of mergers is unless it would involve these larger groups."

Professor Shalloway: "I'd like to respond to that. The question, as I see it, comes down to how does one make scientific decisions about how to allocate scientific resources? And if I look within my section or other departments that I know about, then I would say that an optimal size of how big a unit can be that can get together in a room and have a real scientific discussion about what direction to move in, I would say that that number lies between 20 and 30. One hundred is too big, so there's no way that a Division of 100 faculty can escape dividing itself into some sort of sub-groups that are going to harden. I would also suggest that ten is too small. So, precisely, what the formation of units should be, I don't know. I have ideas, but that will be discussed. I would say that the real question is, what units are going to get together in rooms and internally make resource allocations?"

Professor Andrew Bass, Neurobiology and Behavior: "I'd like to say that any discussion about ideas of merger are very much driven by the ideas expressed by Professor Stein about the identification of future goals and not driven by administrative structural thinking but by goal-oriented thinking. Perhaps these should be better defined if we are to be leaders at the turn of the 21st century."

Professor Howland: "Well, I think that this discussion demonstrates that there's a lot of work to be done but I also think that it's also very clear which one of the dichotomous decisions that we have before us today we should take if we want to do this work in a sensible manner, and that is to preserve the Division. To Professor Stein, whose remarks I very much appreciate, I wish we had time to formulate things in the

manner that we have to do, but I think that there are two things that mitigate against us. One, the pressure of the curriculum, which we have to maintain; and two the Division offers the greatest hope for preserving rationality, and the very schedule that has been put upon us by the administration. Those are the realities we face, Peter, and in the press of the moment, we've been told that the decision is going to be made and the rational thing we can say is, 'Take Option K' because Option J will destroy us far more."

Associate Professor Alan McAdams, JGSM: "I found the discussion to be educational. I think that I've learned a great deal. I think that Lisa Earle, along with Peter Stein, have raised some fundamental questions. And the question of the permeability and the ability of whatever structure is created to bring together all 500 members of the biology faculty is extremely important. Things have to be permeable. From what I've heard, I also agree with the averment that Joe Ballantyne made, that the curriculum question seems to be best served by Option K. It still must be open and permeable to permit the participation by all 400. I would also agree with Mr. Garza that we're not going to be setting things in stone by the decision that is made now, but the question is, at this moment, what is the best base from which to start toward the mobilization of all 500 Cornell faculty members to achieve true leadership in the biological sciences when we have identified what science most needs to be done. I hear a consensus, of course, I'm an optimist."

Professor Harrison: "I'd like to clarify my suggestion about mergers. Jeff Doyle asked why our sections were proposing such an option. I think the underlying reason is flexibility and the ability to move in new directions, when such directions are warranted. Many of the Senate members who are not biologists may not realize that, first of all, Cornell traditionally has had enormous strength and continues to have enormous strength in Organismal and Evolutionary Biology. I think that all others agree within the Division that we do not want to compromise that strength. On the other hand, we are less strong relative to our peers in Biochemistry, Molecular Biology, Genetics and Development, perhaps. Yet those are the disciplines that have grown enormously in the last two decades. Yet, and I can say this because I am chair of Ecology and Systematics which is an Organismal and Evolutionary department, that Biochemistry has shrunk in that period rather than grown. The number of faculty members in that section is now smaller than it was a decade ago. Why is that? Well, it's because within the Division, we are all entrenched as sections and we refuse to give up our turf. There is no, and there has not been any, really serious discussion as to moving lines from one section to another. We hinted at it, and the executive committee I served on has approached it occasionally, but not seriously. I think that David Shalloway's, Andy Bass', Ron Hoy's and my concerns come from what we see as a solidification of the current structure and the underlying components of that structure. I think that what we are doing now has failed. I was a member of the Task Force, and I'm considered a strong proponent of the 'department' model. I can say publicly that, at this point, I'm not sure I care whether a department model is the outcome or a strengthened Division is the outcome, but I care passionately that we change our ways so that we can move forward and deal with intellectual issues, as Peter Stein suggested. I see Randy Wayne's defense of the current system and the other faculty members' defense of the current system is going to lead us in exactly the wrong direction."

Speaker Pollak: "Okay, we have time for one more comment because we do have Good and Welfare and other new speakers out there."

Professor Mikhail Nasrallah, Plant Biology: "I do not understand the claims that were made about the walls that the Division makes around itself. I would cite the specific point that the former Director was approached about the Genomic initiative and he set up faculty from all across the units and colleges to go ahead with the initiative and it is still going and prospering. The teaching is also carried out in the same way whenever there are possibilities and interest from outside the Division, and they are welcomed. Those are facts. So I do not go along with these walls that would seem to take form from the Division. I do not think that they exist."

Assistant Professor Kathleen Whitlock, Genetics and Development: "I wanted to end on a positive note. I'm a new professor here and I did my Ph.D. at the University of Washington, and I just wanted to comment on what excellent undergraduates Cornell produces and despite all the comments about the teaching program, which I'm sure there are problems with, the students from the outside are perceived as excellent undergraduates, and everyone is happy to have Cornell undergraduates in their schools for graduate school. Along with future goals, my understanding is that molecular biochemistry ideas are lacking funding at Cornell and that has driven many people to mobilize. I agree that some kind of cohesive unit should be retained, like the Division, but I think that it should be opened up to other departments that would like to belong. I also think that we should be careful in drawing lines and the things that I see here is that part of Cornell's excellence is that it has an agricultural school and basic biology. It's unique in that way but we tend to draw lines between people who are out in the fields and in the lab. I think that is dangerous because they're both strong parts of biology. Different, but strong. Finally, I'd just like to end this by saying that I hope this ends soon because the longer we drag on this decision, we're going to lose professors. I'm sure there are people here who have offers from other universities who are going to get sick of this and leave. So let's get this over with."

Respectfully submitted,

Kathleen Rasmussen, Associate Dean and Secretary of the University Faculty

●