

**DRAFT-EXTRACT FROM FACULTY SENATE DISCUSSION ON
BIOLOGICAL SCIENCES**

December 9, 1998

1. REMARKS BY AND QUESTIONS FOR THE PRESIDENT ON BIOLOGICAL SCIENCES

President Hunter R. Rawlings, III: "Thank you. I thought I would make a few brief remarks and then I'd be happy to answer any questions you might have concerning the decision on the organization of biological sciences at Cornell. Let me begin by saying that I think the life sciences in general, the biological sciences, are exceptionally significant today for two obvious reasons. First, this is one of the most eminent areas of research in the world. The changes that are occurring in biological sciences are astounding and I expect to see that continue for the next twenty or thirty years at least. So, this is an area of tremendous intellectual activity, discovery, breakthrough, and it is clear that it is an important area for Cornell to be very much invested in. Second, Cornell already has a very strong investment in the biological sciences. We have about 400 faculty members here, depending on the way you define 'biology', who are engaged in activities within the sphere of biological sciences. It is an exceptionally large investment, and one in which we want to make the most possible progress.

"These two facts made a decision on the organization of biological sciences especially critical for us because by almost everyone's testimony, the organization we had was not working well. People disagree on why it wasn't working well, but just about everyone agreed that it was not working well. There are numerous reasons for that, but I won't go into all of them. I thought I would just give a couple examples of my reading of the problem based on a lot of information that we've received in the last nine months or so. First, a lack of strong leadership in the biological sciences. Second, unclear upward decision-making processes; that is, too many people required to make the decision and poor alignment between responsibility for decisions and the authority to make the decisions. That clearly was a problem. Third, inadequate interaction between Division faculty and non-Division faculty. That is, there has always been such interaction, but it has been perceived by many to have been inadequate. Fourth, very clear problems of resource allocation among sections, particularly in setting priorities within the Division of Biological Sciences. All of these were significant problems recognized by nearly everyone who talked or wrote about the issue.

"Something needed to be done, and two schools of thought coalesced. One was to enhance the Division and try to solve the problem by making the Division stronger by giving it stronger leadership. The other approach was to dismantle the Division and to create departments along more traditional lines within colleges. Clearly, there is strong sentiment on both sides and very intelligent people of good will disagree on this matter and we had many suggestions along both lines.

"We feel that it is better to disband the Division and move into a departmentalized structure which looks more like the rest of Cornell for several reasons. First, with the change to departmental structure, we give clearer reporting relationships for decision making, clearer accountability, and clearer means of prioritizing and making decisions. That is probably the principal reason for the decision to move to a departmental model. Secondly, we begin to conduct our biology programs in a way that is similar to that in which we conduct our own programs at Cornell through colleges and departments rather than through an exceptional structure. Thirdly, we also have the opportunity, thereby, to convert smaller units into larger, more powerful ones that bring together faculty members in closely related disciplines as in the case of Molecular and Cellular Biology and Genetics. We will, I believe, no longer be out of step with the way biology is organized in most other universities. Fourth, through this departmental organization, we will also be able to focus attention and some resources upon a critically important enabling core of modern biology: Molecular,

Cellular, Developmental, and Structural. This department will now have a clear mandate, a clear mission, leadership, a clear reporting line, and a core of strong senior faculty in order to develop the way it should to become nationally competitive for faculty, for graduate students, for research grants, and for private fund-raising opportunities. That, I think, is essential if Cornell is to be at the forefront of biology, in particular the enabling area of Molecular, Cellular and Developmental Biology.

"Now, we can do this, I think, without weakening other areas of biology. It is certainly not our intent to signal, in any respect, a desire to weaken or diminish other areas of biology which are also of extreme significance for this decade and the next, and the one after that. It is essential that Cornell maintain its strong investment in the biological sciences generally, and that we continue to have very strong Organismal biology at Cornell. We do not have to weaken our commitment to the broad undergraduate biology major. In fact, we intend to see it strengthened through the addition of faculty members teaching in the program who have traditionally not taught in the program. I am happy to say that we have invitations from departments such as Entomology, which now want to engage in teaching the undergraduate biology students on campus, as well as a strong interest from the Vet School. We intend to take full advantage of those opportunities and we are grateful for those offers from those corners.

"I also want to emphasize that the Provost's office will play a major role in insuring that colleges collaborate closely in creating the new departments and in supporting the undergraduate biology major. Vice Provost Bert Garza will play the lead role in this work and will help us maintain a broad institutional view of the biological sciences and ensure that there is close coordination, cooperation, and collaboration across college lines.

"In summary, I would like to see biological sciences flourish in the different colleges at Cornell with strong faculty leadership as we have in the physical sciences, and with inter-college bonds of the kind that we have built across campus in the physical sciences. That will certainly be our work over the next few years. Thanks for the opportunity, and I would be happy to take some questions."

Speaker Pollak: "Okay, do we have questions or comments? If so, raise your hands."

Professor Howard Howland, Neurobiology and Behavior: "Thank you, Mr. President. I'm sure I echo the sentiments of the house when I thank you for coming here to answer our questions, and I'm glad we broached the topic of decision making because that's the substance of my question. It's well-known that you're an expert on Thucydides, and as such, you may remember this famous passage from the Funeral Oration of Pericles, where Pericles is trying to distinguish the Athenians from the surrounding oligarchies and despotism, and he says, 'well, I guess I don't know it by heart and I'd better read it.' (laughter)

President Rawlings: "Well, I can do the rest of it for you in Greek."

Professor Howland: "He says, 'If we Athenians are able to judge at all events, if we cannot originate and instead of looking upon discussion as a stumbling block in the way of decision, we regard discussion as an indispensable preliminary to any decision.' Now Pericles didn't say, 'And the decision should reflect the discussion,' but I think that's a fair interpretation of his meaning. Now, Mr. President, you've made two very important public decisions for this university. The first one, after not much public discussion, concerned putting all of the freshmen on North Campus. In taking that decision, you surprised us, because that particular course of action had not been discussed publicly at all. Indeed, I think that at the time the decision was taken, financial implications had not been totally investigated. Secondly, in the decision we're talking about today, you decided after long public discussion to abolish the Division of Biological Sciences. That was one of the alternatives that was discussed. Still Mr. President, you surprised us because as a result of that discussion, many of the faculty in the Division, and in the Senate, and indeed many of your

counselors, had come to the opinion that the Division should be preserved and not abolished.

"Well, those decisions are behind us now. They're past us, and they raise questions about your future decisions. My question is, do you agree with Pericles that the discussion is an indispensable preliminary to all wise decisions, or are you following some other ancient classical tradition -- Odyssean perhaps -- since we are in Ithaca, where a tradition that requires secrecy and surprise, and above all, the helpful intervention of the Gods?"

President Rawlings: "Thank you very much. I especially appreciate not only the reference to Thucydides but also the use of Thucydides. Yes, I am certainly very much a student of Thucydides and Periclean democracy, in fact. I do agree strongly that discussion is a strong preliminary to decision making. On both of the topics that you mentioned, Cornell has had considerable discussion. On the issue of housing, we have had thirty years of discussion, in fact, and thirty years of reports -- twenty six in all on student housing -- but very little in the way of action. So it was important not only to have the discussion, but also to render the decision. The decision I eventually made was very prominently discussed on campus before I made it. The Cornell Daily Sun published a long and supportive editorial on housing the students on North Campus. I was pleased to have, in that case, a lengthy, strong, and student-oriented recommendation along the lines of what we eventually decided. That case is a good one for preliminary discussion leading to decision and in this case, an actual recommendation from a student publication with a good deal of authority. In the particular case of biological sciences and the organization thereof, we also had very lengthy discussion over many months, not many years, but we also had report after report and I appreciate all of the letters that individual faculty members wrote, and reports that we've had. In this case, as you've noted, it came down to two essential options. One of those in favor of retaining and enhancing the Division, the other in favor of disbanding the Division. Our own task force at Cornell, which consisted of a number of faculty members as well as administrators, recommended this course of action which I eventually took. Other committees recommended different courses of action. So we had opposing committee reports, and we had many faculty members on both sides. This is a case where, again, we tried to listen very carefully over a long period of time and then to make a decision."

Associate Professor Randy Wayne, Plant Biology: "I have a large comment. The history of science shows that the vast majority of advances in science have come from individuals or small groups. Indeed, Einstein suggested that refugee scientists should seek jobs as lighthouse-keepers, so that they may find the isolation necessary for scientific work. In an article entitled: 'In praise of smallness how can we return to small science?' Chargaff wrote, 'We all know that what is cannot be otherwise. The existence of anything weighs the scales most unfairly against anything else that could have been in its place, but is not.'

"If this be true, then the way the Division of Biology was set up, weighed the scales most unfairly against everything else that could have been in its place but was not, and thus, in spite of the fact that the majority of the students and the faculty spoke in favor of maintaining the division, you sought to change it. Likewise, the structure you have set up by presidential proclamation will weigh the scales most unfairly against everything else that could have been in its place but will not be.

"I would like to comment on an aspect that I believe will be diminished in what you have called the 'post-division era'. That is, academic freedom and the spirit of the independent investigator. Again, according to Chargaff, 'Science is the application of reason, and mainly of logic, to the study of the phenomena of nature. Therefore, the most important scientific tool is the human brain. Each brain sits on its own head, and the all-important unit of research is the individual scientist.'

"If the most important unit in research is the individual scientist, what is the value of centralization? It has been argued, equally strongly by Socialists and Capitalists that: (1) science exists to serve the material wants

of human beings and (2) a central authority, knowing the material wants of the community, could efficiently and quickly switch researchers to the most immediate problems of the day. In this way, overlap would be avoided, and trivial investigations would no longer take up time and money. However, the thinking of economists does not typically take into consideration support for the creative and original investigators, who, in the main, have discovered the phenomena necessary for technological progress. According to John Baker: 'The proper function of a research team is to work out the consequences after an independent worker or two or three scientific friends have opened a new line of investigation. There will be plenty of people who will want to follow the new line. Indeed, one notices a strong tendency for scientists to ask, 'What is being done?' They might as well ask frankly, 'What is the fashion?' The original investigator on the contrary asks himself, 'What is *not* being done?' The people who want to follow a new line often do excellently in teams and they can be fitted satisfactorily into planned research. They have neither the wish nor the ability to think originally, though they are often talented, well equipped technically, and possessed of a great love of knowledge. If science is to flourish, however, encouragement must be given to people of independent spirit, who want no master. The desire to know is widespread among men: the desire to know specifically that which is not known is on the contrary very rare.'

"Your decision will have a negative effect on the current and future biology students and faculty for two reasons. Firstly, you have sent a very clear and resounding message that the President of Cornell University has a better grasp of 'what is biology?' than do the majority of the one hundred faculty members in the Division. This lack of respect is extremely demoralizing to the faculty, and I'm sure you're aware that faculty morale has plummeted ever since the college and university administrations started to micro-manage biology. Given that each faculty member pursues his or her own difficult, demanding, and underpaid profession to a large extent because we enjoy what we do, a lowered morale would have an adverse effect on our ability to teach, advise, and do research. Secondly, your decision will have a negative effect on academic freedom; and in destroying the environment where the brain can function creatively to discover new phenomena and laws.

"I believe that the transference of power from the faculty in the Division to Day Hall sends a chilling message to all faculty members in the Division of Biology. That is, the first question that must be asked when pursuing biological research will no longer be, 'How can we better understand the biological basis of life?', but 'Will the proposed research bring in a substantial amount of money to Cornell?' That is, Day Hall will support work on biological projects that have short term economic gains -- that is sell buyology . . ."

Speaker Pollak: "Senator, do you have much more there?"

Professor Wayne: "A little more."

Speaker Pollak: "You can submit that in writing to the Secretary and if you have a question at the end, you can address it now." (The complete text of Professor Wayne's comments is attached as [Appendix A.](#))

Professor Wayne: "Okay. In order to alleviate my anxiety that you are only looking at biology as a cash cow, and not as an intellectually satisfying and important enterprise, which incidentally provides the knowledge for technological advances, perhaps you can describe to me one or two areas of biological research that currently are not well funded, because they are at variance with existing knowledge, yet in your opinion have significance for increasing our basic understanding of life, and long-term potential for satisfying the material needs of human beings."

President Rawlings: "Well, let me say that I appreciate your comments and I certainly hope that this decision will not cause morale problems for the faculty member. I'm sure that there are a number of faculty members that are disappointed with this decision because they prefer that we maintain and enhance the

Division. On the other hand, there are a number of faculty members who are very pleased with this decision, as one might expect, and who feel that it is an important element in their decision to stay at Cornell. We have opinions on both sides of the fence, and we expected that no matter which way we made that decision. I do also . . ."

Professor Wayne: "Do you have a proportion of the number of people who felt the two different ways?"

President Rawlings: "I do also strongly agree with your view that we should pursue science and knowledge for their own sakes. It is certainly my very strong view that we should not allow funding opportunities to weigh anywhere near as heavily as intellectual discovery. That to me is what the University is about, what it should be about, and what it should always be about. As a member of the Humanities faculty, I have more reasons to believe that than perhaps most others. So I think that is a value that I share most strongly with you. I also agree that its impossible to predict in a given year, where research is going to go in different disciplines, and that is why we support so many at Cornell because it is extraordinarily difficult to know when a particular discipline is going to start issuing the results we've seen issued by many in the biological sciences."

Professor Wayne: "Can you answer the question? Which other intellectually stimulating areas of research that don't make money are you aware of?"

President Rawlings: "Yes, my own area of research, Classics."

Professor Wayne: "I meant in biology, this is about biology."

President Rawlings: "Oh, in biology. I'm sure that there are many fields in biology."

Professor Wayne: "I just want an example."

President Rawlings: "I'll just say many."

Speaker Pollak: "Okay, we've run over, and you do have a plane to catch, so we appreciate your coming and we'll move to the next item on the agenda. Dean Cooke will make a few remarks."

President Rawlings: "Thank you."