

**University Faculty Forum**  
**Cornell's Land Grant Missions**  
**September 25, 2002**

Unofficial transcription. Wording has not been verified by speakers.

*(Acoustics in the room were less than optimal so words may have been transcribed incorrectly. Please contact the University Dean of Faculty Office if there are corrections or questions.)*

Francille Firebaugh, Vice Provost for Land Grant Affairs and Moderator: “Good afternoon. Welcome to this Faculty Forum courtesy of the Faculty Senate. My thanks to Bob Cooke for arranging for this. This afternoon we are going to consider the work of the Land Grant Mission Review at Cornell. I’m Francille Firebaugh, Vice Provost for Land Grant Affairs. I’m pleased that you are here to consider this important topic. The review began early in this calendar year, so it has moved with considerable speed as measured by most things at the University. We are pleased that the work of five panels will be recorded this afternoon. The charge to the panels was to assess the current work, especially in outreach, and to make recommendations for the future, and this was divided into five areas. The brochure you received has a list of the various panels and we’ll hear from the Outreach Extension or colleagues of Agriculture and Life Sciences, Human Ecology, and Veterinary Medicine will be first and reporting for that panel will be Ron Ehrenberg. Next we’ll hear from David Butler who is going to report as the chair of the panel for Outreach Extension for Industrial and Labor Relations. Third, we’ll hear from Clif Pollock. He and Chris Ober co-chaired the Engineering and Economic Development Panel. We’ll then hear from Biddy Martin who co-chaired the K-12 Panel with Patsy Brannon of the College of Human Ecology. We are delighted Marianne Krasny is going to be giving it is fair to say a substantive talk. That was Biddy’s desire to have this done. And then we’ll hear from Ronnie Coffman on Tech Transfer, and I’m delighted that Charlie Walcott has agreed to be a respondent for all the panels. He has studiously reviewed all five, and when you say you have reviewed the Tech Transfer report, you have done some reviewing! We appreciate that. That is our lengthiest report.

“For four of the five panels there is a Presidential Oversight Commission, chaired by President Rawlings, and it is our responsibility, to try to take the overview of the work of the panels and to find common themes and to come up with overall recommendations. The Board of Trustees has taken an interest in this process, and each of the panels has had one or two members of the Board of Trustees on their panel. We’ll be reporting to the Land Grant Committee of the Board of Trustees in October and then to the Executive Committee of the Board of Trustees in December and finally to the full Board in January.

“Our meeting this afternoon is scheduled for that last comment that you would like to have considered in the reports. All the reports are available on the web, and it is listed in this brochure. If you need a paper copy, let me know and I will furnish that for you as well. With that, we’ll start and I’ll ask Ron Ehrenberg to begin.”

Professor Ronald Ehrenberg, Industrial and Labor Relations: “Well, I am delighted to be here. You might ask why is it that a Professor of Industrial and Labor Relations would agree to co-chair this panel, and the answer is I have such admiration and affection for the role that Francille is playing for this University and also the role that Mal Nesheim played during his years as the Provost that I felt that it was the least I could do. Mal is chair. I am co-chair. Mal could not be here because of some family issues, but he is chair of that committee. Our committee consisted of the following members ( list ) , and what you will easily notice is that the representation is very heavily from faculty in the three colleges who themselves are involved substantially in outreach activities Cooperative Extension Directors, and we had two trustees from the agricultural movement, who are wonderful people and great trustees of Cornell, Peter Ten Eyck, who I’ve known for a number of years, and Craig Yunker, who I’ve just gotten to know. That’s probably one of the best parts of being on the committee. But the reason that I want to stress to you where the committee weights were from is because our report reflects primarily the views of people who are involved in outreach activities in these colleges.

"As part of our efforts, we sent out a survey to all faculty and extension associates in these three colleges as well as all Cooperative Extension Offices throughout the state. The responses that we received were primarily virtually totally

from people who are involved with outreach activities. I venture to say that if we look at the audience today, we would find that disproportionately the people who are here are coming from that sector also.

“President Rawlings has encouraged us to be brief, and he said trustees are like CEO’s, they don’t read more than one or two lines, so you have to cut everything down and summarize everything in three or four key recommendations. That’s all I’m going to do today. The recommendation on number one, and I’m not going to read it to you because I’m very tired. I just taught my class. Recommendation number one basically says, if this is something that the trustees are serious about, they have to make sure that there is funding to support these activities. In the report we talk about the fact that funding from the state has been level at best for many years. It has declined in real terms [saves money for] the federal government. Funding for outreach activities in the private part of the university was not our charge. What we were concerned about was very sporadic and occurs primarily through special grants that people get, so if we really care about outreach and really believe in the Land Grant Mission of this university, then this has to be accorded the same priority that other activities at the university recently have, such as athletics, financial aid, the new Life Sciences campaign. I could add residential life and any one of a number of other things. So that is point one.

“Point two is really the sense, and again I am telling you this sense comes primarily from the people involved in the activities, that there has been a shift in concern in several of the colleges and from the university away from concern about outreach and away from a concern insuring that there is a stable group of people that is involved in these activities and that these people will, that is the people out in the field and the faculty here on the Ithaca campus, get the same recognition of the importance of these activities that those of us involved in residential teaching are receiving. So the second point really is if the university cares about outreach, not only does there have to be money but there has to be visible evidence in terms of a change in attitudes and a staffing pattern that indicates that they care about this.

“The third point, and this actually is a theme that comes up in the ILR report, is that we have to work much more at the university to integrate the research and outreach functions of the things that we do, because outreach is really nothing more than another form of education, education often in off-campus locations and sometimes not in the classroom setting. Just as when we go after researchers we want people who are excellent teachers, but we want our teachers also to be excellent researchers. We want the faculty who are involved in the outreach activity to be excellent researchers. So the goal is when you go to fill a person, look for outstanding people who are making cutting-edge contributions in areas where there is outreach potential.

“Finally, we are talking in number four a lot about collaborative relationships. Partially this came from a sense of a number of the faculty that they are really stretched thin, that they are being asked to do things because other states are not doing them, that we might be better off if we could stop doing things, but we could basically live off of what other states were doing in the area. So we would like to see the university provide leadership and incentives for faculty members to go after these collaborative relationships. What we had in mind was land grant universities getting together and establishing sort of more regional programs or some events, which transcend states. We had in mind Cornell playing a leadership role in the National Association of Land Grant Universities. I won’t be tempted to use the acronym. And for the Land Grant Universities to sort of push the feds to fund programs in a way that encourages these collaborations. We had in mind working much more closely with other units of the SUNY system to further enhance the delivery of our outreach systems. And we particularly hear talk about two-year colleges in the state, because one of the models that we saw in some of the presentations that we were models. Cornell can develop the programs, but it doesn’t have to be the deliverer of the program. Two-year colleges are out there. The two-year colleges are part of the SUNY system. Historically or at least in recent years as Cornell has, they are a relatively under funded sector. We believe not only programmatically can these kinds of partnerships enhance our efforts, but there may be some political benefits as well.”

Professor Firebaugh: “Thank you. We turn now to David Butler.”

Professor David Butler, Dean, School of Hotel Administration: “I don’t have slides, but I am going to come forward a bit since the lectern seems to be rather distant from the audience. We structured our report in terms of the charges to our panel, the first of which was to renew programmatic vigor while dealing with funding realities. Now, I do want to say initially that the way that is phrased implies that there was not programmatic vigor there to start with or at least currently, and I have to say that we found a very vigorous set of programs with some very committed people driving them. We also found, as those people are only too painfully aware, that the funding situation has taken a very serious

turn. There has been a decline of some substance going on dating back some 20 years in the percent of ILR support that is provided by state funding. If I am correct, it has dropped from something like 52% around 1980-81, to about 27% now. Now, that is an issue because a good deal of the outreach mission of the School, a good deal of what the state expects of the School, has to do with supporting groups and particularly unions and union members who are not in a position to pay the whole cost of their program. Unfortunately, what has happened over the years as state funding has declined, more and more of the funding for some of these programs that were important to the service mission, but not profitable has had to come from other for-profit activities of the ILR Extension. Those activities, however, become increasingly difficult to realize significant profits from. Certainly the current economic climate has added pressure there. An overall recommendation to deal with that issue is to develop a concerted, intensive lobbying effort to go after state and federal funds earmarked for the field of workforce development. There is some hope at least that because there are funds there earmarked that way and because ILR could make a significant contribution in this region, that might be one way to get some state money back, and some federal money as well, supporting the programs.

“We also suggested just some ideas about some forms of new programming that might be worth a review as areas that might yield both more funds to do some of the less profitable service oriented programming and also provide significant service statewide and nationally. We saw an opportunity in the growth of the non-profit sector and in many of the challenges that that sector faces in refining its labor-management practices. We found an opportunity in the growing interest in the shifting global economy and its impact on the workforce. We believe there is expertise there that could address that, even more extensively than is now the case. We found that in terms of best practices that the Buffalo region had developed a very interesting partnership between area business leaders and union leaders in order to deal with the economic pressures facing that region. There may be a model in that partnership that could be replicated elsewhere in finding the driving forms of support. We also believe that there are opportunities for further academic alliances both within Cornell and with other institutions outside of Cornell, and we say a little bit more about that in the report. There may be an opportunity in creating an institute that brings together unions across the country and identifies their concerns and interests and speaks to them.

“We also felt that it might be worth at this time reviewing the overall structure of the ILR operation with the question in mind, would it be possible to reduce some of the replication of programs across the regional centers in the state by establishing centers of expertise located in a region where that expertise might be especially important but serving the state? So was there an opportunity to create some more efficiencies? We also felt that in the current structure in order to get new programming established we need to do more with a lot of the existing programming. There needs to be an investment in a marketing arm. It may be that some of the efficiencies when you get the restructuring could be used to create a marketing arm that would push ILR programming more widely. We were also asked to review the current linkages between research, extension and the undergraduate experience, and our strongest recommendation there has to do with the recommendation that there be a concerted effort on the part of the School to bring the mission and work of ILR into much closer touch with the knowledge being generated by the resident faculty. This is I think behind the initial development of the operation and the stated mission, but we found that currently the extension seems to operate too much removed from the research base being generated by the resident faculty. We were asked to identify barriers to change. Addressing that issue we felt was a significant one in terms of overcoming barriers. To go back to something Ron Ehrenberg mentioned, we also felt that if real and dramatic change were to happen in outreach at Cornell, it would require a strong endorsement at the highest levels in the University. That would have to become a fund raising priority to drive the resource base and there should also be some investment in coordinating outreach activities. Thank you very much.”

Professor Firebaugh: “We turn now to Clif.”

Professor Clifford Pollock: “I am speaking for the Engineering Economic Development panel. We interviewed about a dozen different groups, spanning from local start-ups at the airport to large corporations such as Corning and Kodak. We talked to local business agents; we talked to regional technology development bureaus; we spoke to faculty in Cornell and faculty outside, a large group of US land grant universities. From all these parties we heard remarkably similar comments concerning what we were doing, and how to correct the land grant mission and what needs to be done to improve the Engineering College’s role in this mission.

“Let me cite some of the things we are apparently doing right. There exist many examples of how intellectual property that was developed within the college is now being used to form companies. Kionix at the airport is an example with

120 people working and is generating a lot of wealth and some of that's coming back to Cornell. Rainbow Technologies, another company down in Endicott, is making large screen displays. Faculty research and consulting was cited for having helped many local industries. Corning Glass and the sodium problem in their flat panel displays, which is one of the most profitable parts of that company, was made healthy by research here at Cornell. Cortland Line, they make fishing tackle up in Cortland, they also use our help. Facilities such as the Cornell Nanofabrication Facility, the CNF, are widely used by companies. They have over 250 users every year from industry, and that provides a tremendous asset. A lot of the companies are at the airport because of that. And finally, Cornell Engineering students are highly sought after by many people in the country, but these are students who tend to stay in this area. So companies look forward to having that kind of educational process here where they can hire people who might stay.

"We also identified several areas where the college role in land-grant could be enhanced. And there were two major findings. One was that we must simplify access to expertise at Cornell. The second item is to encourage entrepreneurs to develop Cornell intellectual property. Let me first talk about the access issue.

"Corporate interests, both large and small, all cited difficulty they had in gaining access to the right IP, the right faculty, the right facility, the right research center when trying to get at Cornell. This comes about in part because of the very nature of the research centers we have here on campus. They often comprise many different departments and colleges and faculty and facilities. One of the people described Cornell as being one of the nation's most amorphous universities I think that's a very accurate description. As an example, what if a company wanted to gain some technical advice on new electro-optic material? Where would they go? They might call the Cornell Center for Materials Research; they might call the College of Engineering; they might call the Materials Science Department; they might call the Vice Provost for Research. Every one of those might be a reasonable place. It's kind of the luck of the draw who they might call. Each of these offices would probably refer them to somebody, probably someone tainted by their own parochial self-interest, however. Not that that's bad, but it's probably not the optimum solution. Most companies stated a frustration when trying to contact Cornell for specific technical advice. They observed there was no guidance on where to gain access to the right Cornell expertise. They observed our web page was not directly wired to a research directory. They observed there was no obvious office to call. There's no coordinated point of access to research expertise. And they observed that most of the successful contacts they have established come about from students who were at Cornell and know us from the inside. It's not that they don't try. There are many offices at Cornell working on just this purpose. There's a Corporate Relations Office in the colleges; there's an office for Economic Development; there are outreach efforts in almost all the research centers, and lab directors in places like the Nanofab have an outreach mentality trying to bring outside users in. But historically, these offices have tended to work independently, and that's where the rub comes in.

"Our first recommendation is for much better coordination on campus between all of these units. While we're not convinced that a central office is or is not the right solution to this, we do recommend that a committee with representation from all these parties including the Corporate Relations staff, Economic Development people, Cornell faculty, the Research Foundation, and some local economic development people, be formed to explore better ways to accomplish access to Cornell technology. We recommend they explore such things as mechanisms for coordination between these offices, standards and suggestions for key words on web pages, optimize research engines, and possible creation of liaisons to act as agents to local industry. 311 This process and problem is multidimensional is going to require a very careful study by all the parties in order to find a solution.

"Our second issue was that of transferring Cornell intellectual property to local business. Economic development is one of our charges. One of the best ways active research benefits society is by providing technology for start-up companies. Start-up companies are a very significant engine for economic growth; they provide high-paying jobs, they have spin-offs, there's a multiplying effect. Cornell actively tries to support this kind of activity. We have many offices already here used in start-up companies. Activities include the Cornell Office of Economic Development, the Cornell Research Foundation, Cornell Center for Advanced Technology and Biotechnology, Cornell Business and Technology Park at the airport. Many activities are in place because of the mentality at Cornell trying to encourage this kind of stuff. But in our interviews with entrepreneurs who started companies based on Cornell technology, we often heard concerns that interfacing with Cornell was more difficult than it had to be. So we feel this is a place where we lose an opportunity.

"Here are some of the issues that we think need to be addressed. There's not a simple directory of research projects

that describe the richness of the research on campus. It's just not obvious what's going on here, what's available. CRF, the Research Foundation, did not universally affect promoting new IP as it became available for licensing. I don't mean to pile on CRF. We heard very good things about CRF, but there was this issue that kept coming up that there is IP being generated that they haven't told the right parties about yet, and this should be looked at for whatever reason.

“Another complaint here was that IP being used by start-up companies was often over-valued by the faculty member and by CRF. There's little appreciation from the company's perspective that we understand all the issues that motivate the company. It's a lot more difficult than that. Faculty express the concern that they are often reluctant to get involved with a start-up due to the perceived stigma that such activity takes away from the research and teaching. Ways need to be explored to satisfy the federal requirements for reporting on outside activity but still which don't discourage, not necessarily encourage, reasonable entrepreneurial activity among the faculty. Such activity will ultimately benefit Cornell and the overall economy. And finally, alumni who could provide venture capital for start-ups, which then is often not being accessible to entrepreneurs. The wisdom, enthusiasm that some of the alumni can bring to this problem was somehow hard to find, and if you will excuse the word dead.

“The last point, we heard a lot of discussion about patent policy at Cornell. We heard from several companies that are very reluctant to come on campus and talk to faculty for fear that the faculty member will come up with a solution and patent it, which would then be used against the company. So there has to be—we're recommending that Cornell take a larger view of IP and take into account there are not only royalties to be gained from it, which is a good thing, but there are other issues such as forming good relations with companies that might in the long term produce better research funding or spin-offs or generate wealth which will come back not through royalties but through giving. So in summary, we had two recommendations: improve the access to Cornell expertise and encourage the entrepreneurs to develop Cornell technology. “

Professor Firebaugh: “I think we should move to tech transfers. Is that all right?”

Ronnie Coffman, Professor and Chair Plant Breeding: “These are our panel members selected from a wide range of departments and colleges. Some of them are here I hope. Would you raise your hands? They are here for questions in case we have them. We tried to look at technology transfer in the context of Cornell and the land grant mission. One thing I would like to emphasize starting off is that in our view social problems seldom have technical solutions, and technology transfer doesn't mean much without attention to all these other things. I listed some examples here—good student, good government, good health care and environmental quality. And Cornell is about these kinds of things and a lot more. There is a lot of sensitivity out there among faculty who are not involved in entrepreneurship and technology transfer, a lot of sensitivity about the emphasis that we seem to be placing on it these days. So I think we ought to keep that in mind as we think about the topic.

“We tried to look at this thing in the context of the land grant mission, which to our mind is about knowledge for the benefit of the public good and knowledge that contributes to social and economic welfare. Our vision related to technology transfer is that we should continue to excel in science and world-class scholarship but directly benefit people through technology transfer and public scholarship. So we tried to define and consider how technology transfer has evolved at Cornell. You need to understand that this is an organizational not a technical process. It requires transferring knowledge across disciplines, professions, sectors, regions, communities, and societies. And the point is, in reviewing the evolution of this thing at Cornell, is that we do not have the strategically effective program in industrial extension that is needed to fulfill our land grant mission in the modern era.

“We talked about, we have a whole chapter devoted to conflict of commitment. This is pretty well defined for faculty in the policy statement. I'm sure that's something you read once a week or so. There is an agreement that you sign or you are supposed to sign each year. The interpretation of this policy in order to enhance technology transfer is one of our real challenges. This is a core issue in considering how we really meet our land grant responsibilities. There is a feeling, I think, by many faculty when they try to become more entrepreneurial and work closely with the private sector that they are kind of guilty until proven innocent in terms of conflicts of interest. So this is a core issue that we think needs to be addressed.

“There is an issue of venture capital. Major venture capital firms don't invest in Cornell, maybe because they don't

know where it is. We also think, as Clif mentioned, that we have cultural and structural problems that are probably more of an issue. So we need to work jointly possibly with our alumni in these major firms to see what we might do about that. We looked at University policies. Our patenting and licensing policies are very similar to other US universities. The variable is how they are implemented, and we may need to adjust what I call our institutional attitude toward entrepreneurship. There are some institutions that have basically the implementation policy of moving things out the door. They don't negotiate hard with the private sector about revenue for the university up-front. Their notion is to get it out the door, benefit the public, and then those that make money from the technology will come back and be good to the university later. That's basically the MIT model. So from the land grant point of view, we need more inventions from Cornell and to move inventions from Cornell to the public faster, allowing easy access to discoveries and knowledge that is used for the public good. This is basically what Cliff was saying to you from an engineering standpoint.

“We looked at surveillance and protection and who is getting off with our stuff, and it is kind of unclear internally whether we are vying over these things. At least it's unclear, Cornell Research Foundation presumes good faith on the part of the faculty but there is really no serious policing. Externally the same abuse with our license is also unclear and we rely on faculty inventors and their colleagues to provide feedback.

“We looked at the special case of New York State. It is a fact that New York has lagged seriously behind a lot of other states that I know many of you are familiar with, Georgia, Illinois, Michigan, North Carolina, in terms of funding technology transfer. Now Cornell has a special obligation to the state as their land grant institution and we think the state has an obligation to us. Jointly we really need to, we are expected to, transfer the technology to benefit the citizens. We need to reexamine our partnership and probably restructure our approach to this whole endeavor. We looked at three board options—one of course is do nothing, the other is ‘how could you tweak the current system?’ And in our view there is not really a possibility of restructuring Cornell Cooperative Extension for instance to accomplish some of these same things that need to be done in this whole arena. So we went further than Clif. Clif said, ‘Create a committee. I didn't want to be on another committee, so we are just recommending that we do it.’

“We think there should be a high-profile Office of University Outreach led by a Vice Provost that could include the Office of Economic Development and Cornell Research Foundation. We think CRF should be relocated to the main campus, and we think the people in CRF should be distributed, for instance there should be a CRF person who deals with the life sciences sitting near the Biotech Building or in Bradfield or somewhere close. Somebody who deals with Engineering should be sitting down there. There would be a central office; they would coordinate, but these people who are expected to represent us in transferring technology should be interactive day-to-day with the science. So that's really the last part of it. We need to reorganize CRF administratively as part of the University. I don't know if you know, but now they are a stand alone 501C2 organization, which means they have their own board; they are their own legal entity. We think they need to be part of Cornell and part of our mission in the modern context of a land grant. One more slide is all I've got.

“We have several recommendations, but these are a sample. We need to continue to examine the land grant mission, strengthen our partnership with the state, recognize that patent is an academic contribution. Right now a lot of faculty are not necessarily interested in patenting, because they don't feel they get that much credit for it. There is that special office that I talked about that emphasizes the support of local business growth, which is something that Clif was talking about, and finally we have a specific recommendation that would provide for humanitarian use of our technology in the developing world.”

Provost Biddy Martin: “I wanted to be part of the K-12 Education part of the land grant panels. The reason I did that is because I believe absolutely that research universities have an obligation to include K-12 education in this country and public education in particular. We worked on the basis of a couple premises. One, that we do have that obligation and two, we have extraordinary resources at Cornell and a number of already existing programs in science, math and technology, education outreach, but that we could capitalize on those programs by coordinating them more effectively and trying to enhance those programs by doing additional things for K-12 education, not only in this area but generally. I simply want to say that credit for the recommendations in the report go to Marianne Krasny and her colleagues on the panel, and to Patsy Brannon. The role I ended up playing because of some time constraints was primarily exhorting the group to be bold and being enthusiastic about the process itself.”

Professor Marianne Krasny: “I think I want to try this without a mike. Because, unlike some of the other group leaders up there, I don’t have a real pocket. I just want to thank Bidy, because I think, even though she missed a few meetings, she kind of summarized it really well. She was obviously in touch with what we were doing. The first thing I am going to talk about is why K-12 education should be a university priority and initiative. Bidy touched on this, but we came up with four reasons. Two of them I have these little schematics. I thought they were easier to explain that way. So this is what I call altruism, but I like Bidy’s term obligation maybe better, but the idea is that there is a tremendous need here in K-12 math and science education. We did focus on science, math, engineering technology education. The university can play a large role in meeting this need. So the self-interest part is that then we get better trained students who are going to come to Cornell to be Cornell students. So that’s one reason, but I think if you read our report it has a very eloquent quote from Rita Colwell at NSF. She says this is a paradox of our time. Here we are a leader in technology and science worldwide, but yet we don’t have very good K-12 education.

“Then we also thought that we should go ahead and not just think what is our obligation but what can K-12 education give the University. So that’s what this schematic is, not just looking at the typical outreach program in K-12 education, kind of the separate-- something we do because we are obliged to, maybe it will bring something to the University--but really, how does it fit into the other teaching and research functions of the university? There are a number of programs, and I’ll get to scholarship in a minute, that are related to the other functions. For example, there are several graduate student outreach programs that provide funding for graduate students to work in schools, and graduate students learn quite a bit about teaching. So that is an example of overlap of outreach in the graduate student training function. The service learning there is a lot of opportunity for undergraduates to learn a great deal through service learning. There is also a number of graduate students and some undergraduates who do research on outreach programs, and that’s where we are getting into the research function overlap. Then there are programs such as, you are probably familiar with, from the Cornell Laboratory of Ornithology, its Citizen Science Programs where we have volunteers including a lot of K-12 students who are contributing some research data to these large regional monitoring programs. I think also just in terms of K-12 our program is going to be more sustainable if we think about them more integrated within the University’s other functions. The scholarship thing that I wanted to mention is that a lot of people think of K-12 again sort of out of the context of why the University scholarship, but as I mentioned there are opportunities for graduate students to do research under these programs. Graduate students who get very involved in these become very creative in thinking about new curriculum and new methods of teaching, and I think that is part of the university scholarship also. We wanted to emphasize that in addition to program and scholarship as an important part of the K-12 education.

“There are two other reasons, the reason why K-12 fits in with the larger university function, and the other is that, as several people have mentioned, relative to the other panels, there is a tremendous amount of activity going on in K-12 education and outreach at Cornell, NSF, Howard Hughes, extension, service learning, and there is a lot more. I didn’t try to list them all. It’s like Clif mentioned. Nobody has a handle on this. People from the outside don’t know how to access it, and I think that also affects our ability to present ourselves as a national leader in this area. We have the ability, I think the capacity, within Cornell to be a national leader, yet not all the pieces are in place. I kind of touched on the last reason. There are tremendous funding opportunities through NSF and other bodies to do K-12 outreach now, and if we have a more defined effort, we may be able to tap into some of those efforts.

“I’m going to go into our recommendations now. Our first recommendation was I think similar to some of the others that K-12 education be a university priority issue. Bidy asked us to be bold, and a lot of things can’t happen unless these kinds of things are university initiatives. We’re are talking about something similar to Life Sciences and the Undergraduate Initiatives. Second is. . . the other two are under this; they are not going to happen if it’s not an initiative. We feel that a great limitation on our ability to be national leaders and have this coordinated effort is that the Education Department has suffered recently from several faculty leaving, and so we are recommending that more support. we look seriously at the Education Department at the university and how it can be strengthened. 664 Then the third one is to form a center, and we had a big debate about center and if we said center, would everybody turn-off listening to us because we know of other centers where there have been problems, but we couldn’t come up with a better term. Somebody suggested Vice Provost, but then somebody else on the committee who I think might be a vice president, said, ‘Oh, if it’s at the Vice Provost, Vice President level, they’ll go to a lot of meetings and they won’t do anything but take notes?.’ So, we came up with centers; we’re open to other alternatives, but I think the important thing is to look at what the center is about. That’s what I have underneath third point. That is that we feel that if we are going to have programs that really have this element of scholarship that provide national recognition for Cornell in this

area, there needs to be some kind faculty leadership for this effort. There also needs to be some kind of staffing for supporting the other programs, and this is something we talked about quite a bit, because there are a lot of programs on the campus, as I mentioned and they are kind of in these little ovals around here, some of them, and they don't always feel like they need to be coordinated. They are doing a great job of coordinating themselves, but what they do feel like they need is support, you might call it coordination but it's things like getting the web site up, as I think Clif discussed, so that the outside world can know what is available at Cornell and what this effort is about. There are various other types of support. The model for this center is the learning community model with the idea that we have all these different kinds of programs, I think most of them are obvious except for maybe EHR, education and human resources programs at NSF. So the education division which funds education, as well as a lot of the research centers are now funding education. This is sort of like a research project in a way in that all these programs are doing little experiments on the best way to do this kind of science outreach from the university and yet there is no central mechanism for us all getting together and to share. So that's where the center and the model comes in with knowledgeable programs but also the scholarship learning from the programs."

Professor Charles Walcott, Neurobiology and Behavior: "Well, thank you. Can you hear me all right without a microphone? I'll come up front anyway. Partly I want to provide some personal opinion, and partly I want to talk a little bit in summary. It seems to me that there are a lot of common elements in what we have just heard. First of all, what is the land grant mission of the university? According to something I cribbed it from, it says, 'to teach such branches of learning as are related to agriculture and the mechanical arts in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions. . . . I thought it was very interesting that in the University Assemblies' Advance that was this fall, one of the major themes was that of service, and it seems to me that this whole land grant mission really is one of service, service to the community, both locally, and in particular in New York State. It seems to me that in this day in age it should extend far beyond New York State and be a national activity. Clearly, this is already going on. There are extraordinary projects; you have heard them. They range from apples to birds to technology, but it covers an extraordinary gamut, and the faculty are already deeply involved in this, in some areas more than others, but nonetheless I think that it touches on essentially the faculty throughout the University at one level or another. Clearly, there are changes going on. In the first place of course, the land grant was assumed to be having to do with agriculture largely, and that clearly has changed. Technology has become important, and it seems to me that we need to think about a much broader audience. That's why I like the idea of knowledge for public good. So it's a different audience now. Secondly, the delivery mechanisms have multiplied and become far more diverse than they used to be. The notion of extension of the land grant mission being accomplished by people going out and working in the community is one model, but media of a whole variety of different sorts offer another model that we ought to be thinking about.

"So what are the needs that come from all the conversations that we've heard? It seems to me that the first of them is what I would call coordination and focus. This university is so diverse; the programs are so diverse. There is no way of learning about them in any useful fashion, and it seems to me that is one of the things that needs to be thought about. And that includes communication among and between the various projects. We need to simplify access to Cornell and have a better interface with the outside world, and we need to brag about some of things that we are doing, and that is going to be essential in trying to raise money to see that they are supported. It obviously has to do with intellectual property rights, which is a clear issue in a number of different areas. Furthermore, it seems to me that we need coordination and cooperation with other states. We don't need to invent the wheel all by ourselves. There are a lot of other land grant institutions out there. There are a lot of other institutions of higher learning, and it seems to me that we ought to find ways to cooperate and collaborate with them effectively. That is very hard for individual projects to accomplish but is something that is needed.

"Financial support, again and again we hear. It used to come from the declining state and federal dollars. It now comes in large part from participants in one way or another and grants, both federal and state. It does not much come from endowment. There are virtues and drawbacks to each one of these things, but one of the things that is clearly needed is to have some kind of central repository with a certain amount of venture capital. What I mean is start-up funds, seed money, to get things going and to support them until they can either find their way in the market place to be supported, as Feeder Watch is largely by the people that watch birds and are willing to pay for the privilege of contributing their data. It's what I call the Tom Sawyer approach to biological research, and that is only possible if you have a certain amount of money to get the thing started. So there is that need for financial support.



“There is the problem of delivery. Face-to-face is part of it surely, but how about television? How about the World Wide Web? How about CD’s, distance learning? It seems to me, we are still not making very effective use of technology. And technology has the key to making much of this possible. Feeder Watch would not have been possible without optical scanning forms. One couldn’t hire data entry clerks. It was simply too expensive, and now we have the rallying cry of every person, their own data entry clerk, as they enter it on-line on the web so that within minutes this becomes available on a national basis. It seems to me that the whole matter of technology is something that needs to be explored further. Evaluation and assessment. The issue is simply how would you know if you were successful? Well, one way we know that Cornell University is successful is we have lots of students desperately trying to get in. That is one measure of success. The fact that we have a lot of alumni who give us a substantial amount of money every year is another measure of success. We need to be thinking in all of our programs about how we are going to measure success. This is not a simple matter; it is a complicated matter. If we want to try and understand the difference we are making to do public good in the community.

“Finally, just because it is something that really I am interested in. I am concerned about the K-12 education initiative. I think it has extraordinary potential. I don’t believe it should be restricted to science, math and technology. That is the area that is currently fashionable; that is the area where there are currently resources, but it seems to me, and I agree very much with Bidy, that the university has a general responsibility to the education community to think about curriculum, to think about teaching and to think about the imparting of knowledge, and if the university scholars are not going to be responsible for thinking about some of these issues and looking at how it is presented, we have only ourselves to thank when we get students we feel are improperly educated. It seems to me, therefore, that the university has a responsibility for the school curriculum in all subjects and that furthermore the role of the Department of Education could be greatly expanded to try and participate with many of these rather exciting ventures where we work with teachers in the high school biology program, in physics and in a variety of other areas. Unfortunately my sense is that it has not been deeply involved in that project.

“Finally, it seems to me that there are things that we as faculty could do as we develop innovative techniques using the new technologies, perhaps under the Provost’s Innovative Grant Teaching Program. Perhaps we can apply some small fraction of this and make it available to, for example, high schools to use as part of their curriculum, that maybe a lesson could be developed on some topic in which we are trying to develop a whole course that could then be shared free with the high schools to try and improve their teaching. So those, it seems to me, are the major issues that I have heard. I am sure that you have heard of many others, and I think it is very exciting that so much is going on here at Cornell in trying to provide knowledge for the public good.”

Professor Firebaugh: “Thank you, Charlie. The floor is now open for your comments, and we ask if you would to come down to the microphone for the transcript. You can also shout. First comment.”

Ellen Harrison, Center for the Environment: “I do a lot of outreach related activities. I was extremely pleased, delighted, that this focus was happening, that there was interest in the highest places in outreach and in the land grant mission. I have had the opportunity to look at a number of these reports and there are a lot of good ideas. I hope that they get taken seriously. There are a couple of observations that I wanted to make that I feel are not well covered in a number of the reports and deserve some emphasis.

“Marianne, in talking about the K-12, was really the only one, with a slight mention in the ILR one, of I think the tremendous potential for interaction with Cornell University students and outreach. At the Center for the Environment we not only have a Master’s program which has an outreach component, but all of our programs employ students in various ways. For many of them it is a life changing experience. They have only been in school until then, and suddenly they are involved in things where they see the implications of doing that work. They get very excited. So I really think for a lot of these there is tremendous opportunity to think about how they can be integrated not just with the research mission and that came out in the ILR report that sometimes there is a divide between the outreach and the research and I know in all the projects we do I ask myself, ‘Why are we doing it here? Because we are a university, because there are smart people working on problems here, how can I get them engaged?’ I do my role as sort of linking that to the research base of the University to real world problems and always try to incorporate an outreach component so all things are together. I don’t have a teaching mission, but we work students into it.

“The other and quite a different concern I have is like Charles’s definition of trying to modernize the land grant mission that it is knowledge in the service of the public in some ways and one of the tensions that I think is increasing,

as funding issues have come around, is more and more we seem to be driven by private sector funding. And I don't take for granted that a contract in some way with the private sector, whether it's for delivery of information, which I think is mentioned in the cooperative extension one or in the tech transfer or the engineering one, I think there are potentially, there are publics that cannot pay that need our services. I understand the financial issues of the university and that's a problem, but I really think that is something that very self-consciously needs to be addressed. We shouldn't assume that making it easier for Cornell entrepreneurial things to get out into the entrepreneurial world is necessarily going to serve the broader public interest as well. I noted that Ronnie mentioned that the last recommendation has to do with humanitarian sort of interpretation. When I read the recommendations that were in the summary, at least the executive summary, I didn't see it there. Maybe I missed it."

Professor Coffman: "It's in the last group."

Ellen Harrison: "OK. But I don't think we are very clear about how to do that, and we need to be thinking about the social implications of some of the technologies that we develop and transfer, so I would just urge us to be a little bit more self-conscious in this about the potential tension between working with the private sector, and I'm not saying we shouldn't; I think we need to, but that there are tensions there where it may in fact put us in conflict with some of the public that can't pay."

Professor Coffman: "I apologize that that particular recommendation is not in the version that is on the web. The whole emphasis on intellectual property and proprietary technology is presenting huge problems worldwide in delivering appropriate technology particularly to the developing world, to people which cannot afford to pay. There is a major effort initiated by the Rockefeller Foundation and involving our university and hopefully most of the major research universities that is trying to design a solution. Basically, it consists of an intellectual property pool where we would be as an institution and hopefully as individuals because that would be necessary, that our technology can be used under the right conditions for humanitarian purposes. An example is, say you have a particular, I know Plant Breeders, so say we know a particular piece of technology is very valuable commercially and in the US but there would be no one able to buy it in Africa, so we agree that this could be used in corn for African farmers free use in developing improved crop varieties on that continent, but it is going to be used commercially in the U.S."

Professor Firebaugh: "Other comments."

UNKNOWN: "I have a question motivated by a bumper sticker. The bumper sticker says, 'Think globally, act locally.' So my question is really directed to the K-12 group. It is very high minded; I love it; I believe in it, but how does that square with the Monday announcement that the University slashed its contribution to the Ithaca public schools?"

Professor Krasny responding: "I'm not going to address the Ithaca School District but. I'm not sure what your question is exactly, but there is definitely a balance on campus in K-12 outreach of those who are doing it locally and those who are doing it more nationally, if not globally. I think there should be both methods. There are people who think that our mission in K-12 outreach is just to get a question and drive them to the local school districts and especially those local school districts that have less resources, but for some of the NSF programs, the informal science education programs which is what the Laboratory of Ornithology is working on; you have to have a national program in order to keep up with informal science education So I think the answer is there are both kinds of efforts, but I'm not sure that was your question."

Provost Martin: "I think I should answer it actually, because, although I don't get involved in this aspect of the University's relationship to the community, I take it that there is a misrepresentation. There wasn't a cut in the amount of money; there was a reckoning with the formula that had actually been in place, a policy between the school district and Cornell for some time, and that Cornell was, according to that formula, overpaying or would have been overpaying had it continued to pay at the rate it paid last year. That's I was brought to understand it. There is still the question of whether or not we should be giving more directly through the school district if we are really concerned about K-12 education. I do think that it would be reductionist to suggest that in order to show our contribution to K-12 education we would have to give more directly the school district, I don't think it follows. but I understand the public relations and even potential interim perception that we are talking about both sides of our mouths. I wish I knew a little more about that formula and why the school district perceives it to be a slashing and Cornell perceives itself to have

followed the formula and exceeded the requirements. So that's not really a great answer, but at least that tells you a little bit more than the paper.

Krishna Athreya, Student Services Associate, Engineering Women's Program: "This is more a comment than a question, I'm just addressing the fact that there has been a very recent effort of the College of Engineering which has not quite made it to the draft report yet, but is going to be soon incorporated into it where there has been the seeding of a national effort for using knowledge for public good in an organization funded Engineers without Frontiers, a national organization that has been supported and is being led by one of our recent engineering alums and there is also at Cornell simultaneously a student chapter that's been getting support through the colleges and the national initiative that is being very well supported by the college. The mission for the organization is to partner with developing communities to develop appropriate technology based solutions that improve the physical quality of life for the community and that of future generations. It is to mobilize students and develop partnerships between students, faculty and alumni and professionals in the real world to come together in a partnership for development in a global sense, for service in a global sense, that might be in fact recognized as part of the land grant mission."

Jim Rundle, Senior Extension Associate, ILR: "I work with labor unions in New York State and nationally, and I have done research on labor law and union organizing and employee involvement programs. I appreciated very much the affirmation of the importance of extension and outreach work to the University that I read in the report. I would like to call your attention to three points. The first is the relationship between the rest of society and extension, and it seems very important that this be seen as a two-way street. Because those of us who work in the field learn a lot from the people we work with and we see a lot of things in the field that are often not addressed by research and I think a closer dialog between those groups could help both sides. Another area is the employment status of those of us in extension. In the ILR School very few of us are in tenure track positions. I think that may be less true in some of the other schools, and that's an important area to look at in examining the relationship between resident faculty and extension faculty. What does it mean to be on the extension faculty if you don't have the tenure status? The last one, I really appreciated Ron Ehrenberg's remarks about looking at the priority that the university places on funding for extension. I would like to raise a question about this, because a lot of us in extension have good connections that give us quite a considerable potential for lobbying power that I think has not been used terribly effectively. Professor Walcott spoke of bragging about what we do. We'd love to do that. The question we have is the structure of the University's lobbying, to what extent are we permitted to go out and brag about what we do? To what extent is this socially coordinated, and in that respects Ron Ehrenberg's point about priorities? Those are the three issues that I would like to raise, and I did write some comments that I understand Mary Opperman has passed along. Thank you."

Margaret Smith, Plant Breeding: "I'll be really brief. I've heard the comments in the ILR report, and I've heard it in a number of other contexts as well so not to pick on them that our extension and outreach efforts need to be more tightly linked to the research base. It occurred to me as I listened to that for the 154th time that one could also equally well interpret that as exactly the opposite way, that our research efforts need to be more tightly linked to the base of extension and outreach needs of our clientele. I wonder if anybody really thought about that and thought about whether there weren't effective ways to insure that our research base is in fact more closely aligned with the needs. I realize, as Charlie said, that those are not just needs of New York. Our extension and outreach goes beyond New York, but New York State remains probably our primary clientele."

Professor Ehrenberg: "We did mention in our report, it probably didn't get as much space or emphasis as it may deserve, but certainly it was in there."

Andy Fagan, Director of Extension, Tioga County: "I often find a hard time talking about this stuff because I take it very personally, having now been involved and connected at Cornell for 20 years and coming from a family dairy farm which is still in operation and doing well. One thing, when I heard the whole conversation about the land grant mission was going to happen, when I saw the list of people involved in reviewing the land grant mission, no offense to all you wonderful people, but it's totally concentrated by Cornell staff primarily, and really I had hoped there would be a more open discourse with the people of New York. And I think that's why it talks about the issues, I think it goes back to what is our definition of a land grant mission? Charlie spoke a little bit about what you had picked up a piece of the historical context of what that was, and I'm not sure we are all on the same page about that is. On the flyer today it talks about a key ingredient of the land grant mission is dissemination of research-based knowledge. In our work in the counties the partnership in working with people is critical; there are 57 associations across the state. We work with

people at all levels, and our role as facilitating bringing people together we see as important or more important than dissemination of knowledge from Cornell. We have to have an open conversation about that and what that means. When we talk about ways that the University can increase outreach and facilitate connections with people and make a difference, we are there. I think also I picked up an assumption that the current extension system couldn't handle it, couldn't step up to the task, I challenge you to challenge us to do that, because we're there. You talked about technology transfer and working with businesses. We work daily with our county departments of economic development planning, with employment centers, with the farming community, with the Chambers of Commerce, with all aspects of the community, and we are not anywhere near the potential of what this University could do. So I challenge you all to keep this conversation going and put your heart and your finances, and you're right in making priorities about what really needs to happen to live up to the potential and the dream that the founders of this University had. The last point is, the other issue that for all of us at Cornell, is recognizing the inherent conflict between being Ivy League and being land grant. We have to face that head on, because other states that have land grant universities there isn't this inherent schizophrenia of what does this mean and how do we reach the needs of people in the state. I think it doesn't mean that it's totally negative. I think we can turn it around and make it real positive if we recognize that being Ivy League adds an added responsibility to us. And the other thing is also realizing the agriculture is much more than the production end, but that we are all part of this in the food system and based on what's happening in the world, we should stand up and scream and shout, 'Look at us. We are the only Ivy League university that has agricultural courses, that can help to solve the world's issues related to food systems and sustainability,' and we have to be proud of that on both sides of the fence. Until we are, we are not one university. So that's enough of my speech. Thank you very much for listening."

Professor Stephen Hamilton, Human Development "As I listen to the recommendations, I am reminded of the lack of two kinds of resources, money, of course, but also faculty time and energy. I am aware that the faculty we most want to be doing more outreach are the ones who are already the busiest with teaching and research. I think of the recommendations then as falling in two categories, as things we could do without additional funding, some of which might actually free up for example faculty enthusiasm if we could make entrepreneurship less onerous to them and others that would require additional resources. I'm heartened by Marianne's perception that there are resources at least for K-12 kinds of outreach, but I think if we thought of it in those two different categories that would help us not to be paralyzed by the fact that we don't have extra money pouring in from all directions."

Professor David Henderson, Mathematics: "I have also been involved with teacher education since the 1970s and with in-service for teachers. One of the obstacles that I have found over these 25 years in having a more integrated, unified approach on campus has been the different ways of doing things in the statutory and endowed colleges. I'm in the endowed college and Education is in the statutory college, and this has made it very, very difficult and has brought up issues and wasted energies and meeting times and everything else that shouldn't be necessary. In my experience that has been the single most problem that has made it difficult for there to be cooperation for instance between Mathematics and Education. Something needs to be done about that, and I think the idea of having a center that will also integrate the in-service and pre-service is a good idea, but if the issue between statutory and endowed isn't solved, there is still going to be all this tension and wasted energy."

Professor Don Duggan-Haas, Education: "First off, I would like to say how very pleased I've been with much of what I've heard today. The one brief comment that I do want to make is that I think this is largely in practice, but I don't think it's very clear in the documentation. We talk a lot about how to help K-12 and schools and teachers, but it doesn't seem like we ask them very much. We would rather spend time coming up with ideas of how to help them rather than talking with them about what they need, and I think that ought to be both done more and where it is done made more clear."

Provost Martin: "I'd like to respond to that. We have and by that I don't necessarily mean the panel because they've had other kinds of things they have needed to focus on. Francille and I have been meeting with the folks from BOCES and the city school district, exploring exactly what they think about and what we need to do and what they contribute and actually the report and the recommendations that they have made converge well. We are going to continue our meetings with them, so that we can work on this. It not that we know such..."

Professor Duggan-Haas: "Yeah, I know that it's not that it doesn't exist. We have spent a lot of time today talking about K-12 education, and I don't believe there is a K-12 educator in the room, and I think that's a problem."

Provost Martin: “Is that true?”

Professor Firebaugh: “We have given it our best shot to sort of advertise, but we can’t win them all.”

Professor Ehrenberg: “I’m speaking now in my role as an education researcher and as the husband of the superintendent of schools of a district that is that is the size of the Ithaca district. One of the most pressing problems facing K-12 education is where the teachers of the future are going to come from And how are we going to attract people of a substantial academic knowledge and high intellectual ability and love of learning into the field to be teachers. The body of research that shows that students learn more from bright, well-educated teachers. There is also a growing amount of research that shows that if you give the alternative of obtaining certification to teach within a four-year program, not a major but just the ability to get the certification, that you enhance the likelihood that brighter students will enter teaching. There are many top universities that have programs that – many liberal arts, for some reason liberal arts places, such as Middlebury have such programs. Cornell does not have such programs, except for the College of Human Ecology where you can get certification from going out and taking education courses. It used to be at Wells College: I’m not sure where it is now. I didn’t see the report, but I’m very disappointed that the presentation didn’t suggest that a major outreach role of Cornell K-12 education would be through provision of training, making arrangements for training, that would allow more bright Cornell undergraduates to go into teaching even for a relatively short period of time during their early career.”

Provost Martin: “I think that is partly wrong, because we are still in discussion with people from BOCES about whether alternative certification is something that Cornell could and should present itself as wanting to do. But that’s not something that was brought to our attention.”

Professor Krasny: “First I want to comment on Don Duggan-Haas’ suggestion of a committee engaged more of the stake holders in defining what our role is. I agree with you, and you’re right. We didn’t spend a lot of time with that. I was really impressed by Clif’s presentation because they obviously did spend a lot of time on that. I want to say that Charlie Trautmann, who was a member of our committee, did develop a plan for doing that and we just didn’t do it yet. As to Dr. Ehrenberg’s comment, Karen Vogtmann who is on our panel from the Math Department, continually reminded us about pre-certification and its importance, and I think a lot of the other panel members where more people who do outreach and extension and so we would forget it, and so there is a section at the end of the report on pre-service education. We think that the strong recommendation about education department very much relates to that. Your right, we covered it very well.

Provost Martin: “I think the reports need to evolve. That’s one of the reasons we’re having this forum and your feedback is critical. Some of the things have not yet made it in to the reports. It’s important for you to understand that this is still in the process and it’s still underway. These are not final documents that can’t be changed by virtue of the people.”

Professor Firebaugh: “Last comment from someone?”

Mark Eisner, Operations Research: “To reinforce the comments about K-12 and getting students involved—the job market is down. I teach a lot of engineers. I say to them, ‘Have you thought about getting into teaching?’ And the looks on some of their faces, ‘Why would I consider that?’ or ‘Gee, I hadn’t thought about that.’ There seems to be nothing that creates an atmosphere that makes going for a teaching job is comparable to going for a job in industry. The pay isn’t the same but the students are really concerned not only about their pay but about their job satisfaction. I’ll bet there are some of them who, if they were given a chance to work in schools, would discover a calling.”

Professor Firebaugh: “I would like to say my special thanks to our panelists, who have chaired the various committees, and to Charlie for your comments, and to you our thanks for your comments. And stay tuned; check the web and we appreciate your coming today. Thank you again, Bob Cooke, for arranging for us to do this.”