

Amended October 10, 2007

The fourth meeting of the Committee of Six for the academic year 2007-2008 was called to order by President Marx in his office at 3:00 P.M. on Monday, September 24, 2007. Present were Professors Frank, S. George, Jagannathan, O'Hara, Servos, and Sinos, Dean Call, President Marx, and Assistant Dean Tobin, Recorder. Corrections to the minutes of September 17 were given to the Dean.

In response to a request by the Committee, the Dean distributed lists of standing and other committees of the Faculty and their current membership. President Marx noted that last year's Committee of Six had discussed the possibility of discontinuing or combining some committees, redistributing the work of some committees, and/or changing the membership of some committees, with the goal of alleviating some of the burden placed on the Faculty and of ensuring the efficiency and effectiveness of the work of College. While it was agreed that revisions would be useful, the members did not bring specific proposals forward to the Faculty, although their discussion did result in a decision to redistribute the work of the Copeland Committee (the Faculty Committee on Research Awards and the Dean's office now administer this program) and to eliminate that committee. President Marx noted that changing the structure or membership of standing committees requires a vote of the Faculty. Professor Frank commented that committee assignments appear not to be shared equally among all members of the Faculty, noting that having all faculty members serve might also decrease the burden on those colleagues who serve regularly. Professor Servos noted, for the Committee's information, that, in 1997, after a survey of the Faculty about this subject and consideration by the Committee of Six, the Faculty had voted to restructure several faculty committees in order to reduce the number of faculty members needed and to improve the efficiency of faculty governance.

In this vein, President Marx asked about the role of the Committee on College Housing. Dean Call noted that the committee has not met for some time, since there has not been a major issue involving housing in recent years. If not for this committee, Professor Jagannathan asked, would there be a mechanism for addressing faculty members' concerns about housing? Professor Jagannathan noted that a number of colleagues who live in College housing, particularly assistant professors, have brought to his attention questions about the transparency and efficiency of the process by which housing is prioritized and allocated. Professor Sinos agreed, commenting that the process seems to be opaque and very slow, and that colleagues appear not to be given timely information about whether housing will be available for them. She and Professor Jagannathan noted that, in the past, the housing process had been more open, with the names of individuals and their ranking on the housing list having been made available to the Amherst community. President Marx asked if this level of transparency had led to any difficulties among those participating in the College housing system. In response, several members noted that clear criteria have been developed for awarding housing, and they believe that the highly formulaic nature of the process has prevented such problems from arising.

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Continuing the conversation, Professor Servos asked, whether the “formula” had been accessible to all when the system was more open. Professor Jagannathan said that the formula was, and still is, well known and accessible. Professor Frank noted that the Committee on College Housing has served as a valuable advocacy group, and that important faculty concerns about College housing have been addressed through this mechanism in the past. She said that the housing lottery is not the only way in which faculty interface with the College housing system: that disputes may arise between the rental properties office and either junior faculty who rent or senior faculty who are selling their houses back to the College. The Dean noted that, at present, he is often asked to assist with questions that arise about housing for faculty members.

On a more general level, and stressing the importance and necessity of the Faculty’s involvement in the governance of the College, against which all other arguments should be measured, President Marx pointed out that the level of committee work that faculty members are being asked to assume places a significant burden on them. Faculty service time should be used effectively and efficiently, while ensuring oversight, especially in areas connected to the curriculum or to students’ academic experience at the College. President Marx suggested that the Committee review the list of faculty committees in their entirety at the end of the meeting, if time permitted. The members agreed to do so.

Dean Call made a series of announcements. He noted that attorney Jim Wallace would meet with the members to review tenure procedures and answer questions about the tenure process. Each fall, Mr. Wallace is invited to speak with the Committee of Six prior to personnel discussions to provide general legal advice related to the tenure and reappointment processes. The Dean asked the members if they felt that there was sufficient business to have a Faculty Meeting on either October 2 or October 16. After discussion of possible agenda items, the members agreed that meetings should not be held in October, but that there would likely be a Faculty Meeting on November 6, since new course proposals would require a vote by the Faculty in time for pre-registration. A proposal for a new Environmental Studies major is also expected to come before the Faculty this fall, the Dean said. He agreed to inform the Faculty that the dates of October 2 and 16 would be released, and that colleagues should continue to hold the dates of November 6 and December 18 for possible Faculty Meetings.

Under “Questions from Committee Members,” Professor Jagannathan noted that attendance at the first lunch hosted by the Committee of Six had been sparse. The members agreed to have lunches, as announced, on first and third Thursdays through October to see if there is sufficient faculty interest to warrant the continuation of this experiment. Professor O’Hara said that she would try to arrange for more timely online reminders about the lunches through the online campus announcements.

Professor George asked Dean Call if any progress had been made regarding the creation of an archive of the *Faculty Handbook*. The Dean responded that Peter Schilling, Director of Information Technology, is considering ways of creating an electronic archive; he is expected to report back to the Dean soon. Professor George suggested that a complete copy of the

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*Handbook* be printed from the Web at the end of each academic year and placed in the College archives in Frost Library. The Dean agreed that both paper and electronic versions of the *Faculty Handbook* would be created annually and archived.

After reviewing the funding guidelines of the National Endowment for the Humanities (NEH) Summer Stipend Program and the criteria by which the College has selected nominees for this program in the past, the Committee reviewed NEH proposals and approved the nomination of two professors. The members discussed the decision by the NEH to change its regulations in 2006, so that there is no longer a restriction on the career stages of nominees for the fellowship. The Committee agreed that putting forward the proposals of tenure-track colleagues who apply, if their proposals are worthy, is particularly desirable.

Discussion returned to the role of the Committee of Six and began with conversation about the Committee of Six's interactions with other faculty committees. Professor Servos said that it is clear from language in the *Faculty Handbook* that standing committees are created by vote of the Faculty; ad hoc committees are created by the President. The Committee of Six advises on the membership of both types of committees. He noted that there is no language in the *Faculty Handbook* regarding the Committee's role in drafting charges for other committees. He commented on an excerpt (appended) from the minutes of the August 31, 2006, meeting of the Committee of Six, in which Professor Schneider asked for further clarification of the role of the Committee. In response, the Dean had described the Committee's responsibilities, including among them the drafting of charges for other faculty committees. Professor Servos said that, in his experience, the President and the Dean have been most likely to charge committees with particular tasks. The Committee of Six has been invited to express opinions on charges as part of its advisory role. The Dean said that practice may have varied slightly among different Committees of Six, and that the practice of the Committee drafting charges for other faculty committees may have been more common during the past several years.

Professor O'Hara noted that the Committee of Six had shaped several charges last year, with positive results, and commented that the Committee's role in this regard is somewhat ambiguous and may depend on whether individual Committees of Six have seen their roles as being more active or purely advisory. She offered the example of the Committee's decision in 2006-2007 to bring a proposal to the Faculty that the pacing of the allocation of new faculty FTEs be considered in concert with any increase the size of the student body. The Committee of Six had felt that it was important to act at the particular moment, when important decisions were about to be made about the future of the College. The question of how to increase the size of the student body was being considered by the FCAFA at the same time as decisions were being made by the CEP about how to solicit applications for new FTEs. These two interrelated issues were being considered simultaneously and yet in isolation from one another. The Committee of Six stepped in to make sure that these two issues might be approached in a coordinated way, she noted.

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Continuing the conversation, Professor O'Hara said that she believes that the Faculty is best served by a Committee of Six that does not decide a priori whether it will be more or less active in its role, but is rather guided by the *Faculty Handbook* and by the details of a particular issue in taking a more active role when necessary. Nevertheless, she said it would be helpful for the Committee to consider at this moment the type of committee it aspires to be. Questions to consider include whether the Committee of Six should strive to clarify issues for the Faculty and whether the Committee should prioritize the tasks of other faculty committees when issues of concern arise. Professor Jagannathan said that, as the executive committee of the Faculty, the Committee of Six should have some latitude in its role involving matters of faculty governance, among them the drafting of charges to other committees. Professor Servos expressed discomfort with the idea of the Committee of Six taking on a role that is primarily executive in practice, as the result might be a tendency to dictate and give orders to other faculty groups. Professor O'Hara said that it is important—whether the Committee is primarily advisory, directive, or interpretive—for members to be clear and consistent in their interpretation of their role in faculty governance.

Professor George said that he has felt in the past that the Committee has sometimes overstepped its role when considering reports brought forward from other faculty committees. In his view, the Committee should discuss such reports and have the members' conversation shared through the minutes for the benefit of the Faculty—but should not alter the report, particularly without consulting the committee that generated it. He noted that Committee of Six conversation can serve to jumpstart faculty discussion, and that rehearsing the major discussion points of a report before a Faculty Meeting can be very helpful; best practice should be that the Committee forwards reports, unaltered, to the Faculty for consideration, he believes. Professor George commented that the colleagues who work on these reports devote a great deal of time and effort to them, and that their service to the College should be respected. Professor O'Hara agreed that the efforts of faculty committees should be valued and appreciated, and that the Committee of Six should consult with faculty committees if questions about committee reports arise and further discussion and/or clarification is needed. While agreeing that the work of faculty committees should be respected, Professor Jagannathan said that, if the Committee of Six believes that a report is not sufficiently cogent, it should not forward it to the Faculty; instead it should be returned to the committee with specific questions and suggestions for changes. It is also not uncommon for the Committee of Six to request a meeting with the faculty committee to discuss concerns before a final report is produced. If part of the Committee's role is to ensure that Faculty Meetings function in an orderly and reasonable fashion, the Committee might, on rarest of rare occasions, refuse to put such a report on the agenda, he said.

At the conclusion of the discussion, Professor Frank noted that she was hearing a desire to solve a tension in members' understandings of the Committee's role. She expressed the view that the Committee would need to feel its way as questions come up about the degree to which it wants to take an active role. Professor Servos said that he worries that it is easy for the Committee to drift into areas that are outside the boundaries of its charge.

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The Dean next asked the members to consider the charge to the new Science Planning Committee (the establishment of which was recommended by the science faculty during a conversation held in July, the minutes of which are appended). As he mentioned at a previous Committee of Six meeting, Dean Call said that the proposed science committee would have a broad mandate—which would include further work on the development of a vision for the sciences at Amherst in the future. At the same time, the committee would be responsible for moving the Merrill renovation process forward. The Science Planning Committee would vet and refine the report (appended) of the Ad Hoc Merrill Planning Committee. The committee would also recommend the next steps for Merrill planning (as informed by the report of the Committee on Priorities and Resources (CPR) Interim Recommendations on a Projected Budget for the Committee on Academic Priorities, which was distributed to the faculty last spring and which is appended here), while later forming a smaller group that would serve as a core Merrill Planning team going forward. As the Committee discussed previously, the plan is for each science department to select a member to serve on the Science Planning Committee.

The Dean noted that, as part of its work, the Ad Hoc Merrill Planning Committee had visited Williams College and had been impressed with the advantages of the efforts of Williams, and those of other peer institutions, to work across departments when undertaking curricular planning. The members also took note of the manner in which Williams organizes and presents information about the sciences. While Amherst is certainly the equal of Williams in terms of the science education that it provides, the College does less well in showcasing science education in a compelling way, the committee concluded. The Ad Hoc Merrill Planning Committee ultimately decided that Amherst would benefit from having an organized, ongoing formal structure that would allow for and encourage cross-departmental conversation among the science departments.

Professor Jagannathan asked if the pertinent issues could be summarized as follows: the need to communicate more effectively about science education at Amherst, the need to renovate Merrill, the need to explore new directions in pedagogy and in the ways students are supported academically, and the need to increase support for student and faculty research in the sciences. In terms of committee structure, Professor Jagannathan and Servos expressed concern about creating a standing committee, unless there are ongoing needs in these areas. Professor Servos noted that an ad hoc committee could certainly explore new forms of pedagogy and support, work to ensure that Amherst is communicating well about the excellence of the science education it provides, and achieve consensus regarding a vision for the sciences over the next ten years. Professor Frank agreed, noting parallels with the Committee of Six's recent discussion about whether to create a standing committee to explore a new major in Film Studies and New Media. She noted that creating formal structures—ad hoc committees or working groups—for the groups that are working on these issues would provide institutional recognition of the work being undertaken and protection for colleagues from other committee service. Without this imprimatur, the groups' work might be impeded. She also questioned why a standing committee

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should be created to form a vision for the sciences when such committees are not being considered for the humanities or the social sciences.

The question of committee structure aside, the President noted that he has encouraged a dialogue about a vision for the sciences because of the urgent need to move forward with renovating Merrill. In his view, a vision for the sciences must guide any such renovation. Coordinated curricular planning would answer, for example, questions such as whether there would be a need for additional large classrooms or a greater number of small classrooms, whether scientific instruments might be shared or should be housed in separate areas, or whether departments might want to organize spaces around interdisciplinary themes—information that should shape the way the building would be designed. The Dean noted that he agrees with the Ad Hoc Merrill Planning Committee that there will be an ongoing need for a formal structure to encourage trans-departmental conversation about the sciences.

Professor George noted that some members of the science faculty and of the Ad Hoc Merrill Planning Committee have expressed cynicism about the need to develop a vision for the sciences, perceiving the task as mere window dressing for the renovation process. Professor O'Hara said that she has observed that colleagues' expressions of cynicism have alternated with demonstrations of excitement about the prospect of developing a vision. She feels that the prevailing mood of the science faculty at the July meeting was, for the most part, optimistic, positive, and energetic. She noted that, if the Committee of Six has concerns about following a major recommendation (forming a science planning committee) of the Ad Hoc Merrill Planning Committee, the members should consult with the planning committee.

The Dean reiterated that there is a significant and immediate need to develop an exciting, curriculum-based proposal for the Merrill project. The more exciting the proposal, the more generous the support for the project will be, he noted. The President agreed, commenting that he feels that merely making nuts-and-bolts improvements to the building, without a curricular guidepost, would be irresponsible. A cohesive sense of the direction of the sciences will be needed—and will be needed quite soon—if major spending on Merrill is to be justified, and if planning for the campaign is to proceed on schedule. Issues of vision and timing are also pertinent to the renovation of Frost Library, he said.

At the conclusion of the discussion, the members advised the Dean and the President that an organizational structure is needed for planning for the renovation of Merrill, including the development of a vision for the sciences, to move forward. The members recommended that a working group or ad hoc committee be formed, and agreed that the group's first task should be to refine its charge, based on the report of the Ad Hoc Merrill Planning Committee. Professor Servos said that he worries that the creation of a standing committee for the sciences might represent the beginning of a move toward a divisional organizational structure for the College.

The Committee returned to the topic of faculty committees. President Marx said that the key to lessening the burden on the Faculty is to determine which areas of College life require direct faculty engagement, which areas require somewhat less direct oversight by the Faculty, and which areas can be administered by professional staff members, who consult with the

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Faculty when appropriate. Professor Jagannathan said that he has been disturbed that, in recent years, some faculty members have moved away from their legislative and oversight roles and have become more like middle managers, that is they have become more engaged in matters of implementation. Professor Frank asked if course relief and compensation were solutions that could be considered, and President Marx said that, as he has stated on previous occasions, he is open to considering a variety of ideas and approaches, while being mindful of any potential divisiveness that might result.

After a substantial and detail-oriented conversation about the pros and cons of combining or eliminating a number of faculty committees and/or making changes in membership, the members decided to consider whether the College Housing Committee should be eliminated and the oversight of the College housing process should be shifted to the CPR, with support from the Dean. Several members commented that it might be beneficial to have the CPR oversee the housing process because the CPR would have greater clout, should an important housing issue emerge. Professor George was consulted about whether the number of faculty members serving on the Health Professions Committee could be reduced from four to three. He agreed that doing so would not have a negative effect on the functions of this committee. The members also considered whether there is a continuing need for an Orientation Committee, since the program is overseen by the Dean of New Students. It was proposed that the Dean of New Students be added, *ex officio*, to the College Council, and that the Council oversee Orientation, which is largely an administrative function of the Dean of Students Office. Professor Sinos pointed out that some faculty members feel that there should be more Orientation events that foster intellectual engagement, which suggests the importance of the faculty presence on the Orientation Committee. She questioned the wisdom of including this work among the business of the College Council. Dean Call noted that Professor Sarat will be exploring the matter of intellectual engagement especially during the first year, as part of his work as Senior Advisor to the Dean for Academic Life. At the Committee's request, the Dean agreed to explore whether the Health and Safety Committee had been constituted to meet federal or state requirements. If not, there might be possibilities for changing the membership of that committee, the members felt. The Dean was also asked to review the stipulations of the committee that makes awards from the Dayton Fund, with the thought that, if the Faculty approves a new Environmental Studies major, colleagues associated with that program could possibly take on the duties currently assumed by those on the Dayton Committee.

The Dean agreed to discuss the Committee's suggestions with colleagues who currently serve on these committees and to report back to the Committee of Six. He noted that several of the proposed changes would affect standing committees of the Faculty and, thus, would require a vote of the Faculty to implement.

Several members commented on the benefits of having faculty members rotate through College committees. These include the experience of working closely with colleagues outside their departments and with other members of the College community, with whom they might not otherwise interact. Some members expressed the view that adding to the work of already busy

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committees in the interests of reducing the total number of committees might not serve the College as well as does the current range of more and less burdensome committee assignments.

The meeting adjourned at 6:00 P.M.

Respectfully submitted,

Gregory S. Call  
Dean of the Faculty



Excerpt from Committee of Six Minutes  
of Thursday, August 31, 2006

Professor Schneider asked for further clarification of the charge of the Committee of Six, as he feels that the charge, as written, does not express the breadth of the Committee's duties. Dean Call first read the charge and then offered further explanation. He noted that the Committee is the executive committee of the Faculty. As such, it sets the agenda for the faculty meetings; drafts charges for faculty committees; moves forward conversations about reports and campus issues; evaluates cases for reappointment, tenure, and promotion; and evaluates faculty grant and fellowship proposals. President Marx also relies on the Committee, as the elected committee of the Faculty, to provide a faculty perspective and advice on important matters that are under consideration. Professor George said that he objects to putting the Committee in such a role, as he believes that the members are not elected because they have any particular expertise, with the exception, possibly, of experience or good judgment regarding personnel matters. Professors Hilborn and Woglom disagreed, noting that they feel that colleagues elect individuals to the Committee of Six because of the judgment and experience of these individuals. They said that they are comfortable expressing views-as individuals and members of the Committee----because there are often important faculty interests at stake.

## Minutes of the July 12, 2007, Meeting of Science Faculty

On July 12, 2007, at noon, Dean Call convened in the Lewis-Sebring Dining Commons an informal meeting with members of the science faculty to discuss the future of the sciences at Amherst, including issues surrounding curriculum, faculty and student research, and facilities. In attendance were Professors Baird, Benedetto, Bishop, Cheney, Cox, Demorest, Friedman, S. George, Goutte, Hall, Hansen, Harms, Hart, Hood, Hunter, Kushick, Kaplan, Leise, Leung, Loinaz, Marshall, C. McGeoch, L. McGeoch, McKinney, Miller, O'Hara, Poccia, Ratner, Sanderson, Tranbarger, and Velleman; John Carfora, Director of Sponsored Research; Janet Tobin, Assistant Dean of the Faculty; and Lee Barstow, Director of Advancement Information Systems, who served as Recorder.

The Dean thanked the assembled colleagues for their willingness to attend the summer lunchtime conversation. He then introduced John Carfora, who recently assumed the new position of Director of Sponsored Research in the Dean of Faculty's office. The Dean explained that Mr. Carfora's primary role will be to help Amherst faculty secure external funding to support their research activities. The creation of the position, Dean Call noted, was a recommendation of the Committee on Academic Priorities (CAP). The Dean thanked Mr. Barstow for taking the minutes of the meeting.

Dean Call continued his introductory comments, referring to the meeting's purpose as outlined in his email invitation and as informed by the two documents accompanying it. The Dean thanked those colleagues, in particular the members of the Merrill Planning Group (Professors Goutte, Hunter, Marshall, and Sanderson), who have worked over the past year to begin the process of planning for the renovation of the Merrill Science Center, in the context of considering as an underpinning for the project the development of a vision for the sciences at Amherst for the coming decades. The Dean explained that the draft document prepared by the Merrill Planning Group is not definitive, but rather should be viewed as the first step of a process that the group envisions as broad and inclusive, with the goal of building on what has been developed so far and ultimately achieving consensus. Pointing out that the Merrill renovation is a once-in-a-generation opportunity for the faculty, Dean Call said that it is his hope that the science faculty will engage in a planning process that will result in a project that is outstanding and visionary, rather than in a series of cursory upgrades to the building. The Dean pointed out that the Board has expressed support for this project, but noted that making a successful case for the building will depend on the faculty's ability to convey a compelling "blueprint" for science education and research in the years ahead, as well as for physical spaces.

Noting that, as part of its work, the Merrill Planning Group had visited peer institutions, including Williams, Dean Call shared his observation that, although Amherst's science curriculum is second to none, sister institutions do a better job of communicating their strengths in the sciences. He called on the faculty to tell Amherst's story, in order to build a persuasive case in support of two related, but not identical needs: the renovation of Merrill and the development of a new vision that articulates shared goals for science at Amherst.

The Dean said that one of the Merrill Planning Group's purposes in gathering the science faculty at this time is to broaden the dialogue, hear new ideas, and move conversation forward. The question, he said, is what needs to be done to keep the Merrill renovation on track and to build for the future. Dean Call encouraged the faculty to "think big" and to view the renovation as a catalyst for a more expansive conversation. He then opened the floor for discussion.

Professor Marshall, representing the planning committee, described the evolution of the members' thinking. Beginning with a purpose understood as, "Let's renovate Merrill," the members learned that to make decisions or even start planning, they needed to identify goals. In writing the draft document, they engaged in the first step of a process akin to the recent crafting of the mission statement for the College, he said. The result of the ongoing process will be a document that is more a statement of guiding principles than a summary of procedures and practices. He added that the document, in its final form, will be intended not only for faculty, but also for potential students and donors, and colleagues outside the sciences.

Professor C. McGeoch said that she understands that the document will conclude with, "...therefore, we need to renovate Merrill," but she wondered how it would be disseminated, and to whom. Dean Call responded that, at this stage, the document is meant to serve as a basis for discussion. It was drafted to support science faculty as they work toward reaching a consensus on goals for the Merrill renovation and for the directions that the sciences should take in the future. The document's purpose now is to provide guidelines and principles for the departments; over time it can be shaped to meet the needs of different College constituencies, Dean Call said.

Professor Goutte said that the planning group views the document as a foundation upon which the faculty should now be encouraged to build. The group saw the creation of this piece as an alternative to the impossible task of assembling the entire science faculty to discuss far-reaching and complex issues, without the benefit of some groundwork.

Professor Hansen expressed the view that the College already provides an excellent, state-of-the-art science education and that the current facility has not impeded his teaching or research, though a renovated Merrill is certainly necessary to maintain quality in the future. He fears that tension will be created if a flashy argument-in particular, re-defining the sciences at Amherst-must be articulated as a justification for renovating the building. He advocated for a message more along the lines of maintaining excellence, rather than transforming science education at the College. He sees the purpose of the document, therefore, as a way to explain to potential donors that they would be ensuring that science education at Amherst remains innovative and vibrant.

Professor Goutte responded that the planning group agrees that it is valuable to hear and share what Amherst does well, while noting that new ideas and approaches can enhance the sciences at Amherst. Professor Loinaz asked if this planning effort is a response to concern about the sciences, and the Dean responded that the planning process is motivated by the needed Merrill renovation, as well as CAP priorities, including increasing support for student research. In particular, the Dean said he shares Professor Hansen's view that science education is a strength of the College, and he sees the current planning process as a means to enhance that strength.

The student research priority is an example, said the Dean, of the opportunity to articulate the strengths of current programs while envisioning new approaches. Given that overseeing student research is very time-consuming for faculty, for example, possible solutions such as hiring additional postdoctoral fellows, post-bacs, or technicians to provide assistance to the faculty could be considered.

Professor Harms made the point that eighteen additional FTEs have been approved by the Trustees, and that innovative thinking about pedagogy and facilities will provide the justification for their allocation. She encouraged the faculty to think boldly and outside the box, offering as an example the idea of advocating for smaller classes (as few as twenty-five in introductory courses) and interdisciplinary ways of covering subject matter that is required for the different scientific disciplines.

Professor Hansen noted that issues were being conflated in the course of the conversation. There has long been a desire for smaller introductory science classes, but the primary limitation in terms of making smaller classes possible is the number of faculty, he said. He thinks that it would be more productive to articulate what is being done in the sciences and how a renovated Merrill will help the faculty continue to do what it is doing.

Professor Kushick agreed, putting the following scenario before the group. Suppose the chemistry department proposed a specific plan for smaller classes (forty or fifty students) and additional intensive support for students for the first two years, rather than in the first year only. Accomplishing such a plan would require four new FTEs, he said. He wondered if including such a plan in the proposed visionary document was practical. The Dean noted that, in fact, a new FTE had just been awarded to the department to meet goals that the department articulated for meeting the needs of less well-prepared students.

Professor Kushick argued against the idea of labs being taught by staff, noting that Amherst's focus on teaching is distinctive and that important learning goes on in the lab. Professors Hansen and Hall agreed, while Professor Poccia responded that careful placement of technicians and postdoctoral fellows can free up faculty time, while preserving the principle of faculty dedication to teaching. Professor Marshall pointed out that conditions differ among disciplines. Professor Hansen said that part of the stress, in terms of enrollments, that is being put on the sciences is the result of admission decisions. He noted that the sciences have little control in this regard.

Agreeing with Professor Harms that the faculty should be thinking creatively, Professor Sanderson noted that there is often overlap in terms of the material covered in the various statistics courses taught by different departments across the College. She wondered if collaboration among departments might make it possible to consolidate some of the statistics courses, freeing up space in the curriculum and faculty time so courses in other areas could be offered. Professor Sanderson supported the idea of considering new pedagogical models, as well as looking beyond new FTEs for solutions. She suggested, for example, that the ways in which Psychology 11 is taught could be improved if resources such as postdocs were made available to her department.

Professor Kaplan also supported thinking in new and creative ways, but noted that there can be practical difficulties that prevent innovation from taking place. He commented that, while he would like to teach collaboratively with colleagues from different disciplines, the need to cover the departmental curriculum in his small department makes doing so very difficult.

Dean Call noted that making it possible for faculty to teach interdisciplinary courses is, in part, a resource issue. He posed the following questions to the group: what would be the best way for faculty to make the case for teaching such courses? How would a need rise to the level sufficient for getting resources for doing so? He pointed out that there is no mechanism, at present, for advocating interdepartmentally. He suggested that there should be a tool in place that would enable faculty to advocate for goals that span departments, bringing a higher level of attention to such proposals.

Returning to the renovation of Merrill, Professor O'Hara suggested that it will be important to consider ways in which the renovation can facilitate more interaction and conversation among faculty in the sciences, which she feels is critical. A renovated building should also do more to celebrate the sciences (using exciting exhibits and graphics, for example), she said, commenting that other schools' science centers create such a feeling and are far more impressive overall. She said that Merrill does not meet her needs as a scientist. She described deficiencies in Merrill, mentioning the isolation of the disciplines and the lack of visibility of the Moss Quantitative Center in its current location. Professor O'Hara said that she feels that a better building will draw the best science students, noting that the current facility conveys the impression that the College's institutional commitment to the sciences is not great. Another area of concern is the lack of a vibrant and coordinated Web presence for the sciences at Amherst. She noted that other colleges (mentioning Williams, in particular) do a much better job in this regard.

Professor Marshall said that he supported the vision outlined by Professor O'Hara and reiterated that Merrill has many drawbacks. He noted that his research has been hindered by the constraints of the building, commenting that the air quality has become too poor in Merrill to continue his research involving lasers.

Professor Kaplan pointed out that the plans for celebratory exhibits and Web pages described by Professor O'Hara should include provisions for the additional staff that will be needed to build and maintain them. In addition, he urged the faculty to engage in the daunting task of imagining what the computational support needs in different scientific disciplines will be twenty years from now, since this is rapidly expanding area. Professor Kaplan noted that the College's strengthened commitment to less well-prepared students and the desire to reach out to students who avoid science (often members of underrepresented groups, he noted) should also be considered carefully as plans for the future are developed.

Professor Harms recalled that Merrill was built to accommodate the addition of a new wing, and she raised the possibility of moving the Department of Mathematics and Computer Science to Merrill to establish a new computational center there. Continuing with a general remark encouraging bold thinking, Professor Harms urged the faculty to imagine the best story possible for the future of the sciences, to take the larger view, and to put the most exciting package possible together. Dean Call and Professor

Marshall encouraged the faculty to think in the sort of broad and creative ways outlined by Professor Harms.

Professor Miller said that, while she is eager to take a fresh look at the curriculum in the Department of Biology, in her experience it can become complicated when trying to solve departmental challenges by collaboration with other departments, often because departments have very different needs.

Professor Harms offered the idea of breaking introductory classes into modules that would be taught across science departments. Majors could take the modules that related to their discipline's course of study only. In this way, departments might be freed from teaching some overlapping introductory material, and fewer introductory courses would be taught overall. Professor Cheney noted that students often have different needs, depending on whether they are pre-med or anticipate becoming research scientists. He said that the Board is concerned about the low number of Amherst students who pursue Ph.D.s in the sciences, in comparison to the number who aspire to be physicians. Professor Goutte argued that a balance is needed at Amherst between pre-meds and those who wish to pursue Ph.D.s in the sciences. She feels that having more of a sense of unity among the sciences would encourage more students to go on to graduate programs, and she noted that at Williams, for example, the sciences as a whole have a presence that is lacking at Amherst. She pointed to efforts by Williams--a brochure of current research spanning the sciences that gives the science great visibility and the inclusion of a coffee shop in the science center to facilitate informal interdisciplinary engagement among faculty. She suggested that strengthening departments with new FTEs would free up science faculty to work interdepartmentally. Professor Marshall agreed, noting that, at present, there is insufficient "wiggle room" within departments for faculty to teach outside of their departmental curricula.

Professor Cheney offered the idea of creating a position for a "sciences center" director at Amherst as a mean of creating greater cohesiveness among the sciences.

Mr. Carfora advocated for a common message that moves from an intrinsic to an extrinsic point of view and which would be valuable when pursuing outside funding. For instance, he said, experience shows that the word "integrated" is more compelling to funders than "interdisciplinary." Three steps are needed in the planning process, he said: to consolidate the strengths of the departments, to memorialize past successes, and then to ask what is the future of sciences at Amherst.

On a different, but related topic, Professor Cox, noted that he is involved in placing students in math courses at Amherst, and has recognized that such a placement has implications beyond math. For example, a student's math placement often affects the sequencing of chemistry courses that he or she can take and, thus, the pace at which the major can be completed. He suggested that it would be beneficial to have multiple entry points to majors. It was noted that at Smith students can enroll in half-semester courses, introductory courses that are paired with courses required for particular majors. This structure might be a way of accomplishing what Professor Cox was suggesting, providing flexible entry points.

In considering next steps for the planning process, Professor Hall suggested that a delegate be appointed from each department to bring departmental concerns to the centralized planning group. The group would then synthesize ideas. Professor Harms urged that the planning move forward quickly. Professor Sanderson advised that the group discuss ways to expose students to research experiences as early as possible after they arrive at Amherst. Students often want to begin research in their first year at the College. Professor Loinaz reiterated the point that research opportunities are limited by the number of faculty who are available to work with students.

Dean Call asked the group if, as the planning process moves forward, there should be two committees-- one to consider the renovation of Merrill and another to consider the future of the sciences at Amherst, or a single committee that would consider both of these issues. Attendees voiced support for the idea of a single committee. Professor O'Hara asked that representatives from IT, the Library, and the Moss Quantitative Center be involved early in the planning process.

In a final comment, Professor Hall urged the group to consider, prior to dividing it up in their minds, that Merrill was originally designed to house only three departments--Chemistry, Physics, and Astronomy. None of these departments has shrunk significantly since the building was built, and the addition of the psychology department has already increased the stress on the available space.

The Dean thanked his colleagues for a very productive discussion and adjourned the meeting at 2:05 p.m.

**Report from the Merrill Planning Committee**

April 6, 2007

*Prompted by issues raised by the Committee on Academic Priorities and the need to renovate Merrill Science Center, the Dean- of the Faculty formed the Merrill Planning Committee in spring 2006. He requested that we, the members, who were drawn from different scientific disciplines, consider science education and research at the College from an inter-science perspective, both as a valuable exercise in itself and as a means of informing planning for the Merrill renovation. The committee's discussions were far-ranging, encompassing an examination of the sciences as they are today and of directions they might take-both individually and in concert-in the future. As requested by the Dean, the committee thought broadly and creatively and included in our consideration all of the sciences, rather than focusing only on those departments that currently reside in the Merrill building. Through conversations with colleagues, visits to other campuses, and consideration of written material on science education and programs, the committee developed an initial set of guiding principles and recommendations. This working document was shared with a large portion of the science faculty at a meeting held in July and is now being provided as an interim report to the faculty as a starting point for further dialogue.*

A small liberal arts college that is serious about science education faces a great challenge in presenting its students and faculty with a powerful and attractive alternative to large universities. Amherst College is fortunate to have a faculty that is committed to both high quality research and teaching. We believe that Amherst can draw from these strengths and use its adaptability to become a model of excellence in science education.

Looking at the existing strengths of the Amherst science departments and the challenges faced by students and faculty of science, as well as the broad national trends in the sciences, we have attempted to envision the strongest future for the sciences at Amherst College, and we have defined several guiding principles. Here we present our recommendations for the future of the sciences at Amherst. Our small size imposes constraints on our ability to meet certain challenges in scientific education and research, and we discuss these constraints and some recommendations. We also believe, however, that our small size presents us with two unique advantages: the opportunity to present students with an intimate learning environment, and the opportunity to foster an integrative scientific community far more effectively than can a large institution. Our small size makes it possible for chemistry majors to know the biology professors, or physics majors to interact with computer scientists, or psychology majors to take advanced biology courses. We recommend strengthening science departments so that there is more room for flexibility and curricular innovation, and building an interactive scientific community.

Building a community of sciences at Amherst College will allow us, as a group of cooperating scientists, to more effectively address the common challenges we face, as well as to foster interdisciplinary areas of study and research. For example, each department currently struggles with ways in which to best support underprepared science students; as a cooperating group of science faculty, staff, and students, we can create resources, curricular initiatives, and programmatic changes that will help students throughout their four years in the sciences, rather than applying individual and uncoordinated band aids to each science course. Building a community of sciences at Amherst College will allow us to promote, encourage, and support vigorous scientific research activity, a key determinant in the quality of scientific education and development of students as well as faculty. Scientific progress is propelled by the constant exchange of information and ideas; we believe this can fuel progress at Amherst in the areas of teaching and research



in the sciences, while demonstrating that the intimacy and cross-disciplinary nature of liberal arts education can be put to use to create fertile ground for science education in the twenty-first century.

### **Current State of Science at Amherst**

\*Amherst faculty are dedicated to teaching undergraduates, and are fortunate that Amherst attracts high quality students who are eager to learn. Faculty members strive to meet the needs of students with diverse preparations and career goals. The sciences at Amherst College teach students the principles and practice of the scientific method within the context of a comprehensive liberal arts education that allows them to seek, value, and advance knowledge and engage the world around them. We challenge our students to observe the natural world, apply scientific principles, synthesize concepts, engage in creative problem solving, and develop skills in written and oral expression.

\*Amherst faculty have a strong commitment to conducting the highest quality research within core disciplines. Faculty publish in leading scientific journals, receive grant funding from federal and private agencies, and present their research at scientific conferences. Most of these research endeavors involve Amherst students.

\*Interdisciplinary teaching and research in the sciences is ongoing, including programs in neuroscience (integrating physics, biology, chemistry, psychology, and computer sciences), environmental studies (integrating physics, psychology, chemistry, geology, biology, and economics), scientific computing (geology, physics, computer science), and chemical-physics spectroscopy (chemistry, physics). A proposed program in biochemistry and biophysics is under review, and discussions about ways to enhance the relationship between physics and astronomy are continuing. Science faculty also collaborate on teaching with faculty outside of the sciences.

However, at present cross-departmental initiatives are difficult because departments often do not have the staffing flexibility to allow them. In addition, offering courses, hiring, and tenuring in cross-disciplinary areas is challenging. For example, the Neuroscience program at Amherst (the first in the country at a liberal arts college) was originally composed of faculty from physics, psychology, biology, chemistry, and computer science, but pressing departmental needs have pulled faculty efforts away from this program, leaving it sparse and less interdisciplinary than initially envisioned.

### **GUIDING PRINCIPLES**

**Change** - Science is rapidly evolving.

> Amherst College must remain flexible and responsive if it is to continue to attract and retain the best students and faculty.

**Student Needs** - The range in student pre-college science preparation is widening, especially in light of college priorities to increase socioeconomic diversity of the student body.

> Amherst College must be equipped to serve all students, from those who are underprepared, to those who have already had extensive coursework and are ready to engage in research and upper level classes.

**Research** - Research is a prominent part of undergraduate science education at the top institutions across the country.

> Faculty must be supported in their efforts to create and sustain rigorous research programs at the College. Science students must have access to hands-on learning experiences and opportunities to participate in quality scientific research.

**Interdisciplinary Science** - Emerging importance of new cross-disciplinary areas of scientific inquiry. D  
> Amherst College sciences must build an environment in which students and faculty are supported to explore and to grow in new areas of study or research that lie at the intersections of defined disciplines.

## **OVERVIEW OF RECOMMENDATIONS**

- 1) Core disciplines**
- 2) Interdisciplinary courses**
- 3) Research community**
- 4) Faculty research programs**
- 5) Science Steering Committee**
- 6) New Building**

## **RECOMMENDATIONS**

### **1) Ensure integrity and quality of core disciplines.**

The limitation of a small college is that it is difficult to offer comprehensive education in core disciplines and still be able to grow and innovate. We must not let new trends and needs compromise the strength of our nationally recognized programs in core scientific disciplines, but instead we must work to strengthen our existing departments so that they have the flexibility to stretch, to intersect, and to innovate to meet student, faculty, and College-wide needs.

-Providing core coursework in traditional disciplines is necessary to prepare students for admission to graduate and medical school and help students succeed in such programs. Most of the science departments are currently providing the bare minimum number of courses in the discipline to prepare students for admission to and success in doctoral programs or other career paths.

-Amherst College science faculty value the unique learning opportunities that are found in laboratory courses. The intimate learning environment, the hands-on manipulations, and the opportunity for extensive one-on-one interactions with faculty and with peers are invaluable for students of science. Amherst's small size allows science departments to incorporate such laboratory components into their curriculum. Having such laboratories taught by faculty rather than by graduate students is a compelling advantage that Amherst College must continue to offer its science students.

-Teaching of the fundamental theories and principles in well-established disciplines provides students with the foundation needed to pursue unanswered questions and to develop new lines of inquiry both within and across disciplines.

## **2) Expand opportunities for interdisciplinary study**

The dramatic growth of knowledge in science fields and the erosion of boundaries among separate disciplines over the last decades mean that future scientists may require strong skills not only within their given discipline, but also across related disciplines. Educational institutions are therefore offering new integrative courses that draw from subjects that were traditionally taught separately, such as mathematics, physics, chemistry, geology, psychology, and biology. We view the small size of Amherst College and the liberal arts approach as being naturally conducive to an integrative atmosphere, and we recommend taking advantage of these features to facilitate crossdisciplinary interactions.

-Develop introductory level courses addressing current issues in science that are cotaught by faculty from across disciplines. This approach works especially well when presented early in students' academic careers because it provides students with a broad understanding of the principles in each science (and thus an educated foundation in which to pursue upper-level courses and majors). Providing interesting and broadly appealing courses designed for all students (not just prospective science majors) also leads to the recruitment of "walk-on scientists," meaning students who did not see themselves as "scientists," but develop an interest in a particular scientific field through such exposure.

- We also believe it is important for science faculty to forge greater ties with other social science and humanities departments to examine topics in education, literature, economics, anthropology, religion, politics and morality. One possible approach to providing such courses is through the First-Year Seminar Program. Faculty across the College could work together to create seminars that bring in both science and non-science fields to examine current societal issues. For example, a First-Year Seminar in Environmental Studies could bring in faculty from physics, biology, chemistry, anthropology, psychology, math/computer science, philosophy, geology, political science, and economics. Another possible interdisciplinary First-Year Seminar could be Global Health, with faculty from biology, economics, philosophy, psychology, chemistry, anthropology, history, math/computer science, and American studies.

-Provide introductory interdisciplinary courses that help students who arrive with weaknesses in academic preparation. One such course (Bio/Chem 03) will be offered for the first time in the fall of 2007 [by Professors George (Bio) and O'Hara (Chem)]. Providing other such courses could help these underprepared students accomplish their academic and career objectives in a way that our current curriculum does not.

-Provide enhanced support for current and future interdisciplinary programs, such as Neuroscience and future interdisciplinary programs. Support continued collaborative efforts between departments to co-teach interdisciplinary topics, such as Biochemistry, which has been co-taught by Biology and Chemistry faculty for thirty years.

-Create "3:2" or "2:1:1:1" programs with engineering schools to allow students to obtain both a B.A. degree from Amherst and a B.S. degree from the engineering school in five years. In these programs, the students spend three years at the liberal arts college and two years at the engineering school. In the past Amherst has had such arrangements with MIT, RPI, and Dartmouth. Many liberal arts colleges find that these programs attract more science students to the college. Since prospective Amherst students often ask about such programs, and we believe

that resurrecting Amherst's participation in these programs would enhance the recruitment of science students to Amherst.

### **3) Facilitate creation of a vibrant research community of students, staff, and faculty**

Research experience is becoming a crucial component of undergraduate education in the sciences among the top educational institutions. Students who do not have research experience are often handicapped when applying for admittance to the top graduate programs or the top research internships.

Without the enormous resources provided by graduate students and post docs at universities, and without recognition of the time involved in student training, Amherst College faculty struggle to be able to offer research mentorship to all interested students. We recommend the allocation of resources, facilities and staff to facilitate research training. We recommend the elevation of on-campus research efforts to greater awareness and appreciation on campus. The presence, vigor, and visibility of the campus scientific research community will become increasingly critical in attracting top science students and faculty who are comparing Amherst College to larger universities.

- Provide opportunities for students to have hands-on experience with research at early stages in their academic careers, including summer research opportunities for first- and second-year students. Although the current Amherst College summer research program, funded by the Howard Hughes Medical Institute and other agencies, provides some opportunities, there are many qualified students for a limited number of positions (25 to 30 students are funded out of 70 who apply), and such positions are not available in all science departments (e.g., psychology, physics, and physical chemistry are not eligible for Hughes support). Providing students with hands-on research experience early in their academic careers may spark students' interest in particular scientific fields, and thereby motivate future study in this discipline.

- Provide fully funded summer research positions at Amherst College for students at all stages of their academic careers. Such a program could be heavily advertised by the Admissions Office and used to recruit students with research interests in the sciences.

- Provide guidance and assistance to students in finding research internships off campus for summer or post-college work

- Create a viewbook that describes the ongoing research activities of Amherst faculty and students to educate prospective science students (and their parents) about the types of research projects available to students at Amherst College.

- Provide opportunities for all students to begin thesis work the summer before their senior year. Acquiring the skills to pursue meaningful laboratory projects and field research is often time consuming. Beginning a project the summer before the senior year dramatically expands the depth and range of possible thesis projects. In the current system, we are able to support some students in the summer with funds from faculty grants and endowed departmental funds. We would like to be able to offer this opportunity to all rising seniors interested in pursuing a research thesis project.

- Provide staff to support and facilitate these hands-on learning and research experiences. This staff might include lab assistants, post-docs, and research fellows.

-Create project-oriented experiences in experimental, analytical, or computational research as part of the new introductory interdisciplinary courses.

-Modernize existing machine shop and electronics shop to provide support for both research and laboratory courses.

-Create additional laboratory spaces that allow students to engage in hands-on learning and research. Ideally these laboratory spaces should be flexible to allow for different styles of laboratories to be taught in different semesters as well as the summer.

-Create a Science Resource Center where students could go for assistance with laboratory projects and quantitative questions. This resource center would be staffed during "student-hours" (perhaps 2 to 10 pm) so that all students would be able to have assistance as needed with laboratories and homework assignments. Science fellows (recent Amherst science graduates) could potentially provide this type of staffing.

-Foster gender and ethnic diversity within the scientific community of Amherst College so that students who are underrepresented in these fields can find role models and feel encouragement to pursue scientific studies.

#### **4) Support for faculty research programs.**

The quality, the reputation, and the vigor of the Amherst College science community hinge upon the research programs that are initiated and maintained by faculty. Amherst attracts outstanding scientists who are committed both to teaching and to creating nationally recognized research programs. We recommend assisting faculty in establishing and sustaining these research programs.

The effectiveness and the reputation of science education at Amherst depend critically on the quality of on-site research programs. Scientific contributions made by Amherst faculty research programs go a long way in advertising the quality of the Amherst College scientific community. Publications in top scientific journals and receipt of competitive research awards put Amherst on the map and build its reputation among scientists, potential donors, granting agencies, future students and faculty, and parents of prospective students. Such faculty achievements are difficult to aspire to in an academic environment that places great teaching and administrative demands on its faculty without the research staff and graduate students that are present at universities.

-Provide staff who support faculty research. Support activities might include: ordering and maintaining supplies, maintaining laboratories, fabricating equipment in the machine or electronics shop, design and maintenance of electronics, computer assistance, and setting and cleaning up lab preparations.

-Develop new ways of assisting faculty with maintaining active research programs. These will differ widely from one research program to another, but examples might include developing closer connections with U Mass graduate students, fellowships for recent Amherst thesis students to remain on campus pursuing research following graduation, and support (or matching support) for research post-docs or research assistants.

### **5) Sciences Committee**

In order to coordinate and streamline the efforts of the science departments to address the challenges elaborated here, we recommend the formation of a Sciences Committee. We do not envision this committee taking over decisions that are more appropriately left to individual departments, such as those relating to the allocation of space, teaching, FTEs, or funding. Rather, this committee would be instrumental in facilitating communication between the Science Departments and Programs, and in building a community of scientists at Amherst College.

-Coordinated efforts among all science departments would better serve the student body, especially as all science students take courses in multiple science departments. For example, all Biology majors must take two semesters of chemistry, one semester of physics, and one semester of math. All pre-med students take four semesters of chemistry, two semesters of physics, two semesters of biology, and at least one semester of math.

-Coordinated efforts among all science departments will better address the underprepared student who is likely to face the same challenges in many different science courses throughout his/her four years at Amherst College

-Coordinated research presentations and summer research opportunities will strengthen the vitality of the research community of students, staff, and faculty.

-Coordinated efforts among the sciences will facilitate the creation of interdisciplinary teaching opportunities and research projects.

### **6) Renovated Science Facility**

We recommend taking advantage of the necessary renovations of Merrill as a time to incorporate structural features that will facilitate implementation of the recommendations we have elaborated here. We envision this to be an opportune time to incorporate unity and flexibility into a modern science facility that is welcoming to the Amherst College community and that puts the act of doing and learning science on display.

-Interaction spaces (such as conference rooms, group project rooms with computers, student study areas, attractive comfortable environment that welcomes the entire Amherst College community)

-Small seminar-style rooms as well as larger lecture halls and flexible class rooms -Science Resource Center for students taking classes or doing research

-Flexible lab space that can be used for interdisciplinary courses with hands-on components during the academic year and can serve for directed student research during the summer.

-Additional lab space to allow greater flexibility in the scheduling of introductory science courses.

**Committee on Priorities and Resources  
Summary of Discussions and Interim Recommendations on Projected**

**Budget for CAP**

Spring 2007

In the fall of 2006, the CPR received a preliminary budget prepared by the Treasurer's Office with projected costs for implementation of all proposals of the Committee on Academic Priorities Report (CAP). Although the figures represented very preliminary estimates, they have served as a valuable entry point for discussions not only of costs but also of possible fundraising targets for a future Amherst Campaign.

**Background**

The CPR was asked at that time to prioritize various aspects of the CAP proposal for presentation to a meeting of the Board of Trustees on January 19, 2007. The Committee ultimately declined that request, explaining that CAP had itself set these priorities, and that all of the CAP Report had been approved, at least in a general form, by the Faculty (see Sum and Substance Attachment to the Faculty Meeting Minutes of May 25, 2006). We did recognize that discussion of the details of implementation of many of the issues had yet to be made. That discussion was to take place under normal Faculty governance procedures involving the work of several committees, including the Committee on Educational Priorities (CEP), the Faculty Committee on Admission and Financial Aid (FCAFA) and the CPR as well as the Faculty as a whole. We noted in our meeting with the Trustees that the CAP Report could already be used as a starting point for fundraising, but that details of how or whether to proceed on many of the specific issues awaited more general discussions with the Faculty and Administration.

After the meeting with the Trustees, the CPR, including its ex officio members, revisited the preliminary budget estimates to see where it could meaningfully assist in making specific recommendations or comments regarding possible imbalances seen in the projected costs of various aspects of the proposals. We undertook this process throughout the Spring of 2007 and held meetings with various members of the administration and staff concerning CAP-related issues, attempting to understand the processes by which various constituencies would be involved in formulating details arising from CAP recommendations and setting priorities for a future Capital Campaign.

At our meeting of April 11, 2007, Chief Advancement Officer Michael Kiefer indicated that it was important for his office to have timely feedback to decide on fundraising priorities, but it was not clear from our discussions with him or other members of the Administration who would ultimately make those priority judgments. Mr. Kiefer indicated that the CAP report did identify and support likely fundraising priority areas, including access of a wider range of students, co-curricular community service,

curricular enhancement, more faculty positions, and continuing improvements to physical facilities. These priorities would probably be made more precise by various Faculty and Trustee committees. He noted that alumni embraced the philosophy underpinning the CAP's broad goals, but wanted more details soon. Dean Call indicated that the College now was gathering Board support for more specific goals. It is clear that initiation of various CAP recommendations will occur asynchronously over a number of years, and in a few major cases has begun already.

### **Discussion of Budget Estimates**

The draft budget concerning CAP implementation was divided into three broad categories. These are: 1) Financial Aid (for increases in international students, increases in the size of the entering class, and elimination of financial-aid-based student loans), 2) Curricular Initiatives (increase in faculty size, Center for Community Engagement, increases in the Academic Intern Program and student research grants, need-based summer language study, full sabbatical supplements for faculty, and three new staff positions, two for research and one for curricular development) and 3) Other Expenses and Facilities (six staff positions to support the increase in the student body, renovations to existing facilities and new space to accommodate expansion of faculty and new programs).

The Committee of Six in its meeting of September 25, 2006, recommended that the CPR might be involved in discussions of financial implications of all issues in the first category above, and sabbatical fellowships, a staff position for support of faculty research and creative initiatives, academic internships, and summer language programs from the second category. President Marx asked us to consider priorities for the entire budget.

The CPR was struck by two issues which it thought it might address initially: 1) the cost of increases in students and faculty, intimately entangled with issues of financial aid, space resources and support services (which combines issues from all three parts of the budget estimate), and 2) funding for student and faculty research, scholarly and artistic work and co-curricular activities, including "community engagement," arising from parts of the second category of the budget, which we believe are intermingled and related, and not entirely characterized by the label "curricular initiatives."

### ***Costs Associated with Expansion of the Student Body and Faculty***

Between the time of our meeting with the Trustees in January and the beginnings of our discussions around budgetary issues, the Faculty voted to recommend moving forward on increasing student admits and beginning expansion of FTEs (see Faculty Meeting Minutes of February 20, 2007). Setting priorities in this area have fallen primarily to the CEP and FCAFA who already have guidelines for implementation of this expansion. The expansion raises a large number of complex financial issues that will become manifest as the increases are phased in. Our concerns on this issue are the coincidental timing of faculty hiring and student expansion, and the probable needs for



new classrooms, laboratory facilities, audiovisual facilities, and expanded support services. Additional issues involve creating a support network for under-prepared students, with, for example, the need to recruit faculty for entry-level courses and support staff in the Writing and Quantitative Centers. Although the preliminary budget makes some estimates of these costs, we do not believe the needs are well enough fleshed out yet to make accurate predictions.

Lack of detail at present also makes estimates of costs for facilities to accommodate new faculty and as yet undefined programs rather imprecise. Jim Brassord, Director of Facilities Planning and Management, at his meeting with us on May 02, 2007, described incipient coordinated long-term planning efforts for construction and renovation at the College which are underway. The integration of a campus-wide space planning effort into the gradual expansion of the College's curriculum will be essential. In fact, the Physical Plant's model for such integration could be a template for further discussion of the less tangible changes that we anticipate.

The related issues of the costs of student and faculty expansion, facilities and support services, and financial aid will be further examined by the CPR in the fall of 2007.

### ***Research and Co-Curricular Initiatives***

Other than the direct costs of additional faculty, the preliminary cost estimates in the "Curricular Initiatives" category of the budget included several items that we believe are intimately related. They pertain to the major activities of our students and faculty within and outside the classroom. For students, these are "community engagement," and research and other creative work opportunities supported by the College. For faculty, they are research support and sabbatical leave. These are all priorities for a vigorous intellectual life at the College and may have varying degrees of curricular, co-curricular and extra-curricular involvement. By and large, they exist outside the classroom but help to define in a fundamental way our distinguishing characteristics as an institution, particularly through the special form of mentoring that occurs when students and faculty work in small groups to explore ideas beyond coursework. These experiences are supplemented by student internships off-campus that are also sometimes supported by College funds. Some internships involve student assistance in the development of new courses by faculty, as well as faculty research projects.

***Faculty research support and sabbatical supplement.*** We endorse the recommendation for three positions to assist faculty in research grant applications and other curricular activities. Amherst has traditionally lagged well behind many of its peer institutions in organizing and coordinating efforts to raise outside research funding. In addition to providing funds for ongoing research and continued scholarly development of faculty, outside grants often provide student research opportunities and overhead for the College. And since we typically advertise ourselves to potential students as a place where students benefit working one-on-one on scholarly projects with faculty, these grants are an important source for sustaining and expanding such activities.

We also endorse supplementing sabbatical leave pay. The labor-intensive nature of teaching at a small liberal arts college combined with decreases in funding opportunities by external agencies make it increasingly difficult for individual faculty members to make up for the loss in pay sabbatical leave currently entails. It is difficult for faculty to find adequate time during the academic year to do much more than maintain their scholarly life, with too little time to contemplate, innovate and develop new ideas and collect new data. Sabbaticals typically provide the main sustained periods for renewal and generation of novel paths of scholarship, or for the undertaking of major projects in the performing arts, social sciences or natural sciences.

These leaves are essential for junior faculty in continuing their PhD and postdoctoral research, and for planning for the long-term projects of their post-tenure careers. Sabbaticals are no less essential for senior faculty, particularly given the longer careers now routinely undertaken. Full year sabbaticals every sixth year are to be strongly encouraged to maintain a vigorous faculty, but a loss of 20% of salary during leave can prompt faculty instead to choose one semester at full pay, especially if they are at a stage where family financial commitments are substantial, for example those with young children, children in college or those caring for aging parents. The College's interest is to nurture faculty members to maintain high levels of scholarly work throughout their full career. The rewards for the intellectual life of the College in supporting these active research programs include enriching the quality of the classroom experience and enabling broader and more intellectual conversations both within and outside the classroom, critical elements of Amherst's identity.

***The Center for Community Engagement (CCE) and other support for student co-curricular activities.*** The CPR was joined on February 28, 2007, by Associate Dean Amrita Basu, Rhonda Cobham-Sander, Special Assistant to the President for Diversity and Inclusion, and Special Assistant to the President for Principal Gifts Robyn Piggott. They reviewed the current plans and projected budgets for the Center for Community Engagement. Professor Cobham-Sander described the evolution here and at other campuses of such programs. She emphasized that the grant from the Argosy Foundation for development of a Center for Community Engagement will allow Amherst to explore a range of ideas as it builds a program appropriate to the Amherst culture.

The Center derives from a very generous gift of approximately \$13 million to promote a widespread culture of service at the College. Plans include expansion of student volunteer opportunities, increases in the number of local partnerships with service organizations, building new partnerships with regional, national and international NGOs, and expanding public-service internship opportunities for students. Summer stipends for hundreds of students will be contingent on their regular service in local communities during the school year.

We applaud the thoughtful and generous nature of the proposed program for "community engagement". Yet the CPR recognized that this powerful initiative would have still unclear ramifications for the College's planning for a campaign, as well as for its continuing curricular and fiscal obligations.

We noted the following important points: 1) the portion of the CCE budget devoted to student employment opportunities dwarfs the sum of all other student employment support for research and internships, 2) the budget's indicated necessity for a robust infrastructure to run the program, including seven new positions and two current positions, and centralized office space, 3) the likelihood that, by virtue of its size and visibility, the Center will convey a message that this will be a highly valued activity, perhaps implying that that it might be more valued than other equally important student activities, and 4) the gift represents a rare form of targeted funding which is exceptional historically if indeed it does not set a precedent. These points are considered in order below.

1. *Other College-supported student research opportunities and academic internships.* Support for students in the form of research funds used for student salaries on campus arises from many sources: the Dean of Faculty's Student Research Fund, which supports a wide range of research activities, Academic Internship Awards (formerly Mellon Academic Internships) which usually originate from faculty-initiated projects that would benefit from student involvement, the Faculty Research Awards Program (FRAP), departmental budgets for academic year student research assistance, Federal Grants such as NSF and NIH investigator-originated projects with budget lines for student involvement, other extramural grants such as the Howard Hughes Medical Institutes Program for summer science projects for undergraduates in the sciences, and various other restricted funds. The budget for these activities projected for 2008 is about half of the budget for community-based activities supported by the Argosy fund. Many of these sources of support are variable, dependent on the success of institutional and individual competition for outside grants. Much of what is supported is co-curricular by nature, extending classroom learning into research environments. Much takes place in the summer. Support usually incorporates substantial hidden costs, since many of the programs provide little administrative support (which instead originates from established administrative offices and extra faculty time), little if any technical support and relatively small supply budgets. There is little coordination of the various programs. The Dean of Faculty should be commended for increasing support from the Dean's Office for summer student research and academic internships in recent years, but this is still insufficient to meet all the needs of providing regular opportunities for large numbers of students to work one-on-one with faculty on scholarly pursuits.

2. *Infrastructure.* The combined supported research activities and academic internships are in stark contrast with the proposed CCE activities. The CCE plans to add seven new administrative positions and incorporate two existing ones to coordinate the program, and its budget includes training programs, workshops, fees for community partners, stipends for participating faculty, funds for activities in both summer and the academic year, additional staff, distinguished speakers, program assessment and advisory board meetings, travel and transportation. The Director, according to the organizational chart supplied to the Committee, will report directly to the President's Office, establishing the position in some ways on a par with the Dean of the Faculty and Dean of Students. Funds are essentially guaranteed for seven years, after which support may revert to endowed funds. By contrast, other student activities which comprise a

wide range of intellectual pursuits are not coordinated, have little or no funding for infrastructure (e.g., supplies, administrative and technical positions, faculty stipends, outside speakers or a central office), and have more unpredictable sources of funding.

Coordination of the varied activities that the College now supports under the umbrella of student research activities and internships, with an office and director, would facilitate applications and distribution of funds and give these activities enhanced visibility. These activities might be grouped as intellectual programs, scholarly projects or creative activities to give them a prominence and coherence they currently lack.

Infrastructure support in addition to a director and office might include a committee to review applications. Requirements for additional personnel, supplies and travel requirements would be discipline-dependent, and these would augment and facilitate the kinds of faculty-student interactions that should be a hallmark of our institution to distinguish Amherst from most small liberal arts colleges and universities of quality. We are not prepared at this time to outline in detail how a coordinated effort for student research and academic internships might function, but could imagine some aspects. Personnel needs might include post-doctoral fellows or technicians in science labs, temporary employment of performers for large scale works in music and dance, travel budgets to support visits to distant libraries with specialized holdings in languages, humanities or social sciences and for student attendance at professional meetings to present their own work or learn about our professional lives outside the College. Supplies might range from paint and canvas, to lab reagents, to raw materials for stage sets. A creative review committee would be important in imagining the possibilities and should poll the faculty concerning what would be necessary to fruitfully expand student/faculty research opportunities and collaborations in various fields.

3. *Visibility and student choices.* By virtue of its size, the Argosy grant will send the intended message that the College values highly commitment to community activities. The Dean of the Faculty told the CPR that it was the hope that 75% of students would take part in at least one CCE internship experience during their undergraduate years. We do not disagree with the message, but it seems to us that the program will have a major impact on student choices of extra- or co-curricular activities at which they spend their time, and possibly even on choice of majors. While we agree that community-based activities (and experiential learning) need to be emphasized at Amherst, as the CAP Report recommended, there are many other equally valuable activities that could suffer, given choices between guaranteed support and limited support. In addition, some concern was raised by students on the CPR that the funds would significantly influence students' academic and career decisions, choice of majors and possibly even affect the degree to which students could participate in political activities and other civic projects not explicitly funded by the CCE. Further concerns were raised about its effects on the work-study program (diverting student job distributions toward Center-funded academic year activities), and on how in practice it would interact with the College's academic mission and course distribution. A compensatory increase in student research and internship programs would alleviate these real and perceived imbalances.

4. *Targeted funds.* Since the gift of the Argosy Foundation is targeted to a single objective, even though richly varied in potential activities, it raises the issue of the type of fund-raising to be conducted in a future Campaign. It is our understanding in discussions with Michael Kiefer and our experience in previous Campaigns that unrestricted funds are preferred because of their flexibility. However Mr. Kiefer pointed out, as a result of the changing demographics of alumni populations, donors are becoming increasingly more interested in targeting donations. If the pursuit of targeted donations becomes a major objective of the next Campaign, it is important to recognize this alteration, since it may be necessary and indeed fruitful to find specific areas of the CAP recommendations especially suited to individual or corporate donors. In this case, the Faculty might serve as a more valuable resource than in previous campaigns.

## **Recommendations**

In light of these considerations, we recommend that:

1. In order to extend the curricular experiences and enrich the intellectual life of Amherst's students, the College increase its funding for student research and internships, with primary emphasis on opportunities to work with Amherst faculty on campus or off, summer and academic year.
2. The College enhance and augment the visibility of student-faculty scholarly interactions by designating a coordinator for the myriad research programs and opportunities now available, and for future such initiatives.
3. The College recognize the special needs and hidden costs resulting from the wide range of scholarship of the faculty through support of appropriate forms of infrastructure, in addition to student stipends. Such recognition might include a faculty advisory committee, informed by broad campus discussion, to work with a coordinator to develop guidelines and budgets.
4. The College recognize in word and deed, e.g. office space and publicity, the significance of student research and internship activities to our core educational mission, ensuring they are on a par with community-based initiatives.
5. To facilitate and encourage continuous scholarly renewal of the faculty, sabbatical supplements sufficient to bring sabbatical pay for all faculty to 100% be an objective of the Campaign.
6. A campus-wide space planning process be initiated in response to the projected increases in students and faculty.
7. Finally, in order to anticipate the physical and fiscal requirements for smoothly integrating the rich and varied proposals arising from CAP, the CPR and similar committees and administrative groups must monitor closely both projected and unexpected costs associated with these substantive changes.

Respectfully submitted,

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Members of the Committee on Priorities and Resources, 2006-07