



REPORT OF THE  
COMMITTEE FOR THE 21ST CENTURY  
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JOHNS HOPKINS  
UNIVERSITY

## Executive Summary

The Committee for the 21st Century was chartered by President William C. Richardson and Provost Joseph Cooper to examine critically and imaginatively every aspect of the University's organization and programs in order to recommend ways in which Johns Hopkins can remain at the forefront of higher education through the year 2000 and beyond. The charge was to put forward proposals that would strengthen academic quality, enhance organizational effectiveness, and increase financial self-sufficiency. Strategic Study Groups were established to pursue in depth the challenges and issues in eight different areas. More than 100 faculty, students, and staff were involved in these planning discussions. Additional community input was obtained from open forums, survey data, and meetings with representatives of the Alumni Council.

The Committee envisions the University in the 21st century as an interactive institution, broadly connected externally, and highly focused and collaborative internally. To achieve that vision, the Committee suggests a set of institutional imperatives and 23 specific recommendations to strengthen Hopkins' capacity for excellence:

***Increasing collaboration*** by creating a University Faculty Advisory Council; providing central support for interdivisional academic programs; removing administrative barriers to interdivisional and intradivisional collaboration; adopting a single academic calendar; exploring formal partnerships with a small group of peer institutions; examining the establishment of cross-divisional graduate programs; and integrating professional education programs.

***Sharpening institutional focus*** by instituting a process for regular external review of academic programs; recognizing the integral role of part-time and nontraditional programs and developing mechanisms to ensure their quality; and assessing Hopkins' graduate programs.

***Improving the information infrastructure*** by investing in a substantial upgrading of Hopkins' information resources and technological infrastructure; and establishing a Chief Information Officer for the University and appropriate interdivisional coordinating councils.

***Expanding international dimensions*** by promoting a Hopkins international network of scholars and institutions; and strengthening the international dimensions of undergraduate education.

***Enhancing the undergraduate program*** by devising tangible ways to encourage and reward excellence in undergraduate teaching and advising; and by making the undergraduate experience more personal, building educational coherence over the term of study, increasing flexibility in the length of programs, and involving faculty from all divisions in undergraduate education.

***Increasing attention to community and to citizenship*** by intensifying University-wide efforts to increase diversity and to improve the campus climate; defining the commitment of the University to its faculty and the general responsibilities of the faculty to the University; implementing a post-tenure review process; improving the University as a workplace by addressing issues of child care, security, and wellness; and enhancing and extending the University's community relationships.

*Enhancing institutional effectiveness and efficiency* by reviewing and upgrading divisional and central administrative support systems; and establishing a Center for Educational Resources to enhance teaching and learning skills, to promote the application of technological innovations, and to advance interactive and distance education.

*Securing the University's financial future* by moving the University toward greater financial self-sufficiency for its core activities of education and scholarship. Of critical importance is a major development campaign to build an endowment worthy of Hopkins' academic aspirations.

We conclude that Johns Hopkins is well-equipped to meet the challenges of the 21st century. We need only to confront these challenges with bold thinking and creative vision.

## **A NEW ERA IN HIGHER EDUCATION**

Profound change characterizes the environment for higher education today, much as it did in 1876 when The Johns Hopkins University was established. Out of that earlier transformation an institution emerged that became the model for the modern American research university. At the threshold of the 21st century, Hopkins faces new challenges and new opportunities to assure continued leadership in higher education.

The transition that occurred in the last part of the 19th century was marked by a number of historic trends that had major impacts on the development of higher education in America: increasing industrialization, the influx of immigrants, the rise of urban society, and the emergence of the United States as a world power. During this period also, the expansion of new knowledge and the founding of many scientific disciplines helped define the role universities would play thereafter. Fortunately, in the 19th century there emerged a peculiarly American phenomenon, the rise of philanthropy as a major source of support for educational and cultural purposes. Individuals of wealth and vision among them Johns Hopkins established universities that quickly became leading institutions of higher education.

As the transition to the 21st century unfolds, the changes in America and the world promise to be at least as profound as those of that earlier period and much more rapid. The gap between discovery and application of knowledge becomes ever smaller. Pervading our society is the information revolution, through which all the world's recorded knowledge is fast becoming electronically available for economic progress, for education and research, for governance, or for cultural enrichment and services. The world is shrinking and growing more interdependent. Powerful demographic trends are redefining America in multicultural terms, and changes in the world order following the Cold War are creating new alignments, conflicts, and threats. Economic competitiveness among nations is bringing pressures for increased productivity, and all institutions are being challenged to become more effective and accountable.

These changes are being felt with particular effect in higher education. For example, the explosion of discovery and the electronic revolution have created new ways to carry out scholarly activity and to share ideas and information with students without regard to disciplinary boundaries or physical proximity. Stated simply, the Information Age is leading us to the concept of an agile, responsive, boundaryless university for teaching, learning, and discovery. Just as other institutions must respond to global realities, so must universities become more thoroughly international, more effective, and more accountable. Research intensive

universities such as Hopkins, having grown in recent decades largely as a result of federal grants and (in the case of medical schools) clinical service income, now find themselves vulnerable to changes in governmental policies or competitive market forces. Consequently, research universities are forced to make a realistic assessment of their financial future, to face up to difficult choices, and to put increasing emphasis on their core activities and what they do best.

In assessing the implications of these powerful developments, however, we must not lose sight of the essence of Johns Hopkins University as a place where discovery and learning are the shared experience of students and teachers and where academic excellence is the sovereign value.

The Committee for the 21st Century was established by President William C. Richardson and Provost Joseph Cooper to address the challenges for Johns Hopkins University in the new century. The Committee was charged to examine critically and imaginatively every aspect of the University's organization and programs, including but not limited to the current configuration of academic and administrative divisions; major new opportunities for interdivisional programs; the best use of the University's overseas campuses and centers; the use of facilities; the University's response to the revolutions in telecommunications and computing; the quality and length of degree programs; and all the University's policies and programs that bear on its recruitment and retention of the finest and most inclusive faculty, staff, and students. In responding to these issues, we were encouraged to think boldly along fundamentally new lines, and were asked to emphasize, in each area of concern, recommendations for action.

Our report is the product of many hundreds of hours of study by over 100 faculty members and additional administrators and students working on the Committee or the eight Strategic Study Groups we established. Each Strategic Study Group was charged to explore the specific challenges that Johns Hopkins would face in a given area: interdivisional collaboration, international dimensions, information resources and technologies, faculty issues, diversity, the undergraduate program, nontraditional education and distance learning, and health and biomedical programs. Our Committee and its Strategic Study Groups met numerous times with various constituents of the Hopkins community, held open forums, conducted written surveys, and conferred with our alumni. Collectively, the study groups generated more than 100 individual recommendations. Many are well worth pursuing, and we urge the faculty and administrative leadership of each of the divisions to review the study groups' proposals, available from the Provost's office. We have put forward in this report those recommendations that we believe will have the most significant and immediate impact on Johns Hopkins' academic mission, administrative effectiveness, and financial health.

Over the past 18 months, we have grappled with the question of what Hopkins will be, or should be, in the 21st century. This report begins with our vision of Johns Hopkins University in the year 2010. This vision gives rise to a set of institutional imperatives necessary to its achievement. We then present some specific recommendations, grouped under these broader objectives, and a rationale for the steps we have proposed. Finally, we discuss in greater detail the financial challenges the University faces, and we offer some general strategies for addressing these problems.

## A VISION FOR THE UNIVERSITY

Our vision of Johns Hopkins University in the 21st century is of an institution transformed by the intellectual, social, political, technical, and economic forces that are challenging all of higher education. We see great opportunities if we adapt to these events, rather than succumb to them, and if we shape the future, rather than wait to be shaped by it. Our recommendations embody the following vision of the University:

In keeping with a tradition of innovation, Johns Hopkins will redefine the model it established for research universities. It will create for the 21st century a paradigm of an interactive institution, broadly connected externally, and highly focused and collaborative internally. A global perspective will permeate all University endeavors.

Johns Hopkins will seek the most outstanding faculty and students to attain singular distinction in each division through leading edge research and scholarship and innovative academic and professional educational programs. Creative faculty will be increasingly involved in interdisciplinary areas at the forefront of intellectual frontiers. Students at all levels will be actively engaged in the University's central mission of advancing knowledge through close interaction with a faculty committed to teaching. While preserving a heritage of premier graduate education, Hopkins will commensurately strengthen the undergraduate program and increase its flexibility. Part-time and nontraditional educational programs will become integral to the University's mission as Hopkins serves a changing student population.

Hopkins will renew its reputation as an outstanding center for educational innovation by generating new models of pedagogy and developing applications of state-of-the-art instructional resources. A technologically advanced infrastructure will transform the provision of information and research support to faculty and students and extend the reach of Hopkins' programs beyond the campus. The University's scholars and researchers will be linked to colleagues and students around the world, and lifelong learning connections will be maintained with alumni the world over.

In the context of Hopkins' basic decentralized structure, a high degree of collaboration will characterize the relationships within and among the divisions, enhancing programs while preserving a sense of small scale and agility in decision making. Selective in its own academic offerings and services, Hopkins will establish partnerships with other institutions willing to coordinate programs and share resources. To a larger extent than ever before, Johns Hopkins University will become greater than the sum of its parts.

The University will build a strong and diverse community in which citizenship entails recognizing and appreciating the contribution of all members. A skillful and resourceful staff will be committed to advancing the University's central missions and dedicated to the high level of excellence that distinguishes research and teaching at the University. The work environment for all will be responsive to individual needs, supportive of their potential for professional growth and free of harassment. Johns Hopkins will demonstrate good institutional citizenship through constructive relationships with surrounding communities.

A continuous search for better ways of discovering, teaching, and serving, and the critical evaluation of all endeavors, will enable Johns Hopkins to sustain academic leadership throughout the 21st century as an intellectually rigorous, effective, technologically advanced, and international institution.

## **STRENGTHENING HOPKINS' CAPACITY FOR EXCELLENCE**

The vision that we have for Johns Hopkins University in the 21st century is thus not so much that of a university whose mission has changed as it is that of a university whose traditional mission is realized in new ways. Research universities are already being transformed by modern means of communicating research and scholarship. The boundaries of academic disciplines, the borders of intellectual communities, and the very definitions of the faculty and student body are being redrawn in ways that will reshape research universities as we now know them. As is clear from our vision, we believe that Johns Hopkins University should be at the forefront of these changes and should seize the opportunities they present.

In the next century, we expect that change will be the one constant in universities. But we also believe that a commitment to academic excellence in the discovery and dissemination of knowledge is a fundamental and enduring principle for Johns Hopkins. Just as in the previous century, the foundation of such academic excellence in the 21st will be a distinguished faculty and outstanding students. To that end, we must create an environment that promotes the faculty's best research and teaching and students' best learning.

The reality, as we see it, is that Hopkins' tradition of excellence cannot be maintained in the next century without significant changes in how we approach our major tasks. These then become institutional imperatives for the University:

- We must increase collaboration.
- We must sharpen our institutional focus.
- We must improve our information infrastructure.
- We must expand our international dimensions.
- We must enhance our undergraduate program.
- We must increase our attention to community and to citizenship.
- We must enhance our institutional effectiveness and efficiency.
- We must secure our financial future.

Out of proposals from the strategic study groups and our own discussions, we have formulated 23 recommendations to advance these objectives and thereby strengthen the academic quality, organizational effectiveness, and financial self-sufficiency of Johns Hopkins University in the 21st century.

## **INCREASING COLLABORATION**

Many of the most exciting intellectual challenges of scholarship and research now lie at the intersections of the disciplines. As the boundaries of traditional fields of knowledge and disciplines continue to blur, scholarly excellence will increasingly require interdisciplinary and interdivisional collaboration. Similarly, a common commitment to scholarly problem solving must replace artificial distinctions between theoretical and applied research. Johns Hopkins simply cannot afford to develop multiple programs in fields distinguishable more by academic tradition than by substance. By sharing academic resources faculty, equipment, and facilities we can mount even stronger programs. Not only will cooperation enhance our ability to attract students in selected areas, but it will also contribute to our potential success in competing

for research grants. Moreover, the diversity of perspectives brought to intellectual problems by those from different backgrounds will enrich the learning experience for faculty and students alike.

There are thus compelling intellectual and financial reasons to increase the amount of collaboration within and among the divisions and to temper some of the limiting effects of Hopkins' pervasive decentralization. We recognize that decentralization is a well-established and well-honored academic tradition at Hopkins, responsible in no small measure for the University's past academic success. Decentralization has encouraged entrepreneurship in each of the divisions; it has required risk taking and rewarded innovation. These qualities will be demanded increasingly of the University as a whole, and decentralization should therefore remain Hopkins' fundamental organizational tenet. To secure Johns Hopkins' standing at the forefront of both academic inquiry and instruction, however, we must identify potential synergies and develop creative linkages among academic departments, divisions, and campuses as well as between these units and the outside world.

## **RECOMMENDATIONS**

### **Recommendation 1**

*Establish a University Faculty Advisory Council.*

The present configuration of Johns Hopkins University, with its heavy emphasis on the autonomy of the divisions, makes it difficult to organize initiatives for the common good. The current structure assures faculty input on matters of importance to individual schools, but does not provide the means to stimulate, promote, or monitor programs that have an interdivisional focus. Moreover, matters of long-range planning for the University are not systematically given appropriate attention due to the absence of an effective mechanism for involving faculty, except on an ad hoc basis, as has been the case with the Committee for the 21st Century.

We urge that a University Faculty Advisory Council be established by the President and charged to help chart Hopkins' future. Such a University-wide council, properly constituted with representatives from each of the divisions, should look broadly at interdivisional activities and University-wide issues. As collaborative programs become more commonplace, a University Faculty Advisory Council would assure faculty input and constitute an important mechanism for monitoring and evaluating progress. It would also provide a vehicle for timely advice to the President and Provost on policies that affect the faculty across the schools, as in the case of intellectual property rights, faculty retirement programs, etc. This council would not replace the academic councils of the schools. The currently constituted councils give proper voice to faculty responsibility for the content of curricula, the quality of faculty appointments and promotions, and the academic policies and regulations of each of the academic divisions. Such matters, as well as divisional participation in collaborative programs, would continue to rest with the school involved.

The C-21 process has convinced us that continuing attention to planning issues is essential for the University's future. Academic planning must be institutionalized, as has been done with financial planning. A University Faculty Advisory Council could facilitate ongoing planning by addressing long-range issues and overseeing implementation of the initiatives recommended herein.

## **Recommendation 2**

*Provide central support for interdivisional academic programs.*

Collaborations at Hopkins will continue to arise primarily out of faculty ideas and interests, but can be made even more fruitful with early facilitation and support. In the present competition for divisional resources, interdivisional priorities often do not rank as high as programs based in the traditional departments, nor are interdivisional programs as easily initiated. It therefore becomes important to remove barriers to, and at times offer incentives for, collaborative action.

Whether for clerical assistance, released time for faculty teaching, or travel to successful models elsewhere, initial financial support can often make a critical difference in nurturing a new program. An “academic initiatives fund” would help to seed programs that span divisions and provide leverage to develop proposals that can eventually be competitive for external funding. The University Faculty Advisory Council could constitute the means of providing faculty guidance to the President and Provost on the allocation of such seed monies. There may also be opportunities to establish interdivisional professorships for scholars in fields that involve programs in two or more divisions.

Often, logistical support is as necessary as financial assistance in encouraging the gestation of new programs and the formation of faculty interest groups. Already, models of effective University-wide scholarly interchange exist, and others should be developed given nascent faculty interest. University-wide seminars and colloquia may generate ideas for future interdisciplinary and interdivisional programs. Moreover, the sense of intellectual community at Hopkins is sure to be strengthened by faculty and student interaction around topics of mutual scholarly interest.

We view the stimulation of interdivisional programs also as a mechanism to stabilize University funding sources. Such academic programs should have the potential to be self-supporting over the long term. For example, an interdivisional professorship in a selected field might allow the institution of a new educational program that would fulfill academic objectives and also attract additional tuition and external support.

## **Recommendation 3**

*Remove administrative barriers to intradivisional and interdivisional collaboration.*

If the University is to facilitate a greater degree of collaboration, administrative arrangements and the faculty reward structure must support intra- and interdivisional interactions and foster a new culture of cooperation. Barriers to the flow of faculty and students among departments and divisions must be eliminated. Within the University, it will be especially important to view the faculty as an institutional, as well as divisional, academic resource and to bring that resource to bear in ways that maximize the strength of academic and research programs across the University.

Currently, administrative and financial arrangements for interdivisional programs are negotiated among the schools on a bilateral basis. The resulting arrangements are confusing to students and faculty, and sometimes frustrating to the point of discouraging development of, or involvement in, programs that have academic merit. We must construct policies which advance academically worthwhile endeavors. Working closely with the Deans’ offices, the Provost’s office should seek to develop an appropriate set of recommendations, with advice from the University Faculty Advisory Council.

#### **Recommendation 4**

*Adopt a single academic calendar by 1997.*

One of the main barriers to effective interdivisional programs is the variation in academic calendar arrangements among the schools. Although the majority of the schools operate on a semester calendar, two divisions utilize a quarter system. A further difficulty for students and faculty interested in crossing boundaries is created by the different arrangements for course scheduling within the academic week. It is often impractical to take advantage of the range of academic options that are provided in theory.

A common calendar and course schedule would facilitate greater interdivisional cross-registration by students and allow faculty to participate more easily in the instructional programs of other divisions. It would also make possible the most efficient use of Hopkins' physical facilities for year-round activity. Well aware that changes to long-standing administrative conventions such as the calendar may spark controversy, we nonetheless regard a University-wide calendar and common course schedule as a prerequisite to the greater degree of collaboration essential to our institutional health.

Our preliminary assessment is that a semester system with a summer term equivalent to a third semester appears to be a good fit with the majority of the academic divisions. A committee of academic deans, administrators, and faculty should explore this matter further and recommend annual academic calendars and course scheduling conventions that maximize opportunities for collaborative academic programs as well as efficient facility use.

#### **Recommendation 5**

*Explore formal partnerships with a small group of peer institutions.*

Johns Hopkins University can play a leadership role in higher education by refining the model of the modern research university, which Johns Hopkins established in the 19th century. Serious consideration should be given to creating as a feature of that model a new form of broader partnership with peer universities, perhaps two to three, for the purpose of sharing academic resources across a wide range of programs and services.

Advances in telecommunications make it possible to forge interinstitutional agreements on the basis of academic complementarities rather than proximity. An association of similarly situated universities offers broader potential than local college consortia. Coordinated planning could facilitate resource sharing to mutual benefit, allowing the participants to be selective in their own academic offerings while enjoying access to programs at other universities whose standards they share.

We already have evidence of the potential benefits of interinstitutional cooperation in selected areas, such as the joint degree programs that we offer with other universities, e.g., the J.D.- M.P.H. Dual Degree Program offered by the School of Hygiene and Public Health and the Georgetown University Law Center, and the M.A.-M.B.A. program offered by SAIS and the Wharton School. Under the partnerships we envision, there is the possibility of regular and more extensive interactions throughout the participating institutions.

The advantages of university partnerships to institutions would be both academic and financial. Students at any of the universities in the partnership might take courses at the cooperating institutions or through

their study abroad programs (not as transfer credit, but with the same status as course enrollment at the home institution). Such flexibility would expand the breadth and depth of course work available to students and curb the necessity of universities to cover the entire range of disciplines and subdisciplines. Formal joint degree programs would allow students to combine the particular strengths of individual graduate or professional schools within the participating institutions.

Moreover, in departments that become closely linked, faculty might hold joint appointments, thus enlarging the communities of scholars of which they are intimately a part. Team teaching across institutions and guest lectures by the recognized authorities in fields could be arranged electronically. Benefits from partnerships might be realized also in research activities. The potential exists to share access to expensive equipment. Collaborative approaches whereby institutional teams work simultaneously on related aspects of complicated research challenges could more readily be adopted.

Effective partnerships would conceivably extend to library collections. Institutions might develop cooperative strategies, agreeing to devote resources to certain areas and deferring to their partners for acquisitions in others. Each institution's catalog of library holdings could be made accessible electronically so that the information resources available to faculty and students at any one institution would involve the combined holdings and therefore collective strengths of all partners.

Whether partnerships of the type we describe will work depends on the quality and content of the academic programs. Our faculty therefore must take the lead in developing programs in concert with colleagues from other universities. The academic, administrative, technical, and financial considerations of establishing university partnerships will no doubt be complicated, but it is worth systematically exploring the merits of the idea and the logistical requirements for implementation. A key need in order to realize the full potential of a viable partnership is a technical infrastructure to support distance education.

It is recommended that Johns Hopkins University seek a foundation grant to allow the feasibility of this idea to be tested with several peer universities. Internal discussions should begin by asking each of the Hopkins divisions to identify those universities with which a more formal relationship in selected areas would be advantageous. Such an inventory of comparative strengths could serve as the basis for Hopkins-initiated discussions with the presidents and provosts of a small number of institutions. The willingness of the institutional partners to plan, to share their plans, and to make resource allocations consistent with those plans would be fundamental. The universities involved in partnerships can potentially strengthen programs while controlling costs and advantage themselves in the competition for students. Such partnerships could provide the margin for excellence that might otherwise be difficult to maintain in the coming century.

## **Recommendation 6**

*Appoint a task force of faculty and administrators to examine the establishment of cross-divisional graduate programs.*

Looked at across the University, the Johns Hopkins faculty has enormous strengths in a number of academic disciplines. To take full advantage of these resources, Hopkins should consider a unified graduate program in selected fields. For example, in the basic biological sciences, a "faculty in biology" might be formed with faculty in the Schools of Medicine, Arts and Sciences, Hygiene and Public Health, and Nursing. Such an

arrangement would substantially enhance graduate instruction and respond to interest in problem-oriented, as opposed to departmentally based, research. A cooperative approach to planning the curricula in various fields would encourage the most effective deployment of faculty teaching resources, potentially spawn new interdisciplinary programs, and also stimulate productive new research collaborations.

Where the individual resources of the divisions are not sufficient to offer academic programs of the highest quality, combining faculty resources may also be a means of achieving critical mass. Such possibilities offer significant financial advantages to divisions that share faculty.

In both sets of circumstances, that of building on strengths and that of reaching critical mass, integrated programs can improve quality and enhance student recruitment. The task force we call for might focus initially on the potential in the basic biological sciences as a first experiment. Based on that experience, it could identify other areas where a similar approach might result in stronger programs. Resourcefulness of this sort must be encouraged across the University.

### **Recommendation 7**

*Appoint a task force of faculty and administrators to examine the integration of professional education programs in East Baltimore.*

Among the distinctions of Johns Hopkins University is the leadership that is provided in health sciences education. We believe that Johns Hopkins should continue to set the pace for the nation in this critical area. One cannot escape the observation that the external turbulence in the health care delivery system, including shifts in patient referral patterns and the level of reimbursement for health care services, has created an environment threatening the research and educational missions of the university. Other academic health centers in the U.S. have similarly recognized these threats and have begun to reorganize their hospitals, clinical practice, and academic centers to provide a more monolithic leadership structure that provides a clearer vision for clinical services and a mechanism to provide prompt and effective decision making. If we are to continue to lead, we must adapt our teaching, practice, and research by developing programs that are responsive to changing health care needs and opportunities.

On the East Baltimore campus, in addition to the Hospital, we now have three separate schools with overlapping and sometimes competing roles and functions. Duplication exists in the curricula and in research programs across the spectrum of basic and applied/clinical sciences. A new paradigm cannot be created overnight, but it must be developed if we are to remain leaders. We recommend a serious exploration of the possibility of reconfiguring graduate and professional education on the East Baltimore campus. Such a program of interdivisional cooperation has the potential to increase both the quality of academic programs and the efficiency of their administration, further stabilizing the financial base of the East Baltimore divisions.

The task force should address the desirability of integrated curricula and the possibility of assuming joint responsibility for health sciences academic programs and, eventually, professional degree programs. Among the initial issues to be considered are resource sharing, including space and equipment, and more integrated support services, such as student services and human resources. The model effectively established for the administration of the Welch Library, transportation, and security in East Baltimore may have wider applications. As a means of advancing these discussions, there may be merit in forming an East Baltimore Deans' Committee.

A related issue, but one beyond the scope of our charge, involves the relationship of the East Baltimore academic divisions to the Hospital. Whereas the parallel management structures of the Hospital and University were not major impediments to excellence in the past, this arrangement may not serve us as well in the future. We note recent steps toward collaboration in meeting current health care challenges and urge the leadership of the Hospital and the University to embark upon a further study to redefine the organization of these programs in East Baltimore and Bayview.

Innovative thinking and aggressive action are necessary in order to capitalize on Hopkins' considerable collective strengths in East Baltimore and ensure the continued success of Hopkins' health and medical programs.

### **SHARPENING INSTITUTIONAL FOCUS**

Johns Hopkins has always pursued a strategy of selective excellence. Having neither the financial base nor the size to be a national leader in every discipline, Hopkins departments and divisions have carefully selected the areas in which to achieve excellence and the individual scholars who have made this possible. The most successful departments and divisions have achieved world standing, often while remaining significantly smaller than those at other institutions.

Although it is tempting to want to be a university with every kind of professional school and program, this is neither a realistic, nor a necessary, goal for Johns Hopkins. The University should concentrate its resources internally on selected programs and form partnerships externally with both American and foreign universities to provide program breadth.

We thus envision in the short term no major changes in the constellation of academic divisions, either by the addition or termination of schools. The current arrangements must, however, be the subject of ongoing review, characterized by a willingness to ask hard questions concerning, for example, the role of the various divisions and parts of the University in attaining our commitment to academic leadership, organizational effectiveness, and financial self-sufficiency.

Hopkins' future success will depend partly on the ability to be more flexible and the willingness to adapt. One effective mechanism for determining the course of needed change is a process for review.

### **Recommendation 8**

*Institute a process for regular external review of all departments and academic programs.*

Many departments at Johns Hopkins rank among the very best in the discipline. Some do not. It is imperative that the principle of selective excellence be more vigorously and consistently applied across the University and that whatever the University undertakes be done with distinction. Close and regular examination of each academic unit, including nontraditional programs, is necessary to assure the quality of program and the sufficiency of resources. Programs that fail to meet a standard of excellence must be strengthened, and programs that cannot attain excellence without an infusion of extraordinary resources should be curtailed. The hard choices that must be made should be undergirded with good information. A review process can assist the President, Provost, and Deans in making informed judgments about these matters.

Some of Hopkins' divisions have in place procedures for periodic departmental reviews. These generally are conducted as internal assessments. While self-study is important, we think there is also considerable merit in involving external experts. Attitudes of insularity and self-satisfaction, which are not uncommon within any established institution, are barriers to progress. Outside evaluators can contribute perspective, offer fresh insight, and stimulate ideas for new approaches. Although Hopkins is unusual, perhaps even unique, in size and style, we can learn a great deal from the many models implemented on other campuses.

To be effective, a review process should meet these criteria: it should be ongoing and periodic; it should be objective; it should provide for some continuity among the reviewers; and it should be accountable through the President and Provost to the Board of Trustees. For larger units, including the level of the school or division, these criteria can be met most effectively by establishing a standing visiting committee. For smaller academic departments, such a solution may not be as practical. In those circumstances, it may be wise to include several units in the visiting committee's purview or to consider reviewing some units on a cycle of years.

The President and Provost, in consultation with the Deans and the University Faculty Advisory Council, should develop a set of procedures for regular reviews and should begin immediately to implement this mechanism, ensuring that proper administrative support is provided. It is essential for accountability that the reviews be transmitted through the President and Provost to the Educational Policy Committee of the Board of Trustees.

Asking hard questions about who we are, what we want to be, and how well we are meeting our main objectives, and then making hard decisions, must be critical components of our institutional self-discipline. Such regular and rigorous systematic evaluations and course corrections are signs of the University's good health.

### **Recommendation 9**

*Recognize the integral role of part-time and nontraditional programs throughout the University and further develop mechanisms to ensure their quality.*

Part-time education at Johns Hopkins has been a major vehicle through which the University has served the community and society. We are a leader among research universities in having developed such a substantial array of part-time programs for nontraditional students. Through the Schools of Arts and Sciences, Continuing Studies, Engineering, Medicine, Public Health, and the Peabody Institute, we have earned a reputation for effectiveness in this area, and student enrollments have grown commensurately. The revenues from part-time programs have become a significant factor in strengthening the financial footings of the divisions. Creative new programs that achieve excellence and serve a broad audience can further enhance tuition revenues and strengthen the University's financial base.

Quality is an issue for all academic programs, but the nontraditional and part-time programs present a special set of challenges in ensuring quality. Nontraditional programs can and do emerge in response to a perceived need or market demand, as opposed to a faculty interest or an existing academic strength. Faculty must then be assembled to fill the need. When Hopkins faculty are not available to teach in the part-time programs, external faculty are selected, according to different procedures and expectations about such

matters as research and scholarship. Student admissions standards may also differ, in some cases appropriately so, given the “real-world” experiences possessed by students beyond traditional college age. Nontraditional programs creatively enrich Hopkins’ offerings, and we must ensure high quality in these, as in all, programs.

A first step has been taken by the Provost with the establishment under the aegis of the Council of Deans of a formal process for program approval and an operating committee of divisional administrators concerned with part-time programs. This review process should be enhanced. New mechanisms should be added to ensure quality through enhanced oversight and coordination of program missions, design and planning, application of standards for faculty and students, and outcomes evaluation.

As part-time learners become an even larger segment of Hopkins enrollments, and as the revolution in information technology provides new educational options, we must look carefully at the balance of activities within the Hopkins divisions and the resulting defining features of the University. We expect the lines between traditional and nontraditional education to blur and give new meaning to the concept of lifelong learning. This development will be of special importance to our alumni; we should be alert to opportunities to enhance their continuing education. The University must be ready to respond, not just to the market, but with a strong sense of institutional purpose. It is critical that Hopkins faculty understand these trends and play a substantial role in shaping that response.

### **Recommendation 10**

*Assess the quality, scope, and financial support of Hopkins’ graduate programs.*

Through the course of our discussions, we have become increasingly concerned about the future of graduate education at Hopkins. The health of the graduate programs is largely the domain of the individual departments, but there are a number of troubling signs that call for a University-wide examination of these issues.

Stipends differ greatly across divisions but on average appear to be lower than at other leading universities, and summer support for students required to participate in field or language studies is lacking. Moreover, the small size of some Homewood departments puts Hopkins at a competitive disadvantage with larger universities that cover research areas with more faculty. In some departments, attrition is distressingly high, representing a lost investment on the part of the individual as well as the department. Finally, the climate and general support for graduate students need enhancement, a task made difficult by the lack of campus community facilities and by the sobering realities of the job market.

All these trends suggest that it is timely to look more closely at graduate education at Hopkins to address questions affecting its future course. How should the appropriate size of graduate programs be determined? To what extent will shared resources and programs better integrated across divisions help to strengthen graduate education? How can students be given adequate financial support? What is the proper role of graduate students in the instruction of undergraduates? These and other questions should be the subject of a comprehensive study, conducted in coordination with the University Faculty Advisory Council.

## IMPROVING THE INFORMATION INFRASTRUCTURE

Our vision for the University in the 21st century imagines a technologically advanced university that provides ready access to information, easy communication, expanded opportunities for sharing academic resources, and new modes of delivery of instructional programs. This vision cannot be achieved in the absence of a commitment to improve our basic information resources and services. Hopkins must develop a sophisticated organizational and technological infrastructure to connect students and researchers and scholars, laboratories, libraries, and other institutions across our campuses, throughout the country, and around the world. Many of our recommendations to become more collaborative, to expand our international dimensions, and to increase our effectiveness and efficiency depend on infrastructure support and an enhanced capacity to manage and deliver information in a variety of forms and through a variety of media.

### Recommendation 11

*Invest in a substantial upgrading of Hopkins' information resources and technological infrastructure.*

Some areas within the University have moved ahead in particular applications of technology, but institutionally Hopkins is lagging behind. We invest far less in our information infrastructure than our peer universities. We must provide our faculty and students with computing and telecommunications resources adequate to support the level of productivity and achievement we expect from them. An electronic environment must be created to integrate all the principal categories of information, including campus-wide information services, library information resources, interactive computers and databases, multimedia instruction tools, electronic publishing, and distance learning. Unless these needs are met, Hopkins' ability to attract the best faculty and students, and therefore the quality of the University's academic and research programs, will suffer.

The necessary first step in creating such an environment is the completion of high-speed intracampus and intercampus networks with standards to ensure interoperability. Currently, the University's existing networks are diverse, with varying levels of architecture and different protocols. Users experience an uneven range of access and services among the divisions. Intradivisional systems should remain the responsibility of the divisions, but Hopkins must develop a managed interdivisional information system under coordinated, centralized direction. Modern information systems must also dramatically increase the efficiency of University and divisional administrations, thereby decreasing the costs of providing our academic programs.

By the very definition of a university, Hopkins cannot afford to sit out the information revolution. There are proven technologies that Hopkins can apply and perfect. Indeed, we can share leadership in developing applications in certain areas of scholarship and education. As in the cases of the Johns Hopkins Press journals project with the Milton S. Eisenhower Library and the medical informatics initiative, we have made impressive starts. What is needed is more concerted action across the University.

### **Recommendation 12**

*Establish and vest with the proper authority, responsibility, and resources: a) the position of Chief Information Officer for the University; b) an interdivisional information policy and planning council; and c) an interdivisional operations coordinating committee.*

A high level of central coordination and support is essential in order to provide for the orderly development of a managed interdivisional information system and to maximize its benefits to the University community. We believe that one of the reasons Hopkins has not made more progress in this regard is the absence of an individual with University-wide vision and responsibility for developing, operating, and directing the interdivisional information system. We are sensitive to concerns about enlarging central administration, but we are persuaded that the quality of our information systems is so critical to the future of the University that strong leadership is required. The external assessment that was conducted confirms that universities at the forefront of information technology treat their information infrastructure as a strategic asset. Those most advanced in this regard have designated a single individual who is charged with leadership and coordination of University-wide networking, services, planning, and resource mobilization.

The Chief Information Officer must have the proper authority to administer all University-wide networking and central computing and telecommunications activities. It will be important that a University-wide council of users provide guidance and maintain responsibility for determining policy and developing and maintaining a strategic plan. To assure appropriate interfacing of the various systems, an interdivisional operations coordinating committee composed of information systems staff should also be formed.

Universities that succeed in exploiting these new information technologies will flourish, and those that do not will diminish in stature. Hopkins must make this investment.

### **EXPANDING INTERNATIONAL DIMENSIONS**

Johns Hopkins is already an international university as measured by foreign student enrollments, faculty origins, the distribution of our alumni, the research interests of our faculty and students, the foci of selected academic programs, and our institutional presence abroad. Nonetheless, if Hopkins is to play a central role in providing undergraduate, graduate, and professional training within the new global community, we must be alert to creative ways for the University to infuse its educational programs with an international perspective. And, in today's global society, we must consider and plan our academic presence abroad carefully and strategically. Several steps can strengthen Hopkins' international dimensions.

### **Recommendation 13**

*Promote a Johns Hopkins international network of scholars and institutions.*

Our vision of the University in the 21st century embodies an interactive institution whose faculty are not only full participants in an emerging international academy but also leaders in their respective international communities of subspecialists. Hopkins' current global links are highly diffuse and involve individual faculty at numerous universities, hospitals, conservatories, and government research laboratories. The most realistic "architecture" for an international network of scholars involves a very large number of these dynamic connections between Hopkins faculty and their international colleagues, plus a smaller number of more

formal arrangements or “gateways” to key foreign research universities with agreements developed by the respective administrators.

A viable series of international connections, both individual and institutional, is heavily dependent on a technological infrastructure capable of supporting voice and video communications, data exchange, and distance education. As a first step, all Hopkins faculty should be connected to and informed about the use of the Internet. Information about Hopkins activities abroad must also be made more readily available, and formal agreements should be documented centrally so that faculty throughout the University can take appropriate advantage of them. A database listing the research interests of all network members should be created to facilitate the development of a Hopkins international community of scholars.

There is great potential to embrace Hopkins international alumni in this effort, increasing their involvement in and support for University programs. Mechanisms to link them with the University should be given special attention.

#### **Recommendation 14**

*Strengthen the international dimensions of undergraduate education.*

We believe that all Hopkins undergraduates should be prepared for citizenship in a global society. It is therefore essential that an international perspective not be limited solely to those courses which focus on things foreign, but rather pervade the curricula of departments and disciplines across the University. As academic programs are reviewed, explicit attention should be given to international dimensions. Special efforts should be made to ensure opportunities for serious study of Asia, Africa, and Latin America given their significance in the 21st century.

Foreign language is central to many aspects of international activity and is an important means by which to expose undergraduates to a foreign culture and to prepare them for additional study and work within that culture. Language instruction at Hopkins can be strengthened by improving coordination of schedules across all divisions, by using the Language Teaching Center as a University resource, and by forming partnerships with other institutions here and abroad to facilitate distance learning of foreign languages.

A variety of international components to undergraduate education at Hopkins should also be developed to fit the learning objectives of individual students. Several models have been proposed. For example, premedical students might undertake a research internship in an international health program with faculty already working overseas; engineering students might study Japanese manufacturing technology; and Peabody students might study and concertize abroad during a summer. Opportunities for international research placements, internships, study abroad programs, and various other experiences should be pursued vigorously. While there are costs attendant to their administration, such programs can substantially enrich the undergraduate experience, as well as enhance tuition revenues over the long term.

Although we offer no formal recommendations on the matter of Johns Hopkins abroad, we are convinced that it is time to explore strengthening our presence in other countries. Hopkins can participate, we believe, in financially advantageous ways. Such efforts should begin with maximizing the academic benefits to the University and the efficiency of our current centers in Bologna, Italy, and Nanjing, China. We should go still

further and consider whether Johns Hopkins is particularly well positioned to provide educational programs in areas of the world that would benefit from Hopkins expertise in the training of graduate and professional students. The potential for using developing forms of technology in distance education vastly expands the possible creative relationships that could be established. Several divisions are already initiating new arrangements to help train professionals in other countries.

To be a truly worldwide institution, we must think even beyond discrete programs on foreign soil, to an international perspective and global reach in all Hopkins programs.

## **ENHANCING THE UNDERGRADUATE PROGRAM**

Johns Hopkins University was established as a graduate research university. This fact has shaped our institutional character in profound ways even as it more generally influenced the development of the modern research university in America. In the coming decades, Hopkins should continue to honor its distinctive tradition while it seeks to establish more firmly an equally distinctive tradition in undergraduate education. It is time to reaffirm Hopkins' commitment to undergraduate education and to improve the undergraduate programs in ways that capitalize on Hopkins' special strengths.

Whatever Johns Hopkins undertakes must be done with high quality. The University's baccalaureate programs historically have prepared students well to enter a variety of professional fields and make distinguished contributions. To a far greater extent than at many institutions, opportunities exist at Hopkins for undergraduates to be treated as mature learners, to engage in advanced research, and to be self-directed in the pursuit of knowledge. What does not always exist at Hopkins is uniformly good advising and teaching, enough small classes, and adequate student support mechanisms. It is vital that Hopkins address the challenge to build a stronger undergraduate experience without compromising Hopkins' traditional base of excellence in graduate and professional education.

### **Recommendation 15**

*Devise tangible ways to encourage and reward excellence in undergraduate teaching and advising.*

Specific ideas for enhancements to undergraduate education must proceed from a basic commitment and be supported with changes in the reward structure. We must demonstrate in tangible ways that excellence in teaching and in advising carries with it professional recognition. The faculty, department chairs, and deans of the divisions bear the primary responsibility for appointments, promotions, and tenure decisions; it is to them that we must look for the means to institutionalize a deepened commitment to undergraduate education.

Support for teaching effectiveness will also enhance the undergraduate program. The Center for Educational Resources called for below will provide a range of services to faculty wishing to enhance their teaching skills and to students wanting to develop their learning skills. We envision that the Center's services will be especially helpful to students and faculty early in their careers, while patterns of learning and teaching, respectively, are being developed. New models of pedagogy and technological enhancements to the learning environment developed through the Center will particularly enrich the undergraduate experience.

Constraints on the University's other major revenue sources will make the University increasingly dependent upon undergraduate tuition as a major source of revenue. Efforts to cut costs and trim services in the interest of controlling tuition must be balanced with the recognition that there are needs which must be addressed if Hopkins is to live up to its standards for quality in all programs and to remain competitive for the best students. Guaranteeing the quality of undergraduate education at Hopkins is essential to the University's long-term financial stability.

### **Recommendation 16**

*Make the undergraduate experience more personal, build greater educational coherence over the term of study, increase flexibility in the length of programs, and involve faculty from across the University in undergraduate education.*

We believe that undergraduate education at Hopkins should continue to be distinguished by preparing graduates to learn how to analyze complex issues, to clarify values, to make effective use of all forms of information, to work independently yet cooperatively with others, and to communicate clearly and effectively. Notwithstanding many present strengths, the academic experience of Hopkins undergraduates can be improved by a variety of new learning experiences.

In order to build a sense of longitudinal coherence into the curriculum and foster a sense of community, several defining experiences should be provided, including a common freshman experience, internship programs, directed research projects, and senior year "capstone" experiences. Because of its relatively small size, Hopkins also should provide every undergraduate the opportunity to connect with professors in small classes, directed research, or independent study. Engaging faculty across the University in the education of undergraduates is one means of creating this environment.

A high percentage of Hopkins students continue on to advanced degree programs, and they should be assisted in moving at a pace conducive to their individual academic and career goals. Motivated students may want to complete their degrees as quickly as they are academically able. Further study should be given to new approaches to combined undergraduate and graduate programs that would facilitate the educational needs of such students.

Hopkins' international eminence as a research university is not inconsistent with a renewed dedication to a role as an undergraduate institution of the highest quality. As the University enters the 21st century, we should develop synergistic and distinctive programs that will benefit both the research and teaching missions.

## **INCREASING ATTENTION TO COMMUNITY AND TO CITIZENSHIP**

Both internally and externally, Hopkins must foster a strong sense of community. Despite the good intentions of many, the University is not now always perceived as a supportive institution, nor is it a sufficiently inclusive community. Personal anecdotes and survey comments confirm that there are too many students, faculty, and staff who sometimes feel isolated and ill served by the University's support services and facilities. Both fairness to individuals and institutional self-interest in being competitive for faculty, staff, and students require that the University increase the degree to which it is accessible, hospitable, and diverse. A more inclusive and supportive environment will not only improve the personal satisfaction and efficacy of members of the Hopkins community, it will also strengthen the University's institutional effectiveness.

### **Recommendation 17**

*Intensify University-wide efforts to increase diversity and to improve the campus climate.*

As we consider the challenges confronting the University in the 21st century, we cannot fail to address the need to achieve greater diversity. Despite the progress that has been made, women and minorities remain underrepresented on our faculty and senior staff. Hopkins must intensify its efforts to increase the numbers of underrepresented groups among our faculty, staff, and student body. The demographic trends are compelling, and the economic consequences of ignoring their implications are serious. But more important, as a university, we ignore at our peril the educational imperative associated with a multicultural world. We need the talents of all members of our society. Furthermore, the collegiate experience will be enriched and academic inquiry into complex problems enhanced by a wider variety of perspectives and experiences.

Achieving diversity involves more than recruitment, however. It also involves the creation of a salutary environment and appropriate support mechanisms. Hopkins is not alone in grappling with the challenge of achieving effective diversity. Indeed, many of the specific suggestions made by the Strategic Study Group on Diversity are similar to recommendations at other universities or echoes of suggestions by previous Hopkins committees. We commend the specific proposals to the individual schools and divisions where implementation of concrete steps primarily must be taken.

If Johns Hopkins is to make substantial progress, an explicit statement of commitment must also be articulated from the top. Although we find the University's senior leadership fully supportive of the goal of creating a more inclusive community, the importance of this objective should be highlighted by putting the full authority and prestige of the President of the University behind the initiative. We urge that the effort be accompanied by specific charges to those who share leadership responsibility, and that it be sustained by regular reporting on progress toward achieving a more diverse community.

### **Recommendation 18**

*Define the commitment of the University to its faculty and the general responsibilities of the faculty to the University, and implement a post-tenure review process.*

It is worth restating that the foundation of academic excellence on which Johns Hopkins has been built and on which the University will continue to rest is a faculty of the highest quality. Attracting and retaining such scholars must continue to be Hopkins' first priority. Success depends on competitive salaries, benefits, and supporting resources, including libraries and electronic information and communication systems.

Once recruited, faculty must also be given the opportunity for professional growth. Junior faculty are especially in need of mentoring by senior faculty, but at all career stages, scholarly development through changes or expansion of scholarly interests is a critical factor in ensuring the vitality of Hopkins' primary academic resource.

The mutual responsibilities of the University and the faculty should be recognized and explicitly described. Because recruitment and development of faculty are primarily divisional responsibilities, each school should provide guidance for the faculty by publishing a description of faculty responsibilities and criteria for promotion. Additionally, procedures to evaluate tenured faculty should be adopted as a means of improving the tenure system. Periodic review by department chairpersons and the Dean would meet the rare need to identify and address persistent failure by a faculty member to meet his or her University responsibilities. Such periodic evaluations can also encourage scholarly development and departmental and University citizenship.

Significant concerns relate to the quality of life for faculty, both within the University and in the communities surrounding the University campuses. These issues do not pertain to faculty alone, and the University must be aggressive in addressing them for the benefit of all.

### **Recommendation 19**

*Improve the University as a workplace by addressing issues of personal concern such as child care, security, and wellness.*

If Hopkins is to be a successful institution in the 21st century, we must cultivate a highly skilled workforce and provide an environment conducive to its professional advancement, much as we nurture the scholarly development of faculty and the intellectual growth of students. Not only must we identify and improve the factors that detract from the immediate work environment, but we must also recognize that issues of family responsibility, concern with security, and personal needs such as health and fitness affect the ability of all members of the Hopkins community to be happy, productive, and contributing.

Child care is a pressing problem for many faculty and staff. The problems of balancing work and family are complicated, as is the task of developing appropriate institutional responses, whether in government, industry, or higher education. Hopkins should be proactive in addressing these problems and should enlist the creative talents of our faculty and staff in identifying solutions.

### **Recommendation 20**

*Enhance and extend the University's community relationships.*

The health and safety of the communities around us affect not only staff, faculty, and students, but our fellow citizens as well. Recent collaborations with other community groups in preparing Baltimore's application for an economic empowerment zone are encouraging signs of partnership between the University and its surrounding communities, and such cooperative and mutually supportive endeavors should be pursued. We recognize, as others must, that there are limits to what Hopkins can do, given constrained resources. On the other hand, the needs are urgent, and it is vital that Hopkins exercise civic responsibility. Johns Hopkins must demonstrate that it is a humane and enlightened institution, both on and off the campus.

Of particular concern are the physical environment of the campuses and the personal safety of those who work and study here. Crime on the Hopkins campuses undermines our ability to create a healthy community, characterized by open interaction and free interchange. If we are to be successful in recruiting faculty, staff, and students, we must work to improve the communities of which we are a part. The roots of urban problems are complex, and Hopkins has expertise that should be brought to bear on community issues such as education, health, housing, and violence. An institutional commitment to Baltimore must be motivated by more than self-interest, however. A constructive relationship with our fellow citizens in Baltimore is an essential act of institutional citizenship and part of our mission of public service.

## **ENHANCING INSTITUTIONAL EFFECTIVENESS AND EFFICIENCY**

If Johns Hopkins is to prosper in the 21st century, critical attention must be given to the effectiveness of all University programs and services. The marketplace for education is changing due to the telecommunications revolution and shifting patterns in worldwide social development, as well as the internal logic of the academy. Shifts in spending priorities, prompted by the end of the Cold War, and heightened cost-consciousness at every level of society have brought constraints on major categories of revenue, from tuition to federal research support. It is prudent to assume that these constraints will continue to be felt, perhaps with deepening effect, for at least some years yet. Therefore, the University must exhibit the resourcefulness that has long distinguished Hopkins as a pioneer of American higher education.

Resourcefulness must take two forms: making the best use of existing resources and taking initiatives that will allow Hopkins to be at the academic forefront. Our next recommendations address the enhancement of the University's administrative and academic effectiveness.

### **Recommendation 21**

*Review and upgrade divisional and central administrative support systems.*

While administrative costs at Hopkins compare favorably with those of our peer research institutions and many administrative functions work well within some divisions, there is a general concern that our administrative support systems are inadequate to meet the needs of a rapidly changing external environment one that requires increased financial scrutiny at the same time that there are fewer resources to devote to administrative functions. The large number of governmental requests for detailed financial and other information, for example, requires that the institution devote more resources to compliance. At the same time, our administrative information systems too often have not succeeded in meeting the needs of those in the University who depend upon timely and accurate information. While it may not be possible to reduce direct administrative costs significantly, the indirect benefits of more effective administrative systems will have enormous payoff. For example, most academic departments maintain a separate set of "shadow" accounts to track expenditures from research grants because the University systems are not designed to provide the up-to-date information organized in a fashion that principal investigators on research grants need.

We have seen firsthand the importance of good data about institutional characteristics and accurate analyses of institutional trends on the basis of which to assess the University's situation. There also must be an ongoing planning mechanism able to utilize these data to strengthen the University in the future. The proposed University Faculty Advisory Council, or an appropriate body responsible to the Council and to

University officers, should serve in this capacity to ensure that planning is not a once-in-every-30-years activity at Johns Hopkins.

In a highly decentralized university such as Hopkins, there will always be a major tension between the need for divisions to function as autonomous administrative units and the requirement that certain information be maintained centrally for the entire university. Presently, the University operates functions such as payroll and accounting as centralized operations, while other functions, e.g., faculty and student information, are maintained exclusively within the divisions. The difficulty encountered with this arrangement is that the centralized function may operate without full understanding of the needs of its divisional constituency, e.g., faculty, students, or administrators. Conversely, the central administration has difficulty meeting its needs for information when data are maintained in the divisions in inconsistent ways, thus making meaningful aggregation problematic.

A better model might be to view administrative systems as distributed databases, in which each division is responsible for gathering and maintaining data into a divisional database, subject to a set of standards that are common across the University. Central administration systems would have network access to these distributed databases and could upload information they require to their systems. In this fashion, divisions could tailor the databases to meet their diverse needs, while at the same time maintaining information in the common format required for University-wide administrative reporting and analysis. Because the systems are maintained divisionally, information is likely to be more accurate and timely, being closer to the source, than systems that are located and more closely managed remotely. This decentralized structure better fits the organization of Hopkins and matches the modern computing paradigm. Coordination will be required, and we have proposed mechanisms to accomplish this in Recommendation 12 calling for a Chief Information Officer and appropriate interdivisional councils.

The task of reducing administrative costs while at the same time increasing effectiveness will require a significant investment in upgrading or replacing various administrative computing systems, such as payroll and accounts payable systems, and adding new ones, such as faculty and research databases. Faculty input will be important in ensuring that any systems designed address users' needs.

It will also be important to review our progress in making administrative sectors more efficient and responsive. We have already proposed that Hopkins develop a mechanism for ongoing external review of academic programs. We feel that continuous assessment of administrative functions should also be implemented, either by using external review committees or enhancing the staff of the internal audit division, which is charged with assessing the efficacy of administrative units. In either case, a committee composed of faculty and administrators should be appointed to superintend the process.

Every opportunity to curb expenditures and thereby conserve resources for areas of higher priority should be considered seriously. Even small savings, which may not represent a very large percentage of the total University budget, translate to meaningful income from a significant endowment. For example, a savings of \$1 million or 0.1 percent of the total University budget represents the addition of about \$20 million to the endowment, assuming a 5 percent payout. Saving just \$5 million University-wide (0.5 percent of the total budget) would produce roughly the same effect on the bottom line as adding \$100 million to the endowment. We owe to Hopkins' current constituencies a serious commitment to cost consciousness, and

we owe to future generations of faculty and students due diligence in protecting the strength of Hopkins' endowment.

## **Recommendation 22**

*Establish a Center for Educational Resources to enhance teaching and learning skills, to promote the application of technological innovations, and to advance interactive and distance education.*

Central to our vision for the University is the expectation for pedagogical leadership, especially in the development of an open university. A Center for Educational Resources would support faculty and students eager to improve the environment for learning and would facilitate the extension of Hopkins' educational programs beyond the campus.

As a clearinghouse for ideas to enhance teaching effectiveness in more traditional classroom settings, the Center would assist faculty and graduate students with the preparation of syllabi and course materials, with the delivery and organization of lectures, and with teaching styles. It would also bring together the best knowledge about teaching evaluation and encourage the use of constructive feedback to improve our educational programs.

Equally important, the Center would serve as a multidisciplinary laboratory for promoting and developing applications of new informational technologies to research and teaching. Educators, cognitive scientists, computer scientists, information specialists, librarians, and other experts should feel at home in such a center. Given the advances in communication and media technologies, faculty and staff could greatly benefit from a facility that provides direction and training in the use of existing and emerging electronic tools for teaching and research. This is especially important for the delivery of distance learning courses for which traditional classroom teaching methods may not be nearly as effective.

The technological infrastructure and technical expertise required to coordinate and promote innovations in the use of electronic media in research and teaching are probably best organized administratively at the interdivisional level. Currently, a mechanism for sharing and enhancing some exciting electronic education projects under way within the University is missing. Opportunities to stimulate creative adaptations in other divisions are thus lost, along with potential benefits to staff development and training.

In addition to its functions as a support facility for the University at large, a center might eventually become an institution of applied research and education with its own faculty and academic programs. We anticipate significant partnerships with other educational institutions, government, and industry and the potential for financial viability. After short-term start-up, we expect that the Center would become self-supporting, for example, by obtaining external grants and by creating products to market.

The University-wide Center could be conceived of as having a locus in each of the schools where it is needed. Those divisions that have begun to develop programs for teaching effectiveness would continue their efforts to support division-specific needs. Existing media facilities at the Applied Physics Laboratory, the Homewood campus, or in East Baltimore would serve as the sites to test the fruits of the Center in practice, through such activities as the teaching of distance classes, the production of multimedia projects, and the conversion of research data to visual displays. University-wide coordination of the Center would maximize

the institutional benefits to be gained from investments in expertise and technology and would provide a fertile ground for spawning new applications.

## **SECURING THE UNIVERSITY'S FINANCIAL FUTURE**

An imperative if Johns Hopkins is to sustain excellence in the 21st century is the need to secure the University's financial future. Hopkins has had a long history of financial challenges, and the next two decades do not promise to provide any respite. The causes of the University's major financial challenges are not unlike those of other research universities, but Johns Hopkins has particular characteristics that make it potentially more vulnerable than most institutions. In fact, Johns Hopkins, in some regards, suffers from its own success. The faculty's ability to secure grants and contracts, particularly from the federal government, has allowed Hopkins to achieve a level of distinction far beyond that supportable by a tuition and endowment base alone. A secondary consequence of this creativity, however, is a heavy dependence on external sources of revenue.

Fortunately, Hopkins has traditionally risen to financial challenges, due in large part to the highly creative leadership of the divisions. A useful five-year financial planning process is in place, but some aspects of the University's present financial environment will require even greater discipline and initiative to manage future exigencies.

The major problem the University faces is that many of the revenue streams upon which it is critically dependent are unstable. Forces that we cannot predict and cannot control have already led to operating budget deficits in several of the schools over the last few years. A strategy of closing operating budget gaps by expending endowment is very imprudent in the long term. It erodes "hard dollar" support for faculty salaries and other academic purposes; it decreases the amount of capital that can be invested in renewal and expansion of the University's physical plant; and it reduces flexibility to invest in exciting academic opportunities as they arise.

Because it is critical that the implications of Hopkins' financial structure be fully understood, a brief review of revenue sources and anticipated changes over the next decade is in order.

Revenue from Federal Government. Although Hopkins is a private university, over 37 percent of its more than \$919 million in revenues in Fiscal Year 1993 was derived from government research grants. The faculty's ability to compete effectively for federal research dollars has enabled Johns Hopkins to establish itself as a peer of other American research universities having endowments and tuition bases many times larger than ours. In fact, the percentage of the overall University budget that is supported by endowment at Johns Hopkins (about 4 percent) is among the lowest of leading research universities, primarily because of the University's relatively small endowment and the high volume of Hopkins faculty research.

While Hopkins remains strongly competitive for government research funding, the rate of growth in the next decade is likely to decline for several reasons: an anticipated slowdown in the rate of growth of NIH, NSF, DOD, and other research funds; the potential for Congress to allocate more of these funds outside the peer review process; and increased competition for federal research dollars. Pressures from Congress to reduce the support provided via indirect cost recovery, if successful, could create an even more perilous situation, especially for private universities where this mechanism has reimbursed the costs of constructing

or renovating research facilities. Johns Hopkins and other private colleges and universities also receive significant funding from the state of Maryland in recognition of their roles in educating Maryland students and advancing economic development. Decreases in this funding would be difficult to offset.

Revenue from Tuition. The percentage of Hopkins revenue that comes from tuition is much smaller than at many universities, but it is nonetheless a critical 18 percent. And, it is the one source of revenue to support academic programs and services over which we have some control. Over the past 10 years, Johns Hopkins has been able to sustain continued increases in tuition rates because of the strong applicant pool, the relative affluence of these students, and the fact that most other private universities increased their tuition fees similarly. Given the projections for modest growth of our national economy, raising tuition revenue through future fee increases in excess of the rate of inflation is unrealistic. For the first time in decades there will be an oversupply of baccalaureate programs with a diminishing pool of eligible students, so that colleges and universities will be more often competing on the basis of cost and student aid packages.

Fortunately, Hopkins has been extremely successful in attracting nontraditional students, both through the School of Continuing Studies and through part-time and adult education programs offered by many of the divisions. These students at the undergraduate and graduate level have provided incremental sources of tuition revenue and are projected to be a source of future revenue growth for Hopkins. We are well positioned in the regional marketplace to take advantage of the increasing need to provide high-quality education to students who are employed full-time and either cannot matriculate in more conventional university programs, or have needs for more specialized education (e.g., continuing medical education) by virtue of a rapidly changing technologic base and/or licensure requirements.

At the doctoral level, there is little chance to increase tuition revenues. The majority of tuition revenues from doctoral programs is derived from University sources through research and/or teaching assistantships, or from government research grants. Mechanisms for funding full-time graduate students are under serious pressure, and a shortfall in government grant support could have significant deleterious effects, since the training of doctoral students is at the core of Hopkins' mission.

Clinical Service Revenue. Charges for clinical services rendered by Hopkins faculty physicians constitute a significant revenue source for the School of Medicine and about 16 percent of the University's budget. In addition to supporting the salaries of faculty physicians within the School of Medicine, clinical revenues provide support for the academic and research functions of the School and contribute to the operation of the new Johns Hopkins Outpatient Center.

In the face of the major changes in health care today, the growth in revenues from clinical service will not continue at its historical rate as a system based on capitation replaces one based on fee for service. Increasing enrollments of patients in health maintenance organizations will also reduce physicians' fees and curtail the utilization of specialists. Hopkins has largely provided specialty medical care, and it is particularly vulnerable under the ongoing restructuring of health care delivery. The Hospital's rating by U.S. News & World Report as the best in the country for four consecutive years notwithstanding, there is no guarantee that Hopkins physicians will continue to draw patients in such large numbers in future years.

Endowment and Gifts. Endowment income, as noted, accounts for only a small percentage of Hopkins' operating budget. Compared to the endowment base of other leading universities, Johns Hopkins' endowment, at \$725 million, is small. For example, among institutions of roughly Hopkins' size, endowments are significantly larger at Washington University (\$1.7 billion) and the University of Chicago (\$1.2 billion). The endowment of larger universities such as Harvard at \$5.8 billion and Yale at \$3.2 billion are of a different order of magnitude altogether. While we aspire to maintain a position among the top handful of research universities, Hopkins' endowment ranks only 21st of American colleges and universities. This increases the pressure on all other sources and forces painful choices among important priorities such as financial aid, faculty positions, and student services.

The recital of these financial challenges should make clear how critical it is for the University to elaborate its financial base and to seek greater financial self-sufficiency. One conclusion that can be drawn is that Hopkins needs to take steps to reduce its heavy dependence upon federal funds that are subject to abrupt reductions over which we have little or no control. In this environment, long-term planning regarding financial obligations is extremely difficult. We urge that the University explore the enhancements to revenue which we have proposed and that financial planning discussions continue with a sense of urgency. We thus close with a general recommendation and some more detailed suggestions that would help to set us on a course of greater financial security.

### **Recommendation 23**

*Move the University toward greater financial self-sufficiency for its core activities of education and scholarship.*

We have already proposed distance education and international initiatives that may help to increase revenue from academic programs. We have recommended expanded programs for nontraditional learners. We have called for reviews of academic departments as well as administrative units in order to rehabilitate or eliminate ineffective academic programs and to improve effectiveness and cut costs of administrative services wherever possible. We have proposed a sharpening of focus so that resources can be used more effectively. We have urged resourcefulness and serious consideration of wider collaboration and resource sharing, both within and beyond the University. And we have raised the possibility of rethinking structural arrangements in certain areas in order to deliver stronger programs while avoiding the costs of duplication. We recognize that the specific steps necessary to ensure longer-term financial stability will be different from one division of the University to another and must therefore be initiated within the divisions. However, there are a few critical strategies that likely apply to all divisions and are best instituted at the University level. Our primary concern must be to ensure that, throughout the University, there is a firm financial underpinning to support the range of educational programs and of scholarly investigation being carried out in our classrooms, libraries, and research laboratories.

For example, we can and should consider carefully Hopkins' policies with respect to indirect cost recovery. Given growing Congressional inclination to treat indirect costs as discretionary costs rather than true costs of supporting research, our heavy dependence upon indirect cost recovery puts Hopkins in a vulnerable position. The University should take steps to reduce its dependence on this source of funds. A rigorous process of efficiency improvements that succeeded in reducing administrative costs, coupled with the institution of a policy that limits the amount of debt that can be assumed for facilities construction or renovation, might

make this possible. The University has already established that if indirect cost reimbursement cannot be relied upon to cover the University's debt costs for construction, then incurring additional debt is not appropriate. Consideration should also be given to divisional policies to ensure that the allocation system provides adequate incentives to faculty to compete for federal grants in those disciplines where funding is available. Further, it seems prudent to set aside a certain amount of IDC recovery relating to depreciation for plant and equipment replacement that would renew the research infrastructure.

Another source of financial concern involves the great extent to which Hopkins faculty in many divisions are directly supported on "soft money." Over the long term, we should take steps to reduce the percentage of tenure-track faculty salaries that are derived from research grants. There are several ways to accomplish this goal. First, endowment can be increased and dedicated to support existing faculty positions, rather than to create new ones. Second, increasing tuition revenues through added enrollment in full-time or nontraditional programs, to the extent that such increases are greater than the incremental costs associated with providing these expanded programs, can be used to "harden" faculty salaries. We caution, however, that enrollment increases should be considered only where the support systems are adequate and quality can be maintained. Third, we can reduce the number of tenure-track and/or tenured faculty. These approaches involve important trade-offs, but even painful choices must be explored. In sum, we suggest that the following strategies be considered:

- 1) Increase substantially the endowment per tenured faculty member.
- 2) Increase tuition collected per tenure-track faculty through expanded educational programs.
- 3) Adopt a user-oriented model wherever possible for University and divisional administrative services to eliminate current redundancies and to more effectively serve internal and external customers.
- 4) Decrease the University's dependence upon indirect cost reimbursements to reduce the impact of changes in federal policies.
- 5) Concentrate resources on programs of excellence.
- 6) Adjust faculty size over time to reflect changing opportunities and the long-term availability of resources.

It is critical that we identify major new revenue sources and seek to build an endowment base worthy of our aspirations. The major development campaign to be launched this fall is thus critical to the University's future.

On it ride many of our hopes for academic leadership in the 21st century.

While financial considerations have been woven throughout the Committee's discussions, and while their seriousness concerns us all, we want to emphasize that change at Johns Hopkins must primarily be academically inspired, as opposed to financially driven. The recommendations we have made will serve to strengthen Johns Hopkins' capacity for the scholarly excellence that remains the University's central and enduring mission.