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THE PROVOST

January 15, 1992

To: Members of the Faculty of Arts and Sciences

From: Frank M. Turner, Provost 

I am enclosing a copy of the Report of the Committee on Restructuring the Faculty of Arts and Sciences. The report is the product of almost a year's work by a committee of faculty members. The process has necessarily been a long one because the task set before them was difficult. The members of the Committee have learned much from the community as well as from each other. After much study, consultation, and deliberation, they have presented in this report their best collective judgment as to how, given the need for a smaller Faculty of Arts and Sciences, a reduction might most constructively be undertaken.

In transmitting this report, I would like to remind the faculty of those broad institutional goals that this restructuring effort is intended to achieve. It is our hope that by undertaking a series of changes now we can preserve and protect excellence at Yale. One part of this requires some reduction over the next decade in the number of ladder faculty positions in the Faculty of Arts and Sciences, so that Yale may bring the scale of its programs to a size that can be sustained over the long run. That situation does not exist at present. Through achieving better focus in its academic programs, the University should be able to assure the protection of competitive faculty salaries, high levels of student aid support in the College and the Graduate School, a generous faculty leave policy, a reasonable level of library acquisitions, adequate laboratories for teaching and research, and make possible a necessary level of capital maintenance.

The centrally supported professional schools and administrative units are also undertaking planning efforts that will produce significant reductions in their activities. Every part of the University will be undergoing some form of major restructuring as together we seek to achieve these goals.

The Deans have scheduled a joint meeting of the faculties of the College and Graduate School on February 13 at 4:00 P. M. in 101 Linsly-Chittenden to permit a general discussion of this report.

I would welcome written responses from faculty on any aspect of this report. Please submit them to my office by February 17.

The Restructuring Committee will attend the faculty meeting, read all written materials, and meet to discuss the faculty's response before sending its recommendations to the Executive Committee of the Faculty of Arts and Sciences. The Committee understands, however, that any changes in the recommendations will need to occur within the approximately 11% reduction in the number of junior faculty equivalents outlined in the report.

I look forward to receiving your comments and responses.

REPORT OF THE COMMITTEE ON RESTRUCTURING
THE FACULTY OF ARTS AND SCIENCES

For Faculty Comment

January 15, 1992

Over the past two years, the President and Provost have discussed with the faculty and described to the Yale community the serious financial problem facing the University. Recent slowing in the rates of growth of the University's major revenue streams has not been accompanied by a similar slowing in the growth of the University's expense base. The problem is compounded by Yale's need to attend to its deteriorating physical plant and the impact that this effort has begun to have on the operating budget. The recently issued statement entitled "The Financial Situation at Yale" describes this situation in detail and need not be repeated here.

In the spring of 1991 the Provost and Vice-President for Finance and Administration asked most departments and units to reduce their 1991-92 budgets for staff and other expenses by specified amounts. The reduction of about \$8 million in the University's expense budget that resulted was not enough, however, to prevent an \$8.8 million projected deficit for 1991-92. Without substantial corrective action, the deficit will grow significantly in future years. The officers and the Corporation have determined that this financial problem can be solved only by reducing the scale of Yale's programs to a level that can be sustained by the resources expected to be available in the future. The University must accept deficits in the operating budget for several years so that the necessary reductions can be made in an orderly and constructive way.

In February 1991, as part of a process to achieve long-term reductions in the operating expenses of the University, President Schmidt and Provost Turner asked 12 members of the Faculty of Arts and Sciences to serve on a committee to recommend reductions in the size of that faculty and in the scope of its academic programs. The

committee is called the Committee on Restructuring the Faculty of Arts and Sciences, and its members are: Richard H. Brodhead, Chair of the English Department; Donald Engelman, Chair of Molecular Biophysics and Biochemistry; Gerald Jaynes, Professor of Economics and Chair of the African and African-American Studies Program; Alvin K. Klevorick, Professor of Law and Economics and Director of the Cowles Foundation for Research in Economics; Richard Levin, Chair of Economics; Peter B. Moore, Professor of Chemistry; Jules D. Prown, Chair of History of Art; Alison F. Richard, Professor of Anthropology and Director of the Peabody Museum; Judith Rodin, then Chair of Psychology and subsequently Dean of the Graduate School; Robert B. Stepto, Professor of African and African-American Studies, American Studies, and English, and subsequently Acting Chair of the American Studies Program; Henry A. Turner (spring 1991 only), Professor of History and then Master of Davenport College; and Michael E. Zeller, Chair of Physics. Also on the Committee, *ex officio*, were Donald Kagan, Dean of Yale College, and Jerome J. Pollitt (spring 1991 only), then Dean of the Graduate School. The Committee was chaired by Provost Frank M. Turner and staffed by Deputy Provost Charles H. Long.

Charge to the Committee

The Restructuring Committee was charged with developing a plan for reducing the size of the Faculty of Arts and Sciences. The President and Provost asked the Committee first to identify reductions and recombinations of academic activities that might be made for sound academic reasons without regard to financial pressures. They asked the Committee next to indicate where further reductions might be made with least risk to the strength and flexibility of the faculty as a whole. Finally, they asked the Committee to consider all departments, programs, areas, subfields, and centers, and then to establish

priorities, rather than recommend proportional, across-the-board reductions. The process was to be one of restructuring, not just reducing, and it was expected that it would result in the consolidation of some departments and programs and the elimination of others. The Committee was asked to forward its recommendations to the Executive Committee of the Faculty of Arts and Sciences (consisting of the President, the Provost, the Dean of Yale College, and the Dean of the Graduate School). The Executive Committee will solicit comments from the members of the Yale College Faculty and consult with the Restructuring Committee before making formal recommendations to the Yale Corporation at its meeting at the end of February 1992.

Important principles that guided the Committee's considerations include the following:

- (1) to focus Yale's resources on its most important academic activities;
- (2) to maintain existing areas of strength whenever possible;
- (3) to preserve activities that are fundamental to Yale's mission, regardless of their current strength; and
- (4) to set aside some resources so that the University can continue to respond to emerging academic needs.

The Work of the Committee

The Committee began meeting weekly in mid-February 1991 and continued through mid-June, meeting more than once a week after classes ended. In September the Committee began again, maintaining a schedule of two meetings a week and numerous subcommittee meetings. Several times the Committee met with President Schmidt and

Vice-President Finnerty to review the financial situation of the University and its effect on the resources available to the Faculty of Arts and Sciences. In addition, Deputy Provost Long prepared documents and tables that included statistical profiles of departments generated annually by the Office of Institutional Research, financial analyses and budget projections produced by the Office of Financial Operations, and analyses of the distribution and growth of faculty positions made by the Provost's Office.

The Committee asked the divisional advisory committees to report on the relative strengths of each of the departments under their purview, including their professional standing in their disciplines, the areas in which they have achieved or might expect to achieve distinction, and their success in attracting graduate students and faculty. The Committee asked each divisional advisory committee to consider what reductions might be made in the light of academic priorities, and to suggest more effective ways to configure the departments and programs in its division. Questions directed to the advisory committees included:

- (1) Which departments are strong and which could be strengthened by the addition of modest resources?
- (2) Are the current relative sizes of departments appropriate for the future?
- (3) Could higher academic quality or greater efficiency be achieved by combining some departments or programs?
- (4) Are there departments or centers that could appropriately be significantly reduced or even eliminated?
- (5) Are there subject areas or kinds of instruction in which resources should be reduced?

During the spring of 1991 the Committee met with the University Librarian to gain an understanding of how Yale's library resources correspond to the sizes and fields of departments in the Faculty of Arts and Sciences and how different kinds of reductions in that faculty might affect library costs. The Committee also reviewed the size and cost of the Graduate School, particularly the structure, net expense, and growth of its financial support program: tuition income, stipends, teaching fellowships, and dissertation fellowships. It discussed the factors that influence the number and quality of incoming graduate students, and how these might be affected by reductions in the size of the faculty.

The Committee reviewed a number of instructional programs that have become heavily dependent upon non-ladder faculty -- e.g., courses in foreign languages and expository writing -- to determine whether these areas present opportunities for reductions. The Committee considered interdisciplinary programs and how better to monitor, evaluate, improve and, when appropriate, reduce or eliminate them. It examined enrollment data, class size, and teaching loads to consider whether faculty resources could be more efficiently deployed. Finally, the Committee looked closely at the income that flows from indirect overhead cost recovery and the effect that reductions in certain departments might have on the University's budget.

In May the Committee met with the directors of the divisional advisory committees, who by then had had an opportunity to review the departments in their divisions and to meet with the chairs of some of those departments. Some committees had recently participated in external reviews of certain departments. In the course of discussions concerning all of the departments in the division, each advisory committee identified departments or programs about which it had special concern.

Based on these reports, on further conversations with the divisional directors, and on other materials such as summaries of the findings of external departmental reviews, the Committee identified a number of departments and programs that seemed to warrant further study. Among these in the social sciences were Sociology, Statistics, and the Institution for Social and Policy Studies; in the sciences, Operations Research and the departments composing the Engineering Council; and in the humanities, Linguistics and Philosophy. In addition, the Committee considered a number of departments where administrative consolidation might be beneficial and others that seem to be attempting to cover so many subfields that internal consolidation might be appropriate.

During June the Committee discussed, with increasing intensity and level of detail, the departments and programs in which significant restructuring might be justified. It also considered the effect that major changes in these areas would have on the research and teaching missions of other departments. At this time the Committee had the benefit of further written communications from the divisional advisory committees. To look more carefully at the departments of each division and to explore various models of reductions, the Committee divided into subcommittees, which met independently and brought their findings to the whole Committee.

Scale of Reductions

The Committee looked closely at the size and composition of the Faculty of Arts and Sciences and reviewed the changes that have taken place in the distribution of faculty since the last time a reduction of positions was undertaken. That reduction began in the late 1970's, when in the face of recurring deficits it was decided to remove 7.5% of the ladder faculty positions allocated to the Faculty of Arts and Sciences. The specific reductions

were recommended by an Academic Review Committee, composed of the Faculty of Arts and Sciences Executive Committee and the directors of the four divisions. Between 1979 and 1982 many of those reductions took place, but before they were all accomplished the University relaxed the schedule for reductions. In the changed economic climate of the mid-1980's new positions were added, with the result that the ladder faculty of Arts and Sciences is currently not 7.5% smaller, but somewhat larger than it was in 1979-80.

The growth in ladder faculty since 1979-80 did not take place evenly over the Faculty of Arts and Sciences. The Division of Physical Sciences grew more than the other divisions; the Division of Humanities shrank slightly. The growth that did take place can largely be attributed to initiatives in several departments and areas of study -- African and African-American Studies, Comparative Literature, Computer Science, Engineering, foreign language instruction, Judaic Studies, and Women's Studies -- and the transfer of Operations Research from the School of Organization and Management to the Faculty of Arts and Sciences.

The Committee looked carefully at the financial savings that might be anticipated from various kinds of reductions. Two important facts emerged from this examination. First, the elimination of a department would result in more savings than would the elimination of the same number of positions across many departments, since the former would result in far greater savings in staff, graduate student support, equipment, space, and other overhead costs. Second, because faculty in some departments conduct significant amounts of sponsored research and thus generate income for the University, reductions in some areas might result in significantly less savings than would reductions in others. But with the possible exception of Molecular Biophysics and Biochemistry -- a department shared with the School of Medicine -- even in departments that generate

significant overhead revenue, faculty reductions result in long-term measurable savings for the University.

Although the Committee could not ignore the financial implications of its choices, it could not recommend closing whole departments for reasons of cost alone or eliminating only those positions that would yield the most savings. Factors other than cost always dominated the Committee's consideration. These include departmental quality, the need at Yale for certain areas of study, the desirable balance among departments and divisions, research interactions among departments, and the requirements of the undergraduate and graduate teaching programs.

As the University's financial situation became clearer, Provost Turner asked the Committee to develop a plan that would lead to a reduction of 15% in the number of ladder faculty positions. Ladder faculty constitute the basis of a department's size and therefore the resources it requires in salary, benefits, support staff, equipment, space, and other overhead costs. The Committee agreed to use as its common measure of ladder faculty the number of budgeted junior equivalents -- a measure that counts one tenured position as equal to two nontenured ones. This equivalence is roughly accurate with respect to compensation, and has for several decades been an accepted way for departments to change the ratio of tenured to nontenured faculty within a given level of resources. Using this measure, it is possible to track changes in the resources allocated to Yale's departments over a considerable period of time. There are now 1067 approved junior faculty equivalent positions in the Faculty of Arts and Sciences budget, comprising 367 tenured and 295 nontenured positions in individual departments and 38 junior equivalents outside of departments, most of them unfilled positions in divisional pools. A reduction of 15% would require the elimination of 160 of the 1067 junior faculty equivalents.

Review of the Financial and Capital Plans

In the fall of 1991 the Provost informed the Committee that over the summer he and Vice-President Finnerty had initiated planning, comparable to that being undertaken by the Restructuring Committee, for significant reductions in the professional schools and administrative units. The deans and directors are still developing these plans, but it is already apparent that the reductions required will cause significant changes in the scope of many of the University's activities. As a result of the reductions in administrative units, the University community will lose a number of the services these units currently provide.

The Committee reviewed the financial situation of the University and in particular the plans for capital expenditures. The Committee read an early draft of the "Financial Statement of the University " and met with Vice-President Finnerty and Associate Vice-President Janet Ackerman to discuss the latest budget projections, the scope of the facilities renovation program, and planning for eliminating the projected deficit. The Committee then met with former Provost William Nordhaus, who shared his perspective on the budget projections and the current facilities program.

In addition, the Committee met several times with President Schmidt, who discussed the budget and the University's plans for a capital campaign. He also indicated that the University Buildings and Grounds Committee has been reconstituted and given increased responsibility, including authority to establish priorities for projects to be included in the capital budget, to determine that the levels of renovations proposed are appropriate, and to ensure that the work is carried out at reasonable cost.

Discussions with Specific Departments

Throughout their deliberations, members of the Committee read and discussed a considerable amount of material from various sources, including faculty and students who elected to write to the committee directly about specific departments or about restructuring generally. They also read a number of statements about departments, programs, and centers from individual faculty members and chairs with respect to those departments that had been identified as areas of concern. They reviewed reports on departments or centers submitted by outside *ad hoc* advisory committees and summaries of reports from committees of the University Council. At appropriate points members of the Committee informally sought information from members of the Yale faculty. Many members of the faculty also initiated conversations with members of the Committee about issues raised by the restructuring process. The Provost also met with a large number of Yale faculty, both individually and in groups, and he and the Dean of the Graduate School reported on consultations they had made at Berkeley, Chicago, Columbia, Harvard, and Stanford.

At the end of September the Provost sent letters to the chairs of departments and programs that seemed to warrant further discussion, inviting them to speak with the Committee. The Committee then met with the chair and in most cases also with several faculty members of each of the following units: Linguistics, Operations Research, Sociology, Statistics, the Institution for Social and Policy Studies, all four departments of Engineering, and the Council of Engineering. During these meetings, the chairs described their departments, answered questions posed by members of the Committee, and discussed various options for the future.

Following these discussions the Committee began working on two fronts. First, it discussed each of these departments in more detail and attempted to reach consensus as to

the most appropriate action to take. Second, it discussed all other departments in the Faculty of Arts and Sciences to develop models for achieving a total reduction of up to 15%. During this process, discussions were led by the divisionally organized subcommittees, which suggested alternative ways of achieving reductions and informed the Committee about the merits and risks of each. Each subcommittee also met with the appropriate divisional director, and in some cases with the entire advisory committee, to share views and discuss alternatives.

After due consideration the Committee came to the view that a reduction of 15% would seriously jeopardize the capacity of the Faculty of Arts and Sciences to accomplish its academic mission. Following the subcommittees' detailed presentations of the departments, division by division, the Committee reached consensus that reductions beyond the level of 10 to 12% would make it difficult for many departments to retain their academic quality or meet their teaching obligations.

After reviewing the likely impact of a 15% reduction, the President and Provost accepted the Committee's judgment that reductions of this magnitude should not be attempted. As a result, they reduced the target to 10-12%. They indicated, however, that smaller reductions in the Faculty of Arts and Sciences necessarily shifted the burden to other areas of the University and increased the risk that additional actions within the Faculty of Arts and Sciences may become necessary in the future.

With this lower target in mind, the Committee continued its deliberations, reaching consensus on two sets of recommendations: first regarding those departments to be eliminated, significantly reduced, or consolidated, and second for reductions that might be made in other departments. These recommendations follow.

Recommendations for Specific Departments

Linguistics. From background materials and discussion, the Committee was made aware of the illustrious history of the study of linguistics at Yale, which predates the formation of the department in 1963. The Yale Linguistics Department was founded on traditional strengths in historical linguistics. Since the late 1960's, however, when the discipline itself underwent significant change in its approaches to theoretical and structural linguistics, the Yale department has had difficulty offering a balanced program and attracting students.

The Committee noted the connections between Linguistics and other departments and programs that teach in the area of linguistics or have overlapping interests in that field. These include African and African-American Studies, Anthropology, Computer Science, English, Philosophy, Psychology, the Haskins Laboratory, and departments of non-western languages. It discussed whether Linguistics might become part of the Division of Social Sciences or an interdisciplinary program. The Committee recognized the intrinsic importance of the study of human language, but it reached consensus that the existing departmental structure is not the most effective way to pursue this study at Yale. The Committee recommends that the Department of Linguistics be discontinued. It further recommends that in allocating faculty resources, both the Humanities and Social Science Divisional Committees be directed to support the study of linguistics within the context of other departments.

Operations Research. The small size and low enrollments of this department made it a concern of the Committee. Operations Research currently consists of three tenured and two nontenured faculty members, and five unfilled positions. Two of the three

tenured faculty members have primary appointments in other departments. All three share research interests in the areas of mathematical programming and the application of optimization methods and game theory to problems of resource allocation. Their activities link them to faculty in the School of Organization and Management and in the departments of Computer Science, Economics, and Mathematics.

It appears to the Committee that the continuing research interests, collaborations, and teaching of the Operations Research faculty can be accomplished successfully without the current departmental structure. The Committee recommends that the Department of Operations Research be discontinued.

The Institution for Social and Policy Studies. In its years at Yale ISPS has taken several forms. It currently serves as a resource and meeting ground for interdisciplinary research by faculty from several professional schools and departments in all divisions, primarily in the social sciences. The Restructuring Committee reached the view that despite some excellent programs, for some time the research and other activities generated by ISPS have not been commensurate with the resources devoted to the institution. The Committee recommends that the Institution for Social and Policy Studies be discontinued, but that some of its resources be retained to foster research in the social sciences. It further recommends that a committee be appointed to consider the most effective way to achieve this goal.

Engineering. Engineering poses a particularly complex set of issues for the University. For over a century Yale has offered an undergraduate program in engineering that has had notable success in training leaders in the area of technology. For some time,

however, the University has had difficulty determining what the size and structure of this activity should be. Yale engineering began in 1852 as a separate school and two years later joined the School of Applied Chemistry as the Yale Scientific School, later renamed the Sheffield Scientific School. In 1932 engineering again became a separate professional school, but in 1962 was moved to the Faculty of Arts and Sciences as a single department of Engineering and Applied Sciences consisting of several sections. That department was later divided into the existing departments of Applied Physics, Chemical Engineering, Electrical Engineering, and Mechanical Engineering, whose activities are coordinated by the Council of Engineering.

Since Yale's engineering faculty has traditionally been much smaller than that of major engineering schools, it has been difficult to create programs with sufficient breadth to attract many undergraduates to study engineering. Each of the departments contains areas of impressive strength, but size limitations seem to have prevented the Yale engineering program from making a major national impact. The collective view of the chairs of the engineering departments, conveyed in a comprehensive presentation and a number of supplementary reports to the Committee, is that departments of Chemical, Mechanical, and Electrical Engineering are all required to maintain a viable engineering program at Yale. The chairs also believe that engineering as a whole cannot and should not be expected to reach national prominence unless it is allowed to grow substantially.

In effect, the Committee seemed to be faced with three options: (1) expand the existing departments so that they can compete more effectively, (2) maintain the status quo, or (3) terminate engineering entirely. After considerable deliberation the Committee reached consensus on several points. First, given current financial constraints, significant expansion is not possible for engineering -- or for any department in the Faculty of Arts and Sciences. Second, the Committee cannot justify exempting engineering from the

reductions that must be imposed on other departments, especially since the per capita cost of engineering is high relative to other science departments and the teaching burden is low relative to all departments. Yet the number of faculty in the existing departments is already so small that the departments regularly face curricular and administrative difficulties, and even modest reductions would exacerbate these problems. Third, it is essential for Yale to retain a strong presence in technology and applied science, and this cannot be achieved without an engineering program.

For these reasons the Committee proposes a fourth course of action. The Committee recommends that the three existing engineering departments be reduced by 12 junior faculty equivalent positions and consolidated into a single Department of Engineering. It further recommends the establishment of an ad hoc advisory committee for the period of restructuring to assist this consolidation. The merged department would be one of the larger in the Faculty of Arts and Sciences. It should not be limited by difficulties due to its size, since it will be able to draw resources from a larger pool.

This consolidation will require extensive discussion and planning, including consultation with outside experts. The members of the department and the ad hoc advisory committee should pursue such issues as whether the three existing engineering areas should continue as distinct subgroups of the new department and whether its undergraduate programs should maintain or seek accreditation. The primary tasks that the University faces in this transitional period are: (1) to find effective leadership for the new department, (2) to design a process to ensure faculty appointments of the highest quality, and (3) to develop a strong undergraduate program that attracts engineering students to Yale and Yale students to engineering.

The Committee further recommends that five junior faculty equivalent positions from the pool of the Division of Physical Sciences be reserved by the Executive Committee for enhancing excellence in Engineering. These are to be used to make strong appointments that support the directions taken by the reconfigured department after the restructuring of engineering has been successfully completed.

Applied Physics. The major thrust of research in Applied Physics is in the area of condensed matter physics. Recently Applied Physics and Physics have jointly created a condensed matter theory group, but the need for additional strength on the experimental side is recognized by both departments and has been commented on by past external review committees. Because the two departments share the common discipline of physics, and because the Committee has concerns about the relative cost and teaching load in Applied Physics, the Committee recommends that Physics and Applied Physics be merged into a single Department of Physics. It further recommends that 8 junior faculty equivalent positions be removed from the joint department -- 5 from Applied Physics and 3 from Physics. The department that results will have a broader research base and a size large enough to strengthen the national position of Yale physics. Those members of the current Applied Physics Department who wish to join the new Department of Engineering should be welcome to do so. The Committee understands that this merger may take several years to achieve. An advisory committee composed primarily of faculty drawn from the two departments should be appointed to assist in the transition.

Sociology. The Committee's primary concern about this department is that its research and teaching programs are not concentrated sufficiently on the core of its discipline. Many of its faculty members have strong connections to other departments and

programs, and although these connections have benefited the University generally, they appear to have diffused the focus of the department. The expected retirement of a large segment of the department's senior faculty raises questions about Sociology's future direction.

After considerable study and discussion, the Committee was persuaded, because of the importance of the discipline and its interactions with other social sciences, that the Sociology Department should continue at Yale, and that it should seek a renewed focus. Given the number of current openings and pending retirements, it appears that if new faculty are chosen carefully, this goal can be accomplished with a faculty smaller than the present one. The Committee therefore recommends: (1) that the Department of Sociology be reduced in size by 11 junior faculty equivalent positions; (2) that the department build a strong base in the theory and methods of sociology, as well as in two or three core fields of specialization; (3) that special attention be given to assuring strong leadership for the department; and (4) that an advisory committee be appointed, consisting of faculty from inside and outside the University, to advise the Provost on the direction and composition of the department. During the initial years of the rebuilding process, it may be necessary for Sociology to be chaired by a member of the Yale faculty whose primary appointment is outside the department.

Philosophy. The Committee accepted the view of the Divisional Advisory Committee that, given the University's strength in the humanities, Yale needs a strong Philosophy Department. Recognizing that efforts are already underway to rebuild the department by recruiting senior faculty, the Committee agreed that it would be inappropriate to recommend significant restructuring at this time.

Statistics. The Statistics Department drew the attention of the Committee because of its small size and low undergraduate enrollments. Despite its size, the Statistics Department has enjoyed an excellent national reputation for many years, and it represents a field important to the social and natural sciences at Yale. Recently, however, the Statistics faculty has diminished in size to only two tenured and two nontenured members, calling into question the department's long-term viability. The Committee discussed this situation as well as the department's current and potential contributions to the teaching program of the University. The Committee recommends that Statistics be retained at its current size and be given the opportunity over the next three years to fill its open senior position. At the end of that period, should efforts to fill the position prove unsuccessful, a review of the department and the teaching of statistics at Yale would be appropriate.

Reductions in Other Departments

The Committee's recommendations for the departments undergoing significant restructuring would remove 49 junior equivalent positions from the faculty. After further conversations between the subcommittees and the chairs of the divisional advisory committees, the Restructuring Committee developed specific recommendations for each of the remaining departments. These recommendations resulted in 65 further reductions for a total of 114, or 10.7 % of the 1067 junior faculty equivalent positions currently budgeted in the Faculty of Arts and Sciences. Although divisional parity was not a goal, the combined recommendations do not alter the current relative sizes of the divisions significantly. A list of all departments follows, with their current sizes and the number of junior faculty equivalent reductions recommended:

<u>Departments</u>	<u>Current JFE</u>	<u>JFE Reductions</u>
Physical Sciences		
Applied Physics	20	5
Astronomy	12.5	0
Chemistry	42	3
Computer Science	25	3
Engineering	53	12
Geology and Geophysics	34	3
Mathematics	44.5	3
Operations Research	11	11
Physics	50	3
Other Positions	14.5	0
Total	306.5	43
Biological Sciences		
Biology	55.5	3
MB&B	36	0
Other Positions	3	0
Total	94.5	3
Social Sciences		
Anthropology	27.5	1
Economics	68.5	7
Political Science	42.5	3
Psychology	46	2
Sociology	27.5	11
Statistics	9	0
Other Positions	9	0
Total	230	24
Humanities		
African & Afro-American Studies	12.5	1.5
American Studies	12	(+1)
Classics	23	2
Comparative Literature	16.2	1
East Asian Langs. and Lits.	10	1
English	71.8	5
French	24.5	3
German	16.5	2.5
History	71	5
History of Art	34	2
Italian	6	0
Linguistics	10	10
Music	23	3
Near Eastern Langs. and Civs.	13	1
Philosophy	26	4
Religious Studies	25.7	2
Slavic Langs. and Lits.	14	1
Spanish and Portuguese	17	1
Other Positions	10	0
Total	436.2	44
Total Faculty of Arts and Sciences	1067.2	114

Implementation

Implementation of these recommendations will take time and thoughtful planning. Since reductions will be accomplished only by attrition (retirements, resignations, and expiration of term appointments) and since after 1993 the timing of retirements cannot be predicted, the full restructuring process may not be completed until after the end of the decade. Throughout the process the divisional advisory committees, in conjunction with the Steering Committee of the Faculty of Arts and Sciences, must monitor the balance of positions among departments and make adjustments as educational changes require.

With respect to departments scheduled for elimination, all tenure appointments and all current terms of appointment for nontenured faculty will be honored. For these departments and for those recommended for major restructuring, the Executive Committee, the divisional advisory committees, and special advisory committees, consulting closely with the departments concerned, will determine the time frame for closing designated departments, reassigning faculty as necessary, and scheduling other reductions. After consultation with the departments, the Executive Committee of the Graduate School will discuss and take whatever steps seem appropriate with respect to current and potential graduate students.

In departments not scheduled for elimination or major restructuring, detailed implementation of the Committee's recommendations will be carried out by the departments themselves in consultation with the divisional advisory committees and the Steering Committee of the Faculty of Arts and Sciences. All reductions will take place by attrition over the rest of the decade, but largely in the next 3 to 5 years.

In departments not scheduled to close, assistant professors will continue to have the same opportunity for reappointment and promotion to term associate professor as they had before restructuring. Nontenured faculty in these departments will continue to be considered for tenure positions according to existing policies of the Faculty of Arts and Sciences. Opportunities for promotion to tenure will depend, as always, on the qualification of the candidate, the availability of resources, and the department's demonstration of the need for a tenure appointment in the relevant field. To keep nontenured faculty apprised of their prospects for tenure, all departments, and particularly those scheduled for significant restructuring, should keep faculty as fully informed as possible about their academic plans and the fields in which tenure appointments might be made in the future.

Under a policy adopted in the fall of 1989, when a senior faculty member retires or resigns, one junior faculty equivalent position is retained by the department and one is transferred to the appropriate divisional pool. The Restructuring Committee reaffirms the value of this policy and urges that the practice be continued, while recognizing that the pressure on departments undergoing reductions may temporarily reduce the number of positions that will accrue to divisional pools. During the period of restructuring the divisional advisory committees will play an especially important role, for rigorous attention to the divisional pools and a very careful allocation process will be required to maintain the flexibility and vitality of the appointments process. The divisional pools embody the resources available for responding to educational initiatives and special opportunities. An important reason to protect them is to ensure the continued opportunity to promote outstanding candidates to tenure positions.

Additional Recommendations

In the course of its deliberations, the Committee identified three areas of the Faculty of Arts and Sciences that warrant further study.

1. The Graduate School. Over the past decade there has been considerable growth in graduate enrollment because of larger classes of incoming students and an increasing length of time to the Ph.D. For example, from 1979-80 to 1990-91 the number of Ph.D. students in the first and second years increased from 681 to 824 (or 21%). The number of Ph.D.s awarded annually has grown only half that much. Given the significant increases in stipends, teaching fellow compensation, and new dissertation fellowships over the period, expenditures in the Graduate School have grown rapidly relative to other parts of the University's budget. Steps have recently been put in place to reduce enrollment in the later years, but it is important to monitor the situation carefully and to set reasonable departmental targets for the future.

For many reasons, and in particular because the number of faculty will be reduced over time by more than 10%, the Committee recommends that the enrollment and financial structure of the Graduate School be reviewed and that the number of incoming graduate students be reduced. The Restructuring Committee believes that there are now more graduate students in certain fields at Yale than faculty can effectively supervise, and that this problem is likely to become more acute as the number of faculty declines. Given the complexities of the budget, differences among departments, and the length of time a graduate student may be enrolled, it may be appropriate to appoint a special committee reporting to the Dean of the Graduate School to assist in this review.

2. Language and Other Non-ladder Instruction in Yale College. The use of non-ladder faculty, including graduate students, to teach certain courses, particularly foreign languages and expository writing, increased significantly over the past decade. Without presuming to determine the appropriate level of such teaching, the Committee recommends that a committee be appointed to examine this area with respect to the quality and efficiency of non-ladder teaching, and to determine whether all of the courses so taught have a sufficiently high priority to justify the expenditure and the heavy use of this faculty. Given student demand and the faculty's expressed commitment to languages and expository writing, it is unlikely that there will be large savings in this area, but it would be inappropriate to overlook this extensive area of instruction.

3. Interdisciplinary Programs and Special Majors. The Committee recognizes the importance at Yale of graduate and undergraduate interdisciplinary programs, the difficulty those programs often have in securing the faculty and support necessary for their continuing quality, and the lack of an adequate process for monitoring these programs, particularly when they cross divisional boundaries. The Committee therefore recommends the institution of a standing Committee on Interdisciplinary Programs and Special Majors to work in conjunction with the divisional advisory committees and to report on a regular basis to the Steering Committee of the Faculty of Arts and Sciences. This committee would monitor all programs informally every year and formally every five years to confirm the quality and vitality of those programs and to ensure that the resources devoted to them are clearly identified and effectively used. This committee would also be charged with recommending the creation or elimination of such programs.

As its first assignment, for the purposes of restructuring, over the next two years the new committee should review all special programs in light of the available resources. By the spring term of 1993-94 the committee should make its recommendations for

consolidation or elimination of programs. This committee should develop a clear understanding of the number of faculty positions and the amount of staff and program support -- whether present in departments or allocated to the individual program -- that are necessary and available for each program. It should also secure from the divisional pools some resources that can be shifted from one program to another as appropriate.

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The recommendations of the Restructuring Committee are made after many months of consultation, analysis and discussion. Although a reduction of the size contemplated cannot be made without risk to the quality and productivity of the faculty, the Committee has attempted to minimize those risks and to establish a framework that will enable the reductions to be made over time in a responsible and constructive way. Some positive effects should follow from this process. Departments and divisional committees will be able to make academic plans with a clear understanding of the resources that will be available to them over the next decade. Since the somewhat smaller Faculty of Arts and Sciences here envisioned will be sustainable by the resources of the University, the whole educational enterprise will rest on a firmer footing. These changes should ensure that the Faculty of Arts and Sciences will be able to meet its important academic goals in the difficult years ahead.