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BUILDING FROM STRENGTH, A NEW COLLEGE FOR CARNEGIE-MELLON UNIVERSITY.

CARNEGIE-MELLON UNIV., PITTSBURGH, PA.

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A DESIGN FOR A NEW COLLEGE OF HUMANITIES AND SOCIAL SCIENCES AT CARNEGIE-MELLON UNIVERSITY IS PRESENTED. THE GOAL OF THE NEW COLLEGE IS TO INITIATE IN THE STUDENT A PROCESS OF EVOLUTION WHICH WILL CONTINUE TO SHAPE HIM THROUGHOUT LIFE. THE CURRICULUM IS DESIGNED TO HELP THE STUDENT BECOME AN INTELLECTUALLY INDEPENDENT AND EMOTIONALLY RESPONSIBLE ADULT AND TO INTERRELATE HIS SPECIALIZED AND HIS GENERAL KNOWLEDGE. A CHAPTER ON THE FRESHMAN YEAR DESCRIBES A PRESCRIBED CURRICULUM CONSISTING OF A "FREE" SEMINAR TO DEAL WITH THE ADVISING PROBLEM, A SEMINAR IN A SPECIAL AREA, AND COURSES IN DEVELOPMENT OF SELF, LITERATURE AND THE ARTS, AND MATHEMATICS. OTHER CHAPTERS DESCRIBE THE STUDENTS, FACULTY, NEEDED RESOURCES, THE POSITION OF THE NEW COLLEGE WITHIN THE UNIVERSITY, AND THE "METACURRICULUM" TO PROVIDE ADDITIONAL LEARNING EXPERIENCES OUTSIDE OF THE CLASSROOM. THE CONCLUDING CHAPTER PROVIDES AN ANALYSIS OF THE WAYS IN WHICH THESE PROPOSALS DIFFER FROM MUCH EDUCATIONAL PRACTICE NOW CURRENT IN THE UNITED STATES. (BN)

BUILDING FROM STRENGTH

A NEW COLLEGE

FOR

CARNEGIE-MELLON UNIVERSITY

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PREFACE

The undersigned committee have been at work since February 1, 1967 studying and debating the design of a new college of Humanities and Social Sciences. Four of us -- Hayes, Schoenwald, Steinberg, and Woodruff -- began to work in February. Three -- Beaman, Moore, and Wolfenstein -- joined the group in June. Bronfenbrenner has been meeting with us since September. We have considered a great many written sources: the letters of suggestion written by members of the faculty and summaries of those suggestions prepared by the officers of the General Faculty, the position papers of departments and deans, and numerous studies of the present state and present needs of higher education (a partial listing is appended to this report). We have consulted formally a number of people on the campus: Dean Mullins and Dean Carlin of Engineering and Science; Dean Rice and Professor Winsand of Fine Arts; Dean Simon of the Graduate School of Industrial Administration; Professor Friedberg, chairman of

the General Faculty; Mr. Wenger, Director of Admissions; and a group of eight very helpful juniors from all colleges on the campus.

We have arrived at a shared vision of a new college that we recommend with enthusiasm to the administration and the faculty, and we have come to agreement -- in some particulars, partial and provisional -- on ways of implementing the vision through curriculum and administrative arrangements. At this time we want to bring the results of our deliberations to the faculty and administration for consideration.

We propose that the new college begin its operation with an experimental group of about fifty freshman students: twenty-five women from among those admitted to Margaret Morrison Carnegie College who express their wish to enter the experimental program, and twenty-five men specially recruited for this pilot class. We believe it can be arranged for these fifty students to be joined in some of their general-education courses by selected freshmen from Fine Arts and Engineering and Science. We believe it would be very desirable to start this pilot program in the fall of 1968.

This recommendation has a number of implications that may be usefully spelled out. We hope that the planning committee which has drafted this report can continue to function, with time released for its work, through 1967-68. We wish to plan and guide preparation for the pilot class, including course planning. We wish to hold a number of meetings on questions that remain to be resolved and matters that need to be further refined. Some of these should be open "hearings" on announced subjects that any interested

faculty member may participate in, and some invited conferences of those concerned with special topics. We wish to prepare a detailed timetable of development for the college and for phasing out portions of our present program that will become redundant. Our assumption is that the four years of the new program should be developed serially as the pilot class moves into them, and that the pilot class will be followed yearly by larger classes until the college grows to a full student complement of 600 to 800. One of the best ways to finance the development of the new college, we suggest, would be for the University to seek a large grant to underwrite the cost of designing and implementing the curriculum for the pilot class's four years with us.

Richard B. Beaman
Martin Bronfenbrenner
J. Richard Hayes
Richard A. Moore
Richard L. Schoenwald
Erwin R. Steinberg
Lincoln Wolfenstein
Neal Woodruff, Jr.

GOALS I and program

A college education is meaningful and valuable only insofar as it starts in the student a process of evolution which will continue to shape him throughout life. This evolutionary process must give the student:

1. A continuously deepening and broadening understanding of himself and of the world;
2. A disposition to strive for humane goals and values;
3. The ability to act effectively insofar as he can in helping to solve the manifold and critical problems facing mankind in the last third of the 20th century;
4. A growing enjoyment of life both at work and at leisure;
5. Finally, and most important, independence. As we teach him, he should have less and less need for teachers. He should acquire the skills and the taste for educating himself. He should outgrow his need for us.

These, then, are the goals of the new college. Before they can be accomplished, many obstacles must be overcome. Just as this committee began its work in February, a letter came to Dean Steinberg from a freshman student:

> I have come to look at my entire freshman year as merely a checklist of subjects enabling me, at some point, to study what I'm interested in and what I feel is relevant. Doubtless you will respond that all freshmen need a common basis for further study, have patience. All freshmen need to be given direction and guidelines, have patience. Perhaps you are right in these things to a certain extent. But these ideas must become secondary when the requirements strangle me and when I feel that the most productive thing I do all week is work in the Tartan Grill, making $1.35 an hour. I expected college to be the most vital and stimulating time of my life. It is a disappointment.
>
> As an illustration of what I am feeling I would like to quote from J. D. Salinger's Franny and Zooey (page 146, Franny is speaking): "I don't think it would have all got me quite so down if just once in a while -- just once in a while -- there was at least some polite little perfunctory implication that knowledge should lead to wisdom, and if it doesn't, it's just a disgusting waste of time! But there never is! You never even hear any hints dropped on campus that wisdom is supposed to be the goal of knowledge. You hardly ever hear the word "wisdom" mentioned."

We have since found this cri de coeur echoed time and time again in the voluminuous studies we have consulted on the American college and university. And of course it has been loudly shouted by students from New Haven to Berkeley. We heard it again, loud and clear, from our own Carnegie Tech juniors when we called them in for advice. Certainly, we cannot educate the student if he thinks that what we want to teach him is irrelevant. He must understand clearly where his education is leading him.

If one eavesdrops on student conversations, it becomes apparent that intellectual exchange among students is a rarity. This is not to say that individual students do not have worthwhile intellectual concerns. Almost all of them do, but they do not seem eager to share these concerns with one another. They do not seem to create an exciting intellectual environment for one another. We cannot educate our students well unless we make our campus an exciting intellectual environment.

Often we find C. P. Snow's two cultures at war in our class rooms. We see art and science students mistrusting one another, drawing ever farther apart, each side retreating more and more deeply into its own specialty. We cannot educate our students broadly unless we can convince them to accept, understand, and value both cultures.

A college can prepare students for this world, but not if it decides merely to offer courses which a student can take with half a mind, or less, involved. We do not intend to allow him to escape with good grades dutifully earned while he sits passive in class. We will not permit him to emerge with ideas and values unchallenged, a sheepskin-sanctified version of the person he was when he matriculated. We will use all of our experience, individually and collectively, to touch him, to move him, to change him.

We propose to create a college culture that will engage the student deeply, that will be and become a part of himself -- a college culture so rewarding that he cannot stand apart from it.

To educate our students, then, we must enlist their enthusiastic support for a cooperative venture in exploring the whole range of intellectual life. How do we propose to do this? Here in brief outline is our program:

We propose a curriculum which consists of two interrelated strands. The first occupies most of the freshman and sophomore years and part of the junior and senior years. The purposes of this basic program are: first, to aid the student in making a transition from high school adolescent to intellectually independent and emotionally responsible adult; and second, to interrelate his specialized and his general knowledge.

The means that will be used to achieve these goals are:

1. A group of courses that
   a. engage the student deeply in the activities and modes of behavior of three broad intellectual and creative areas, enabling him to identify more surely his own interests, talents, and competences in mathematics, science, and technology, in the social and behavioral sciences, and in the arts and humanities.
   b. give him understanding of the forces that have shaped and continue to shape him and his world -- physical, chemical, biological, psychological, social, cultural, and artistic.

c. acquaint him with his own potentialities and those of men in general by requiring an imaginative grasp of other times, places, societies and their speculations, feelings, values, and projections of self in art.

d. foster self-knowledge by compelling him to reexamine the ideas and values he has brought to college in the light of what he is learning of these disciplines, forces, and potentialities.

2. Support of the curriculum by

a. an intensive series of required lectures, plays, concerts, and activities (the metacurriculum) designed to expose the student to his environment, especially the urban environment, in all its variety -- natural, cultural, intellectual, social, and political.

b. an advisory system (centered for freshmen in the "free" seminar described below) that provides him with real and sustained contact with a faculty member who will advise him on his academic progress, examine critically his academic work-habits, comment on his intellectual strengths and weaknesses, and encourage him to develop his capabilities to their limit.

In the second curricular strand, the student is expected to exercise his intellectual maturity to make or confirm a career choice, to pursue a "major," to carry out independent scholarly research, and to accept considerable responsibility for his own education.

The proposed curriculum, to be discussed in detail in the following sections, is outlined in the accompanying chart.

In each semester, we expect the students to take four courses, each approximately equivalent in difficulty to our present 12 credit hour courses, and to participate in frequent "metacurricular" activities. In addition, in the freshman year, students participate in the "free" seminar.

Math, Science and Technology	Literature and the Arts	History and Social Science	
Mathematics (Computer)	Literary Imagination	Development of Self	Elective
FRESHMAN			
Mathematics (Structures)	Introduction to the Arts	Historical Understanding	Freshman Seminar

Science	Arts and Society	Social Science Course	
SOPHOMORE			
Science	Arts and Society	Social Science Project	

Science and Technology (Tentative)			
JUNIOR			
			Ethics

			Twentieth Century
SENIOR			
			Twentieth Century

FRESHMAN II

year

1. The "free" seminar - the major point of personal contact between the student and the college -- devoted to providing the student with academic feedback, with intellectual stimulation beyond the usual range of usual academic subjects, and the opportunity to tell the college what he thinks of it.

2. The pass-fail freshman year - designed to give the student frequent feedback and yet allow him to be motivated by something more mature than the traditional grades.

3. The developmental course - designed to force the student to examine himself in relation to the college, to his family, and to society.

4. The mathematics course - intended to break the "mathematics barrier" for non-science students by giving them enough mathematical skill and confidence so that they will feel comfortable in science courses. The course will include training in the use of the computer.

5. The arts course - a laboratory course in which the student not only looks and listens but also does.

6. The seminar in a special area - small interested groups of students pursue scholarly research under the careful supervision of a faculty member.

Freedom and constraint in the curriculum. It may strike one as paradoxical that we have chosen a largely prescribed curriculum for the freshman year as a means to lead our students to intellectual freedom and independence. We feel that this choice is the sensible one to make, however, for a number of reasons. The course of study which we have prescribed is designed to remove some common constraints which frequently limit student choice, and to make the later choices available to the student more meaningful.

Many humanities students avoid science courses because they believe that they cannot cope with the mathematics involved. Our mathematics course is designed to show them that they can handle mathematical thought (as any intelligent human can), and thus to open to them a wide range of choices which had previously been closed.

Similarly, many of the verbally and mathematically sophisticated students may avoid activities such as painting or the dance because they would feel embarassed to do poorly. Our introduction to the arts course is designed to provide the student with the opportunity to discover interests, and perhaps talents which he might never have discovered by himself.

A Freshman Elective. We do feel that there is a valid function to be served by an elective in the freshman year. Many students come to college with a compelling interest in some academic topic such as anthropology. In such cases, we feel that it would be unwise to force the student to delay a year in pursuing his special interest, and that he should, therefore, elect a course in a field which strongly attracts him.

We are very much aware of the benefits accruing to a student skilled enough to read literature written in a language not his own. We expect that our department of Modern Languages will continue to develop and expand its offerings in foreign literatures.

Descriptions of the Freshman Courses. We do not regard the contents of the courses we have outlined below as fixed. The specific descriptions that we have presented are intended merely as examples which would fulfill the course goals. As a committee we determined the courses which would best realize the aims we had set for the new college, and then we asked an advisor, usually one of our members, to suggest possible content for each of the proposed courses. Detailed planning for the new courses will be carried out by special groups in consultation with the appropriate departments.

Mathematics: The mathematics course is aimed at humanities and fine arts students and is intended to

a. introduce the student to the nature of mathematical thought and to the nature and possibilities of the computer. (Both will help him to a better understanding of modern science.)

b. reduce the student's fear of mathematical thought and of computers;

c. give the student sufficient mathematical skill to make him comfortable in later science courses.

We propose that the first semester be Computer Programming and Problem-Solving and Artificial Intelligence, and the second semester, Mathematical Structures and Models. The first course may take as a point of departure for its design the present S-600. S-600 will in fact be taught this fall to a group of students from the college of Fine Arts and Margaret Morrison Carnegie College, and from this experiment a very good idea may be derived of how best to teach these matters to freshmen in the new college.

The second course might include the following topics:

I. Mathematical language and the nature of proofs and manipulation of symbols, in particular sets and functions.

II. Mathematical structure

   a. How it is imposed - axioms
   b. How it is compared - isomorphism, homeomorphism
   c. How it is categorized - algebraic, order, topological

III. Patterns of science, nature, society and behavior which can in a plausible way be given mathematical models; for example,

   a. Information Theory
   b. Network Theory
   c. Probability
   d. Linear Programming

The committee agrees that an understanding of calculus would extend invaluably the student's understanding of mathematics and would open many doors for him in other fields dependent on mathematics. Professor Moore has agreed to attempt an experiment during the second semester of the present academic year in teaching caluculus to students prepared in mathematics much as freshmen in the new college will be. Our hope is for a way of including a meaningful introduction to calculus in the mathematics component of the freshman program.

The Development of the Self: This course could be taken by students in any of the undergraduate colleges on our campus. Its purpose is to:

a. orient the student to his new life in Carnegie-Mellon University and help him to adjust to its more intense intellectual demands.

b. help him to understand the developmental, social, and psychological forces which have brought him to this point, and which will continue to shape him hereafter.

This course falls more firmly in the field of psychology than any other, but it will use materials and modes of examination from anthropology and sociology as well. It will be organized around certain problems that have or can be given immediate relevance for the student; these problems will be examined in the disciplined ways of the fields mentioned. An example of such a course is outlined by our advisor in psychology as follows:

1. The College Experience

A. The nature and origin of the University

READING: A history of the university in western culture
The Harvard "red book"
The college catalogue and other policy statements
A history of Carnegie Tech
Selected articles in The American College
Readings on the "two cultures" problem

LECTURES: The nature of the private college. Carnegie's relation to the community and to its benefactors and alumni. The nature of the opportunities available for study and relaxation.

ASSIGNMENT: Design a college

SEMINAR: Discuss selected designs

B. The problems of students at college

READING: Mace: The Psychology of Study.
Freud: The Psychopathology of Everyday Life.
Cases in behavior modification
Selected articles from The American College

LECTURE: Analysis of case histories of students with emotional and study problems. How to tell when you need help and where and why to get it. Study techniques - organization of time, lecture notes, self evaluation, etc. Normative data.

ASSIGNMENT: Keep a study log and then analyze it. Design and perform a study experiment. Do a small literature search.

SEMINAR: Compare study logs

SPECIAL SEMINARS: Creativity, emotional problems, and study problems. (Each student takes only one.)

2. Forces which form the individual

A. Varieties of parent-child relations

READINGS: Sears, Maccoby, & Levin: Patterns of Child Rearing
Benedict: Patterns of Culture
Mead: Growing up in New Guinea

LECTURE: The Kibbutz and other child raising systems.
Films on ape families. Work of Harlow and Spitz.
Variations within American culture.

SEMINAR: Compare child-parent relations of self and others in group.

B. The Process of Development

READING: Freud: Three Contributions to the Theory of Sex
Paiget: The Moral Judgment of the Child

LECTURE: Theories of emotional and cognitive development

ASSIGNMENT: Visit a nursery school

C. Pre-College Education

READING: Skinner: Walden Two
Neill: Summerhill
Holt: How Students Fail

LECTURE: Students excused from class to prepare selected topics on their own initiative

ASSIGNMENT: Analyze an incident in, or an aspect of, one's own pre-college experience

SEMINAR: Joint seminar with high school students on pre-college education

D. Social Presures

READING: Festinger: When Prophecy Fails
Sargent: The Battle for Men's Minds
Experiments by Asch and Milgram

LECTURE: Nature of social forces; conformity; studies of mass communication

ASSIGNMENT: Compare the communications of antagonists in a public controversy, such as Milk Control.

Introduction to the Arts: We propose a course resembling the one Professor Winsand has designed and offered through the Curriculum Study Center in the arts. It involves some lecturing, perhaps for one hour a week, and more importantly, several hours spent weekly in studio or laboratory work in the non-verbal arts. It begins with an active introduction, to the elements of the arts. It is intended to develop an understanding of visual, tactile, aural, and kinetic elements and their characteristics, such as shape, color, texture, line, pitch, intensity, duration, etc., which make up the raw material the artist uses.

The course moves on from initial acquaintance with these elements to their synthesis in works of art. Students are given problems in creation which do not require exceptional talent -- such problems as the composing of sounds on a tape recorder, the construction of a musical instrument from simple materials, the expression of feeling in dance or mime, the construction of mobiles and stabiles, and the use of interacting colors in two- and three-dimensional forms. A problem may result from the unequal training entering students will have had in the various arts; the solution must be to use the special training of individual students to enrich the experience of the group. Such a course would enable students to appreciate the arts by allowing them to see and solve problems the artist

solves. The emphasis is not on the history of art or on technical mastery, but on problems the artist faces.

Literature: We think of the course in the literary imagination as a study of literature itself, not of literary history, methods of scholarship, critical approaches to literature, or the separable social or psychological perception literature includes. The course will confront the student with the literary work as an image -- just as he might be confronted by the image that is a painting, a piece of music, a ballet, or a live dramatic performance. The student should live with a literary image and in it for a time, and learn to talk and write about it meaningfully and without cant or pedantry. The course should provide a vital and dramatic experience of coming to terms with literature. In a sense it should be a course in learning to read, in the fullest sense of the term. The student should become free within the work of literature and he should further be led to see its manifold relation to other things outside that illuminate its meaning -- history, philosophy, other arts, psychology, society, and so on.

The works chosen for reading and discussion will by and large be works by major writers, and works not only of English and American literature but of other literatures as well. The works should have some appeal to the present college generation with its capacities for profound emotional experience, for ironic and iconoclastic questioning, and for idealism. A

number of the works chosen should be from the nineteenth and twentieth centuries, though some should also come from earlier times, so that the course will bear witness to the continuity of human experience. Our advisor in English suggests the following list of works to choose from in making up a course:

Sophocles, Oedipus, Antigone
Euripides, The Trojan Women, The Bacchae
Aristophanes, Lysistrata
Petronius, Satyricon
Chaucer, Canterbury Tales
Cervantes, Don Quixote
Rabelais, Gargantua
Shakespeare, Henry IV, Hamlet, As You Like It
Jonson, Volpone
Donne, poems
Moliere, Tartuffe, The Misanthrope
Swift, Gulliver's Travels
Pope, Rape of the Lock, Epistle to a Lady
Voltaire, Candide
Diderot, Rameau's Nephew
Blake, poems
Byron, Don Juan
Gogol, "The Overcoat," "The Nose"
Melville, Moby Dick
Dickens, Bleak House or Our Mutual Friend
Tolstoy, The Death of Ivan Ilych, Father Sergius
Dostoievsky, Notes from Underground, Crime and Punishment
Flaubert, Madame Bovary
Ibsen, An Enemy of the People
Conrad, Heart of Darkness, Lord Jim
Gide, The Immoralist, Strait is the Gate
Mann, Tonio Kroger, Felix Krull, Confidence Man
Joyce, Dubliners, Portrait of the Artist as a Young Man
Kafka, Metamorphosis, The Trial
Lawrence, The Man Who Died
Eliot, poems and plays
Faulkner, The Bear, The Sound and the Fury
Brecht, Galileo, Mother Courage
Pirandello, Henry IV

Hemingway, In Our Time
Sartre, No Exit, The Flies
Auden, poems
Cary, The Horse's Mouth
Camus, The Plague

The course should include, as well as reading and interpretation of literature, some creative experience to parallel students' experience in the non-verbal arts. Students might well be asked to write some poems in strict forms, such as blank verse or heroic couplets. Further, they might be given some experience in reading and acting a drama. We intend the consequence of this course to be awareness of literature, skill in reading it, and more important, self-awareness stemming from recognition of aspects of one's own experience and being in the literary image.

History: The committee would like to see a course which builds on the History departments' work in making the teaching of history meaningful by introducing students to the working methods of the historian, and by helping students to carry out, at increasingly complex levels, the historian's tasks of sifting and analyzing information. The objective of this course is to make the nature of historical understanding clear to students so that they learn to place themselves and their culture in historical perspective. We cannot leave unchallenged their certainty that the world began with their earliest memory, their resigned conviction of the depressing and inescapable uniqueness of each generation's pressing concerns, or

their assurance that a civilization ends for all practical purposes when an individual -- that is to say, any of them -- dies.

We want students to see how the past determines what an individual or a group does, and can do. This course will treat both with the gathering and the interpretation of data in order to deal with questions which really are questions: the answers cannot be looked up at the back of any book. Our advisor in history suggests attention in the course to problems such as:

Liberty and control

a. Some comparative studies -- how "free" was life in 5th century Athens, 14th century Florence, 19th century Pittsburgh?
b. Cigarettes, air pollution, fluoridation -- history and present status of the controversies, studied to illuminate this problem: how does someone get into the position of telling you what to do "for your own good"? Material of this kind connects also to the Development and Ethics courses.

Past, present, and future of women

a. How to get facts, given the creation of most surviving records by men
b. How to plot a curve (of historical development; non-anatomical)

The history of a rock 'n roll song or group, or a pop artist

a. An exercise in treating the present as history
b. Training in the use of a variety of materials which can prove valuable in historical interpretation
c. This exercise would connect to the freshman Arts course, perhaps, and to the sophomore Art and Society course, surely.

A biography of a parent or grandparent

a. This relates to other courses such as Development of the Self. It leads toward Carl Becker's goal: "Everyman His Own Historian."

Exploration of the history of work and play

a. These central human concerns have scarcely been touched by historians. The field is wide open: that is to say, undergraduates may well have real thrills of discovery.
b. These questions of work and play are connected to the whole content of the general education program, and to the student's choice and pursuit of a vocation. Study of the evolution of the idea of a profession, for example, may help a student considerably to gain more insight into his perplexities about a life's work. The analysis of the shape of past careers, particularly of men who changed decisively in later life, is another tactic worth considering.

War and peace

a. Theories of the causation of war
b. Studies of a variety of conflict situations: colonial wars in the 19th century, Korea in the 1950's, the Thirty Years' War, assorted Crusades, American Indian wars (intertribal, and white man against red)
c. Reactions to war
   civilian and military morale
   Stouffer, et al., The American Soldier; J. Glenn Gray, The Warriors
   Vietnam studied as it developed, and as participant-observers perceived it
d. How a war ends
   Rudin on 1918; studies of the ending of World War II
   The problem of "permanent" peace.

Seminar in a Special Area: The purpose of the freshman seminar is to provide the student with the experience of exploring a rather narrow topic in considerable depth. In this respect, it contrasts with the other courses in the freshman year which aim primarily at mastery of fundamental concepts. The seminar will serve as the student's introduction to scholarly research. We intend that the student select the seminar which most appeals to him from among a number available. These seminars must be designed by individual members of the faculty. They should deal intensively with a subject

or problem which is a part of the ongoing research of the professor, or which he wishes to study with the collaboration of perhaps a dozen freshmen. It may be a project in any field of learning. It may involve on-campus work of a scholarly, creative, or experimental sort, or it may involve off-campus observation, investigation, or experimentation. The more likely it is to draw students and professor enthusiastically into a shared enterprise, the better. We suggest that the members of the faculty who are interested in offering such seminars propose them in some detail to allow some to be chosen in a kind of annual competition.

The goal of this seminar is to enable students in the first year to become genuinely active in a specialized intellectual pursuit which they choose for themselves. It may or may not prove to be a study preparatory to the major the student later chooses; it will in any case give him an introductory but intense experience of specialized academic endeavor.

The "free seminar": This seminar serves a number of functions. It is an advising mechanism in which small groups of students consider together their academic problems. A preceptor will guide such discussions and serve as the academic advisor to each student in the group. The seminar will serve to stimulate the student's interest in the intellectual and cultural environment and to introduce him to the metacurricular activities which he will be expected to engage in during his college career. The preceptor will call students' attention to cultural events on-campus and off-campus, will

arrange from time to time for the whole group to attend some events together, and will lead later discussion of them. Such cultural discussion can be wide-ranging -- symphony or opera performances, art shows, poetry readings, sessions of jazz or folk music, presentations by speakers, Pittsburgh's architectural achievements and horrors.

The seminar will deal not only with students' academic problems but also will give the college the advantage of their ideas and criticisms of its courses and programs. This seems to us an important function. The student should feel that the feedback he provides to the college is valued and listened to, and the college should have the benefit of what its students say about the way it is affecting them.

The seminar will sometimes function as a debating forum on questions which concern students intimately. We conceive debates on such matters as something more and something more formal than mere bull sessions. We suggest that a pair of students be made responsible for arguing the negative and affirmative sides of an announced question, and for preparing an informed and controlled argument.

Finally, the seminar will serve to aid the college in evaluating the student in his first year.

We want to leave the preceptor free to do as creative a job as he can of maintaining personal and intellectual contact with each of his students and

within the group. We assume that he will try to make the seminar serve all of the functions we have enumerated, but the amount of attention to each must be left to him to decide as he sees the evolving needs of the group.

Each seminar group will include twelve students who will meet with the preceptor for one-and-a-half to two hours each week in a seminar room. The atmosphere will be informal, with coffee available. Occasional meetings should be scheduled in the preceptor's home or elsewhere off campus for special events. The members of each seminar group should be selected so as to reflect the diversity of the college -- a cross-section with respect to race, religion, sex, and intended major. The preceptors must be selected carefully for their maturity and their ability to relate to young students. We hope that a warm personal relation will develop between the preceptor and his students. Such a relation will let the students feel free to bring problems to the preceptor, and it will insure that the preceptor is actively concerned with their welfare. Students should know that he will be their "friend in court" if they should need one.

Study-Skills Center: Beyond the free seminar we propose one further expedient for helping our students solve problems that many freshmen have: a study-skills center. It would be a small operation staffed by psychologists trained in recognizing and remedying difficulties in learning. The student might go to it for help on his own initiative or he might be referred by his preceptor. Typically the center would work intensively with the student for

not more than a week or two helping him perceive the ways in which his methods of study are ineffective and can be made less so. The center might help the student keep and analyze a log of his own studying, instruct him on taking notes, suggest ways of organizing his time effectively, and help him find ways of effectively studying independently. We do not want students to go without help in solving these elementary but crucial problems.

Physical Education: We believe that educated men and women are nevertheless individuals with bodies, individuals whose health would benefit greatly from participation in individual and group athletics. We urge the provision for the new college of a wide range of instruction and participation in athletic activities that prove rewarding during college years and, even more importantly, in the endless decades of weight-watching beyond.

English Composition: One final note is required on the freshman year: we have omitted from it the traditional course in English composition. We feel it is time, as other universities and colleges have felt, to put the responsibility for training in the effective use of language on the high schools which prepare our students, the whole of the college faculty that instruct them, and the students themselves. We assume that the freshman year will include a great deal of practice in the uses of language, both written and oral. Indeed, some practice in the rhetoric of argument is an explicit function of the free seminar. In any case the omission of a separate course in composition is not to be construed as indifference to the aims of such a course. Precisely the reverse is true.

Evaluation: The Pass-fail system: In the usual grading system, grades serve two functions: first, they provide the student with information about his performance, and second, they serve as a permanent record of that performance -- a permanent record which is used by others, teachers and employers, to make decisions about the student. We feel that such a grading system would seriously hamper the program of the new college. If an initiation period is to have its full effect in helping the student to operate effectively and independently, a new grading system is necessary. We propose instead a dual grading system in which the student is given two kinds of grades, temporary and permanent.

The temporary grades are intended to provide the student with frequent and detailed feedback about his performance in his courses. No record of these grades is kept beyond the freshman year. We propose that the student be given just one grade of pass or fail as the permanent record of his performance in the freshman year -- not one grade for each course, but one grade for the whole freshman year. It is to be based not just on the student's course work, but more generally on the student's total intellectual performance. A grade of pass means that the student can be regarded as a valuable addition to the sophomore class.

We hope that the pass-fail system will free the student, during the freshman year, from the fear of "spoiling his record." This should allow the student to feel freer to experiment with new study methods and make him

more likely to establish new and more adult criteria for evaluating his performance. Most important, by declaring a temporary moratorium on extrinsic rewards and punishments, it will give him the opportunity to become deeply engaged in intellectual and artistic pursuits for their own sake.

the III

METACURRICULUM

We intend to use some of the student's time outside of class and classwork for additional experience in learning to be at home in the world. We recommend the provision of at least one event a week drawn from the following very partial list: lectures, concerts, visits to plants and laboratories, art exhibitions (with intelligent gallery talks), extended sessions with non-professional teachers such as businessmen or laborers or physicians asked to talk with students about their lives, poetry readings, plays, dance performances, explorations of the urban environment -- including coffee houses, slums, and city administration. Participation in these events, hopefully motivated by the student's own interest and enthusiasm, will be considered an essential, not a peripheral part of his life and activity in college. Among freshmen, the events will be discussed in the "free" seminar.

We hope to make maximum use of the dramatic, artistic, and musical events, and the lectures, already available on our campus, and in addition we want to add some events which may have to be subsidized in part by the

University. The cost connected with events outside the campus (transportation, tickets, etc.) should be considered part of the student's necessary expenses, and scholarship aid should take these expenses into account.

We do not intend to settle for reaching students merely in class. We are dealing with students who have to be brought into the thoughtful, rich, and rewarding adult world in a great variety of ways. We want them to talk to each other, and we are determined to furnish them with plenty to talk about; not only "bull session" material, but also a large number of ideas and experiences which demand investigation and reflection.

We recommend the creation of an Activities Board for curricular experimentation, to which any student or group of students could apply for funds to develop well-considered projects.

We hope that the new college will publish well in advance a comprehensive weekly calendar, listing in detail what is happening on our campus and in the Pittsburgh area.

We need rooms where undergraduates in the new college who want to begin or continue musical instruction can practice, studio space where the artists in the college may work, and a modest studio theater for student dramatic activities.

Metacurricular events should be open, when possible, to students from all over the campus. Our hope is that these events will be so compelling that even the faculty will abandon some of its well-known reluctance to

return after 5 p.m. We mean the campus to be the center of the world for our students, the point from which they venture out frequently, but always the point to which they return to sort out and work over their experiences among themselves and with the faculty. We see our job as that of providing our students with "equipment for living" (Kenneth Burke), and we cannot do that job in classes alone. If they leave after four years unable to live richly and understandingly in a city, we have failed.

BEYOND IV
the freshman year

We have done our most detailed planning for the freshman year. We feel that the attitudes, disciplines, and understandings developed in the first year of college are crucial for the years that follow.

With a background of mathematics in the first year the student will be required to take a year of science in the second. The goal of the science course should be an understanding of the scientist's method of establishing scientific knowledge. While the subjects studied should be of major importance, no attempt should be made to be comprehensive. To meet the goal for most students the science courses taken should not be the regular courses taken by science majors, although for some students one or more of the regular courses might prove a desirable alternative. If an appropriate course can be developed it would be desirable to require a semester course in technology to be taken during the junior year. We have requested the college of Engineering and Science to provide proposals for courses to meet these needs.

The year course in the sophomore year entitled The Arts and Society should build on the courses in literature, fine arts, and history of the freshman year. We envision a course that discusses several historical eras with emphasis on artistic and intellectual development. The course might resemble the present History of Arts and Civilization more closely than the present Western Civilization course.

The sophomore year should also contain a year of Social Science designed to provide the student with an understanding of the society he lives in and the social scientists' methods of studying it. We suggest that the second semester of Social Science be a project which will bring the student into contact with the community around him. Ideally the project would allow the student to employ the methods of the social scientist to increase his understanding of a current social problem.

A mechanism for advising and free discussion should be established beyond the freshman year, building on the experience in the free seminar; student initiatives and suggestions in this regard should be particularly welcome.

As the student moves through the sophomore year and beyond he will be increasingly involved in major courses and related elective courses that must be designed by the individual departments. We do not wish, however, that the broad concerns emphasized in the first two years be wholly superseded by a narrow specialization.

The student should be required throughout his college career to think deeply about the goals of his education and his relationship to society. The required one-semester course in ethics (listed under the junior year) and the senior course, The Twentieth Century, are designed with this in mind.

We propose an ethics course centered about inescapable problems in the student's present life, and in the years ahead of him. We hope that he will bring to bear on the discussion of these problems much of what he has learned in his first two years. Most importantly, we want him to discuss these problems using the analytical tools developed by philosophers past and present. We do not want a course cataloguing ethical theories from Plato to Joseph Fletcher. We do want a course in which students bring to bear some of these ethical theories on questions such as the control of pornography, the endurance of illness and incapacity, the meaning of death, the justification of suicide, the rightness of taking life by conscription, abortion, or capital punishment, the extent of involvement in a corporation's fate. In the senior course, the student should bring the knowledge and insights gained from his earlier studies, including those of his major field, to a serious consideration of the problems of mankind in the last third of the twentieth century. In this course students and faculty from the Engineering and Science and Fine Arts Colleges could come together with students and faculty of the new college to share their different perspectives on

the human condition in the world today. A partial prototype for this course might be C-900, Seminar in Contemporary Ideas, currently being offered as Science and Values.

The opening of the new college affords an opportunity for departments to reexamine their majors. At present the majors in the division of Humanities and Social Sciences are usually restricted to ten three-hour courses or the equivalent. We suggest that redesigned majors might consist of eight four-hour courses beyond or in addition to the general-education program. We hope that departments will insure that their majors progressively encourage independence on the student's part by increased use of small seminars and tutorials, and by more exploration of ways to encourage students to educate themselves. We suggest that every student be required to write a senior thesis in his major, and that this constitute a test of the capacity for independent work that he has developed in passing through the work of the major. The student should be an active participant in a discipline, not a passive receiver of its knowledge.

We also suggest that a project be included in the junior or senior year. One idea that we have considered is that the students be freed from course work for as much as a full load for one semester of his junior year to do a project on or off campus. The principle involved is clear: to afford the student opportunity to do intensive and independent work of some kind. We

want to explore further and to receive suggestions about what projects might be most beneficial. We have discussed the desirability of study abroad or at another college for one semester or one year.

Another suggestion for the senior year has had an important place in our deliberation. It is that some senior students be involved in advising, tutoring, and perhaps teaching freshmen and sophomores. We assume that such an arrangement would insure a fruitful continuity in the generations of students moving through the college. With careful supervision it could be an extremely valuable experience both for the seniors and for the freshmen and sophomores.

We have not tried to resolve the question as to what new majors should be made available in the new college in fields where departments remain to be established. The suggestions for new departments most frequently made by the faculty are philosophy, sociology, anthropology, and political science. These suggestions seem to us eminently reasonable. Their implementation should be preceded by careful consideration of the size and character desired for a particular department and its relation to plans both for the new college and other parts of the university.

In addition to departmental majors the new college should provide interdepartmental ones to meet the needs of students with special interests. We expect that the major programs will be flexible enough to satisfy the needs of students who plan to go on to a professional school (such as law, medicine, or business).

NEW COLLEGE V and existing colleges

The new college must build upon the existing resources of our university and must serve a valuable function for the existing colleges.

1. Many students arrive at college undecided as to their "major" or their vocation in life. This seems quite reasonable and natural. Most of them are unaware of, or have complete misconceptions about, many of the professions that they might enter. The first two years of the new college have as one of their aims to help the student understand himself, evaluate the goals of his college education, and appreciate the methods and professional ideals of the scientist, social scientist, artist, and humanist.

After spending his first two years in the new college the student should have the opportunity of continuing for a B. A. in this college or alternatively of obtaining a B. A. in science (or perhaps in engineering) or fine arts in two more years. Presumably the student would have made his elective choices (at least in the sophomore year) with this in mind.

We have discussed the subject of majors with the deans of the college of Fine Arts and the college of Engineering and Science. In both cases the deans

have listened most sympathetically to our suggestion that B. A. degrees be established in the departments of those two colleges. The question was considered whether such B. A. degrees should be offered by the new college, and all who discussed the matter agreed that they would be best administered and conferred by the colleges in which the departments exist. The B. A. in Fine Arts or Engineering and Science would be a less intensively professional degree than the B. S. and B. F. A. now offered in those colleges. We see this as a very desirable development and feel that the planning of these new B. A. programs should go forward with the cooperative planning of the professional colleges and the new college.

2. Many students enter the Engineering and Science college as freshmen, only to find as time goes on that their interests and abilities are not in these professional areas. Such students should have the possibility of continuing for a B. A. in the new college after spending their first two years in another Carnegie-Mellon college; the requirements for a B. A. in the new college will be sufficiently flexible to make this possible. An alternative possibility for students who follow the Fine Arts or Engineering and Science program in their first two years is to continue in these colleges working for a B. A. degree rather than a professional degree; this means that they can devote perhaps half of their time in the last two years taking courses in the new college. It would seem desirable to provide students whose interests may be more in the humanistic and less in the technical aspects of science (or

fine arts) with the opportunity of taking a number of courses in the History of Science (or Art History). The development of majors in these areas would be a natural direction for the new college to follow. Still another alternative that now exists for students in mathematics or physics is the double major program leading to a B.S. degree. With the development of a B.A. program these double majors should be reevaluated.

3. The possibilities discussed above should make Carnegie-Mellon highly attractive to a wide variety of students. The prospective science student with broad interest has tended in the past to avoid Carnegie Tech because there were too few opportunities for him in humanities or social science. The prospective liberal arts student who is nevertheless very interested in science tends to avoid the usual small liberal arts college. Carnegie-Mellon can now hope to attract both of these kinds of students.

4. Carnegie Tech was unusually fortunate in the quality of its staff and program in Humanities and Social Science, without which the education of engineering and science students as well as fine arts students would have been fundamentally deficient. The development of the new college should make it easier to retain and attract good faculty. With the new college it is to be hoped that the general education program for all students will continue to flourish, develop, and improve.

5. A great gain in educational vitality will result for all students from their being intermixed in the general courses of the first two years as well as in

the ethics course in the junior year and in the Twentieth Century course in the senior year. Students in Engineering and Science will not be asked to take the same courses in science and mathematics as the students of the new college. The other beginning courses described above should prove a fine general education for scientific and engineering professionals. Students in the college of Fine Arts will not take the Introduction to the Arts meant for freshmen in the new college, but they will take other general education courses together with students in the new college and Engineering and Science. Matters such as the choice of courses and scheduling will have to be discussed fully with the Fine Arts and the Engineering and Science colleges.

6. An essential aspect of the program of the first two years for the new college is the cooperation it will entail among members of the faculty of the different colleges. We will draw as fully as we can on our already established strengths. We hope and assume that instruction in mathematics, science, and technology will come from faculty members in the college of Engineering and Science willing to share what they know and do with deeply interested students who do not plan professional careers in Engineering and Science fields. The same may be said of faculty and courses in Fine Arts. In addition, we hope that some of our colleagues from all parts of the campus will decide to join, from time to time, in the teaching of such courses as ethics or literature or history or human development, for are we all not part of a single venture, an effort to show students what educated men are, and what they can do?

VI

STUDENTS

Carnegie has long served the function of training professionals. The new college must be guided by broader and more flexible notions of utility than in the past, a wider and more tolerant acceptance of what may prove survival values. And its students must come from diverse backgrounds, some from patterns of culture other than the dominant urban-industrial middle class. The presence of such students would increase the diversity of the college decisively and prove of value to the entire campus community.

Getting a different sort of student may require a different sort of recruiting program from our present one. It may mean the development of new criteria for admission and new methods of assessing promise. It will mean poking into corners of American society where we have not previously looked for prospective students. It certainly means publicity.

In the matter of admissions standards, we are strongly inclined to follow the recommendation of the Director of Admissions and specify not admission requirements (that is, high school courses that must have been taken), but preferences or recommendations, as many colleges and

universities are now doing. We suggest the following preparation: English, four years; mathematics, three years; laboratory science, two years; one foreign language, three years.

We suggest that students be required to demonstrate their proficiency in one foreign language at some time before the beginning of their senior year. We will consult with the Department of Modern Languages about designing tests for language proficiency, and about means for improving the performance of students who do not pass such a test. The committee prefers that work at the college level in a foreign language be restricted to the study of literature, and to the acquisition of additional languages. A first foreign language should be acquired, and gaps repaired in the knowledge of languages already studied, by intensive summer programs and the use of non-credit arrangements (language laboratories, group tutorials, residential arrangements requiring the use of a foreign language) during the regular academic year.

VII

FACULTY

It should be clear by this point that we envision the new college as an intellectual community which will impose heavy demands on both students and faculty and yield rich rewards to them. Hopefully it cannot be otherwise in a program that assumes deliberate responsibility for fostering students' growth and maturity in many ways, for leading them through a rite of passage to the confident independence of adulthood, for sending them on beyond college with a greater awareness of who they are and what they want to be. Such a commitment seems to us to mean that the faculty will be engaging students deeply in the activities of their disciplines more than exposing them to findings and conclusions, will be creating more intellectually companionable relationships with undergraduates, and will be regarding their subject-matter and modes of work both as ends in themselves and as means to students' self-fulfillment. We have in mind a college culture exciting to both students and faculty, one that can be created and sustained only by the faculty's intense collaborative effort.

When to these general aims are added the specific activities we propose that the faculty engage in -- the metacurriculum, the free seminar and advising system, more instruction by seminar and tutorial, a new general education program providing an intellectual center for undergraduates of all colleges -- it is plain that a great deal of faculty energy must be channeled into undergraduate education. This raises the spectre currently haunting universities throughout the country of the conflict between undergraduate education on the one hand and research, scholarship, and graduate education on the other. Granting that views of this conflict expressed by students, parents, the press, and the general public are often naive and uninformed, we are persuaded that it must be carefully taken into account in designing a new undergraduate college. All faculty members know that published research or an able doctoral student is currency redeemable at any college or university, but that recognized skill and devotion to undergraduate education are paid for in company scrip; credit at the company store is often discounted and seldom easily transferred. If the new college is to be successful as an exciting intellectual community, the conflict must be lessened, and rewards and incentives -- of all kinds, tangible and intangible -- must be provided for dedicated and effective participation in the program of the new college and the new general education program of the university.

Our intention is not to create two faculties, not to drive research and graduate education apart from undergraduate education. Rather we would

bring these together where we can, and we would place them on a par in value among the activities carried on by a full-fledged university. We suggest bringing research into undergraduate teaching as a shared activity of students and faculty wherever that will be educationally fruitful, and we suggest increasing the attractions and rewards of undergraduate teaching toward those of research and graduate teaching. In moving from the Division of Humanities and Social Sciences to the new college, and in beginning a general education program that will draw students and faculty from the whole campus, we must implement more fully the present Humanities and Social Sciences policy of making teaching and research coordinate considerations in rewarding faculty, balanced in their attractiveness.

We suggest a number of means for achieving this goal, some that can be put in effect by the college and its faculty, others that require support from the university.

A. Within the College

1. Discussion by faculty members of their own teaching experiences and of their place in the program of the college should be encouraged to the fullest extent. Teachers should be as fully informed as possible of what students are learning and doing in other classes, especially those of the general education program. The staffs of large courses should work closely together in planning and teaching; they should be encouraged to engage in joint teaching, guest lecturing in one another's classes, forming consortia, and other such cooperative ventures. We suggest, indeed that the faculty's adoption from

the beginning of an open-classroom policy enabling colleagues to sit in on classes freely would make possible everyone's fuller awareness of the whole program and could spark cooperative ventures within and between departments.

2. There should be within the faculty a vigorous search for teachers suited by knowledge, talent, interest, and inclination to various specific educational functions and responsibilities in the program. This search should extend throughout the university for the faculty -- surely a shifting, changing faculty -- of the general education program. We believe there are teachers who harbor a wish to exchange their accustomed activities or part of them for new ones, perhaps for a year or two, perhaps more permanently. Certainly it should be a responsibility of the faculty and administration to smoke out such valuable teachers and entice them from their departmental lairs.

3. Experimental education should be encouraged by every means. We suggest that a faculty committee be empowered to seek, receive, and act upon applications by members of the faculty to experiment with new methods of instruction and advising, new modes of treatment or presentation of material, new combinations of materials or methods, new interdisciplinary perspectives. The committee would consider whether such proposals, often falling outside normal departmental offerings and sequences, would contribute to the program of the college. It would function in effect like the board recently established by the Berkeley faculty to support educational experiments. (Select Committee on Education, Education at Berkeley, 1966, 105 ff.)

4. The faculty should seek to be fully informed about the success of its program and should gather full, explicit, concrete evidence of the educational effectiveness of its members. In our view this requires consulting the judgment of students more regularly and systematically than in the past. The perspective of mature students can be gained by something like the plan adopted at Yale, where all graduates with excellent records (and all recipients of graduate degrees) are asked to write a frank, detailed letter on their education, commenting on particular programs, courses and teachers. This plan might be varied to seek the judgment of a more representative group of graduates, not merely the best. And it might be supplemented by inviting some graduates several years beyond college to look back and judge their education.

But the new college and the new general education program cannot wait until they produce graduates to be in close touch with student evaluations. These should be gathered from the beginning through the free seminar, the advising system, and whatever further arrangements departments can work out for gathering the suggestions and comments of their majors. We suggest further that the faculty of the new college and the general education program devise a method for at least selective course evaluation by undergraduates; such evaluation has been sufficiently tried and studied in many universities that a firm basis exists for working out a sound plan -- or at least one whose limitations are known.

B. With Institutional Support

1. We recommend the establishment of endowed chairs designed to increase the attractiveness of teaching in the new college. Because of alterations in shapes and rhythms within careers, it is probably inadvisable to provide that a man appointed to such a chair shall hold it for life. Rotation among members of the new college faculty seems preferable. We might also consider the part-time chair, or stool, upon which might perch colleagues from Engineering and Science, Fine Arts, or other units on campus, temporarily or partially detached for service within the new college or general education program.

2. We recommend that the new college have funds available so that it may enter into some joint arrangements with departments for hiring or promotion of individual teachers. Such arrangements would give the new college some much-needed flexibility in supporting and rewarding good teaching.

3. We urge that funds be provided to support seminars on teaching and advising, luncheon meetings for the staffs of large courses and such groups as the free seminar preceptors, experimental teaching, seminars on cognition or audio-visual aids or other supports to teaching. Among the latter we have one specifically in mind: faculty in the new college, especially preceptors in the free seminar, may find it useful to increase their knowledge of personality development. Seminars in this should be provided, perhaps a version of the seminars developed by the Balints and others for

giving training in the understanding of psychodynamics to working professionals such as lawyers, social workers, general practitioners, and teachers, and offered at the Pitt Medical School for several years to physicians.

4. We urge the provision of ample funds to buy faculty time for the initial design of courses, to reduce the load of staff members teaching these courses for the first time, and to revise these courses every few years.

We on this committee are keenly aware of how useful for us has been the provision of released time. We were able to read, to think, and to have lunch together frequently, free of some of the pressures that ordinarily beset full-time senior faculty. It is our strong conviction that we could not have worked out the proposals which we are now submitting if we had not been given time in which to direct our attention wholeheartedly and wholemindedly to the problems of a new college. All of the members of the committee on the new college have had considerable experience on committees of various kinds, including many charged with the resolution of major questions. We have no doubt of the indispensability of released time if satisfactory answers to important questions are to be sought. Over and over again we had the experience of reading something in common which has stimulated us all, and of productive and lengthy lunch conversations from which substantial ideas embodied in this report would come.

VIII

RESOURCES

We are looking forward to a new liberal arts college which is small and of outstanding quality. In spite of the excellent resources of the university we will not be successful unless considerable new resources are provided for this enterprise.

1. We urge most strongly the building of a freshman residential center, for all new-college freshmen and probably some freshmen from other colleges, perhaps with some seniors also.

We also urge the building of an experimental residence hall which would house some of the upperclassmen in the new college and probably also some from Engineering and Science and Fine Arts.

Both the freshman and the upper class units should be coed, a situation made feasible by a system of entries providing access to separate groupings of accommodations for men or women. Each unit should have its own commons. In addition, facilities such as hotplates or end-of-hall kitchenettes should be amply provided. The upperclass unit should include some apartments as well as suites for varying number of students, and some single rooms. A few faculty members might be in residence.

Our aim is to make living on campus very attractive and economically feasible for students. We are providing an intensive curriculum which has important common elements: we want students to talk about what they will be sharing. Psychologists assure us that groups do talk about what they share, and we intend to further such activity by pressing for these new residential accommodations.

We hope that these units will include some faculty offices, perhaps suites which might be used on a rotating basis by part of the staff of a core course, or by a senior faculty member and a beginning instructor, or by people from several fields engaged on a common project. It is important to emphasize that we are not thinking of the faculty as operators of a 24-hour service station. We do certainly intend, however, that as many steps as possible shall be taken to facilitate encounters between faculty and students when these encounters seem desirable and profitable. Once or twice a week they might take their coffee and lunch with groups of students if comfortable snack bars and commons were available. Faculty members may welcome coming, with spouses, to a reasonably good dinner with students about whom they know something.

We urge the appointment of a committee to draft recommendations in detail for these buildings, and also to study the residential experience of the freshmen admitted in the pilot class. Provision should be made for an auditorium sufficiently large for the entire college.

2. The quality of faculty the college will hope to retain and the degree of contact between faculty and student which we aspire to achieve undoubtedly mean higher paid faculty with lower course loads than has been the practice of the old Humanities and Social Sciences division. The new college will thrive only if it is backed by an adequate endowment.

3. Campus buildings must provide a sufficient number of small, attractive meeting rooms for the variety of seminars which must comprise an essential part of the college curriculum. The increasing amount of faculty time devoted to direct interaction with small groups must be compensated in part by the replacement of some impersonal lectures and quiz sections by mechanical devices. These would require additional space, such as a hall in which a continuous scheduled screening of educational films could take place. Some of these additional rooms might well be located in the proposed residential center.

4. We should attempt to build endowment for the library. As the amount of individual work by undergraduates rises steadily, we should anticipate increasing demands on the library. We can rely on Carnegie Library to some extent, and we urge the administration to work on the problem of easier access for students and faculty to the University of Pittsburgh Library. The problem nevertheless will remain basically that we need to have a much larger number of books in the humanities and social sciences on this campus if we are to lead students into independent exploration of a considerable diversity of questions and to satisfy the needs of the faculty.

5. The usefulness to the new college of increased facilities with which to aid students with serious psychological problems cannot be denied, and the expansion of counseling and psychiatric services should be considered.

ARRANGING IX

for an institution

Much of our thinking has been addressed to the question of how to begin an enterprise we believe to be challenging and exciting. We are convinced that it is most reasonable to start with an experimental or pilot program as soon as possible.

We urge that an immediate search be undertaken for an associate dean of the new college. His functions should include supervision of the general education program, the free seminars, and the metacurriculum. We should look for someone with abundant energy and high devotion to an intensive educational program. We hope that an associate dean can be found in time to supervise the operation of the pilot program; until then, we suggest that this function be undertaken by a committee such as ours.

It is clear that various faculty committees will be needed in the future, both to develop and to evaluate programs; among them are:

1. an intra-university visiting committee to advise on planning and to perform other functions useful to the college. We have in mind a "friends of the new college" committee which can be consulted regularly, and will be, because of the closeness of the ties of the new college to the rest of the campus.

2. a committee specifically charged to evaluate programs in the new college.

3. a College Policy Council containing faculty members of the new college and the Dean which meets regularly to consider policy decisions.

X

CONCLUSION

In his studies of Bennington College, Theodore Newcomb found "that when the effects of the college environment have been powerful enough to influence individuals' self-images, and thereby to affect their subsequent environments, the college influences are likely to persist." (Newcomb, et al., Persistence and Change: Bennington College and Its Students After Twenty-Five Years, N. Y.: John Wiley & Sons, Inc., 1967, 230). A college has impact when its faculty is committed to the realization of certain goals and values evident in its daily practice, and not merely stated in its catalogue.

No college will deny that it wants to affect its students, but many will hedge about the breadth and depth of desirable influence. Sometimes the rhetoric associated with new ventures in education becomes overwhelming. After we had read a number of books and proposals about educational innovation, we began to feel that we would end up sounding like everyone else. To some extent we must, because colleges after all are more like each other than they are like anything else. In many specific ways, however,

the elements we are proposing really do differ from much educational practice now current in this country:

1. explicit and determined training in independence;
2. a curriculum designed to provide tools for dealing with the student's world, a curriculum flexible enough to allow him to work with real problems, a curriculum such that the faculty need not exclaim every year, "Heavens! another problem area in the headlines -- and we have no course in it!"
3. the "free seminar" as a real attempt to deal with the advising problem;
4. the "metacurriculum," to ease the strangeness of some parts of the adult world, and to drive home to students the faculty's resolute belief that intelligence and feeling can be made to play over all of civilized life;
5. institutional arrangements to provide the structure within which curriculum and metacurriculum can function, including freshman and upperclass residence centers and ample provision for experimentation and evaluation.

We believe indeed the new college will generate excitement, and that the excitement will come from doing well what we can do with a new college on this campus. No other new-born college will command the resources of faculty talent in the fine arts and the sciences which are ours on this campus. All of the gains from the new enterprise are not prophesiable, but it seems reasonable to expect that new general education courses and upper level

courses in which Engineering and Science students and Fine Arts students join members of the new college will help them all toward better balance and an improved perspective on their world.

We intend the proposals we have presented here, not as fixed solutions to static problems, but rather as directions to guide the college in a continual search for new and better solutions in a changing world. We have proposed specific courses, but we recognize that courses must be revised radically every few years if they are to maintain their vigor.

We urge the reader to join with us in the design of the new college. We extend this invitation most particularly to those who feel strongly critical of the proposals we have presented. Both criticism and support are essential to the success of this adventure.

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