AN ARTS COMPLEX

FOR PRINCETON UNIVERSITY

BY

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DEGREE OF MASTER OF ARCHITECTURE

at the
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Dean Pietro Belluschi
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Dear Dean Belluschi,

In partial fulfillment of the requirements for the degree of Master of Architecture, I submit the following thesis, "A New Arts Complex for Princeton University".

Sincerely yours,

Ernest E. Kirwan
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I

ABSTRACT

"A New Arts Complex for Princeton University

Ernest E. Kirwan

Submitted for the Degree of Master of Architecture in the Department of Architecture, M.I.T., on May 18, 1959

why an arts complex at a University?

an abiding interest in education, and as a novice teacher...in the specific problems of art-architecture education.

a share in the belief that America is producing a race of half-educated men, who "too often know how without knowing why"; that our advances in technology must be paralleled by an awakening of aesthetic consciousness...of the ability to perceive intrinsic value, which is the mark of a mature culture.

the University must be the place for a beginning.

why Princeton?

the idea of the thesis existed before the site was chosen. There was then the problem of application of certain general principles to a particular University situation...to integrate as fully with the educational direction of the University as practicable...but to remain a clear statement of the organizational principles I feel to be important in design education.

Princeton's historic educational direction...toward the ideal of individual self-development through the "living-teaching" concept*(1)...is surely the direction that higher education must follow if we are to realize our potential in the period of crisis to come.

the Princeton campus presents a real challenge to new building.

why change the present art-architecture plant?

the University has a self-acknowledged space problem in its Architecture-Archaeology-museum arrangement, and is now preparing plans for new buildings and additions to the present plant. However, I felt that many unfortunate conditions would arise with further additions to McCormick Hall, making it impossible to produce a clear archetypal solution...and thus it would be justifiable to remove the existing building and rebuild on the same(excellent) site. Therefore, this thesis bears no relation to the immediate economic or administrative problems of the University...(which I feel to be too many and too varied for proper cognizance in this thesis).

*(1) see pages 9 - 16
ABSTRACT

why change Princeton's art-architecture departmental structure?

after discussion with Princeton faculty members, students and graduates and observation of the existing physical plant, I propose the following changes and additions:

the emphasis of the University has always been focused on the sciences and humanities...and like many schools, it now rushes forward with a crash program in science, and will need badly in the future, the balancing forces which could be supplied by an active, vigorous program in the Arts. In order to accomplish this, I propose to establish: (1) a new, revitalized Museum of Art, which will be in close contact with campus activities, (2) an active program in the Fine Arts (painting and sculpture), to replace the present largely ineffective Creative Arts program. The students and faculty of these departments could give new dimension to the life of the campus, and to the students in architecture, history and city planning.

the School of Architecture partakes of the virtues and deficiencies of the University as a whole...as a result it has a marvelous level of scholarship, but I feel it suffers somewhat from an overabundance of "paper" activity and from its alliance with the History-Archaeology program. Its architecture students need more participation in "direct-making" experience...through activity in the Fine Arts department and workshop experimentation. Therefore, I have proposed an integrated design-workshop program with adequate space for three-dimensional experimentation.

the introduction of a new Department of City and Regional Planning at the graduate level...in order to capitalize on the widespread resources of the University dedicated to the development of men who will actively participate in the shaping of civic form and content. The new department will expand the scope of the architectural curriculum and will also provide reciprocal stimulation to the art and history programs.

major goals....organization and form

an expression of the physical necessities and educational aspirations of each department within the complex

the organization of these elements into one organic entity...in order to provide the maximum possibility of planned and spontaneous interaction for all students and faculty.

a maximum educational impact by these activities and programs on the University as a whole...especially on those students from other departments entering the building for elective studies.

continuity with the spatial and textural organization of the campus

an expression of contemporary structural and mechanical potentials
ladies, ladies, listen here
the miracle value of the year
tranquillize that worried frown
the world is yours for nothing down

COMMERCIAL: Come in tonite and see our complete line of security blankets, early retirement bonds, TV handy home hypnotism kits, dispensable automobiles and pork chops in plastic packages.... and don't you forget, tune in tomorrow for the next episode of "The Happy American Story".

We are searching for Valhalla and finding Slobbovia.

The liberal democratic process by which we live has brought the highest level of material well-being to the greatest number of people in the history of the world, largely due to the economic and social mobility inherent in the free-enterprise system. During the first century of its practice in America, this system developed an incredible effectiveness and stability through the potential of a great internal frontier coupled with a vigorous new race in the New World. The social and Industrial revolutions of the nineteenth century brought to Western Man, especially to the American, the incentive and power to conquer his ancient adversaries, poverty, famine and plague, to populate the wildernesses, and through a growing science to begin to reap the rich bounty of nature. The healthy young organism of democracy which allowed the individual to follow his own destiny in this great age of conquest, promised much; the self-governed would certainly give to the world the impetus to a new, and greater Golden Age...to a new civilization. Perhaps it still may.

However, during the twentieth century, our system has been subjected to
an incessant bombardment from every conceivable direction; two World Wars and a continuing international climate of crisis, the world population "explosion", the steady depletion of our natural resources and frontiers, a rampant technology, and so on, ad infinitum. Pressures from this bombardment are causing our system to undergo an unfortunate and premature mutation.

The prime manifestation of this mutation, the rise of the great working class during the past two decades, is a miracle...the realization of the American dream, but it may be a paper miracle, dearly purchased. The unbelievable standard of living for this great majority was produced by an artificial boom...injected into our economy by the hot war and now by the interminable cold war. From this boom, there seems to be no turning back. The enormous power wielded by the labor unions will allow neither retrogression nor stabilization of the spiralling daemon of our desire to climb, to own and to consume, consume, consume. The great monster, once unleashed, must be fed...and in order to satisfy its apparently boundless appetite we have created a cult of synthetic progress. Our lives have been dedicated to the Twin Goddesses of Paper-Plate and Kleenex; we are being bred to demand hygienic and temporary newness in everything about us, as Huxley told us we would in "Brave New World".

We can see it happening everywhere. Labor demands, rightfully, that workers be guaranteed an annual wage (who could argue)...therefore, management must guarantee itself an annual output (who could disagree with such logic), which necessitates, naturally, an annual market for more and more "things"; things which (I guess....) must have a limited lifespan or appropriateness
to fashion...if they are to be replaced! And so the huckster goes to work. After all where would this country be...without the advertising "profession"!

Incredibly, we have convinced ourselves that this kind of progress is good. "Progress is our most important product", intones one of our leading corporations. In the shattering pace his tribe has set, individual man has become increasingly less able to adjust to his environment, increasingly less able to know the boundaries of his world,... increasing less free. He is becoming a statistic in a SYNTHETIC SOCIETY. a society whose values are slowly being transmuted in our morass of conflicting, superhuman forces...and finally Everyman will boggle, don his blinders and join the rat-race to who-knows-where.

All this sounds like good Party line fodder,...nevertheless it is true and if we are to salvage our birthright we must recognize our misdirection and determine a course which might lead us out of the stream which could very well lead to the decline of western civilization.

The one great hope we can cling to in this period of homicidal adolescence is the potential in an educated majority. This path to a possible maturity is strewn with obstacles...we may perpetuate our history of stubborn refusal to act until disaster compels us...education may not be able to meet the dual challenge of quantity and quality.

But there is no other Saviour in sight...in the coming period of possible mass suicide, the world must place its faith in a new age of educated man.
III.

education in a synthetic society

"If he is indeed wise, he does not bid you to enter the house of his wisdom, but rather leads you to the threshold of your own mind". This quotation from Kahlil Gibran's, "The Prophet" is the underlying motivating factor of this thesis, and contains the seed which will give root to the re-oriented educational philosophy which must develop if we are to realize our great promise. However, the immense economic-technological steamroller rolls on, gradually pressing us into the flat patterns of mass conformity over wide areas of our lives. True, we have gained certain new levels of conspicuous identity through our new buying power, but gradually we all now succumb to a new, more deadly form of the Plague, which has begun to atrophy our abilities in the discernment of intrinsic value... the ability to see in nature and in the people and things about us, a real value - above their potential to return capital for capital invested.

An indication of our sickness is the fact that our national hero is no longer Horatio Alger, but the lucky man, who each week is given a million dollars (tax-free) by TV Billionaire John Berresford Tipton. We love the short, fast race...the quick return...something for nothing...and we seem to go to any lengths to get what we want, but do not need.

Our national educational program, operated by teachers and administrators who are integral with our world of specialization and speculation, is unable to escape this creeping blight.

For a quarter century, we have been increasingly guilty of misdirection in our educational practices...from most kindergartens to most universities,
especially in the weakening of individual initiative through our neat, efficient packaged subject-matter gift programs in our secondary school s. We feed the student a dose of pre-digested information and then test him by the classic true-and-false and multiple choice exams to find out how well he may be able to regurgitate what he has swallowed. All nice and neat and hygienic, however; no messy perspiration being spilled by anyone; no necessity to force the student to extend himself and develop neuroses; no trying, time-consuming contact between teacher and student...all this can be done much more efficiently by processing the student through an IBM machine.

We have as students been satisfied to have life made meaningful for us, and have not participated in the making of meaning for ourselves. There has been too little involvement by the American student in discipline-centered learning, too little reliance on individual initiative and guts. Like the rest of our society, our educational system is being forced to develop synthetic solutions ...instead of the badly needed human solutions. This we cannot tolerate; once the hope residing in education disappears, we are on the road out of town.

The only course we can follow is one which will return to the individual the confidence that somehow he is still master of his own destiny...and that everything is not predetermined by political or economic forces too vast to be influenced by the life of any man. There must be returned to each man, the dignity of his own being. This can be done only by great teachers in great schools.

(Princeton's program, described in the next section...is for me, the clearest statement for policy in higher education that could be conceived...this could be the Way back into town.)
IV  the idea of a Princeton Education*

the light which we have gained was given us not to be staring on, but by it to discover onward things more remote than our knowledge.  

John Milton

THE AIMS....individual responsibility and attainment

A LIBERAL EDUCATION means opened horizons. It emphasizes growth and personal attainment, and encourages decision and creative action on the basis of informed and thoughtful judgement, consciously pursued. This is the strong tradition in western education, and is held in common as a central concern by many of America's colleges. Each generation offers new challenges, but fundamentally the first concern of liberal education endures. Woodrow Wilson, Princeton's thirteenth president, went directly to the core of the problem when he said:

"The object of the college....is the intellectual and spiritual life. Its life and discipline are meant to be a process of preparation, not a process of information. By the intellectual and spiritual life I mean the life which enables the mind to comprehend and make proper use of the modern world and all its opportunities....The educated man is to be discovered by his point of view, by the temper of his mind, by his attitude toward life, and by his fair way of thinking. He can see, he can discriminate, he can combine ideas and perceive whither they lead; he has insight and compassion. His mind is a practised instrument of appreciation. He is more apt to contribute

* an excerpt from the Official Register of Princeton University (pages 9-16)
light than heat to a discussion, and will oftener than another show the power of uniting the elements of a difficult subject in a whole view; he has the knowledge of the world which no one can have who knows only his own generation or only his own task."

To produce such men and such understanding is the central aim at Princeton. What, then, distinguishes Princeton and justifies its claim to serve well its chosen purpose? What in particular has Princeton to offer to help meet the pressing need of our times for men capable of independent and thoughtful judgment and for creative ideas?

THE WAYS..."living teaching"

the preceptorial and the laboratory

Today, as for the last two centuries, Princeton's resources have been dedicated to developing those attributes of "insight and compassion" and "the whole view", by which Wilson measured the educated man. That man, never an abstraction, is at Princeton a member of an educational commonwealth constantly engaged in extending the frontiers of knowledge. He is not a passive recipient of textbook information merely, nor an inert listener to lectures and demonstrations. He experiences the most exciting adventure of all -- the endless quest for deeper insight, comprehension, and understanding. Embedded in the strata of Princeton is the concept of "living teaching". Through the preceptorial conference, the laboratory, and independent work, the student is released from the role of schoolboy, and discovers the satisfactions and rewards of active participation in the educational process.
In this spirit, Woodrow Wilson, more than a half-century ago, became the pioneer in an educational experiment which has won recognition in virtually every American institution of higher learning. In order "to animate the pursuit of knowledge" he invited approximately fifty young teachers to join the faculty as "preceptors." Thus was born the preceptorial system, and since 1905 it has prevailed at Princeton as a major instrument in its educational method.

The weekly preceptorial conference, supplementing the lectures, contrasts with periodic recitation and learning by rote. The free exchange of ideas under the guidance of a preceptor provides stimulation and opportunity for independent thought. The preceptorial is smaller than the formal class. It usually numbers seven students. The faculty member is present neither to lecture nor test the student's memory, nor his ability merely to marshal facts, learned the night before and forgotten the next day. On the contrary, through open discussion in which all are invited to join, the preceptor seeks to encourage each member of the group not only to grasp the subject, but also to evaluate it and its implications in terms of his own critical capacity and experience.

Seniors who have shown capacity for advanced work in the preceptorials may be encouraged to explore the principles and processes of independent research in the fields of their own particular interests and talents. Seminars on the post-graduate level are available to them, as are Princeton's special programs and conferences, wherein faculty and undergraduates jointly investigate subjects of theoretical and practical significance. Thus the spirit of the preceptorial conference permeates the educational fabric of the University.
independent study

Through the preceptorial conference and the laboratory the Princeton student becomes an active participant in an educational enterprise. Through independent work he discovers the fun in individual scholarly investigation and learns to explore, to analyze, to assess independently. As will be indicated more fully, the program of independent study is built into the curriculum at Princeton. It applies to all upperclass students in the arts and sciences and to many in engineering. Drawing on the stimulus toward independent thought and judgment nourished by the preceptorial and laboratory methods, it often proves the most valuable and vital part of students' educational experience. Through close, working relationships with faculty supervisors, the student finds in his independent studies the lasting benefits of self-discipline, in scholarly and scientific adventures in which he himself is the explorer. Opened horizons and intellectual accomplishment take on a fresh meaning for the student who has gone his own intellectual journey.

From the moment a student enters Princeton until his graduation, he comes under the influence of teachers who are also active scholars, men of high competence in their fields, working on the frontiers of knowledge. He encounters them as a regular part of his week's work not only in lectures but in laboratories and preceptorials. He has constant access to an open-stack library of major dimensions, and laboratories equipped with rich resources for experiment and training are available to him. During the first two years the student normally is required to explore widely and prepare a base for the
more specialized departmental studies of upperclass years in which he concentrates in the field of his greatest interest and aptitude. Throughout he enjoys the opportunity of intellectual stimulus in a relatively small university community. He lives on a self-contained campus within quick reach of two great cities.

qualitative assessment

Supporting the basic concept that education is an opportunity rather than a set of requirements, the standards for judging scholastic achievement at Princeton have been broadly conceived. These standards emphasize the quality rather than the quantity of the student's performance. The Princeton degree is not based on a system of units that must be "passed". While upholding high standards of work, the faculty rejects the concept that education can be measured in parcels called "credits." Low grades do not automatically mean deficiencies to be made up. The student's standing is based rather on his cumulative average, on a rising scale from the modest standards of the freshman year to manifestations of excellence in upperclass departmental work. There is no quota or expected proportion of failures, and the number of unsuccessful students is very low. In brief, the Princeton degree stands for a performance of consistently high quality, and is not awarded by a process of debit and credit.

a faculty of teacher-scholars

The teaching staff at Princeton is equipped to meet the responsibilities it assumes. In number, the proportion is one officer of
instruction to each six students. In principle and practice, the Princeton faculty strives to make an actuality of the theory of the combined college and university. Princeton's enrollment, large for a college but small for a university, has been kept within rather strict limits. There are now approximately 3000 undergraduates and 700 graduate students. This ratio is considered a favorable one for students and faculty alike.

Princeton has a single faculty composed of men who are at once scholars and teachers of undergraduates. The life-blood of teaching is constantly renewed and revitalized by creative scholarship. Equally is scholarship put to work in classroom and laboratory. The concept of the indivisible college and university, the ideal of the teacher-scholar and the principle of a single faculty are parts of the whole, which is Princeton.

Princeton believes in the pursuit of knowledge for its own sake. It believes equally in knowledge for use, and that knowledge as a path to wisdom must be openly and freely shared. In the rapidly changing modern world, where the findings of yesterday are replaced by the discoveries of today, Princeton is aware of the dangers of narrow specialization; it therefore seeks to stress fundamental theories and concepts governing each area of knowledge. This applies as much within the Schools of Engineering and Architecture as in the departments of the arts and sciences.

To be both comprehensive and intensive, an undergraduate plan of education requires a faculty as devoted to teaching as to scholarship or research. Even the senior officers of instruction at
Princeton are as likely to conduct classes, preceptorials, and laboratories with freshmen as with graduate students. This principle carries forward the intention of the original founders. In establishing Princeton on the model of the English dissenting academies, they insisted not only on the traditional emphasis on the value of liberal knowledge, but also on an intimate relationship between teacher and student in an atmosphere that would encourage the widest possible freedom of inquiry. An early account of Princeton's pioneer teachers remains equally valid today:

They proceed not so much...by prolix discourses....by burdening the memory and imposing heavy and disagreeable tasks, as in the Socratic way of free dialogue between teacher and pupil or between students themselves under the inspection of the tutor. In this manner the attention is engaged, the mind entertained and the scholar animated in the pursuit of knowledge.

Here, in a few words, is set forth the central idea which makes for the "living teaching" of Princeton's faculty of teacher-scholars in the preceptorials and in the laboratories.

Over the years the close relationship between teachers and students has helped to inspire approximately one-half of each senior class to continue education after graduation in preparation for careers in one of the professions. To the student who is making his choice of a college, however, this prospect is four years away. Of more immediate concern to him is the fact that he can look forward from the day of his admission to an educational experience geared to his interests and calling forth the best of his abilities.
needed: education for "unreasonable" men

"America The Beautiful"
"......O beautiful, for spacious skies....."

We learned that song in grammar school, and many a chest has swelled with pride with the playing of this anthem, in the thought that it was great to be a part of this powerful and beautiful nation. We now have a kind of mixed pride, for we have a powerful nation, that is sure... but it is no longer beautiful. Somehow, beauty has been denied us. Our democratic processes, so successful in producing material welfare, governmental stability, religious freedom and a multitude of other virtues, is producing for us a scrofulous environment and a hideous landscape. Other civilizations formed their physical surrounds in a slow, more natural process, but the hyper-active twentieth century allows its marvelously ingenious denizens to produce wonderments behind a million closed doors, and then to release these marvels like the devils from Pandora’s box to multiply our collective chaos. Our lives become increasingly burdened with meaninglessness and stupidity...our cities become more and more dangerous for human habitation. No end to this telescoping menace seems to be in view.

If our rescue is ever to be effected, it must come through a new kind of relationship of man to man...the kind of relationship that Walter Gropius so succintly described for us in a talk at his seventy-fifth birthday dinner, "The fallacy of our present set-up lies, in my opinion, in the fact that a majority of us believe that modern organization-man has found today's version of that indispensable ingredient of all cultures: the intellectual common denominator of a time. He has not. For with his new tool - automation - he pursue only one aim: to compel each individual
who takes part in the common production effort to abide by a narrowly circumscribed intellectual code, the focus of which is mere expediency. Since adaptability is rated higher by him than independent thought, the individual becomes lost in the group. Against this robotization of our society, we should set our conviction that keeping one's identity is superior to social usefulness at any price and that this levelling process can never produce a cultural common denominator.

But didn't we only yesterday run down the rugged individualist? We did, but the pendulum has swung back sharply to the other extreme now, and we have to discover the hard way that neither conformity within the group—which leads to tyranny by the majority—nor willful extravagance of the individual can create a climate which favors the development of initiative and imagination; but that it is the moral responsibility carried by each individual independently within the group which provides the basis for the goal of a democratic culture: unity in diversity."

The lengthy quotation from Princeton's catalogue in the previous section, outlining the University's philosophy of education certainly indicates that it is wholly devoted to the development of the kind of men that Gropius desires...men capable of independent thought. However, Dr. Gropius also stated that the goal of a democratic culture is unity in diversity...and it is my contention that Princeton's emphasis since its founding has been directed toward the development of certain kinds of independent men...the "reasonable" independent men...(a listing of the endowed professorships at the University proves this). It has marvelously well-developed programs in Psychology, Religion, Astronomy, Chemistry, Politics, Mathematics, etc., but only the most cursory recognition of the importance of another kind of independent man...the "unreasonable" independent man...very necessary
indeed if we are truly to achieve unity in diversity.
Can men who are really cognizant of and devoted to the creation of order and beauty in our neighborhoods, our cities, our regions, be produced at any of our universities? Or are our capabilities restricted to the training of business types who will continue to be prey to expedience. Possibly there is one way to assist in a better balance in our future leadership is to recognize the importance in our cultural structure of those eminently unreasonable men...the dedicated artists, writers and composers...those most sensitive interpreters of our "reality". However, this unlikely for some time to come, for our leading Universities (most) have fostered an almost complete indifference to, and even hostility toward active arts programs and (still governed by the Protestant Ethic) the strange, unwashed types they attract...these types do not belong to a normal life...they are not "real", (that is, until they become marketable).

Any cross section through one of these universities, I am afraid would show a marked degree of unity in unity. For this reason, in this thesis I have proposed (and prophesied, hopefully) a really active program in the creative disciplines for a future Princeton University...in the belief that exposure to the kind of "unreasonable", supra-rational interpretation of our world that such a program would bring...would add new dimension to the kind of meaning made in the other excellent disciplines in the University's program.
some notes
on architectural education

Architecture, like all branches of contemporary activity has been especially vulnerable to the ills of our present synthetic economic and professional structure. A learned analysis of the problems besetting the practice of architecture is obvious out of the scope of this thesis....but I will (tongue in cheek) commit the unpardonable error of quoting something from my own writing on this score....The Mother of the Arts is an unhappy woman; she is at the mercy of specialization which begets disunity; of unionism which begets shoddiness; of specification standards and outdated codes which beget dullness and rigidity; of speculating realtors and politicians; of horrible hardware and an advertising-minded industry, and worst of all a mis-educated public as its clientele. She is at once both perpetrator and victim in this increasingly unfortunate affair.

Uncountable reams of paper have been devoted to plotting the direction that architectural education must follow in order to turn the flood tide which threatens to inundate the profession of architecture and which threatens to replace it by a super-efficient team of engineering-industrial technologists. (who more and more are usurping areas once belonging to the province of architecture). At the present time my acquaintance with this enormously complex problem is too brief to allow me the privilege of stating a personal philosophy....therefore I will concern myself in this report with those conditions which directly pertain to the art-architect planning arrangement which I propose to introduce at Princeton...(prefaced by a few general remarks).
It is a commonly accepted fact that the practice of architecture-planning and the business and craft of building have become too vast to be competently understood by any single individual. We must (for better or for worse) recognize this situation in our educational programs. These must be diversified and at the same time unified...education for all the specialists involved in building activity should spring from some kind of central program...Hugh Stubbins has called this "an expanded architectural curriculum". Perhaps this is as good a name as we can hope for at the present. Every institution concerned with the training of these specialists must soon devote itself to discovering the common denominators in their training programs and to arrange new interlocking programs of study for these members of the new "team"...for if we are to achieve any degree of future success toward the creation of a better physical environment...the practitioners of the multitude of special disciplines must develop a much higher degree of mutual respect and understanding.

Yet there must, inevitably, be an "architect" as the leader; a man trained to operate on conceptual level and who has the ability to synthesize (not compromise) the information and inspiration which comes from the other members of the group...while keeping a firm grip on the total formal concept. For if architecture is to remain an "art", there must be retained the supremacy of individual concept...for no artifact of importance has ever been created by an artificially contrived "team". These teams, now common in the industrial design field are developing clever practices ("brainstorming" etc.), and are capable of a high level of sophistication in the production of "good design". These teams are
very necessary for the design and execution of useful objects and comp-licated commercial, technical and business mechanisms...dedicated largely to the turnover of capital for our economic machine. (In fact, they are really outperforming the architect in these areas). Perhaps, in the future, when our culture has a much broader foundation, we may see these teams springing to spontaneous organic concepts; however our present pattern of specialization will allow no such high-level accomplishment.

Therefore, while we are aware that a coordinated system for the education of the specialists in the building and engineering professions is of great importance for the future, it is the training of the "architect" which is our utmost concern.

As mentioned in the Abstract, one of the major reasons for choosing Princeton as the University in which to attempt an intercoordinated program of art-architecture-planning is my belief in the Princeton concept of education...of individual participation in the making of meaning, and not, as many of our larger schools are forced to practice, a kind of mass transferrence of pre-digested information and meaning.

There is amazingly little one can quarrel with in the stated philosophy of the School of Architecture at Princeton; however, in practice there are aspects of the program with which I must take exception in this thesis. These are listed after the following...a description of the present program in architecture at Princeton.*

* As listed in the Official Register of Princeton University Volume XLVIII. Number 10, June 1, 1957...Titles "the study of Architecture at Princeton".
the architectural program as it exists at Princeton

The Princeton Program in Architecture has two main divisions, the Undergraduate Program leading to an A.B. degree, which prepares the student for post-graduate work, and the Graduate Program, which is distinctly professional in character, and culminates in the M.F.A. degree in Architecture. In exceptional cases, holders of a Master's degree may pursue further studies involving a project of creative research commensurate with a doctoral thesis in order to obtain a Ph.D. degree in Architecture.

Most of the exceptional characteristics of this Program derive from two complementary convictions concerning the best training for Architecture:

At the beginning the student should receive the broadest possible general education, so that he may begin his specialized professional studies with a well-rounded personality and a widely-informed and receptive mind.

At the close of his University years he should have developed his individual powers to observe, reason and create to the point that he has seized the initiative in his own education and may expect to find his life's work a constant stimulus to further self-development.

To these ends the Princeton Plan begins with a curriculum which provides the widest distribution of courses throughout the University consistent with professional education, and shifts slowly in emphasis to a concentrated program of professional studies in the graduate years.

Together, the Undergraduate Program and the Graduate Program are planned to offer an unusually complete professional training in Archi-
itecture, in which the student may acquire a sense of values which will enable him to exercise independence of thought and to work confidently in a changing future. The wisdom of such an architectural education has been amply demonstrated by the achievement of our graduates, not only in Architecture and such related professions as Industrial Design, Urban Planning and Landscape Architecture, but also in Business, Advertising, and other occupations in which the broadening discipline of architectural training is of particular value.

Throughout this Program the Princeton architectural student shares the educational opportunities and community life of the University; and benefits by the University's preceptorial system, policy of small classes, and emphasis on the development of the individual student. As an Undergraduate he works in laboratories with engineers and scientists and studies Art and Literature in the same classes as students who are concentrating in these fields. Architectural students enjoy all of the contacts and experience gained outside the classroom as well, and participate in undergraduate activities, musical organizations, athletics, publications, etc. on the same basis as other undergraduates. As a Graduate Student, engaged in advanced work in his own field, he is nevertheless encouraged to take part in the varied program of the University as a whole. He may take courses offered by the other departments of the University which are directly related to the study of Architecture or rewarding in the advancement of almost any serious interest. A stimulating program of extracurricular events, lectures, seminars, concerts and exhibitions further assist the student in achieving a well rounded intellectual life.
The Undergraduate portion of the Princeton Program in Architecture is composed of two stages corresponding to the University-wide provision for a wide distribution of courses in Freshman and Sophomore years, and Departmental concentration in Junior and Senior years.

In Freshman and Sophomore years the student may enter the Architectural Program at the beginning of any term or drop out into another field with equal freedom. During these two years he will have a minority of his courses directly concerned with Architecture: one course Freshman year, two courses Sophomore year, out of his five each term. The remaining majority of his courses must be widely distributed throughout the University to provide a solid foundation of general education.

As few students entering college have definitely decided on the profession of Architecture as a career, most underclassmen tentatively explore several fields of study through their selection of courses; and those who choose the Program in Architecture do so after a fair sampling of the University's curriculum.

In his Junior and Senior years the student concentrates in architectural studies, and is actively engaged in designing architectural compositions in "Independent Work" which demands the largest part of his time.

In this upperclass period the student is given a basic comprehensive education, in which he develops his individual powers to investigate accurately, to organize facts and to draw logical conclusions from them, and to design his personal constructive solutions to environmental problems. By the end of his Senior year the Princeton student has completed a balanced Liberal Arts program with Architecture as its
Major integrating study. If he goes no further with Architecture he has acquired an excellent general education.

At the same time the Junior and Senior years serve as a trial period in which the student may demonstrate to himself and to the Staff of the School his interest and native ability in Architecture. If he develops a sustained and growing interest in Architecture, and proves to be exceptionally skillful in solving architectural problems he will be encouraged to continue his work at the professional level and to enter the Graduate Program.

---

the undergraduate program
typical schedule of courses

**FRESHMAN YEAR**

<table>
<thead>
<tr>
<th>FALL TERM</th>
<th>SPRING TERM</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCHITECTURE 101</td>
<td>ARCHITECTURE 102</td>
</tr>
<tr>
<td>The Visual Arts as Cultural Expression</td>
<td></td>
</tr>
<tr>
<td><strong>MATHEMATICS 103</strong></td>
<td><strong>MATHEMATICS 104</strong></td>
</tr>
<tr>
<td>Elementary Calculus</td>
<td>Analytic Geometry with Calculus</td>
</tr>
<tr>
<td><strong>PHYSICS 101</strong></td>
<td><strong>PHYSICS 102</strong></td>
</tr>
<tr>
<td>The Methods, Nature and Philosophy of Physical Science</td>
<td></td>
</tr>
<tr>
<td><strong>4 ELECTIVES</strong></td>
<td></td>
</tr>
<tr>
<td>ECONOMICS 201 The Structure and Functioning of the National Economy</td>
<td></td>
</tr>
<tr>
<td>SOCIOLOGY 211 Order and Change Modern American Society</td>
<td></td>
</tr>
<tr>
<td>LITERATURE 132 The Interpretation of Literature</td>
<td></td>
</tr>
<tr>
<td>HISTORY 102 European Civilization in Its World Perspective: 1815 to Present</td>
<td></td>
</tr>
</tbody>
</table>


### SOPHOMORE YEAR

#### FALL TERM

<table>
<thead>
<tr>
<th>Course</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCHITECTURE 203</td>
<td>Architectural Drawing</td>
</tr>
<tr>
<td>ARCHITECTURE 201</td>
<td>Ancient Architecture</td>
</tr>
<tr>
<td>ENGINEERING 205</td>
<td>Statics</td>
</tr>
</tbody>
</table>

#### SPRING TERM

<table>
<thead>
<tr>
<th>Course</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCHITECTURE 204</td>
<td>Color and Form</td>
</tr>
<tr>
<td>ARCHITECTURE 202</td>
<td>Mediaeval Architecture</td>
</tr>
<tr>
<td>ENGINEERING 206</td>
<td>Mechanics of Materials</td>
</tr>
</tbody>
</table>

**ELECTIVES 4**

<table>
<thead>
<tr>
<th>Course</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>RELIGION 101</td>
<td>Introduction to Judaism and Christianity</td>
</tr>
<tr>
<td>LITERATURE 141</td>
<td>Great Modern European Writers</td>
</tr>
<tr>
<td>POLITICS 202</td>
<td>American Politics</td>
</tr>
<tr>
<td>PHILOSOPHY 102</td>
<td>Philosophy and the Modern Mind</td>
</tr>
</tbody>
</table>

### JUNIOR YEAR

#### INDEPENDENT WORK IN DESIGN

<table>
<thead>
<tr>
<th>Course</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCHITECTURE 409</td>
<td>Analysis of Architectural Composition</td>
</tr>
</tbody>
</table>

#### 4 ELECTIVES

<table>
<thead>
<tr>
<th>Course</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCHITECTURE 307, 308</td>
<td>Drawing and Color</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCHITECTURE 313</td>
<td>Renaissance Architecture</td>
</tr>
<tr>
<td>ARCHITECTURE 314</td>
<td>Modern Architecture</td>
</tr>
</tbody>
</table>

**4 ELECTIVES**
ENGINEERING 302 Reinforced Concrete

ENGINEERING 305 Structural Analysis

ART 207 Art and Civilization in the United States

ART 310 Modern European Painting

SENIOR YEAR

INDEPENDENT WORK IN DESIGN

ARCHITECTURE 406
Architectural Materials and Construction

Analysis of Architectural Composition

ARCHITECTURE 410
Analysis of Architectural Composition

6 ELECTIVES

ENGINEERING 401 Statically Indeterminate Structures

ENGINEERING 402 Structural Design

* OTHER ELECTIVE COURSES may be taken throughout the University

the graduate program

The Graduate Program in Architecture is designed to make full use of
the maturity of the graduate student. Princeton men who have fulfill-
ed the Undergraduate Program with distinction are joined by outstand-
ing students holding degrees from other institutions in the pursuit
of an adult program of study which rests firmly on the capacity for
independent thought and action of the individual graduate student. Throughout the Graduate Program criticism and supervision of work encourage the development of the student's own ideas and personal approach to the problems of Architecture; the responsibility of decision rests on him alone. Judgment and grading of student work places emphasis on native ingenuity and creative thought, and recognizes the fact that there is a great wealth of contemporary solutions to contemporary problems.

The normal program will take two and one half years and will be composed of the following: Architectural Composition, Illumination-Color-Structure-Form (an experimental lab), Structural Design, Mechanical Equipment, Building Economics, Professional Practice, a Seminar in City Planning as well as numerous and widespread elective courses, and a Thesis for the Degree of Master of Fine Arts in Architecture.

VIII

proposed changes and additions to the present architectural program

(as a novice, I am compelled to place the prefix...."I feel", in front of the following statements)

The School of Architecture at Princeton has, in the past, been too largely integrated into an historical, word-oriented context; while this may produce excellent critics and teachers it may not produce the kind of hard-fighting, knowledgeable architect-planners who will go out into the fray and push through the badly needed reforms in our professional world; reforms which they are quite capable of conceiving with their more broad background in the sciences and humanities.
the introduction of workshop activity

One of the manifestations of the history-word oriented program is the lack of a powerful interest in direct-making activity. There is an experimental lab on the grounds of the university for this purpose, but it somehow was located about a mile from the architecture building, making it a kind of special place to go to...for a special kind of activity. It is my contention that such workshops must be placed in immediate juxtaposition to the drafting rooms to be really efficient. For this reason, I have introduced workshops with wood, metal and plastics equipment, adjacent to an experimental structural lab in the lower level of the architectural building. This in addition to activity in the painting and sculpture studios and in the photo lab will give the architectural students the opportunity for more direct-making experience which I feel so strongly is the key factor in the poor performance of most of the schools of architecture today. The students are being inundated with numbers, words and paper...but architecture is a three-dimensional concern...in which spaces must be created by systems of structure conceived to give meaning to those spaces and to "evoke their function". A high degree of proficiency in this complicated affair can only be achieved through a synthesis of the poles of creativity...the rational, objective analysis of the physical requirements of the space...given a countenance through a subjective, supra-rational understanding of what the space should be. The former can be learned by word-and-paper activity but I feel that the latter can only be gained through kinetic learning...of knowing how things are made (in the universal sense), through participation in the act of making, and through the observa-
tion of the consequences of direct actions on materials. In this activity can be seen, without the intervention of words, the meaning of limit and of the operation of governing principles in various systems (color, geometrics etc.). For an architect, I believe, does not really need to pile brick on brick or I-beam on lally column in order to learn about structure...it can be learned by exercises which are given to discover the form potential of plasticene or plexiglas, or basswood, etc. It is the understanding through the "muscle-sense" which can give rise to the housing of an activity in a significant form. It cannot be gotten through planning alone, for no matter how brilliant the curriculum in this area, it depends on the weak medium of language for the transfer of information and criticism.

It is this factor which most challenges the placement of the architectural school within the University compound. As we all know (and have been consistently reminded by Wright, Corbusier) formal design education often is a bankrupt business, devoid of meaning for the really talented student; criticism of projects which never reach beyond the paper stage is perennially ineffective. I am sure we all would agree that the self-criticism which occurs from having done something and then seeing it or being in it...can be more effective than a year of paper problems. Painting and sculpture studio work or structural workshop experiments require few erudite explanations...the learning process has gone on since the student (for example) chipped the first piece of stone off the block or put the first piece of paint on the canvas.

To repeat, I do not propose the abolition of the drafting room or the initiation of a brick-laying course...but I do propose a drastic reinforcement of the direct three-dimensional program within the
architectural curriculum. If we do not do this, we will continue to have a mass of rhythmless, scaleless porcelain panel-clad buildings brought into being on the drafting tables by skillful planners. But we will have no architecture; this will be done by a new breed of engineer-designers (Nervi, Candela etc.) who will know, first hand, the potentials of new materials and structural systems.

the student "work" court

This covered court (usable all during the entire year) is planned to be used for exhibitions from all departments and for structural and spatial experimentation and is located at the main student entrance so that activity going on there may be observed by all students entering the building.

the jury room

Juries have historically been open at Princeton, so that interested students and faculty members may observe and participate. The new jury room is located on the main floor directly off the work court... and is adjacent to the student lounge, so that the two may be joined for special occasions.

the drafting rooms

For many years the undergraduate and graduate students have worked in the same drafting room. In order to maintain this working relationship, the new drafting rooms are largely open to each other and separated only by a low bank of lockers and sinks. Each student is given
a six-foot desk-table and storage unit with a low tack board at the front of each desk. In addition there are sinks and model-making tables and individual lockers for student use.

faculty offices and studios

The faculty members are each given office and drafting space and are encouraged to practice and do research work on the premises so that the students may benefit from direct observation of this professional work. There is also a large faculty center on the top floor, where all faculty members may meet for faculty conferences and where they may entertain students and visitors.

research facilities

Princeton has for the past few years, been involved with Solar Research activity and with a program of study of Curtain Wall construction. Space for these activities has been provided within the building...in the basement and on the third floor.

storage

The storage area for all drawings and models is located in the basement with easy elevator access from all floors.
DEPARTMENT OF ARCHITECTURE

physical requirements

<table>
<thead>
<tr>
<th>FUNCTION</th>
<th>SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director's office</td>
<td>1,000 sq. ft.</td>
</tr>
<tr>
<td>Administrative office, 2 secretaries file spaces</td>
<td>400</td>
</tr>
<tr>
<td>9 offices for staff</td>
<td>300 sq. ft. ea.</td>
</tr>
<tr>
<td>Undergraduate drafting room</td>
<td>2,000</td>
</tr>
<tr>
<td>Graduate drafting room</td>
<td>2,000</td>
</tr>
<tr>
<td>Jury room (whole school)</td>
<td>1,200</td>
</tr>
<tr>
<td>Workshops Structural experimentation</td>
<td>400</td>
</tr>
<tr>
<td>Wood - Metal - Plastics shops</td>
<td>1,000</td>
</tr>
<tr>
<td>Storage room</td>
<td>800</td>
</tr>
<tr>
<td>Classrooms (2)</td>
<td>600 sq. ft. ea.</td>
</tr>
<tr>
<td>Research facilities</td>
<td>1,000</td>
</tr>
</tbody>
</table>

The architecture students will also use the student lounge, photo lab, and design fundamental workshops.
IX
OBJECTIVES

General

covered "work court" gives (year round) usable space for exhibitions, structural experiments, etc.

encourages spontaneous and planned activities
between the several departments within the complex
through continued contact with the material shown here and elsewhere
prominently throughout the building...all those students using the
building for elective studies (1200)...will benefit in the area of visual education - reaching and stimulating the future leaders of the country is one of the more important functions of the University.

the simple "ring" of circulation allows easy physical contact be-

between all the elements within the building

the placement of the new buildings in such a manner as to be sym-

pathetic with the overall spatial organization of the campus...the
main feature of which is the system of defined open-spaces connected diagonally. (see Diagram #1)

the Museum of Art....more space, better internal function - much
closer contact with campus activity and the addition of the "working museum"

the Marquand Library....more space and light for book storage and study areas - central location...easy access from all departments

History and Archaeology....more adequate lecture facilities...better
access to these by students from other departments...more preceptor-

ial rooms and seminar rooms

Fine Arts....establishment of painting and sculpture as new depart-

ments with really adequate facilities...placement to achieve close
association with architecture, city planning, the workshops and the working museum

Architecture and City Planning....establishment of new Planning
course at graduate level....placement of these departments to achieve maximum interaction...more space for drafting and study...and easy access to workshops and Fine Arts studios

proper orientation and location for easy access for all the depart-

ments
<table>
<thead>
<tr>
<th>DEPARTMENTS</th>
<th>NUMBER OF REGULAR DEPARTMENTAL STUDENTS</th>
<th>STUDENTS IN 1ST &amp; 2ND YRS</th>
<th>STUDENTS FROM OTHER DEPARTMENTS USING FACILITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>JR  SR  G-1 G-2 PH.D  TOTAL</td>
<td></td>
<td>PROF  ASSO  ASS  INST  LECT  TOTAL</td>
</tr>
<tr>
<td>DEPARTMENT</td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>OF HISTORY</td>
<td></td>
<td></td>
<td>42</td>
</tr>
<tr>
<td>&amp; ARCHAELOGY</td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>SCHOOL OF</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>ARCHITECTURE</td>
<td></td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>&amp; PLANNING</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEPARTMENT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OF PLANNING</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>130</td>
</tr>
</tbody>
</table>

* PROPOSED – (SOME FIGURES ARE FROM THE EXISTING PRINCETON CATALOGUE - HISTORY, ARCHAEOLOGY & ARCHITECTURE)
DEPARTMENT OF CITY AND REGIONAL PLANNING - (new department)

A Princeton motto is "Princeton in the Nation's Service"; it seems incredible that in the matter in which the nation most needs service and needs it quickly -- the organization and design of the elements of our urban environment .... that Princeton has not initiated a Graduate Program in City and Regional Planning.

"Planning is defined as an integrative Art And Science. It is concerned with the unified development of urban communities, of states, regions and the nation. Planning is conceived of as a democratic process derived from the natural expression of human desires and needs and must operate within the framework of regularly constituted Governmental forms.

A student must be trained to organize and conduct research studies, to collect information, assimilate, analyze and evaluate. He must also know design requirements and to be familiar with the elements of good design and must be skillful in translating his work in two and three dimensional form."*

Therefore the planning student would have to complete the regular architectural curriculum and would work in planning during the Graduate years. A full-time Planning and design department would certainly make more realistic use of the potential of the Bureau Research...whose function and composition are listed below:

"The Bureau was established in 1941 under the sponsorship of the School of Architecture, the Department of Economics and Sociology, the School of Engineering, and the Department of Politics, through funds provided by the Rockefeller Foundation, the American Philosophical Society,

* Harvard GSD Handbook
Gordon McCormick '17, and the School of Architecture. The Bureau was created for three main purposes: (1) to provide a mechanism for the coordination and integration of information and research in fields pertaining to urban planning; (2) to contribute, through creative research, to the development of a greater knowledge of the relationships between the different activities which together form the city, and to a further understanding of urban structure; (3) to provide informal assistance to students engaged in special work in fields related to urban planning.

All facilities of the Bureau, including its Library and its bi-monthly publication, The Urban Reference, are at the disposal of students. The Library includes a comprehensive collection of material dealing with the various aspects of urban planning: government, economics, population, structures, geography, land use, transportation, and utilities. Master plans adopted by cities are available for study. The Bureau is located in the Firestone Library.

Work done by this department could add not only to the stature of the University as a whole, but could give dimension and direction to these students in architecture and the arts who are concerned with larger problems....of the creation of a more beautiful and safe urban environment.
physical requirements

<table>
<thead>
<tr>
<th>FUNCTION</th>
<th>SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drafting room</td>
<td>1800 sq. ft.</td>
</tr>
<tr>
<td>Classroom</td>
<td>800</td>
</tr>
<tr>
<td>Reference room</td>
<td>275</td>
</tr>
<tr>
<td>Offices: Director, 2 secretaries</td>
<td>600</td>
</tr>
<tr>
<td>2 Faculty offices</td>
<td>300 sq. ft. ea.</td>
</tr>
</tbody>
</table>
At present, Princeton has a program called "Creative Arts", with the following notation in the Catalogue:

Princeton University, aided by a grant from the Carnegie Foundation, inaugurated in 1939 a Creative Arts Program to provide additional opportunities for undergraduates showing particular interest and aptitude in the creative arts, painting, sculpture, music and writing. The central purpose of this program is not so much to develop professional sculptors, painters, musicians, or writers as to allow undergraduates to develop their creative faculties in connection with a general program for humanistic education.

(It has three part time faculty members on its staff of artists)

This may have been proper and adequate for the first century of Princeton's history, for the early University was formed by the Protestant Ethic and largely denied the very existence of meaning in the plastic arts for American education. However, the future of advanced education will depend for its success on its ability to provide for the student an environment charged with potential for understanding the poles of man's capability; from the poetic statement to the involved calculative situation. No interpretation of reality is complete which denies the existence of one of these poles. The greatest book in history, the Bible -- can only be understood in this manner.

In Princeton's avowed direction toward allowing "undergraduates to develop their creative faculties in connection with a general program for humanistic education", there lies a basic fallacy. For no real
program in the arts can exist in a vacuum, there must be faculty members in residence who are actively and seriously engaged in pursuing a life of making -- and there must be a body of challenging students who are working full time at being artists, (not occasionally dabbling between classes in history or engineering). No real gain for the University will be found in this direction and perhaps it even contains a danger...in the obvious neglect of the artist by the University.

FINE ARTS -- the new program

A basic change that I have made in departmental structure is in the removal of "ART" from Archaeology (formerly the Department of Art and Archaeology) which has been historically a word-oriented, intellectually-based program and which would actually have a detrimental effect on an active arts program if too directly associated.

Students will participate in the normal University Program - with general studies for the first two years --then within the School of Fine Arts for the Junior and Senior years. A selected number of students will be retained for the Graduate Program; this group will be reinforced by a chosen few students from outside the University.

All students will begin in the first year with a Design Fundamentals Course which will be given by faculty members of Architecture and Fine Arts with a concentration on the limits and potentials acting within systems, (color, geometrics, etc.) and will be approached in a laboratory context, accompanied by an intensive study of natural principles of perception and structure; the individual would then proceed to studio programs in the following years.
SCHOOL OF FINE ARTS

physical requirements

FUNCTION

<table>
<thead>
<tr>
<th>SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>900 sq. ft.</td>
</tr>
<tr>
<td>900</td>
</tr>
<tr>
<td>900</td>
</tr>
<tr>
<td>2000 sq. ft.</td>
</tr>
<tr>
<td>700</td>
</tr>
<tr>
<td>700</td>
</tr>
<tr>
<td>450</td>
</tr>
<tr>
<td>800 sq. ft.</td>
</tr>
<tr>
<td>125 sq. ft. ea.</td>
</tr>
<tr>
<td>300</td>
</tr>
<tr>
<td>250 sq. ft. ea.</td>
</tr>
</tbody>
</table>

* Faculty members will be given studio space in the building and will be encouraged to work in residence so that students will benefit from the association.
The present department, Art and Archaeology, is an old respected (and successful) institution of Princeton University. However, in the light of the new problems besetting our educational programs, I do not feel that this department is operating at optimum efficiency as it is presently constituted.

Because of Princeton's desire to keep "professional" activities out of the University, painting and sculpture dabbling courses have been integrated into this department of History of Art and Archaeology. However, this very scholarly tone of these historical activities is the antithesis of a serious program of active participation in the plastic arts. Therefore, for the sake of clarity in this project I have given the Painting and Sculpture Departments an autonomous administrative structure and have made a distinct department of the History of Art and Archaeology elements.

Some of the courses that are given in this department are the following: Ancient Architecture, Medieval Architecture, Ancient Art, Art of the Middle Ages, Art and Civilization of the United States, Italian Painting, Myth, Religion and Art, Chinese Art, European Painting 1600-1800, Modern European Painting, Renaissance and Modern Sculpture, Renaissance Architecture, Modern Architecture, Classical Greek Art, Hellenistic and Roman Art.

There will be as many as 1000 Students (listed in Chart #1) from outside the Art-Architecture complex taking courses in History as a part of their regular distribution of Humanistic studies. This necessitated placement of the lecture, study and preceptorial rooms at a convenient location.
location for easy access and egress for rather large numbers of people. Many of these classes are of the preceptorial variety and are given in special preceptorial rooms and in the offices of the faculty members. The study room is used for display of history plates which must be open at all hours of the day and evening. In addition, there is a great deal of individual research done in the library so that study space must be made available for many history students there as well.

**DEPARTMENT OF HISTORY OF ART AND ARCHEOLOGY**

**physical requirements**

<table>
<thead>
<tr>
<th>FUNCTION</th>
<th>SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director - 2 secretaries</td>
<td>650 sq. ft.</td>
</tr>
<tr>
<td>4 Offices - full professors</td>
<td>300 sq. ft. ea.</td>
</tr>
<tr>
<td>9 Offices - assoc., assist. professors,</td>
<td>250 sq. ft. ea.</td>
</tr>
<tr>
<td>instructors</td>
<td></td>
</tr>
<tr>
<td>4 Preceptorial rooms</td>
<td>300 sq. ft. ea.</td>
</tr>
<tr>
<td>1 Study room (history plates)</td>
<td>1200 sq. ft.</td>
</tr>
<tr>
<td>2 Seminar rooms</td>
<td>700 sq. ft. ea.</td>
</tr>
<tr>
<td>Archaeological display - storage</td>
<td></td>
</tr>
<tr>
<td>room in basement</td>
<td>800 sq. ft.</td>
</tr>
</tbody>
</table>
XIII

THE MUSEUM OF ART

The present museum, built in 1887 is no longer adequate for its purpose, and it badly needs additional exhibition space to be more closely related visually to the campus, so that more spontaneous visitation of its exhibitions will be encouraged. (At present plans are being studied for a new wing to the existing museum for this purpose).

The new Museum is planned to have three separate and distinct kinds of exhibition space for the following uses: (1) changing shows which are placed to attract the attention of the entire Princeton Community (on the lower floor and in the great court) (2) the permanent collections in the upper floors of the main building will include the following: "the C.O. von Kienbusch Jr. Memorial Collection, assembled over the past three decades for the purpose of enriching courses in Art and Archaeology; the Henry B. Cannon Collection of paintings of the school of Verona; the Dubois S. Morris and Frederick Petersen collections of Chinese paintings; the Junius S. Morgan Collection of prints; the Dan Fellows Platt Collection of drawings; and other special groupings devoted to the Mediterranean Regions, Western Europe, the Far East and the United States." and (3) the "working museum" adjacent to the Fine Arts studios for study uses and pastiches and is readily available to the History students for specific historical research.
### Physical Requirements

<table>
<thead>
<tr>
<th>Function</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director and secretary</td>
<td>600 sq. ft.</td>
</tr>
<tr>
<td>Curator and secretary</td>
<td>400</td>
</tr>
<tr>
<td>Galleries for changing exhibits</td>
<td>1,600</td>
</tr>
<tr>
<td>Permanent collection</td>
<td>12,000</td>
</tr>
<tr>
<td>Working museum</td>
<td>3,000</td>
</tr>
<tr>
<td>Shipping and receiving and Superintendent's office</td>
<td>600</td>
</tr>
<tr>
<td>Vault</td>
<td>2,000</td>
</tr>
<tr>
<td>General storage</td>
<td>4,000</td>
</tr>
<tr>
<td>End work area</td>
<td></td>
</tr>
<tr>
<td>Photo lab and storage</td>
<td>600</td>
</tr>
</tbody>
</table>
The present library contains 50,000 volumes on Architecture and Art, and possesses a collection of 48,000 slides in color and black and white and 330,000 photographs. (It is assumed that this collection will be considerably expanded in the future).

It was my feeling while working on the organizational studies for this complex that the library is the only element which is common to all departments within the group and was therefore placed in a central location with easy access from all departments and a north exposure to the great court.

As the new library is planned, there will be a place for exhibition of new and special library acquisitions adjacent to the librarian's office and to the slide and photo collection, (in a place where a good deal of circulation will occur).

There are also special architecture city planning, and history and art reading rooms - and much study space in the mezzanine and stack areas.
### MARQUAND LIBRARY OF ART

**physical requirements**

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**FUNCTION** | **SIZE**
---|---
Main reading areas | 3,800 sq. ft.
Architecture and City Planning reading reference room | 900
History and Fine Arts reading and reference rooms | 900
Librarian's office | 400
Work area and assistant's office | 600
Slide and photo collection | 1,300
Stacks | 8,400
Pack volumes and General storage in the basement | 900
McCormick Hall... west side
McCormick Hall... south side
Museum of Art... north side
View down McCosh Walk
DIAGRAM # 2........SITE PLAN
The buildings which will be removed (as was explained, to achieve a more clear archetypal solution) are the following: McCormick Hall and Murray-Dodge Hall... (See diagram #2)

McCormick designed by Cram and Ferguson was built in 1922, is an addition to the Museum of Art built in 1889, designed by A. Page Brown. (see photographs). The buildings were enlarged in 1927 and again added to in 1935, and is destined to be enlarged again in the next few years. The resulting confusion of styles and function is my justification for the removal of this building for the sake of the clarity of this problem.

Murray-Dodge Hall (two buildings, joined by a cloister) was designed by A. S. Harvey and built in 1879. It now contains a small auditorium for undergraduate dramatics (which activity has largely disappeared in the Sputnik age), and various religious and social services. The proposal of this thesis is to expand the future use of this little theater (Theatre Intime), and to build a new theater on this site for the theatrical function and as a lecture hall for the museum and design departments... for about 500 persons.

It is hoped that the creation of a new, more defined space will be accomplished in the area between the new museum, Pyne Hall and the new theater and Clio Hall. This crucially located, defined space could assist in giving focus to a revived interest in Arts activity... by placing emphasis on the entrance and exhibit spaces in the lower floor of the Museum (with a view through to the sculpture court) and to the entrance to the little theater. The site is centrally located.
and will be used by large numbers of the student body and faculty during all hours of the day and night.

One of the major problems faced in siting the building was to give proper orientation and location to each separate function within the complex.

(see diagram #2)
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BIBLIOGRAPHY

The Official Register of Princeton University
Princeton University Catalogue
Architecture As Space......................... Bruno Zevi
Museum Without Walls........................... Alexander Dorner
College Architecture:
An Expression of Educational Philosophy........... Albert Bush-Brown
Architectural Record August 1957

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and my tireless wife Constance, who assistance was invaluable
Sprayed Concrete "Hat" in First Floor Corridor