Occupants of Building 20: 1945-1979

1945 Rad Lab*
- Division 5

Center for Analysis
Division for Basic Research

1946 RLE* (until 1957,...)
- Communications & Related Projects 1947-48
  - Communications Research 1949-54
  - Communications Biophysics 1954-74...
  - Speech Analysis 1954-59
  - Semiconductor Noise 1954-56
  - Neurophysiology 1954-74...
  - Mechanical Translation 1955-65, 197-
- (Aids to Computation - this category is not important in itself)
  - Processing & Transmission of Information 1955-74...
  - Multipath Transmission 1954-56
  - Statistical Communication Theory 1954-74...
- Microwave & Physical Electronics 1947-48
  - Transitor Circuits 1954-57
- Microwave Physics 1947-48
  - Microwave Gaseous Discharge 1949-59
  - Low-Temperature Physics 1950-56, 1959-62
  - Irreversible Thermodynamics 1956
  - Nuclear Magnet Resonance & Hyperfine Structure 1956-61, 1963
- Modern Electronic Techniques Applied to Physics and Engineering 1947-4
  - Magnet Laboratory Research 1951-55

LNS*
- Headquarters, Machine Shop & Purchasing*
- Nuclear Physics
  - Cosmic Rays* (until 1979)
  - Elementary Particles Group
  - High Voltage Research
  - Nuclear Cross Sections
  - Radioactivity
  - Spectroscopy
  - Synchrotron
  - Theoretical Group*
- Radio Chemistry
  - Chemistry of the Fission Elements Group
  - Cyclotron Operating
  - Inorganic Group
  - Organic Group
- Radio Medecine
  - Isotopes & Tracers Group
  - Therapy Group

*Occupant moved into Building 20 in this year.

1946 Plastics Research *
Dynamic Analysis & Control*
Statistics*
Economics (until 1947)
Group Dynamics* (part of RLE)
Math
Chemistry
Physics*
Project METEOR* (became the Flight Control Lab)
Stroboscopic Measurements*

1947 Acoustics* (third interdepartmental Lab)
Food Technology* (Prescott Lab)
Geology*
Nutritional Biochemistry*

1948 Insulation Research*
Model Railroad Club

1949 Computation*
Health Physics Lab
IBM Computing Group*
LNS- Linear Accelerator (originated in RLE)
Linguistics
Meteorology (until 1952)
Project LNS_APR Group (Accelerator Physics Research)

1950 Shipping & Recieving*

1951 Dynamic Analysis & Control Lab* (until 1962)

1952 Adhesives Lab*
Air Force ROTC
Army ROTC
Navy ROTC
Numerical Analysis Lab*
Pershing Rifles
Computing Section

1954 Flight Control Lab* (until 1955)

1955 Office of Statistical Services (until 1958) (IBM Computing Group)

1956 Computation Center* (research center, in 1967 became Information Processing Center)
Physical Sciences Study Committee (until 1962)

1957 Plastic School

1958 Physical Plant*
Watchman*

1959 Ice Research Lab*

1960 Campus Patrol*

1962 Biomedical Computer Research Center
Lab Hazards Committee* (now called "Toxic Chemical Committee under the auspices of EMS)

1963 Occupational Medical Service* (grew out of Lab Hazards Committee and became division of the Medical Dept. in EMS)

1964 Science Teaching Center (in 1969 merged with the Educational Research Cente

1965 MIT-Wellesley:
Upward Bound

1966 Radio Frequency Interference*

1967 Educational Research Center (until 1974; became DSRE)

1969 UROP

1970 Environmental Medical Service* (includes Industrial Hygiene & Radiation Protection)
Harvard-MIT: Health Science Program

1971 Concourse Program
Council for the Arts
MIT-ERS Electronics Research Society

1972 International Nutrition Planning Program

1973 DSRE
University Film Study Center*

1974 Harvard-MIT: Cross Registration (part of the Humanities & Social Sciences Deans' office)
Humanities- Deans
Piano Lab*
Technology Studies Program (became Program in Science, Technology & Socie

1975 American Journal of Physics*
Dept. of Nutrition & Food Science (Diet Kitchens, Electronics Shop, Reading R
Division of Animal Medecine Lab (Veterinary Services)
Oral History Program
Project WITS- Project on Work in Technology & Science
Secondary Technical Education Project- STEP

1976 Aspen Project
Harvard-MIT: Biomedical Engineering Center for Clinical Instrumentation
Lab for Experimental Sedimentology
Project STILE
United Nations University World Hunger Programme

1977 Center for Materials Research in Archeology & Ethnography
Philosophy Dept.
Program in Science, Technology & Society

1978 Center for Cognitive Science
Harvard-MIT: International Food & Nutrition Policy Program
International Population Initiatives
Text Editing Center

Occupants Whose Arrival Date is Questionable

Atomic Energy Commission
Architecture Education Study
Air Force ROTC
Army ROTC
DIT-MIT Program
Education Study
Electromagnetic Interference
Geology
Geophysics
Housing Bureau
Instrument Develop Shop
Instrumentation Lab
Lab for Computer Science
Machine Shop
Mason Shop
MIT Press
Model Aircrafts Club
Navy ROTC
Physics
Plastic School
Program in International & Community Development
Recording Studio
Registrar
Samuelson
Scanning Proton Microprobe Group
Score, Inc.
Ting, Samuel
Unified Science Study Program

Massachusetts Institute of Technology
Institute Information Services
Room 4-237 77 Massachusetts Avenue
Cambridge Massachusetts 02139

12 December 1979

TO: Virginia Gunter

FROM: Kathryn Lombardi

Here is a summary of my understanding of themes and organization for the Building 20 exhibition.

There will be a number of theme "lines" tracing the development of certain activities in Building 20 over time:

1. The interdisciplinary incubator -- Rad Lab, RLE, and "offspring"
2. The physical sciences -- Laboratory for Nuclear Science
3. The life sciences -- Nutrition and Food Science
4. Research on education -- PSSC, Science Teaching Center, Education Research Center, Division for Study and Research in Education
5. Humanities, Arts, and Social Sciences -- Linguistics; Science, Technology, and Society; Council for the Arts; Dean of the School of Humanities and Social Science
6. Undergraduate education and Research -- the Undergraduate Research Opportunities Program

In addition, we would have lists located every five years, cataloguing all the activities in the building at those times.

Finally, the columns might be used for such purposes as:

- Architectural genesis and plans
- Description/comments on support service activities
- Extracurricular activities
- Mini history of ROTC
- Comments from questionnaire
- Graffitti sheets

Hope this is useful.....

Kathryn

KWL:dl

cc: Kathy Halbreich ✓

OTHER OCCUPATIONS

ADDITIONAL OTHER TENANTS

ADDITIONAL ACTIVITIES

TENANTS

OCCUPANTS

supplemental auxiliary further plus support ancillary independent separate organizations

GR BL PURP RED ORAN YELL

BUILDING

Date: 12 Feb 91 12:33:53 EDT
From: DOT@MITRLEVM.mit.edu
To: SIMSONG@MIT.EDU
Subject: Building 20 info

From: dot

RLE's Administrative Officer, Donna Ticchi, mentioned that you are writing an article on Building 20 for Tech Review. I don't know if I be much help to you, other than the fact that I have also done much research on RLE and the Rad Lab.

I would suspect that the people over in the MIT Archives would be helpful to you, if you haven't approached them already. There was an article published in The Boston Globe on June 29, 1988 by Alex Beam titled "A building with soul." It's basically a casual discussion with Professors Lettvin (now at Rutgers) and Halle about their love for the building. RLE will be reprinting it (with permission) in its upcoming issue of the lab's newsletter CURRENTS.

There was a NOVA (PBS-TV) show on the Radiation Lab just last year. It was called "Echoes of War." In it, there were still shots of Building 20, probably from the MIT Museum. Another one of the credits listed at the end of the program was the Historical Electronics Museum. I have never heard of them, and I suspect they may be able to help you with some further information.

There are several professors still around MIT that may be able to help you. Professor Louis Smullin and Professor Campbell Searle are two that come to mind. Professor Smullin was affiliated with the Rad Lab, and may have some recollections. Professor Searle is still located in Building 20, and has been for some time. Also, the RLE Photographer, John Cook, may also be of help to you. He has been here some 30 years, and is also a history buff of sorts. His office is located in Building 20. Morris Halle may also be a good source.

You may also have heard about the 50th anniversary celebration of the Rad Lab that is coming up this June. The celebration is being held in conjunction with the IEEE Microwave Society annual meeting here in Boston. A reunion of the Rad Lab alum is planned, as well as some special events and exhibits. If you want more information on this, I will let you know who to contact.

Your article sounds intriguing (I am also a fan of Building 20), and although I am not certain how you are approaching the subject (architectural, nostalgic, historic, technical, trivia, etc.), I would be glad to help you make contact with the appropriate people.

Dorothy Fleischer
36-417, x.3-4653
Editor and Staff Writer
RLE currents

THE STORY OF BUILDING 20

Building 20 at 18 Vassar Street was built in 1943 as a temporary structure to house part of the Radiation Laboratory. With the end of World War II and the disbandment of the Radiation Laboratory, the building became the first residence for the Research Laboratory of Electronics. RLE was founded in 1946 to continue some of the Radiation Laboratory projects, and in particular to be the first organized interdisciplinary laboratory at M.I.T. The Laboratory for Nuclear Science and Engineering, the Dynamic Analysis and Control Laboratory, the Cosmic Ray Group, the Acoustics Laboratory, and the Prescott Food Technology Laboratory were among the early activities using the variable spaces that Building 20 provided.

Unusual flexibility made the building ideal for laboratory and experimental space. Made to support heavy loads and of wood construction, it allowed a use of space which accomodated the enlargement of the working environment either horizontally or vertically. Even the roof was used for short term structures to house equipment and test instruments.

Although Building 20 was built with the intention to tear it down after the end of World War II, it has endured these thirty-six years, providing a special function and acquiring its own history and anecdotes. Not assigned to any one school, department, or center, it always seems to have had space for the beginning project, the graduate student's experiment, the interdisciplinary research venture. In this capacity it has functioned as an incubator, allowing a project to develop until its space requirements or independence demanded a move.

17 MILLION ELECTRON VOLT LINEAR ACCELERATOR

Through the instigation of Professor John Slater and others working in the Research Laboratory of Electronics, work on the M.I.T. 17 million electron volt standing wave microwave linear accelerator began soon after the end of World War II. By 1950 the accelerator still was not complete. It was taken over at that time as a potential nuclear physics research facility by the Laboratory for Nuclear Science. Professor Peter Demos, who was then a physics graduate student working on his thesis, took a year's leave from his studies to bring the accelerator into operation; he was working on the project during that period with Dr. Isaac Halpern. By 1951, the 17 MEV linear accelerator was functioning and it was used for a number of years by Professor Demos, Dr. Philip Sargent, Professor William Bertozzi, Dr. William Turchinetz, their graduate students and others, to conduct experiments in photon-induced reactions including photo-fission and time of flight neutron studies. Building 20 was especially good for this purpose for its space was so easily adaptable; in particular the accelerator required the flexible, high bay space available in the building to accomodate its length and its surrounding radiation shielding.

Currently Professor Demos and his colleagues have developed, built, and with user physicists from other laboratories here and abroad, are now using the 400 million electron volt Bates Linear Accelerator in Middleton, Massachusetts. The Bates Linac, which belongs to a new generation of accelerators, is being applied to experiments using the electromagnetic probe (electrons, photons) to study the aggregate structure and properties of the atomic nucleus. Concommitant with the construction and later use of the Bates accelerator has been the development of novel, highly specialized analysis and detecting apparatus, much of whose design, study, and construction was, and is being done, in Building 20. Some of this work has been carried on in an Instrument Development Laboratory located in the old quarters of the 17 MEV Linear Accelerator.

Boston Globe
6/21/86

T.G.I.W.

BY ALEX BEAM

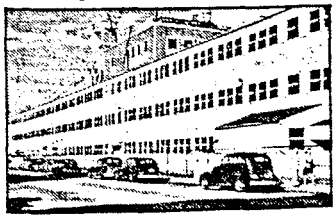
A building with soul

I am sitting inside MIT's legendary Building 20 with three great minds, one of them encased in plaster.

Institute Professor of Linguistics Morris Halle and neurophysiologist Jerome Lettvin – seated on opposite sides of a bust of German naturalist and explorer Alexander von Humboldt – are rhapsodizing about the rickety wooden barracks that is their professional home.

"Building 20 is an admixture of all the interesting things at MIT," says Lettvin, a jovial mountain of shivering cerebra who is admired inside Building 20 not for his genius but as the man who first uttered a profanity on television, during a 1961 debate with Timothy Leary. ("It made the front page of Variety," Lettvin insists. "You can look it up.")

What's so special about Building 20? Even the MIT Museum had trouble answering that question in 1980, when it organized an exhibit dedicated to the ramshackle "Plywood Palace," the least descript of all the institute's studiously nondescript structures. "Why do we celebrate a building so modest, so meek and indeed so homely in its demeanor?" asked the introduction to the exhibit catalogue.



1945 photo/MIT Museum

First off, we celebrate its history. One of several temporary structures thrown up on campus during World War II – it took less than an afternoon to design – Building 20 is the only one still standing. Many of MIT's greatest projects, including the wartime radar project and its first interdisciplinary labs started in Building 20, along with many of the institute's leading professors

Globe staff photo/John B

Savannah Harris (center) sits with other Blue Cross-Blue Shield education graduates during graduation ceremonies.

'When I heard about this program I said, "Gee, that's nice. But it's not for me. I can't do it." . . . Then I got a little encouragement and . . . it's been wonderful.'

– Graduation speaker Savannah Harris

For the graduates tears and cheers

By Sarah Snyder
Globe Staff

The graduates of the Blue Cross-Blue Shield adult diploma program sat in a

immigrants in their late 3 40s. Work and family resp ities had prevented from gett ploma until they discover could get one through classes at the company.

labs started in Building 20, along with many of the institute's leading professors.

Secondly, the building is the kind of academic melting pot that gives university presidents indigestion. Famed linguist and antiwar activist Noam Chomsky works just a few doors away from MIT's ROTC offices, which have decorated one whole wall with a colorful mural of an F-16 fighter.

The music department's piano repair facility – a "computer-free zone," according to a sign on the wall – shares a floor with the nuclear science lab's shop room. The model railroad club, which houses the most sophisticated toy train in the world, is just a stone's throw from the chemical engineering department's cell culture lab, where a bulletin board message inquires plaintively: "Did anybody use toxic substances in the small Corning spinner flasks? About half of my cultures died without apparent reason."

After the war many of the heavyweight research projects moved into their own buildings, and Building 20, with its creaky floors and poor ventilation, attracted researchers who couldn't find space elsewhere at MIT. Once they settled in, they fell in love with the place. "It turned out to be absolutely perfect for research," explains Halle, an ebullient bearded scholar who has made Building 20 his home for 37 years. "You can knock down a wall, you can punch out a ceiling, and you could get space. In academics, space is everything."

In the interests of space, Halle's lab launched an "expansionist" raid against the model railroad club's huge two-room suite. The land grab failed because the club argued that its computerized, 200-switch track layout could not be easily moved. Indeed, a move against the club might have set off a revolt among the building's older tenants, who fondly remember the five-cent Cokes dispensed from the club's specially programmed soft drink machine.

Not surprisingly, Building 20 has its own myths.

"I know someone who can tell you some hair-raising stories about the early days of microwave," Lettvin says, shoving aside piles of unopened mail to dial his phone. Unfortunately, his contact isn't in.

"Remember the phantom?" Lettvin asks. Indeed, Halle does remember the mysterious, homeless botanist who camped out in a Building 20 storeroom and haunted the building's corridors during the 1960s and '70s. No one knows how he supported himself, or who his family was. "He turned down a job at the Field Museum in Chicago in order to remain a phantom in Building 20," Lettvin says.

The professors say MIT tried to evict the squatter and lost their case in a Cambridge court. The phantom hung on until 1980, only to drift into oblivion – and into the history of Building 20.

[redacted]

Cross-Blue Shield adult diploma program sat in a row in cocktail dresses and corsages. Their husbands and children sat proudly in the audience in good suits and frilly dresses, cameras ready.

Savannah Harris, a microfilm clerk who dropped out of school in 10th grade and was receiving her diploma at age 49, stepped down from giving the graduation speech. Suddenly her son Stan, a Northeastern University grad unable to contain his pride in his mother, stepped out of the crowd, placed a bouquet of roses in her lap, and gently kissed her.

Graduations tend to be teary affairs anyway, but Monday's at Blue Cross-Blue Shield was especially so. Most of the 11 adult diploma graduates were high school dropouts or

[illegible] could get one t[illegible] at the compan[illegible]

There was [illegible] from Haiti, a c[illegible] 11 years whos[illegible] Yvesnick was [illegible] sodas together [illegible] and Yvesnic[illegible] clutching a litt[illegible] at her mother

"I helped [illegible] work," Yvesnic[illegible] reason she w[illegible] mother for ge[illegible] "'cause I know[illegible] do something n[illegible]

"Thank yo[illegible] her, smiling.

Nearby was [illegible] immigrant with[illegible] ma from Hong[illegible]

GRADUATES, I

Pru unveils new [illegible] for Back Bay co[illegible]

By John King
Globe Staff

The Prudential Property Co. yesterday unveiled its initial plans for a $275 million, 1.6 million square-foot addition to its aging Prudential Center complex in the Back Bay.

The proposal – which would be implemented during a six-to-10-year period – includes two office towers along Huntington Avenue, a pair of residential buildings on Boylston Street, and a complete overhaul of the center's retail areas.

Company officials could not be reached yesterday afternoon to comment on their proposal, the successor to a 1986 master plan that was disastrously received by the neighboring communities. However, the Flynn administration's chief planner expressed cautious optimism for the new approach.

"We think some further reductions may be in order, but this is a good starting point," said Boston Redevelopment Authority director Stephen Coyle. "It's a much better plan than the prior one. It shows Prudential is listening to the community."

The Pru redevelopment outline is contained in a project notification form filed yesterday with the BRA. Company officials were scheduled to meet last night with the Prudential Center Project Advisory Committee, a 22-member group appointed by Mayor Flynn in 1986 to draw up guidelines for the 27-acre site after a 3-million square-foot

master plan trigg[illegible] sition.

Flynn and Co[illegible] clear that any ne[illegible] the complex must[illegible] committee. The c[illegible] presentatives fr[illegible] hood and busines[illegible] recommendations[illegible] call for increased[illegible] major new towers[illegible]

The new pro[illegible] with virtually all[illegible] company says in[illegible] ing the fact that[illegible] height – a prop[illegible] tower on Hunting[illegible] current zoning li[illegible] rooms are conspi[illegible]

However, the[illegible] square feet of off[illegible] 1986 plan by 32[illegible] comparison, the [illegible] ing units, which[illegible] now set at betwee[illegible] miniums.

"The volume o[illegible] ponent exceeds[illegible] Coyle said. He li[illegible] cerns: The transp[illegible] the new developm[illegible] preserve the affor[illegible] 781 existing apart[illegible]

According to [illegible] yesterday, the ain[illegible] "to transform the[illegible] complex into a s[illegible] streets." The plan[illegible]

PRUDENTIAL, Pa[illegible]

Dateline MIT, Noon, October 19, 1992

Following yesterday mornings devastating earthquake at MIT, Institute authorities were stunned to find all the buildings collapsed, except building 20. The quake, measuring 7.2 on the grade point average scale, was centered under the Great Dome, and struck at 6:00 am yesterday just as a demolition crew had arrived to remove building 20. When contacted late yesterday President White said that it was too early to say what effect this would have on the Institutes major rebuilding program scheduled to start next spring. Ima Pie-Crust, the Institutes chief architect went on record a few moments ago as saying "All of the new buildings will be modeled after building 20's construction techniques." It is believed the Great Dome will be rebuilt as a giant beaver lodge and access to MIT will be under water from the Charles River. Admissions Dean Dr. James Lockemout has revised the Institute admission requirements to reflect the new access method to MIT. From now on all entering freshman will be required to swim under water from the Boston side of the Charles, anyone who makes it will be automatically enrolled at MIT.

The residents of building 20, many of whom had not seen daylight for several years, pasty faced and sunken eyed, were outside the building when the quake struck. They had been evacuated prior to the demolition which was about to begin. A spokesman for the group who declined to be identified, (we believe he had forgotten who he is), said that they were all elated at the reprieve this quake had brought. "I speak for us all when I say that the relief we feel is relieving!" It is believed that the culture shock that many of them were in when faced with life in a new building had affected their thought processes. Chief MIT psychiatrist, Dr. Ruth Washingmachine stated that "this was normal, under the circumstances, but would quickly wash off when they are allowed to re-enter the building."

An update: 14:00 hours

The Director of MIT's Physical Plant, Mr. Ther Itdown, has just unveiled the new model of the MIT campus. To the untrained architect it looks like a mammoth beaver dam on the banks of the Charles. Mr. Itdown read a statement prepared by the trained architect who drew up the plans and made the model, "I tried to make the new campus blend into the environment just as MIT's mascot would do." the architect is quoted as saying. Puzzled reporters left with the promise of a news conference scheduled for the next day at noon.

GENERATIONS - THE STORY OF BUILDING 20, MIT

Produced for the GENERATIONS exhibition at the Margaret Hutchinson Compton Gallery at Massachusetts Institute of Technology, 1980

Producer Virginia Gunter

Video Ann Marion

Education Video Resources, MIT

Honorary Chairman of the Corporation
Dr. James R. Killian, Jr.

Consultant to the President and Chancellor,
Professor Emeritus Albert G. Hill

Provost, Institute Professor Walter A. Rosenblith

President Jerome B. Wiesner

Professor Rainer Weiss

Professor Emeritus, Institute Professor
Jerrold R. Zacharius

this master + duplicate with the preliminary interview tapes - turned over to Helen Slotkin — ARCHIVES June 1980

THE STORY OF BUILDING 20

THIS EXHIBITION REVIEWS THE HISTORY AND ROLE OF MIT'S BUILDING 20. IT WAS CONSTRUCTED AS A TEMPORARY FACILITY FOR THE RADIATION LABORATORY IN 1943. IT PROVIDED THE FIRST SPACE FOR THE RESEARCH LABORATORY OF ELECTRONICS AND THE LABORATORY FOR NUCLEAR SCIENCE. THROUGHOUT THE YEARS IT HAS FUNCTIONED AS AN INCUBATOR FOR NEW EDUCATIONAL AND RESEARCH VENTURES AND CONTINUES AS A CATALYST FOR INNOVATIVE AND INTERDISCIPLINARY ACTIVITIES AT THE INSTITUTE.

MARGARET HUTCHINSON COMPTON GALLERY
MACLAURIN BUILDING, BUILDING 10
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
CAMBRIDGE, MASSACHUSETTS 02139

FEBRUARY 20,1980 THROUGH JUNE 13, 1980
GALLERY HOURS, MONDAY–FRIDAY 10 AM–5PM
SATURDAY, SUNDAY 1PM–5PM

OPENING RECEPTION:
WEDNESDAY, FEBRUARY 20, 1980 4:30–7:30 PM

PRESENTED BY THE MIT COMPTON GALLERY COMMITTEE
WITH THE ASSISTANCE OF THE
MIT COMMITTEE ON THE VISUAL ARTS

GENERATIONS The Story of Building 20

The Margaret ~~Hutchsin~~ Hutchinson Compton Gallery will present an exhibition of considerable interest to the MIT community with the February 20 opening of the exhibition GENERATIONS- The Story of Building 20.

Building 20 at 18 Vassar Street was built in 1943 as a temporary structure to house part of the Radiation Laboratory. With the end of World War II and the disbandment of the Radiation Laboratory, the building bacame the first residence for the Research Laboratory of Electronics. RLE was founded in 1946 to continue some of the Radiation Laboratory projects, and in particular to be the first organized interdisciplinary laboratory at MIT. The Laboratory for Nuclear Science and Engineering, the Dynamic Analysis and Control Laboratory, the Cosmic Ray Group, the Acoustics Laboratory, and the Prescott Food Technology Laboratory were among the early activities using the variable spaces that Building 20 provided.

Unusual flexibility made the building ideal for laboratory and experimental space. Made to support heavy loads and of wood construction, it allowed a use of space which accomodated the enlargment of the working environment either horizontally or vertically. Even the roof was used for short term structures to house equipment and test instruments.

Although Building 20 was built with the intention to tear it down after the end of World War II, it has endured these thirty-six years, providing a special function and acquiring its own history and anecdotes. Not assigned to any one school, department, or center, it always seems to have had space for the beginning project, the graduate student's experiment, the interdisciplinary research venture. In this capacity it has functioned as an incubator, allowing a project to develop until its space requirements or independence demanded a move.

A major factor in the history of Building 20 has been its sheltering and fostering of intellectual development and colleagial interaction. The spirit of intellectual crossfertilization evident in the Radiation Laboratory continued with a number of core individuals, spread throughout the Institute, and was regenerated in industry, business, and other educational institutions.

This exhibition on Building 20 includes texts, photographs, and artifacts from Building 20 activities. Interviews with "alumni" of the building and with current inhabitants have provided information such as historical data and interesting anecdotes which will be interwoven on a time-line structure spanning the exhibit. Photographs will present the people, show some of the activities, and convey a sense of the physical aspects of the building.

Through the years Building 20 has developed a large number of "alumni" for whom it has become a symbol, both personal and professior This exhibition will examine some factors in the history of the building which have contributed to these strong associations.

MIT Helps Preparation Of School Physics Text

By John Maddox
Staff Reporter

CAMBRIDGE, Mass., May 29—A text-book intended to advance the teaching of physics in high schools and which is probably the most carefully written document of its kind yet to have been written will be published in a month or so. It will be the culmination of the main part of the effort of the Physical Science Study Committee, a group of college and high school educators formed three years ago at the initiative of the Massachusetts Institute of Technology under the title of the Physical Science Study Committee.

Apart from the preparation of the text-book, the committee has arranged for the production of some sixty educational films on topics in physics, has arranged for the writing of a number of background books and has designed a number of inexpensive equipments for physics experiments in high-school laboratories. These equipments will also be marketed this summer in the form of kits.

Syllabus for Teaching

The text-book, parts of which have been circulated for the last two years among high-school teachers of physics, is based on a syllabus for the teaching of physics in high schools drawn up three years ago by the physical science study committee.

In the last two academic years physics teachers in more than 600 high schools have [illegible] used it as a basis for their physics course. An official of the committee said that their response has on the whole been extremely favorable, and that only a small proportion of the teachers who have tried the text book have declared they will not use it in coming years.

Dissatisfied With Teaching

The incentive for the formation of the Physical Science Study Committee appears to have been disatisfaction among both university and high school teachers with the character of high school physics teaching. It was felt that this was not conducted in way that presented the subject as an integrated body of scientific content or as one with important cultural and practical implications.

At the same time it was argued that an improvement in these respects would help to offset the shortage of physics teachers in high schools. The official of the committee says that the preparation of the text-book has been carried out by the full-time staff of professional scientists in consultation with the advisory committees and high school teachers with experience of its use. Several revisions of the text have been made since the first drafts were prepared.

Equipment is Simple

In the design of the experiin the new physics course, cost has been kept to a mini[illegible] known as a "ripple tank" for studying wave motion on the surface of liquids has been made out of aluminum window frames lined with glass. Electric motors have been bought for a few pennies from mass production manufacturers. Accurate instruments for recording intervals of time measured in fractions of a second have been improvised from electric doorbells.

Now that the main work of the committee has been accomplished, the full-time staff is being reduced by more than two-thirds. Originally the committee was supported by a grant from the National Science Foundation, while a number of industrial foundations have helped with finance. In future most of its remaining activities will be the responsibility of Educational Services Incorporated — a non-profit making organization whose income will derive from royalties on the sale of text-books, films and other material.

No Plans for Revision

The sped of this contraction has alarmed some of the officials, who at the same time have expressed anxiety that a sudden cessation of activity will foist on high schools a text-book that will not be kept up to date.

Mr. James E. Webb the President of Educational Services Inc. confirmed that no plan were in existence for this kind of revision, though he hoped that some means of doing this would become [illegible] available. He thought that the use of the text-book in schools in the next five years should provide useful material for study by educational psychologists.

Webb also said that the expectation was that more than a thousand schools would use the physics course based on the text-book in the coming academic years, and that demand for it thereafter would grow quickly.

Students Receptive

In all the quarters which have been concerned with this [illegible] there is an expectant but pleasurable anxiety to know what will happen when this carefully prepared pebble is finally thrown on the educational beach.

In the meantime some comfort is gleaned from knowing that a physics class at one high school has formed a club called the "PSSC Tigers" and that it has sent a tee-shirt bearing the committee's initials and a representation of a tiger to Jerrold R. Zacharias, the M. I. T. professor who has been the leading light in the committee's work since [illegible] invention.

By Charles Del Vecchio, Staff Photographer

Sperry Exhibit Now Open

A display of the inventions of James A. Sperry has opened at the Smithsonian Institution, marking the 100th anniversary of the inventor's birth. The 3-month exhibit highlights Sperry's contributions to safety, comfort and technological progress. Joseph Graham here examines the gyroscope, one of Sperry's most famous inventions.

We need this photo

(continued from page 5)

TRI-SERVICE AWARDS

Society of American Military Engineers Medal of Merit:
Andrew Nisbet
Veterans of Foreign Wars:
Chris Santoro
Daughters of Founders and Patriots of America:
Kimberly Moore
Daughters of the American Revolution: Scott J. Stevens
The Retired Officers Association: Jabin T. Bell
American Legion Award for General Military Excellence:
Kevin Whitcomb
Christine Pichon
Allan T. Duffin
Kathryn Viksne
Amercian Legion Award for General Scholastic Excellence:
Sean T. Hogarty
Susan Phillips
Roger G. Knapp
Robert Kosciusko

THE FLIGHTS

--Kimberly Moore

This semester, the flights have been actively involved and aiming high. With the institution of new flight awards, the flights have not only worked towards being Honor Flight, but also Warrior Flight and Jock Flight.

For the last part of the semester, both "A"rrogance Flight, commanded by Sean McLaughlin, and "D"airy Farm Flight led by Vickie Garbarino, put forth a great deal of effort. However, "C"alvin Flight, led by Flight Commander Chantell Wyland, was named Warrior Flight. U nder the leadership of Linda Bate, "B"rutal Bad Boys Flight achieved the honor of being both Jock and Honor Flight.

"B"RUTAL BAD BOYS FLIGHT

The unstoppable Bad Boys just can't be beat; they are one of a kind - they are the elite.

With the invincible pair of Stanek and Bruce, the other flights are assured to end up as cooked goose.

Strader and Whirl are never apart, and together they initiated the flight's great start.

Schloer is the lean one, but boy does he eat; Mr Holmes arranged Bertucci's - oh, what a treat!

Heit calls the DO when comtrees are passed; DeCristoforo has caught up in ROTC exceedingly fast.

Twenty-eight hundred pushups Larson did do, while much support was gained from our Bakerites: Jackie Moore and Heidi Goo.

Winter impressed us with his marathon run, while Pichon planned flight PFT's just for fun.

Guidon bearing is difficult because of the gym's basketball net, but Hernandez has proven to be one of the best at the det.

And last, but not least, Monaghan has been great; she leads the flight in motivation while keeping everything straight.

Teamwork and pride made our flight a success, but from the Brutal Bad Boys- would you expect anything less?

Congratulations on what has so far been an amazing term - Keep up the good work!!

BUILDING 20: A LIFE STORY

--Allan Duffin

Most of us consider Building 20 adecrepit shack, a wooden eyesore on a campus of brick and steel. However, it is important to note that the building played a very important part in military and scientific history, and still does today.

Contrary to rumor, the MIT Physical Plant has no current plans to tear the building down; in fact, maintenance is being performed on certain areas of Building 20. The Physical Plant representative with whom I spoke said to me, "The building will probably still be standing when you have kids." History buffs can rest assured that Building 20 will be around for quite a while.

1994 will mark the 50th Anniversary of the building. Some may question Building 20's original (and current) purpose; but research at the MIT Museum's archives division reveals a place with an important past.

The entire story begins with the development of radar during World War II. While Nazi Germany had not planned much radar research after 1939-1940, the U.S. government's Office of Scientific Research and Development (OSRD) spearheaded a huge effort to create and develop radar systems. To this end, the MIT Radiation Laboratory ("Rad Lab") was established on 11 October 1940, with headquarters in 4-133. The Army and Navy (remember, U SAF wasn't born until 1947) spent a total of two billion dollars during WWII to support the Rad Lab's three main goals: microwave radar, high-accuracy radar for guns, and aircraft navigation. This mission was to be accomplished jointly with the British government.

(continued page 10)

CADRE WHIP CADETS

--Kimberly Moore

In the recent Cadre vs. Cadet softball game sponsored by the Arnold Air Society, the cadre of Detachment 365 whipped the cadets by a score of 16 to 6.

Prior to the game, TSgt Gibson (aka Prophet P) made the call - "We're going to win, hands down!" Be sure to include that in the COUNTDOWN, and just say it was a prophecy made by Prophet P." Well, the Prophet was correct!

Also before the game, Mister Stevens Sir said that numerous cadre members had threatened his evaluation, marks, and commissioning if he showed up to play. (You know, that probably revved him up even more and insured his presence there!)

The cadets did have a great turnout. In fact, there were enough people to comprise two teams! A notable attempt to crush the cadre was made by our own Petie "I am Baseball" Brown when he converted a pitch from Colonel Nelson into a home run across the wide expanse of the Omni-turf and over the hedges. Although it gave the cadets a run and boosted their morale, victory unfortunately was not to be theirs. Good luck next year!!!!!!!

HAVE A
FABULOUSLY
FANTASTIC,
FUN,
EXTRAORDINARILY
EXCELLENT,
SUPER (that's for you Mr Kennedy!),
SAFE (safety!),
and
GREAT SUMMER!!

BUILDING 20 (cont'd)

Soon, however, this wartime operation outgrew its relatively humble home, and the Rad Lab's research expanded to a roof "penthouse" on Building 6; buildings in Boston and Cambridge; and a local airport hangar, convenient for testing radar. Even this space was not enough, as three temporary buildings were erected on the MIT campus -- 22, 24, and later 20.

MIT's radar research had many distinguished results. The Rad Lab was the largest of its kind in the world. With new high-sensitivity receivers, MIT research opened approximately 200 more radio communication channels than previously available. The Cathode Ray Tube (CRT) -- or "television screen" -- became the principal recording and measureing research tool, as a result of the Rad Lab. By the end of the war, MIT's contributions over five years had advanced the radar research field by 25 years!

Rad Lab staff made sure that, although the military was funding their research, they operated in an autonomous fashion. As the MIT Museum put it: "[This was the] first appearance, in the national fabric, of science as an autonomous force ... Here for the first time in significant amounts, scientific energy was set free."

THE BUILDING

Research conducted in Building 20's wooden hallways thus had a significant impact on scientific research in the future. The building itself was designed in one afternoon by a group of MIT graduates, architects who created a functional research facility. Since steel was needed for other war uses, huge wooden beams were driven into the ground to support the walls. Of course, this situation defied Cambridge city fire codes, but since the building was labeled as a "temporary" facility, the wooden frame was allowed. (Today the building still defies fire codes, but through "special arrangement" by MIT, and the historical status of the building, this situation is still allowed.) Building 20 was at the time one of the strongest buildings on the campus, able to withstand 150 lbs per square foot. Every now and then Physical Plant tightens the steel bolts on the shrinking wooden support beams.

Following World War II, Building 20 was used as a barracks for a time; then laboratories and various researchers moved in. This situation is still true today: Most first-time researchers began, and still begin, their work in Building 20. The Rad Lab became the Research Laboratory of Electronics (RLE).

Many MIT programs and professors got their start in Building 20. In fact, Building 20 spawned the now-famous interdepartmental labs and Lincoln Labs, as well as such corporations as Mitre and Digital Equipment Corporation (DEC). Among other things, the world's first atomic clock was built in Building 20 by burrowing through several walls in 1952. Coincidentally, this was the same year during which the ROTC program moved into the building.

Is there a certain allure to working in Building 20? Some think so. A decade ago, the MIT Museum had an exhibit about the building, and people who worked there were asked for their opinion. And the responses, believe it or not, were positive, overall.

(continued page 11)

BUILDING 20 (continued)

Many people who worked in Building 20 commented about the building's "flexibility" and adaptability to a certain researcher's needs. To wit: "It was an informal place to work with lots of flexibility. Nobody cared if you drilled holes in the floor or ceiling ..."

Building 20 is also excellent for research purposes. The Rad Lab used the roof for radar experiments. The building is "removed" from the rest of the campus in terms of people and programs, helping develop a family atmosphere, one observer noted. Offices were noted to be good-sized (some dissent here), and the building had its own "special character," another professor noted.

Thirty years ago, when MIT's Strobe Laboratory was moved from Building 8 to 20 to make way for additional classrooms, Professor Harold "Doc" Edgerton developed all of his early deep-sea cameras and strobes in his new offices. Sonar was also developed by Doc Edgerton in Building 20. As he commented, "We could concentrate on our research. [Building 20] has excellent support ... supplies and shops." (This refers, of course, to the machine shops downstairs.)

"From an experimentalist's point of view, it was an excellent building. It's like an old shoe; it 'fits'," one professor noted. Another stated, "Colleagues think that you are being punished by the administration by being located there. They don't believe your explanations the first time."

Finally, one researcher called Building 20 "an incubator. It is there, it's available; and if you want to start something, that's where you're apt to get space."

Today, the building's residents include the following:

Anthropology/Archaeology Dept
Undergraduate Education Office (incl. UROP, Writing Req.)
Gravitation and Cosmology Group
Committee on Academic Computation
Integrated Studies Program (ISP)
Music Labs, Piano Labs
Center for Cognitive Science
Concourse Program
Technology and Policy Program
Biohazard Assessment Office
Radiation Protection Office
Environmental Medical Service
Industrial Hygiene Office
Dept of Linguistics & Philosophy
School of Humanities and Social Science
Council for the Arts
Tech Model Railroad Club (TMRC)

... and many others. As you can see, we're not hurting for variety.

TOMORROW

Currently it looks like Building 20 will be an "incubator" for a long time into the future. Repairs are being done on various parts of the structure, and researchers continue to move in and out, as before. Rumor has always stated that the building would be razed in three to five years, but it turns out that this is a false assumption. The building is very costly for MIT to maintain, but its functionality as a research facility and its historical importance keep it standing.

One professor questioned Building 20's value in the following manner: "Building 20 was the worst thing about Building 20. I had a nightmare in which I dreamed that all my equipment had fallen through the floor."

Another asked, "Why not just tear down the old rattletrap and forget it? Building 20 space was where they put all cheap and speculative ventures of a type that could not be guaranteed to satisfy the standards of stuffed-shirt administrators."

Time doesn't seem to matter to Building 20; it's survived almost 50 years because of research, the need for space, and its historical significance. It serves as an "incubator" for more than just research; military officers are "born" and raised here as well. Like its looks or not, Building 20 is versatile. Its function is timeless, and its history is rich in reward. May it last another 50 years.

CONGRATS OUTSTANDING CADETS!!

This term, several new individual awards were initiated. They are the Flight Member of the Month, GMC Worker of the Month, the POC Worker of the Month.

For the last month, the outstanding cadets were:

Flight Member:
Michelle Bakkila, "C"alvin Flight

GMC Worker:
Andrew McFarland, CV OJT

POC Worker:
Steve Durst, 1CTS DO

THE BIRTH OF A BUILDING

At eleven A.M. one spring morning during World War II the phone rang on the desk of Don Whiston, '32, an architect for McCreery and Theriault Architects. It was Major Allen, then working at MIT'S physical plant; could Whiston complete a list of building specifications for a 300,000 square foot building in several hours? The answer was yes; the list was supplied, plans were drawn up; and six months later Building 20 was ready for the occupation of the Radiation Laboratory.

The exigencies of the War demanded ready space for the development of radar. Because the use of steel was relegated for other needs in the War effort, huge wooden beams were bolted into place, defying the fire codes then required in Cambridge. Gypsum planking covered the roof lest it catch fire from the activities of nearby industry. Cambridge consented to exempt Building 20 from the standards of the fire code on the condition that it be a temporary structure. Since 1946 when the building was consigned to MIT, the Institute and the City of Cambridge have come to agreements concerning building regulations and to this day the building stands testament to its years of sheltering and fostering of new ideas and ventures of all kinds.

In addition to the occupants enumerated here, Building 20 has withstood hurricanes, fires, and consistent general wear. Windows did not fit properly and were all replaced in 1948-49, and again in later years. In 1957, a hurricane caused flooding on the ground floor, yet Building 20 weathered this storm better than some of its neighboring buildings at MIT. Further trouble occurred when the wastes from the Department of Food Technology's rat colony decomposed the glue in the roof and started a fire in the lab hood. Many alterations have been made to the building to protect it and its occupants from the hazards of various research undertakings; a pit was dug through the ground floor and equipment lowered to its bottom in case of explosion during operation, concrete loaded with lead constituted a vault encasing nuclear experimentation -- the

examples are numerous. Although periodically it is necessary for the staff of the physical plant to tighten the bolts which hold together the now shrunken wooded beams, Building 20 is deemed one of the strongest buildings on campus, with an ability to bear 150 pounds per square foot.

The multiple appendages of Building 20 designed in the final stages by Mc Creery, Barney and Pike are oriented in line with the north-south axis of the campus. Along these corridors, projects great and small have made their presence felt at MIT.

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February 19, 1980

FOR IMMEDIATE RELEASE

M.I.T.'s Compton Gallery Presents Nostalgic Look at Building 20

EXHIBIT:	GENERATIONS: The Story of Building 20
DATES:	February 20-June 13, 1980 Opening Reception: Wed., Feb. 20, 4:30-7:30 p.m.
PLACE:	Margaret Hutchinson Compton Gallery Maclaurin Building--Room 10-150 M.I.T. Campus, Cambridge, Mass.
GALLERY HOURS:	Monday-Friday, 10 a.m.-5 p.m.; Weekends, 1-5 p.m.
ORGANIZATION:	Compton Gallery Committee M.I.T. Committee on the Visual Arts

The Massachusetts Institute of Technology will present "GENERATIONS: The Story of Building 20," in the Margaret Hutchinson Compton Gallery (Room 10-150, M.I.T. Campus), Feb. 20 through June 13, 1980.

The public is invited to the opening reception of this historical exhibition on Wednesday, Feb. 20, 4:30-7:30 p.m.

The show will include texts, video interviews, photographs and artifacts from Building 20. The building was built in 1944 as a "temporary" structure to house part of the M.I.T. Radiation Laboratory where radar was developed.

Located at 18 Vassar Street, Cambridge, Mass., Building 20 has lasted 36 years, acquiring its own history and anecdotes. The structure is not assigned to any one school, department or center, but now provides space for a new project, a graduate student's experiment or an interdisciplinary research venture. In this capacity, it functions as an incubator for ideas.

(MORE)

February 19, 1980

With the end of World II and the disbandment of the Radiation Laboratory, Building 20 became the first residence for the Research Laboratory of Electronics in 1946, M.I.T.'s first organized inter-disciplinary laboratory.

The Laboratory for Nuclear Science and Engineering, the Dynamic Analysis and Control Laboratory, the Cosmic Ray Group, the Acoustics Laboratory and the Prescott Food Technology Laboratory were among early activities using the variable spaces. The spirit of intellectual cross-fertilization evident in the Radiation Laboratory spread throughout the Institute, and has been adopted by industry, business and other educational institutions.

Unusual flexibility made Building 20 ideal for laboratory and experimental spaces. The wooden suilding was made to support heavy loads and could accommodate enlargement of working space either horizontally or vertically. Even its roof was used for short-term structures to house equipment and test instruments.

Though Building 20 was meant to be torn down after World War II, its environment still fosters intellectual development and collegial interaction. It is endeared to a large number of "alumni" who have inhabited it over the years. The exhibit will examine some factors that have contributed to those strong associations.

The exhibit is presented by the M.I.T. Compton Gallery Committee with the assistance of the M.I.T. Committee on the Visual Arts. The Gallery is open to the public Monday through Friday, 10 a.m.-5 p.m., and weekends 1-5 p.m.

--END--

PRK-ES/2/19/80

Black Hole of Calcutta. It was a poor building. I spent 2 1/2-3 years there and then moved over to Building 24 in high society. In the meantime Building 20 got built and by this time materials were a little freer and we had learned a lot about building, so Building 20, I think, was a perfectly comfortable temporary building. It was never meant to stand very long but there it was. Now at the end of the war, in fact just before MIT invented it's first interdepartmental laboratory, the Research Lab for Electronics, Stratton was appointed director and he asked me to help him get it started. I did and it came a matter of Radiation Lab coming down and helping RLE, which started out of the ashes of the Radiation Lab (and there were a lot of very good ashes) We thought, you know, getting a real good space over here in 24. After a great deal of thought, I told Jay,"it seems to me that what we need is a lot of working space -we had a lot of equipment, a lot of people, and if we tried to crowd them into good space we'll scatter them, If we grab the "A" Wing of 20, we get it all, we can get it now, we can fill it, we can defend it"- and we did, and it was very good because the Tube Lab was there and it had a lot of very special equipment - fabrication things,which we needed. The Nuclear Lab was started three or four months later and they were almost forced to the same conclusion by that time, they had essentially no choice, they were scattered a bit but their sonar was, at that time, in Building 20 and shops were in 20. Now we found 20 to be better than we thought, for an experimental building, because 20 being temporary and being of frame construction, if you want to bore a hole in the floor to get a little extra vertical space - you do it, you don't ask people - they would only say no we'd just do it, and Ray Weiss, a very good friend of the Institute, thinks it's the best experimental building ever built, in spite of the noise, the dirt - it's still filthy. But in very little time it filled up - mostly with experimental work of one sort or another. The Acoustics Lab, which essentially became Bolt, Beranick and Newman our bread and board started there - a number of other things I'd have to search my memory to think of them all. They were the first three interdepartmental labs with their beginnings in Building 20, We managed to get a little money to fix Building 20 a little. The A Wing got some plastic tile down one of the corridors and it was not a bad place to work at all. Since then,ofcourse, the expansion of MIT has been great, and Building 20, RLE is out of it entirely, I guess the Nuclear Lab, I heard this morning, still has it's shop there. And of course, the ROTC, and all kinds of things have moved over there. In many, many areas the space itself has been greatly improved and some of the space that was there originally - one of the two inner wings - the A and C are the outer wings, one of them was built with I think no floors - one big for special test equipment.

That proved very useful when we put in some large cryogenic equipment, The building has been flexible, useful, quite often temporaries, except for characters like Ray Weiss who have to be blasted to get to move. People talked about tearing it down on a number of occasions, even when they had the money and somehow or another they've never come to that decision because the building has been useful and I think when it gets to the point where it's all offices, nothing but offices for sort of fringe things like ROTC, then somebody will make the decision to replace it with permanent buildings. But as long as it has these special uses, can be used as a place to start things, I think it will continue to have some use. So that in kind is a thumbnail sketch of Building 20 - a little research here and there - a little looking at phone books over the years - will tell a lot more about what's been there- the Medical Safety Department was there, there was a wonderful female doctor there, Dr. Hardy, Harriet Hardy, who went to Smith or some such silly place as that. The Education Research Center started there, may still be there; UROP, all kinds of things like that that needed space quickly have begun there. Most of them extraordinarily successful.

Q: It was the only place on campus that was that flexible and (A Just about) people could move in quickly? (A. Building 22 was a quicker side, nobody really wanted to move in there but after the war of course, there had not been regular MIT students for three years, there had been special Navy students and special courses. There had been a few but not many. After war there was tremendous influx of freshmen who were no longer out to be drafted immediately and veterans who came to finish their education - so it was converted to a barracks and was a barracks for a few years and not too a pleasant a one but at least a place to sleep for very little. Then, as dorms got built, the need for barracks for students ended, and for a brief spell when the Korean War started RLE was asked to expand and they expanded in there (Bldg. 22) and then Lincoln started about a year later and Lincoln headquartered there. But about 1956/57 I got money to put up a new building primarily it said for RLE and the Nuclear Lab and that was 26 (26 sits right where 22 was) it's probably about twice as big mostly because of the height, 22 was three floors and 26 was about 6.

Q: Was there some reason that the first 3 interdepartmental labs began in Building 20? A. I think just availability. I say I think we had a choice of demanding better space but we wouldn't have gotten enough.

Q: Was the corridor system or anything like that made it easier for people to cross the hallway between departments? A. No, no, no. The interdepartmental labs drew on faculty but the faculty moved their research so that a man's office might have been almost this far away (Bldg 7) as if we were in EE Dept. but he

Q: So there wasn't anything specific about the architecture itself? A. Availability. Q. Well, people must have had a certain transient situation because in order to have space available for new groups someone would have had to move out and were there many short-term projects? A. Like Lincoln, Lincoln was there, the space was far from adequate, but Lincoln in the beginning rented some space down on Albany. They rented a lot of space down there. But then the Air Force built their buildings at Hanscom and we got the first one, oh within a year I guess. So people moved out two reasons: either failure or they got successful. In a special case in the Acoustics Lab. Interest dropped off and both Beranik and Newman, leaders of the Acoustics Lab, set up a company.

Q: What would be interesting, I don't think we want an exhibition that focuses on failure but now that you mention it it's an interesting q, Where there many projects that started out and found they had nothing to do? I'm sure there were, I couldn't give you an example of one offhand. I can give you a semi-example. The Educational Research Center was started by Jerrold Zacharias who is not used to failure at all and I'll not use the word failure in the same breath as Zacharias, the one thing I value those years I have remaining allotted to me because The Education Research Center was Zach's invention. He and Francis Freedman really started it. Francis' untimely death was a terrific blow to Zach personally and to the Center. Zach opinion on what should be done differed greatly from that of the administration as the years wore on and of course Zach retired nine years ago so the Education Research Center shifted into becoming the Division of Research and Education (DSRE) and it changed character and so on. I don't even know where it's located.

Q: I think that one of the struggles we're having is to find a focus for this show, since it's a building of so many rich associations. Can you help us along those lines a little bit? What would be something broad enough and yet also something that we can handle? Well I commissioned a movie of a building once. Maybe you ought to see it. So I should be an expert - but I ai'nt. If I were to use as a focus it would be something, I don't like the phrase I'm about to use, but I'll use it anyway, "adversity can lead to flexibility", something like that. Here was a building started as a temporary one but has been extraordinarily successful. That would be the theme, whether that's a focus or not I don't know. What would be the focus? The building and how it's changed in character and occupancy and what's in and so on through the years.

Q: We'd been seeing it, I don't know if naively or not, as a sort of microcosm of the many of the Institute's roles and maybe of the Institute itself. Is that a fair analysis? Yes. Q. The other difficulty, I suspect, is in selecting from

the myriad of activities, those that will be somehow represented in some depth. Again that requires more expertise than some of us at this table have.

A. Well you know you can find a lot of stuff. I have a mental picture, even now of Norbert Weiner and the electro-mechanical devise down the hall that invented and had something to do with it was called "turtles" a demonstration of generalized feedback which of course was the genesis of cybernetics and all that. So you know very exciting things took place. Weiner's expression to me was much more exciting than his device. But this was part and parcel. May I change the subject and talk about 68 Albany Street? which is now a parking lot or a power bubble or both. 68 Albany Street began life as the Whittemore Shoe Polish factory. Somewhere along the line during the war Radiation Lab took it over and after the war Draper's lab, the Instrumentation Laboratory, that had/ ~~xxxxxxx~~ 500 ~~feet~~/needed some space and they moved into it. You could still smell shoe polish. It was a collection of very different buildings that all joined up, it was sort of a rabbit warren. It was all split up -/tremendous wooden beams, brick floors, and it happens to be the building where the most precise mechanical work known to man was done. I happened to be Chairman of the Board of Draper Lab but I had nothing to do with getting the lab to be a growing concern - but I am prejudiced. But when the Draper Lab got this new building in Technology Square it was very important to it because it had been in 15 buildings scattered along an area approximately two miles long by automobile and maybe a quarter of a mile wide and the one very nice modern new building.....I got sentimental about old 68 Albany Street especially since over the years the Whittemore Shoe Polish had been painted over to match the brick but the paint had gradually washed off so Whittemore Shoe Polish was coming out again and so I talked to Ricky Leacock and said "Ricky, did you ever make a movie of a building" and he said "No" and I said "Why don't you?" and explained why, and/ ~~xxxxxxxxxx~~ because that I did. ~~The high mostly~~ He assigned Ross ~~Ross~~ Nakawain (One of the students) and it's an interesting film. It has great nostalgic value to the former inmates. I think it might be interesting. It takes about 20 minutes. The film I had nothing to do with it except assign it to Leacock. and tell him why ~~Bill Bowditch~~ what it does is sort of follow the mailman around the mailman would go in various offices and as he stops it showed things and do interviews: Draper, Bill Bowditch, and a nice old gal, I'd say pushing retirement age, was busy winding coils and explained during the interview the was thrilled she got when she found out that the coils she had been winding had landed on the moon. You might just take a look at it. I don't know if it will be any good or not. Maybe I'm just being - just doing some public relations for Draper Labs - I don't know but when you're talking about a building it maybe give you an idea. I don't know

the Draper Lab has the film. Warren Seamans said that he also had the film.
Q: It could be interesting to show some films like that as part of the show, talk about other environments within the context of that particular film.
Q. Other than the that it was a temporary building and that people therefore people didn't feel it was so precious they couldn't drill a hole in the floor, where there any other aspects of that environment that were particularly effective or affected people or conducive to ways of working on the way people think?
A. In the case of RLE, it got us all together in the same building, so it gave a sense of unity and purpose to diverse characters who started out distrusting each other. Since John Slater, head of Physics, had invented it and Jay Stratton, Professor of Physics was first director, even though he had been a member of the faculty of EE at one time, the EE people simply didn't trust us and it took awhile but he had the good sense to hire a young fellar named Jerry Wiesner, Assistant Professor, EE, and that warmed the glue and also Jerry did another good job he somehow managed for three or four years, at least, to get along with Norbert(Weiner). He brought Norbert into the pool. Norbert was a very difficult person, he finally did get mad at Jerry and didn't speak to him for six months. He didn't speak to me for a year at one time for a very interesting reason. Jay Stratton, of all the people who owned MIT, was sort of Weiner's father figure, and Weiner got mad as hell at Jerry and he couldn't give up his father figure so he transferred his mad to me. I always thought that was interesting. Don't get me wrong about Weiner. I have great admiration and great love for the man.
Q: Are there people that we should talk to, that are not obvious, that we might not think of that you can suggest?
A. Obviously, Jay Stratton, I'd talk to him. After the war we decided our graduate students ought to learn something about machinery, glass blowing, and experimental so we set up some, you know some optional training for them and I'll never forget Stratton, every night, putting on an old sweatsuit
---
But I think you ought to talk to him. Certainly talk to Ray Weiss, who is a great lover of 20 and who had nothing to do, wait - he was a student in RLE because Zacharias, who was head of the Nuclear Lab, did his research in RLE and made him a student of his.
Q. Does he spend all of his time out at EDC now? Yes Talk to him. He loves to talk.

Q. Walter mentioned a photographer. The name Karaf? A. Ben Diber may still be alive. Oh, I know one who is still alive. John SanRoma, and he is the brother of Jesus Maria SanRoma, the famous concert pianist. John was by predeliction an artist, couldn't make a living at it, became a machinist and a good one. Spoke with an accent and he can be located I'm sure. Oh, a wonderful guy would be Rex Ingram if he's still alive. He was quite wealthy and left a bit of money to the Institute. He was a graduate architect, same year as Killian, and during the war, he had always been an inventor and machinist, he came and applied for a job as a machinist and then we found out what an artist he was and I hired him for RLE and we made him staff/member but he was a machine designer really. He used the lathe, and drafting board, tools. You know these Chinese balls, one inside the other, as a machine exercise he made aluminum tubes, one inside the other, on a lathe,with only a lathe and hand tools and he did one for kicks up to seven. The one that had three which would take a China four months to do, he did in two hours on a lathe. But we had a lot of interesting characters. I think Rex might be found but John San Roma certainly .....

Q. What do you think others in the community are going to find most interesting about this building? and hopefully about this exhibition? A. I think if you work hard and put something good together people will find something interesting. What it will be I don't know. But as I say I invented a film of the Whittemore Building and nothing to do with it and knew nothing about it until I saw the finished product and I loved it and so did most other people and it's been shown to Draper audiences or audiences brought in by Draper and they all seem to like it. Some of them have never seen or heard of the building before.

Q. Do you have any idea how many people passed through Building 20? A. Thousands and thousands. Do you know the numbers Dorothy? A. Not yet. A. I guess 200,000 that's one person every one-hundred and fifty square feet which is 1200 people at any one time plus students, they don't count on space, I mean, not grad students with jobs. So what's the average life? five years? I would say 2,000 every five years. Built in 1943, 34 years old, that's so I quickly get a number like 14,000 , 10,000 would be better... Virginia: Well, if they all come through it will be very successful.

I have some early pictures of things going on at RLE and they might give you some ideas. I think I can locate them. One, we were having trouble with the windows leaking and then by golly the roof/ceiling started to leak and my office was on the second floor but one day it was pouring rain, rain started to pour on my desk, and there's a picture of Stratton, Wiesner, and Hill sitting under an umbrella looking wistful. The reason was we wanted some more space and some

.....

A. I think it would be perfect for the poster.

Mr. Hill: I think I know where there are some pictures. The files may have lots of them. John Cook is the present photographer. His problem would be that he had so many, that go back to Ken Diver, who was the first photographer. He probably has so many you can't get through them. That would be only A Wing.

Warren: RLE alone started keeping a photographic record of each person. They took a photo of that person as he/she started working there. They turned over 6000 prints to us. If we know the badge number we can track down what Wiesner looked like when he walked in through the door.

Q: You had a kitchen over there didn't you? We had a little, this was a wartime hangover, and hung on to it. We had a little sandwich shop that three nice ladies made sandwiches. Now they come out of machines. One of the real problems, it was easier in those day to ask a secretary to go get you a sandwich.

Q: One of the interesting things about Building 20, the number of companies that came out of it, the number of people who formed companies on a national/international level, could that be a focus of the exhibition a part of your theme? You could talk about the possibility of focusing on a number of people. I think there may be another whole exhibition called "The 128 Connection".

A. There's one very interesting one. One man we got to know during the war was Hank McCarthy. Excellent tube designer. Worked for Sylvania Sylvania's way of making money was to pay salaries with paper clips toothpicks, and peanuts and other such things. So Hank thought he'd go in business for himself so he and a man named Booth decided this then they found that starting a business and eating were incompatible so he asked if he could have a part-time job. So Hank worked in RLE parttime for a year, did some good work for us. Then he and Booth

worked fulltime, then they took off and became very successful. The company's name was BOMAC. Sold out to Varian. Hank remembered us at MIT. He gave MIT $300,000. I hate him however, because he never offered me so much as one share of stock to buy (not to give). I think really he thought it was risky and I didn't have enough sense to ask to go with the action. I should also add that the four people who started the Digital Equipment Co. all worked for me at Lincoln Labs and I didn't know a damm one of them. I'm a genius at not making money.

Q. Why do you suppose it is Building/[20]has seemed to be such an incubator? new programs and activities? A. Just because it's there, it's available and if you want to start something that's where you're apt to get space. Somebody else has grown up and gone to the bricks and cement and all that..... Better there may be a spirit connected to it, dating from Radiation Lab, you know Q. You hear people talk about it, it seems to be something more than the structure itself. A. Part of the spirit is due to feeling of oppression. You know oppressed people stick together because you're in compressed space. Then as you graduate and look back, gee, you know I was pretty well off, the exception being Ray Weiss who says, "The hell with moving. They never had it so good".

I could probably go on for six hours. You'd get bored and I'd be having the time of my life..... I think I've given you enough to think about. You ought to think some. This has to be done from your point of view, not mine. I'm just a former inmate who's seen a lot of traffic through, almost a lifer but not quite. You certainly want to get the point of view of photographer, technicians, secretaries, machinists, etc.