Coeducation at MIT

Robert M Gray ’64

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Abstract

MIT was founded in 1861 and admitted its first woman as a “special student” in 1871, the first of a minuscule number of women to be admitted through the following century. In the 1950s, women made up 1 to 3% of the MIT student body, less than half that of 1897. In 1955, President James Killian asked Chancellor Julius Stratton to convene a committee to study the status of women students at MIT and make recommendations for the future. Over a year later, the committee chair Professor Leicester Hamilton wrote to the President recommending that MIT cease admitting women — at least at the undergraduate level. Killian rejected the recommendation and instead made a commitment to increasing the number of women students and improving their quality of life. This article is the story of the infamous Hamilton committee “report” and the sea change at MIT that began in the 1950s and 1960s and eventually led to women constituting nearly half of the undergraduate MIT population. Historical context of women at MIT is provided along with comments on persistent problems for women in academic engineering, especially in the areas of electrical engineering and computer science.

Introduction: Women at MIT

Prologue: The 1870s through 1951
The Hamilton Committee: 1950s
The Leading Edge of the Wave: 1960s
Epilogue: The 1970s and Beyond
1 Introduction: Women at MIT

This photo of Harriet Fell, ’64, from the MIT Museum archives was published in the March 14, 2014, issue of *Science* in a review by Maria Klawe of *Girls Coming to Tech* by Amy Sue Bix [30]. The photo caption reads “On the leading edge of a wave. The 25 women who entered MIT’s class of 1964 matched the graduation rate of their 874 male classmates.”

The pivotal nature of 1960 in the history of MIT had been noted over four decades earlier by MIT Professor Emily L. Wick in her “Proposal for a new policy for admission of women undergraduate students at MIT” [18]:

> “Until the Institute could commit itself to educating women in significant numbers, and could provide suitable living conditions, coeds were not overly ‘successful’. . . . Before 1960 women entered MIT at their own risk. If they succeeded — fine! If they failed — well, no one had expected them to succeed. In 1960 the Institute committed itself to the education of women as well as men . . . The class of 1964 entered in 1960 knowing that MIT believed in women students. It was the first class in which coeds, as a group, matched the proportion of B.S. degrees earned by their male classmates!”

Emily L Wick [18]

I first became interested in the history of coeducation at MIT in 2012 when Bob Popadic, then President of the MIT Class of ’64 (and now Class Historian), decided to renovate the class Web pages for our 50th reunion and include pages on the history on specific living groups, sports, activities, and student organizations. I had written our original HTML crude Web pages years earlier, so he had made me a Class Officer with a title of Class Webmaster. We tried to find members or participants to write the blurbs, but we often ended up writing pages on groups we wanted to be described, but for which we could not find volunteer authors. I took on the pages on the Association for Women Students, mostly because I am an amateur historian and because I had been actively involved in diversity issues during my academic years, especially with diversity (or lack thereof) of women faculty in engineering. In addition, early on I discovered the important role in the history played by Emily Wick, who was a neighbor in Rockport, where I was living as a seasonal trial run for imminent retirement and where she was a sailing legend. Her sailing days were long over, but at the time I occasionally met Emily at the Sandy Bay Yacht Club social functions and I crewed for her niece Laura Hallowell in sailboat races in Emily’s Herreshoff-designed Bullseye *Beaver II*.

Two years of research on the Web (especially the historical Web pages of the the Association of MIT Alumae (AMITA)), burrowing into the MIT Archives and Museum, and reading an excellent article by Amy Sue Bix [28] and Emily Wick’s papers in the possession of Emily’s niece resulted in the Class of ’64 Web pages [2].

In 2017 I was invited to update the article and give a presentation on Coeducation at MIT for a lecture series on Title IX [3] organized by Brandeis Professor Anita Hill (who was then visiting at MIT) and MIT Professor Muriel Medard. In the process of preparing
for the lecture, I discovered that many of stories I had reported in the Web pages based on secondary sources were apocryphal and that the actual history revealed in harder-to-find primary sources was deeper and richer, and on occasion still not completely known. That research resulted in a presentation at MIT in October 2017 [9]. That talk ended with my learning more stories from MIT alumnae from the late 1950s and early 1960s and receiving encouragement to continue my amateur historian’s interest in the topic. In particular, I began a continuing email discussion (with occasional in-person conversations) with Susan L. Kannenberg, an alumna of my brother Peter’s class of 1961, author of _100 Years of Women at MIT_ (1973)[22], and long time member and activist in the Association of M.I.T. Alumnae (AMITA), an organization which through its various incarnations has played a key role in the story told here.

Another invitation led to further research and another talk in May 2018, this time at Stanford University with the support of the Stanford Vice Provost for Faculty Development and Diversity, AMITA, and the MIT Alumni Association (MITAA) [10]. Over half of the 57 attendees at the talk were MIT alumnae.

I have long intended to write up the material in full prose instead of the telegraph language of lecture slides, and Bob Popadick’s idea of a book telling stories by classmates with origins during our MIT time and implications through the present seemed an ideal excuse for the exercise. This article is the result of that effort based on the Class of ’64 Web article, my talks, further conversations with alumnae, and further attempts to dig up still missing pieces of the story. The MIT Association for Women Students and its ancestors remains a common thread in the story, along with AMITA and its ancestors.

The basic story is not new, it is told in significant detail by Amy Sue Bix in [30]. But it is worthwhile to spread the story and to add several details and differing views that were not included in [30] and her earlier related articles. The story can be put into a more global context with the relevant stories of the struggle for coeducation at private elite universities in the Eastern U.S. and the U.K. in Nancy Weiss Malkiel’s outstanding book _Keep the Damned Women Out: The Struggle for Coeducation_ (2016)[16]. A basic irony is that MIT seriously considered ceasing to be coeducational a decade before the most famous Ivy League schools moved in the opposite direction.

## 2 Prologue — The 1870s through 1951

**1861** MIT is founded in Boston, although it does not actually begin classes until 1865. William Barton Rogers becomes President in 1862.

**1865** The Lowell Institute begins the Lowell Lectures at MIT with a gift of $250,000 in order to spread science information to the public [15]. The free evening courses are open to qualified candidates, both male and female, over the age of eighteen. The classes are organized by MIT and taught by MIT Professors, but the students are not recognized as MIT students and are not allowed to attend regular MIT classes and laboratories. The classes gain a strong reputation for practical lab work in chemistry and other areas, and give MIT an appearance of having women students.

**1867** The possibility of admitting women to MIT arises for the first time when several women attending Professor Charles W. Eliot’s course on chemical manipulation as part of the Lowell Free Lectures request to join regular daytime chemistry classes. While short excerpts of the exchange that follows have appeared in many books, it is insightful to quote
the actual letters from *Life and Letters of William Barton Rogers: Edited by his Wife* (1896) [17] to detail the origins of coeducation at MIT and Rogers' role in both promoting and stalling the idea. The letters mention the Committee on Instruction, which was founded in 1864 to be responsible for “the supervision of the School of Industrial Science, both as to its organization and its business-affairs.” [5] The School of Industrial Science was the original school within the Institute. President Rogers was the Chairman and the eight other members included Edward H. Atkinson — a founding officer of MIT and member of the Committee of Finance — and Nathaniel H. Thayer, Jr., a major donor to both MIT and Harvard. [17].

TO EDWARD ATKINSON, ESQ.
58 PINCKNEY STREET, January 30.
DEAR SIR, — I believe that you are one of the Board of Instruction of the Institute of Technology, and in that capacity I want to ask a favour of you. The time of the “Lowell” class in chemical manipulation is drawing to a close, and some of the ladies of the class, who are very much interested in the subject, wish to go on with it. Will it be possible for them and me to join any class now formed in the Institute so as to continue our studies? If so, what would be the conditions as to terms and time? We hear that there is to be a meeting of the Board of Instruction this week. Could you bring the matter before them and so very much oblige,

Yours truly,

A. R. Curtis.

Atkinson forwarded the letter to President Rogers with the note

BOSTON, February 1, 1867.

DEAR SIR, The enclosed note speaks for itself. Can there be any objection to ladies entering as special students except possibly want of room in the laboratory?

Yours very truly,

EDWARD ATKINSON.

A separate appeal was made to Committee member Nathaniel Thayer, Jr.

ANITA E. TYNG AND REBECCA K. SHEPARD TO N. THAYER, ESQ.
BOSTON, January 30, 1867.

DEAR SIR, — At our interview this evening we stated to you that four ladies, regular attendants of the present Lowell class in chemical manipulation, wish to continue the study of Chemistry in the Technological Institute.

Relying upon your kindly presenting our wishes before the meeting of the Committee of Instruction, we remain,

Very truly yours,

ANITA E. TYNG.

REBECCA K. SHEPARD.
President Rogers replies with the authorization of the Committee of Instruction:

TO N. THAYER, ESQ.
1 TEMPLE PLACE, BOSTON, February 4, 1867.

DEAR SIR, — In reply to the communication of Misses Tyng and Shepard, please say to them that the Faculty and the Committee of Instruction appreciate the earnestness with which they and their associate lady pupils in the laboratory are disposed to pursue their scientific studies and would gladly afford them such opportunities of systematic instruction as are compatible with the objects and plans of the Institute, but that we could not comply with their present request without seriously embarrassing the organization of the laboratory and other departments of the school as connected with the regular courses now in progress.

The plan of evening (including afternoon) instruction, forming a department distinct from the so-called regular courses of the school, has been incorporated into the general organization of the Institute for the purpose of enabling lady students, as well as gentlemen, to have the benefit of systematic scientific instruction under the conditions best suited to their convenience and advantage, and to the interests of the school at large.

This department of the Institute, embracing the Lowell free instruction as a part, will, it is hoped, be so organized in another year as to meet the wants of the ladies whom your correspondents represent, and I need hardly add that the Faculty and Committee will gladly welcome them to the classes thus organized.

I remain, yours truly,

WILLIAM B. ROGERS.

It should be noted here that the second and archaic meaning of embarrass is given by the Oxford Dictionary of English as “hamper or impede (a person or action)” or “make difficult or intricate; complicate.”

Although Rogers has promoted equal education for women in his speeches and writings, he is not yet willing to accept the concept further than allowing qualified women to take the evening Lowell Lectures.

The issue arises again with a letter from William P. Atkinson, Professor of English Language and Literature, to President Rogers:

FROM PROFESSOR W. P. ATKINSON.

CAMBRIDGE, August 18, 1867.

... Application has come from one young woman, a rather remarkable teacher, who desires to avail herself of the Institute. I was sorry to have to reply that nothing was open to her save the Lowell courses. There is a large and increasing class of young women who are seeking for something more systematic in the way of a higher education. If we continue a special technical school, ours will not be the place for them; but if we should expand into a modern university, and I am confident there is room for one, by taking the bold step of opening our doors freely to both sexes I believe we should distance all competitors. It is a step sure to be taken somewhere. ...
Unfortunately, earlier in August President Rogers falls ill with pneumonia and poor health and Institute matters — including seeking permission from the Massachusetts Legislature to grant degrees for the impending first class to graduate — leave him little time to pursue the issue of coeducation.

1868 In October Rogers suffers an attack of hemiplegia or paralysis on one side of his body (left). His health rapidly deteriorates and he is granted a leave of absence in December. His friend John Daniel Runkle, Professor of Mathematics, takes over as interim president and becomes president in 1870 when Rogers resigns for reasons of poor health. Runkle serves as President until 1978, but regularly consults Rogers as he recovers his health and defers to him on major decisions. Rogers returns to the presidency on a temporary basis in 1878 and is again elected president in 1879 and serves through 1881. Thus it is President Runkle who receives the next application for MIT admission from a woman, this time not from a student in the Lowell Institute Free Lectures.

1870 In June Ellen Henrietta Swallow graduates from Vassar with an Bachelor of Arts degree in chemistry. During her search for employment she contacts Merrick and Gray (J.M. Merrick and Robert S. Gray, Analytical Chemists and Assayers, 50 Broad Street, Boston), requesting a position as apprentice. They reply that they are not in a position to take pupils, but that she might try to enter the Institute of Technology of Boston. On first glance this is a bizarre suggestion to give to a woman at a time when there are no women students at MIT [26], but an advertisement from the firm lists acting President Runkle as a reference, so the firm is well connected with MIT and doubtless aware of the Lowell evening chemistry classes. Regardless, Swallow writes to MIT asking if women can be admitted, giving as references two of her Vassar professors: astronomer Maria Mitchell — a personal friend of MIT President Runkle, and Professor C. A. Farrar, the head of the Department of Natural Sciences and Mathematics. The Faculty of the Institute of Technology formally receives her application on 3 December 1870, Ellen’s twenty-eighth birthday, but it decides to “postpone the question of the admission of female students until the next meeting.” On 10 December

the question of the admission of Miss Swallow was resumed and after some discussion it was voted that the Faculty recommend to the Corporation the admission of Miss Swallow as a special student in Chemistry. [26]

There was a catch, however, as the Faculty also

Resolved That the Faculty are of the opinion that the admission of women as special students is as yet in the nature of an experiment, that each application should be acted on upon its own merits, and that no general action or change of the former policy of the Institute is at present expedient. [26]

The Committee on Instruction agreed and on 14 December 1870 the Records of the Meetings
of the MIT Corporation included a widely quoted statement:  

It was voted to confirm the recommendation of the Committee on the School of Industrial Science that Miss Ellen H. Swallow be admitted as a Special Student in Chemistry — it being understood that her admission did not establish a precedent for the general admission of females.

President Runkle informed Swallow of the result, writing

Dear Miss Swallow: The Secretary of the Institute, Dr. Kneeland, will notify you of the action of the corporation in your case at a meeting held this day. I congratulate you and every earnest woman upon the result. Can you come to Boston before many days and see me? I will say now that you shall have any and all advantages which the Institute has to offer without charge of any kind. I have the pleasure of knowing both Miss Mitchell and Mr. Farrar of Vassar. Hoping soon to have the pleasure of seeing you, I am

Faithfully yours,

J. D. RUNKLE,

President of the Institute

Swallow later wrote that when she read that there would be no tuition,

I thought it was out of the goodness of his heart because I was a poor girl with my way to make that he remitted the fee, but I learned later it was because he could say I was not a student, should any of the trustees or students make a fuss about my presence. Had I realized upon what basis I was taken, I would not have gone. [26]

In other words, unless she succeeds, MIT can simply deny her existence.

1871 Ellen Swallow is the first woman admitted to MIT as an experiment as a “special student.” As the only matriculated woman student, she is largely hidden and isolated and her lab. The faculty votes to not include her in the list of students appearing in the annual catalog, but reconsiders the action at the last minute and lists her [15].

1873 Ellen Swallow is the first woman graduated from MIT (Batchelor of Science in Chemistry). She also submits a thesis to Vassar which results in a Master of Arts degree.

1875-76 Swallow marries MIT Professor Robert Richards, a member of MIT’s first graduating class. She raises funds from the Women’s Educational Association (WEA) of Boston (founded 1871) for women’s facilities, including a reception room and a laboratory. The women’s laboratory is opened in an “annex” (occasionally reported as a “garage”) to the main MIT building in Boston with the goal of affording “every facility for the study of Chemical Analysis, of Industrial Chemistry, of Mineralogy, and of Chemistry as related to Vegetable and Animal Physiology.”[4] MIT changes its admissions policy to admit “special students” for “advanced instruction in Chemistry . . . without distinction of sex.”

1I heard the current President of AMITA read this quotation yesterday at the annual celebration at MIT of the birthday of Ellen Swallow Richards
1879 Women are given the privilege of being examined for a degree under the same conditions as men.

1882 The original women’s lab is scheduled for demolition. When a chemical laboratory is approved for the new Walker Building, ESR writes

The question of space in the new building for the suitable accommodation of women students has been weighing upon my mind for the last two or three weeks, and after consultation with General Walker, Miss Crocker, Miss Abby May, and Miss Florence Gushing, we have made ourselves a self-constituted committee to obtain subscriptions from women interested in the education of women toward a small sum, say eight or ten thousand dollars, which may be put into the hands of the corporation, in order that they may feel justified in including in the plans suitable toilet rooms in connection with each of the laboratories and a reception room somewhere in the building which shall be for their use only. If this can be done, the Institute can then say that it is in a condition to receive women.

[26], p. 148

MIT decides to admit women as regular students (in chemistry only), so that the new chemistry laboratories will be for both men and women, but the funds raised with WEA will go to a women’s bathroom and a parlor/reception room. It is unfortunately noteworthy that eighty years later students and sta↵ will still complain in The Tech of having “to walk a mile to find a ladies room.” When the old laboratories are torn down, ESR looses her duties as director of the women’s chemistry lab. Her reduced workload does not last long as she is soon appointed as an Instructor, and she is also given the duties of a Dean of Women, without either the title or added compensation.

1884 The women’s reception room is renamed the Margaret Cheney Reading Room after Margaret Cheney (1855–1884, ’82), one of ESR’s students. It provides an “oasis”, “refuge”, “haven” for women students.
The portrait on the wall behind the couch is of ESR.

Over a century later the enduring nature of the Cheney Room and the MIT environment for women was emphasized when Emily Wick was quoted in the 9/1/2005 Technology Review: “Everybody came there, it was our place. The rest of MIT wasn’t too welcoming.”

1890 Eta Sigma Mu (HΣM) Society founded — the first club for MIT women students. It begins as a secret select social organization patterned on all-male fraternities, but it soon drops secrecy and actively recruits members, eventually inviting all women students to join. ESR is elected an honorary member. In 1895 the name was changed to The Cleofan, with its officers and members first published in the 1897 Technique. There was a strong overlap with the Young Women at the Institute list in same book, so the recruiting seems to have been successful and a few non-students were included in the club. The name Cleofan was a popular name for women’s clubs in the MidWest at the time.

The Cleofan would last into spring 1934, with regular Friday afternoon meetings and annual spring meetings. Three years later the Association of Women Students (AWS) would be founded explicitly as a revival of the Cleofan. Beginning around 1973 the name began appearing as a more inclusive Association for Women Students, and by 1990 the “for” dominated reports in The Tech. I have not yet found a specific date for the official name change.
The Institute Committee, the undergraduate student governing body, is founded.

1897 Approximately 6.3% of the 1187 MIT undergraduates are women, a percentage not achieved again until 1969. [18].

1900 The MIT Women’s Association (MITWA) is founded “to promote greater fellowship among Institute women,” specifically for alumnae. ESR fears that MITWA “will never be a success, because we have no dormitory life, no campus, and hence no college spirit.” Nonetheless ESR is elected as the first president of MITWA.

*The Tech* 1/3/1901
1904 Katharine Dexter — a member of Cleofan — graduates (Biology) and marries Stanley McCormick — son of Cyrus McCormick. She will become a major supporter and fundraiser for MIT women — her endowment was valued at $51 million in 1997, then the largest from an individual donor. She also becomes a suffragist and the sponsor and the financial supporter of the development of the birth control pill.

1913 The Institute Committee becomes the Undergraduate Association with INSCOMM as its legislative and executive branch, with responsibility for approving student activities.

1913–14 MIT Technology Matrons is founded as a social service organization for wives of the professors and administrators. In 1975 the name changes to the MIT Women’s League. In 1922 Technology Dames is formed for the wives of MIT students. In 1972 the name was changed to Technology Community Wives. In 1986 the organization opened to all women of the MIT community, married or not.

1916 MIT moves from Boston to Cambridge, approximately 1% of the students are women. The Margaret Cheney room moves with MIT.

1920 The New Margaret Cheney Room in Cambridge

1923 MIT appoints Florence Stiles (’23, Architecture) to an unofficial post as adviser to women students. She becomes Librarian of the Arthur Rotch Library of Architecture in 1931, President of MITWA in 1935, and official “advisor to women students” in 1939.

1934 5/5/34 The Tech mentions Cleofan activity for the last time. The only MIT organization specifically for women students vanishes from the MIT literature and it is three
years before a new organization arises in its place, the MIT Association of Women Students (AWS).

1937 11/16

The Tech

**Coeds To Meet Today**

In Attempt To Revive Dormant Sisterhood

| Representation On Inst. Comm. Is Among The Aims Of Group |

In an effort to revive Cleoan, a coed organization which thrived several years ago, the Technology coeds will have a meeting Tuesday afternoon at five o’clock in the Emma Rogers Room.

Coed leaders, who include representatives from the architectural students as well as from the science students on this side of the river, are hoping that the plan for the new society will be approved by the general meeting Tuesday. If the new move is adopted, the coeds will be organized in a unit for the first time in more than three years.

Aims of the new organization will include representation on the Institute Committee for the trailer engineers. Thus far, no coed has ever been elected to a seat on the undergraduate governing body. In addition, the new society will run dances and other social events for the women students of the Institute and their guests.

This is one more instance of the coeds attempting to strengthen their position in Institute life, the last innovation was the coed fencing team.

1938 Association of Women Students founded.

Constitution approved by INSCOMM (2/11 The Tech)

2/15 The Tech

Announced in MIT Handbook

The new AWS Vice President Frances Emery ’39 is listed in Bever (1976) as Frances Glenn Emery Wypler, ’39.

1945 Margaret Compton, wife of MIT President Karl Taylor Compton, works with MITWA, Technology Matrons, and Florence Stiles to establish the first MIT Women’s Dormitory at 120 Bay State Road in Boston — over 1.2 miles from the MIT campus. It provides 14 beds (later 20) and is supervised by a Women’s Advisory Board, not the Dean of Students as are all other student living groups. The original Advisory Board is chaired by the wife of the MIT President Karl T. Compton and has one faculty wife — Mrs Leicester F. (Alma) Hamilton — along with four alumnae and one student. Florence Styles was an ex-officio member. Mrs Margaret Alvord is appointed as Housemother or Dorm Supervisor, a position she will hold until her retirement in October 1957. Unfortunately with the number of alumnae on the Advisory Board will decrease and be replaced by members of the Matrons (faculty wives). Stiles states that the dormitory should help improve the esprit de corps of the women students, and hence the graduation rate — women performed well in class in comparison with men, but only 1 in 20 typically graduated.
1946 Emily Lippencott Wick comes to MIT as a PhD student in chemistry from Mount Holyoke, where she received her BA in chemistry in 1943 and her MA in organic chemistry in 1945. Emily chooses MIT because it has a good chemistry department, her Dad is an alumnus, and it is near Rockport on Cape Ann, where her family had spent many happy summers. She lives part time at 120 Bay State Road.

1948 Dorothy (Dotty) Leaman Bowe begins work as a secretary to Professor F.H. Norton in the Metallurgy Department. She quickly expands her acquaintances beyond her Department to include students, faculty, and President Compton. Dotty advises students, coaches for exam preparation, connects students with faculty having similar interests, and becomes familiar with the problems facing women students and becomes an advocate. At the time, women students were often ignored or harassed by some faculty, staff, teaching assistants, and male students, both in person and in print.

3 The Hamilton Committee: 1950s

1951 E. Francis (Frank) Bowditch moves from a position as Headmaster at the Lake Forest Academy in Lake Forest, Illinois, to MIT as the new Dean of Students at the invitation of President Killian. Bowditch replaces Dean Everett Moore Baker, who died in August 1950. The MIT dormitory Baker House was named after Dean Baker. On 31 July 1951 he sends a memorandum to parents of newly admitted students, which begins

As your son becomes a member of the M.I.T. community in September as a member of the Freshman Class, I sincerely hope you will feel yourselves also welcomed as a very real part of your son’s experience here. This office wishes to serve you and your sons in every way possible.

The letter continues with the assumption that all new students are sons rather than daughters, yet Bowditch will have a critical role to play in the imminent expansion of the women’s program at MIT.

In August Bowditch writes Killian that he has talked with Dr. Hardy about “taking care of women students.” Dr. Harriet L. Hardy was a physician with the MIT Occupational Medical Service, and Bowditch describes how Dean Baker had talked with her about working with women students, it was his concept that she should serve primarily as medical consultant and adviser and not act into the role of dean of women students. She has performed in this capacity but has not gone much further, primarily because of a limitation of time. . . . I believe we were both in agreement that it might be a good idea to ask my wife, Anna, to serve unofficially as dean of women students, at least the undergraduates, for this year until we could better feel the situation and make recommendations for next year.
The bizarre suggestion of considering marriage to a faculty member as sufficient qualifications for an unofficial “dean of women” is unfortunately somewhat typical of the approach of MIT at the time of designating responsibility for the women’s program to unqualified, unpaid, and effectively powerless individuals. Happily this would soon be rectified the appointment of a paid and qualified — but still largely powerless — staff member, Miss Ruth L. Bean, as an Assistant Dean of Students with specific responsibilities for the women’s program. Killian accepted the proposal in a reply on 13 August 1951, in which he went on to inform Bowditch about the existence of the Advisory Board for the Women Students House and named the members, including Mrs. Hamilton as Chair, three members of the Technology Matrons, and two members of MITWA along with ex officio members — the wives of the Chairman of the Corporation, the President, and the Dean of Students. Killian mentioned the existence of problems with regard to the management of the house and that Bowditch might have heard something about them from Mrs. Hamilton.

Emily receives a PhD in Chemistry at MIT and becomes a Research Associate at MIT, then later goes to work at Arthur D. Little. **1952** The seeds of the Hamilton Committee are sown in an often quoted 24 April 1952 memorandum from Bowditch to Killian and Stratton, with copies to Fred Fassett, Mrs Hamilton, and a few others. It reads

As you know, consideration has been given lately to closing the Women’s Dormitory and moving the girls to the campus. At a meeting this week, attended by Mr. Snyder, Mr. Kimball, Mr. Fassett and myself, it was unanimously agreed that any such action should be postponed for a year and that we should recommend to you that immediate steps be taken to study carefully the whole question of the place of women students, particularly undergraduates, at M.I.T.

The present Women’s Dormitory is inadequate in size (17 girls) and is too far from the Institute. It is the opinion of many that the place, program, and activities of women students has not been adequately worked out and that, in reality, we face one of two alternatives: eliminate women students, at least undergraduates; or decide we really want women students, plan an adequate set-up, and then deliberately go out and get more good girls. Everyone seems to incline to the latter view.

Dean Fassett is currently gathering data on the history of women students at the Institute, their numbers, records, etc.

Dean Fassett is Associate Dean of Students Frederick G. Fassett, Jr., who is responsible for student residence and later in 1956 will become Dean of Residence. I well remember his erudite presence at the Inter Fraternity Council meetings where he would often provide quotations in Latin that were lost on me. On 21 May 1952 Dean Fassett sends a memorandum to Chancellor Stratton reporting on a dinner hosted by him and his wife Julie for several residents of the Women’s Dorm at 120 Bay State which includes a concise statement of the problems at 120 Bay State Rd:

I think there is little question that the Women’s Dormitory presents a fairly serious problem. It appears clear that the girls who live there want their dormitory to be taken into the regular residential system of the Institute. That is to say, they with its administration and supervision to be centered in the
office of the Dean of Students. This desire presents possible difficulties in view of the fact that the dormitory has been and is the principal concern of a group of faculty and administrative ladies who constitute and Advisory Council. My impression is that it is possible that the zest with which the Advisory Council worked earlier may have worn off a bit, that the relationship between the council and the dormitory may perhaps have become routinized. A second basis of serious criticism appears to be the attitude of the house mother, Mrs. Alvord, toward her responsibilities. On this matter the girls spoke with considerable vehemence, although they were courteous about it. I am of the impression that the post has come to be regarded by its occupant as somewhat a sinecure.

Dean Fassett also reports that the women express the desire that ultimately the women should have a larger dormitory on the Cambridge side of the river, suggesting that it should house at least 100–200 women.

In a December memorandum to All Women Students at MIT, Dean Bowditch announces the approval of

the appointment of Miss Ruth L. Bean as Assistant to the Dean of Students. In this position, Miss Bean will have two functions: 1) To administer the Freshman Advisory Council and 2) To serve as Dean for all women students. Thus women at the Institute will be directly represented in the administrative organization of M.I.T. for the first time.

Although Miss Bean will “serve as Dean” and be referred to as “Dean Ruth Bean” in internal and external publications, in fact she will be an Assistant Dean, a member of the staff and not a member of the faculty and hence her impact will be limited. At least it is an official and paid position. An Associate Dean who is a faculty member and has genuine authority will not be appointed for over a decade, and she will be an outsider with no experience with women engineering and science majors. Bean, a graduate of Simmons College, does bring a strong administrative experience and will prove to be a strong advocate for the women’s program during her time at MIT.

Dean Bowditch concludes his memorandum with a list of issues needing attention including the demand for dormitories on the Cambridge side of the river and housing for a larger number of women students, athletic programs for women, better communications regarding scholarships and financial aid, and improvements in the Margaret Cheney Room.

1953 MITWA begins a survey of alumnae showing a strong success rate; 93% were employed and active in their specialized fields [1].

1954 On 6 January Dean Bowditch sends a memorandum to President Killian to renew and reinforce his request for a study of the women’s program and the need to choose between two alternatives. He writes

It has become increasingly apparent since I have been at the Institute that there was need for a complete objective study of the place of women students at the Institute. Since Miss Bean joined the Dean’s Office she has had the opportunity to get to know a great many of the women students currently enrolled and to have a first hand feel of many of the problems which we face in connection with women students.

The Women’s Advisory Board for the women’s dormitory is so constituted that actually there is only one active person left on the committee and she is slated
to retire at the end of this academic year. It therefore seems particularly appropriate we take some steps at the present time to make as comprehensive a study as possible.

Miss Bean and I would therefore like to recommend that you appoint the following ad hoc committee, charge them to make a study of the place of women students at the Institute, and to report to you their recommendations for a long range program.

Mrs. L.F. Hamilton
Mrs. Nathaniel Sage
Mrs. Elspeth Rostow
Mrs. Lockhart B. Rogers
Mrs. Alfred R. Wypler, Jr.
Dean Ruth L. Bean
Prof. John T. Rule, Chairman

Because this committee plays a central role in his history and in the development of the women’s program at MIT, its proposed members merit some introduction. The proposed Chairman is Professor John T. Rule ’21 is the Head of the section Section on Graphics and Head of Course IX, general Science, General Engineering and Science Teaching. He had served as Chair of the MIT Student-Faculty Committee and as a member of the Undergraduate Policy Committee. In 1956 he will replace Bowditch as Dean of Students. Alma Hamilton (Mrs Professor L.F. Hamilton) had long served on the Women’s Advisory Committee of the Women’s Dormitory. Mrs Nathaniel Sage is Dorothy Blair Sage, the wife of MIT Geology Professor Nathaniel McLean Sage Jr. Mrs. Alfred R. Wypler, Jr. ne Frances Glen Emery is an MIT alumna in architecture, class of 1939 (Course IV). As mentioned earlier, she was elected Vice President of AWS in 1934. Her husband worked for Liberty Mutual Insurance Co. and was not associated with MIT. She was active in AMITA leadership and would have made an excellent member of the committee. Mrs. Elspeth Rostow is an MIT Assistant Professor of History (in 1952 she became the first woman professor at MIT) as well as Mrs Professor W.W. Rostow. She is the only woman faculty member proposed, but she is not an MIT alumna. Mrs Lockhart B. Rogers is the wife of MIT Chemistry Professor Lockhart B. Rogers. Dean Ruth L. Bean is the Assistant Dean of Student Affairs, but neither a faculty member nor alumna of MIT.

The proposed committee consists mostly of faculty wives (Hamilton, Sage, Rostow, Rogers), of whom one is also an Assistant Professor in humanities and another has experience with the Women’s Advisory Committee and the Technology Matrons. None of these proposed committee members is clearly qualified to have the education, training, and experience to make useful contributions to a committee charged to study all aspects of the place of women at MIT. Only one member, Wypler, is an MIT alumna. Dean Bean is clearly experienced, but she is only a staff person without the clout of a faculty member and she is not an MIT alumna. Professor Rule is well qualified and an influential figure at MIT. In 1956 he will replace Bowditch as Dean of Students. Strangely, however, he will not be appointed to the committee.

The Memorandum goes on, recommending that the committee be kept small and listing several names that could be added as possible consultants to the committee. Five of the
candidates listed are faculty wives (including the wives of the President and Chair of the Corporation, who is an ardent supporter of the women’s program) along with three deans, including Bowditch.

This time President Killian reacts quickly to Bowditch’s memo, writing to Provost Stratton on 18 March:

Frank Bowditch some time ago proposed the appointment of an ad hoc committee to make a study of the place of women students at the Institute and to make recommendations for a long-range program. I enclose a memorandum which he wrote to me about this.

I have talked with him subsequently with the thought that we could best approach this problem through discussions in a group wholly within the Institute, and I ventured the suggestion that you might be willing to bring together a group of representative officers and faculty members to discuss this problem and to provide a background for us to reach some administrative conclusions. The appointment of a committee including alumnae and wives seemed to me to pose difficulties for it would be a committee not to answer many questions about what the Institute can and cannot do. . . .

Killian’s recommendation against faculty wives seems reasonable, the proscription against alumnae is not — they are the ones most intimately aware of the fundamental problems.

1955 In January Chancellor Stratton appoints a committee:
Professor Leicester F. Hamilton ’14 (Chair)
Assistant Dean of Students Ruth L. Bean
Suzanne Z. Deutsch, Technology Matron’s representative on Women’s Advisory Board (Mrs. Professor Martin Deutsch)
Assistant Professor of History Elspeth Davies Rostow (Barnard ’38, MA Radcliffe ’39, Mrs. Professor W.W. Rostow)
Associate Prof. Kenneth R. Wadleigh ’43

The committee includes Dean Bean and Professor Rostow as recommended by Bowditch. Deutch’s sole qualification seems to be that she is a faculty wife and member of the Women’s Advisory Board for the Women’s dormitory, most of whom are faculty wives. Professor Hamilton, the Chair, has no apparent qualifications for the committee other than he is a faculty member and his wife has volunteered for years for the Matrons and as a member of the Women’s Advisory Committee. Wadleigh is a faculty member and years later will become Dean of Students. As recommended by Killian, there are no alumnae members. In hindsight, the the committee seems ill constituted to accomplish its assigned goals. As will be seen, it fails rather spectacularly to do so.

**Women students**

For some time this office has felt the need of an extensive study of the place of women students at the Institute and for a closer integration of women students into the whole educational program for undergraduates. The special committee appointed by the provost and chaired by Professor Leicester F. Hamilton is now at work, and its recommendations should contribute immeasurably to the general welfare of women students.

*from 1955 President’s Report*
Unfortunately President Killian’s hopes prove overly optimistic.

1956 John Rule replaces Bowditch as Dean of Students. Strong sentiments against admitting women undergraduates continue to be expressed in publications, classrooms, rumors, letters, and meetings. Common arguments are the heavy attrition and poor graduation rate of women students and that “women’s education should be left to ‘specialists in the field’ such as Wellesley and Mount Holyoke” and Radcliffe and Smith, . . .

The Harvard Crimson chimes in:

<table>
<thead>
<tr>
<th>Coeds, Even</th>
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<tr>
<td>Few people are aware that M.I.T. is a coeducational institution. Indeed, to Most Harvard students, the idea of a feminine mind concerning itself with electrochemical engineering or mining and metallurgy seems somewhat revolting.</td>
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from March 2, 1956 Harvard Crimson

6/21/1956 Margaret Alvord, the Housemother of 120 Bay State Rd, writes to Hamilton, arguing that the women students would receive “a more rounded education under more normal conditions in any of a number of good colleges . . . Then if they still are serious about it, they could come to M.I.T. as graduate students.” Alvord then asserts that “. . . if, as Dr. Killian asserts in his annual report, we are committed to produce as many active scientists as possible and to maintain the standards of excellence expected of us, then there is little in the records of the girls who have lived in the dormitory in the past ten years to justify their continuance in the undergraduate school.” Years later she explains in a 1970 letter to Emily commenting on Emily’s 1970 report [18] on women students at MIT:

While I was still at 120 orders came around I suppose from Killian, for us to take a stand on should we or should we not continue to have girls — and I found myself in distinguished company — Elspeth Rostow, Dr Herbert Harris and I opposing undergraduate coeds. We drew such immature lulus now and then that I felt a girl could get her undergrad work or at least 1st or 2 years just as well at Wellesley or Holyoke.

It should be noted for context that complaints were made to Dean Bowditch regarding Alvord’s lack of support for and interest in residents of the Bay State Rd women’s dormitory. See also Dean Fassett’s memorandum of 1952 to Chancellor Stratton. It is notable that Alvord years after the Hamilton Committee counts Elspeth Rostow among those who opposed the admission of women as undergraduates, yet she was appointed to the Hamilton Committee to help produce a recommendation. She also mentions Dr Herbert Harris. Herbert I. Harris, MD, MIT medical director and psychiatrist wrote the most extreme negative letter in the Archives on the issue of admitting women as undergraduates. In his 7/31/56 letter to Hamilton he wrote:

. . . The business of raising a family takes from five to fourteen years at a minimum. During this time, had a male student had her place, he could have been contributing profitably in his professional capacity. At this time, when there is such a shortage of engineers, one wonders if we are justified in taking positions away from male students for female . . . With so much conflict at an emotional level, it becomes plain that their intellectual efficiency must almost inevitably become impaired . . . I think that the presence of women students in the student body has a definite leavening effect and their presence is almost universally
welcomed, I believe, by the faculty and the student body. My concern is for their own welfare, however, and not for the pleasure and ornamentation they can contribute to MIT.

Harris’ letter strikes me as poisonous, condescending, arrogant, and misogynous. Alvord’s “distinguished company” seems anything but.

Arguments against continuing coeducation are countered by referral to the MITWA alumnæ survey of 53–55 [1] and by AWS and others with statistics of successful careers by women MIT graduates in research, teaching, medicine, law, business, and government. Many observe that the graduation and attrition rates would improve if the resources were provided to improve the academic and personal environment for women students. But these points are not mentioned in the archived files relating to the Hamilton committee, only the invited, negative comments directly to Hamilton are included, and one suspects that the so-called report ignores them.

On 18 September 1956 The Tech announces that during the summer John T. Rule, Professor of Engineering Graphics and MIT Class of 1921, was made Dean of Students and Mr. E. Francis Bowditch has been appointed as a special advisor to President Killian.

President Killian eventually gets impatient with the lack of any apparent action and prods Stratton to prod the Committee. Stratton writes to Hamilton

There is now a very strong feeling expressed by the President and by Jack Rule that we must come to grips with the problem of women students, and arrive at some early decisions … Even though your report may be still incomplete, may I not have whatever is ready … I should particularly like to have an expression of the views of the several members of your Committee on what course the Institute should follow. It is not all necessary that these should be unanimous. 10/17/56

Hamilton submits a confidential memo to the President, which becomes known as the Hamilton Report. No copies of this memo are known to exist and much of the understanding of the “report” and its impact follows the excellent (but not easily available) article by Evelyn Fox Keller (1981)[27]:

...The committee’s deliberations continued until the early fall of 56, culminating in a report recommending that M.I.T. cease accepting women students as undergraduates. No copy of the final report is available, but some of the correspondence affecting the final recommendation is. ...In retrospect, it appears that the Hamilton Report marked a crisis in the relations between M.I.T. and its women students. The report itself produced a vociferous reaction. Many were disturbed by its conclusions; even more were disturbed by the picture it portrayed¹ ... The choices were clear: either to discontinue the admittance of women undergraduates or to strive to improve their circumstances. The Record shows that the former alternative was unequivocally rejected, and gradually, efforts were begun to effect the latter.

¹ By at least one account, the reaction was so acute that all copies of the report were ordered burned.

One wonders if sufficient copies existed to produce a “vociferous reaction,” what happened to them all? The story continues.
Keller’s story was based on the information available to her at the time, but more details became available in 1986 when the files on women students were transferred from the President’s Office to the recently created MIT Archives and another story emerged. There was no formal committee report, Hamilton provided his own statistics and his own opinions arguing that women undergraduates have no place at MIT. Subsequent correspondence between Stratton and committee members suggests that they were unaware of the contents of Hamilton’s confidential memo — supposedly representing the committee deliberations. I could find no evidence that there ever were any meetings or deliberations of the committee. These revelations can be found in MIT Archives AC132, Box 18, Women Students Folder in notes by Loretta H. Mannix (LHM), Stratton’s highly regarded Administrative Assistant:
I have been unable to get a definitive answer from the archives as to whether or not the “restricted file” exists.

Killian’s reaction to Hamilton’s memorandum is swift, writing to Stratton on 10/22/56:
1957 Stratton proposes a new policy on undergrad women and the Academic Council approves. [32]. expand, add key points. Stratton summarizes the policy at an informal tea for resident women students 4/24/57. He mentions that in addition to to 120 Bay State Road, Bexley Hall will provide housing for women undergraduates.

The Tech article 4/26/57

Bexley Hall is located at 46-52 Massachusetts Avenue in Cambridge. It was purchased by MIT in 1939 and converted to an undergraduate dormitory. The 33 beds in Bexley allotted to upperclass undergraduate and graduate women students together with the 18-20 beds for first year students from 1958 onward constrained the number of women admitted as undergraduates to MIT. Women students faced restrictions called “parietals” on hours and guests in their living quarters, which governed visitors and required signing in and out. The official reason for these requirements was the mollification of concerned parents.

Emily Wick returns to MIT as a Research Associate.
4 October Sputnik is launched; the shortage of engineers is noted in the press.

1958 February 25 The Tech: “Coeds Fight Expulsion From INSCOMM, Seek Status as a Group”

INSCOMM removes AWS representation claiming that “the number of coeds at MIT is so small as to invalidate any claim of representation” An adjacent article “Tech Coeds: Play A Special Role” concludes with

Last spring, Chancellor Stratton said that, ‘Women are here to stay, and it is our hope to make them feel more a part of the MIT community.’ To many, it would seem that the latest Institute Committee action lacks the ring of hospitality.

1959 Emily Wick is appointed Assistant Professor in the Department of Nutrition and Food Science at MIT. 20 women reside in the 120 Bay State Women’s Dorm.

MIT releases document The Woman at MIT arguing the need for additional housing for women students.

Julius Stratton becomes MIT President.

1960 The class of 1964 arrives, along with a few transfers from other schools, including Judith Selvidge ’62, the author of I Didn’t Know They Had Girls at MIT (2014), a fascinating book providing a sage viewpoint of a world-traveled young woman transferring to MIT as a Junior from the University of Geneva.

Emily is the only woman faculty member at MIT outside of Humanities. Emily’s formal responsibilities for MIT women lay in the future, but by default she is a role model and is actively talking with women students about the Institute and careers.

Leaders of MITWA convince their fellow alumna of the need and Katharine Dexter McCormick ’04 pledges $1.5M for a women’s dormitory.
[the dormitory is] an unprecedented opportunity to advance the professional development of our women students. Women have made substantial contributions to scientific and technical progress in the past. Women’s potential for achievement in these fields represents one of the great latent resources of the country.

*from the 1960 President’s Report*

1961 Kenneth R. Wadleigh becomes Dean of Students in July. The title changes to Dean of Student Affairs in 1962.

1962 Sailing and fencing are approved as women’s club sports, but women had very low priority in using MIT athletic facilities.

1963 Stanley McCormick Hall opens, attracting national publicity. Many people believe that McCormick Hall is named after Katharine, but even today no building at MIT is named in her honor.

The first tower of McCormick Hall houses about 125 women, significantly increasing the number of women admitted. 120 Bay State Road and Bexley cease to be women’s residences. Undergraduate women are required to live in McCormick or with parents or close relatives.

Dean Wadleigh hires Radcliffe Associate Dean Jacquelyn Mattfeld as Associate Dean of Student Affairs, responsible for the women’s program. For the first time, a faculty member
rather than a staff member is responsible for women students, which now number about 248. The *MIT Catalog* mentions “up front” that MIT is a coeducational school, even though it has been accepting women since 1871, albeit in small numbers.

Emily becomes the first tenured female professor at MIT when she is promoted to tenured Associate Professor.

1964 Emily decides to learn more about other aspects of MIT and signs up for the Committee on Student Environment, where she meets Dean Wadleigh.

Dotty Bowe is appointed secretary to Dean Mattfeld when Prof Norton retires and she moves into the Dean’s office.

The AWS, headed by Margaret MacVicar ’65 (BS ’64), sponsors a national symposium “American Women in Science and Engineering” with Carol Gustafsen Van Aken ’65 as chairman. MITWA, faculty members, and Dean Mattfeld provide support.

MITWA becomes the Association of MIT Alumnae (AMITA).

1965 “…from 1965 when it was an earth shattering first occasion to have fifty women enrolled in the first year class” (Emily Wick, *Tech Talk*, 3/28/1973)

The Academic Council again takes up question of women’s future at the institute, with some faculty and administrators still regarding training women undergraduates as a risky venture. After much argument, the Council finally endorses raising the number of women undergraduates to 400, raising the percentage from 3% almost to 9% (but it takes years to happen).

Mattfeld leaves MIT in the spring for Sarah Lawrence to become Provost and Dean of the Faculty, later moving to Brown University and then to be President of Barnard.

After discussions with Dotty, Wadleigh chooses Emily Wick as the new Associate Dean of Students with responsibilities for women’s programs.
Emily joins another new Associate Dean of Student Affairs, future Chancellor, President, and strong supporter of diversity — Paul Gray ’54

Emily joins Dotty in Room 5-108 with the intent of making it a Dean’s office which welcomes students at any time. The office is said to always be full of students.

“Between 1963 and 1972, Dotty with Emily Wick were the women’s program at MIT.” [14]

Dotty’s “goal was to know every woman student, and she and Emily had an office with an open door in the corridor between the Main Lobby and the Hart Nautical area, an excellent place to pop in for a brief talk, especially when coming from McCormick on a rainy day, and entering the building at 55 Mass Ave (with the anchors).” [14]

1966 A woman interviewed for an article reports that MIT is very “expensive, it will cost her $1,700 for tuition and $1,130 more for room and board in McCormick.”

1967 Women are finally admitted to the MIT Athletic Association, but not to the Varsity Club. Later in the year women’s sailing and crew are designated “varsity teams” retroactive to 1963, all other women’s sports considered “club sports.”

Undergraduate women are finally permitted to live off campus without the requirement that they live with family, provided they were over 21, or secured parental permission. Some women were not able live in MIT housing because of lack of space, and so their living off campus was necessity rather than choice.

1968 McCormick Hall East opens. Mildred Dresselhaus moves to MIT from Lincoln Labs with an appointment as the first woman tenured Full Professor following a year as a visiting professor. “Millie” becomes involved with women students and begins discussions with Emily and Dotty on admissions policy and other issues.

Emily Wick is promoted to Full Professor. Emily is the first woman at MIT promoted to Full Professor from within the ranks. She is the second female tenured Full Professor after Mildred Dresselhaus.

1969 Senior House becomes first coed living group with 6 women. The residence requirements for men and women become the same — only freshmen are required to live in Institute houses. All other students may elect to live on or off campus. [18]

Professor Daniel Nyhart, an expert on finance in the MIT Sloan School of Management, replaces Wadleigh as Dean of Student Affairs. Dean Nyhart decides an Associate Dean focused on women’s affairs is no longer necessary and informs Emily and Dotty of his intention to dissolve their office and to not replace Emily and Dotty.
4 Epilogue: The 1970s and Beyond

1970 In March Emily Wick submits *Proposal for a new policy for admission of women undergraduate students at MIT* [18], arguing that admissions requirements should be made the same for women as for men — in particular that MIT should no longer limit the number of undergraduate women by the number of on-campus beds. The report includes a history of women at MIT backed by extensive statistics on performance, housing, activities, athletics, and contributions. The recommendation is adopted by MIT in 1971, at a time when 249 women students were housed on campus.

In September Wick releases a shorter report *Women Students at M.I.T.* including many of the same ideas [19].
1971 Emily steps down as Associate Dean. Room 5-108 closed. Dotty is promoted to a staff position and moves to Financial Aid. Emily recommends that someone be appointed to continue her work. Wadleigh writes to Killian 10/20/1971 that “Emily played the key leadership role in the successful development of a strong identity and character for undergraduate and graduate women at M.I.T. during her tenure on the administration.”

Emily’s resigning as Associate Dean and the administration’s decision to not replace her results in a strong student reaction articulately expressed by excerpts from 12/7/71 Letter from Carol L. Epstein ’72 and Paula F. Stone, ’72, to MIT community. Copies to The Tech, President Weisner, Provost Gray, Dean Nyhardt, . . .
To Members of the Institute Community:
We are writing this letter in response to the retirement of Emily Wick from the Deans’ Office and the circumstances and issues surrounding her decision. With the demise of Dean Wick’s office as of January 1, 1972, the women students of M.I.T. will lose an integral, personal representative in the higher echelons of the Institute as well as a congenial, intimate friend who is sensitive to the problems that we, as women, must cope with in a male-run, male-oriented environment.

To our knowledge, after consulting several faculty and members of the administration, no definitive action is being taken to replace Dean Wick. The needs and position of women at the Institute have apparently failed to generate a serious commitment. We are concerned that unofficial policies will remain the same; that they will perhaps be re-examined and discussed, but that nothing will be done; that the urgency for our full recognition as members of the M.I.T. community will be ignored, and the entire white-washed, appeased, and silenced.

A standard argument used against the establishment of a separate office for women at M.I.T. is that women and men are equal, therefore there is no need for such an office. We argue that we are indeed equal, but that we have not been granted equality; although we are intellectually equal, there are parts of the Institute in which we (and our friends) have experienced personal harassment and discrimination. . . .

As of January 1, 1972, the office of Dean of Women Students will be empty, and will de facto have been abolished . . .

We would also like to set up an Institute Committee on Women’s Affairs at M.I.T. as an investigatory body to look into areas of concern to women, especially in response to input from the community. . . .

The reference to “personal harassment and discrimination” resonates with current events and Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine, the recently published Consensus Study Report by the National Academies of Science, Engineering, and Medicine. [35]

The MIT administration reacts to strong outcry, decides to appoint another Ad Hoc Committee, this time an Ad Hoc Committee on the Role of Women Students at MIT.

Meanwhile, Emily, Mildred Dresselhaus, and Paula Stone organize a meeting for women students in January to discuss issues of common interest, but they forget to put “students” in the title of the flyer and draw a much larger audience than intended.

1972 Title IX of the Education Amendments Act of 1972 reads

No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance.

The first meeting called and chaired by Dresselhaus and Stone draws over 100 women (and two men). The meeting includes women from all aspects of MIT life and raises awareness of the needs and frustrations of women at MIT. The group takes as a name the Women’s Forum and begins regular meetings. Part of this group is appointed as the official Ad Hoc Committee on the Role of Women Students at MIT.

The committee produces a report on the Role of women students at MIT by the end of spring [25], converging at a speed almost incredible for Academia. Its key conclusions and recommendations are indicated by a few excerpts:
“A discriminatory attitude against women is so institutionalized in American universities as to be out of the awareness of many of those contributing to it. Decisions may indeed be made with no deliberate effort to exclude women — at least at times — but policy must be judged by outcome, not by pronouncement. And here we find inadequate numbers of women at all levels, most significantly so at senior levels.”

**Recommendations:**
- active recruitment of women
- publicity about women at MIT
- alumnae Educational Councilors interviewing applicants
- department awareness to admit more women
- a system of women advisors
- more women graduate students
- Emily Wick’s position should be filled

Dean Nyhart hires Anne E. Ellison as an Assistant Dean of Student Affairs in response to a recommendation of the Ad Hoc Committee, but the position is only a staff appointment rather than the previous position of Associate Dean held by Emily. Ellison still holds the post in 1974–5, when she writes in the annual President’s Report:

**Women’s Program** I was a member of the Committee on Educational Policy (C. E. P.) subgroup on women students, which met second term. There was an increasing number of requests from women students to review the report of the Ad Hoc Committee on the Role of Women Students at M.I. T. of spring, 1972, to see how extensively the recommendations had been followed, and to examine some areas in depth that required more work or were not examined in the original report.

The advisability of a new ad hoc committee was considered; however, it was learned that Professor Lisa Steiner of the Department of Biology had been asked to chair a four-person subgroup of the C. E. P. to review the position of women students at M. I. T. That subgroup, enlarged to include women students, myself, and others, met several times in the spring to identify issues and will recommend whether an ad hoc committee is needed.

In other words, not much has happened since the 1972 report except consideration of yet another ad hoc committee. On the bright side, the students on the Ad Hoc Committee win a Karl Taylor Compton Prize.

Emily Wick receives a Bronze Beaver Award from the MIT Alumni Association, cited as an “advocate and model for a generation of women students at MIT from a handful to an abiding presence.”
1973 Emily leaves MIT to become Dean of the Faculty at her undergraduate alma mater, Mt. Holyoke College. The Ad Hoc Committee Compton Prize is used to fund a women’s intercollegiate sailing trophy in Emily’s name. A plaque is “Presented in appreciation for her efforts on behalf of women students” to Emily at MIT in June 1973 by Paula Stone on behalf of the AWS. The boat is Emily’s Bullseye Beaver II.

Note: Emily becomes the first female Commodore of the Sandy Bay Yacht Club in Rockport, Massachusetts, in 1988.

Mary Rowe is appointed as special assistant to the president and chancellor for women and work.

In A Century of Women Students at M.I.T. (1973) ([20], Emily describes the accomplishments and progress during her time as Associate Dean of Students. While noting the progress of recent years, she emphasizes several remaining tasks:

First, there must be more women faculty at both junior and senior levels. Women students need to observe and to communicate with women who have been successful in their field of study. . . . Such role-models are necessary if women are to be encouraged to seek careers. . . .

Second, there must be more women students. M.I.T. — as a leading university in our society — has a responsibility to educate those people whose talents can best be met by the Institute’s resources. . . .”

1978–1983 Emily serves as a term member of the MIT Corporation.

2014 Women at MIT from MIT web site

Note the large discrepancy from undergraduates to faculty! A major problem in growing the number of women students in engineering is the small number of women faculty of engineering. Too few women faculty, role models, counselors, advisors!
5 Parting Thoughts: The Bottleneck Facing Women in Academic Engineering

Much of my academic career after 1980 was devoted to the issue emphasized by Emily in her 1973 article regarding the need for more women faculty as role models. Granted the greater problem is the lack of diversity in many professions, including engineering academia. The recent National Academies report [35] provides extensive evidence of the problems caused by and the damage done by this failure, especially in the case of women. My interest began with my first experience supervising a woman PhD student in electrical engineering at Stanford beginning around 1980, and increased as over the next decade and a half my research group grew from 0% women to about half. In 2002 several of my students successfully nominated me for a Presidential Award for Excellence in Science, Medicine, and Engineering Mentoring (PAESMEM), which brought with it a Grant from the National Science Foundation which was explicitly constrained fund work in the area of the award title. This led to two workshops in 2004 and 2007 organized by my students, former students, and me on mentoring for academic careers, which in turn resulted in two coedited books [36, 6] based on the presentations and discussions at the workshops. The workshops and books emphasized faculty diversity at all levels. In later years I gave several talks on the subject to both tiny and large audiences, including talks as a distinguished lecturer of the IEEE Signal Processing Society (2006–2007), at conferences, and at faculty meetings. I close this article on the history of coeducation at MIT with a few global observations on the statistics of women in electrical engineering and computer science gathered during my research on the topic. The data proved difficult to obtain, and even when I retired there were few reliable reports available. The first table is from 2002, and it was used for my presentation at the workshop associated with the PAESMEM award ceremony and at the two workshops that resulted from the award.

<table>
<thead>
<tr>
<th>University of Delaware</th>
<th>0%</th>
<th>UC Berkeley</th>
<th>11%</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCSD</td>
<td>2%</td>
<td>Penn State</td>
<td>11%</td>
</tr>
<tr>
<td>USC</td>
<td>4%</td>
<td>Stanford</td>
<td>11%</td>
</tr>
<tr>
<td>Cal Tech</td>
<td>5%</td>
<td>Cornell</td>
<td>13%</td>
</tr>
<tr>
<td>UT Austin</td>
<td>5%</td>
<td>University of Washington</td>
<td>20%</td>
</tr>
<tr>
<td>Princeton</td>
<td>7%</td>
<td>Duke</td>
<td>30%</td>
</tr>
<tr>
<td>University of Michigan</td>
<td>7%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MIT was not included because I did not have reliable numbers at the time. The numbers came from trusted colleagues, who had access to internal data. The intent was to count only genuine regular faculty appointments and not visiting and non-tenure-track appointments, which often inflated the claims of percentages on university websites. Two points stand out. The first is that many of the numbers are abysmally low. Many excuses were offered at the time, which usually boiled down to the candidates being unavailable or the institution had tried hard but failed to entice minority candidates. The numbers also pointed out that there were exceptions, major research universities who did significantly better, usually by a combination of active recruiting and institutional requirements for fair and open searches. The University of Washington was high on the list, largely because of the efforts of Denise Denton MIT ‘82 during her time as Dean and the rules.
for search committees that she compiled and enforced. There were no quotas for appointments, but their were requirements for search committees to demonstrate diversity in the short lists compiled for interviews and visits or explain why. The litany of lame excuses common at the time for recommending only clones of the male faculty were not acceptable and could result in the failure of the search recommendations to proceed. Denton wrote the book (actually, a manual) on fair and open searches, which is well-summarized by

\textbf{It's a search committee, not an envelope-opening committee.}

Denise Denton

Years later I updated the numbers. Again I used insider information I trusted to get regular faculty numbers without amplification by non-tenure-track positions and soft-money visiting hires. By this time there had been a thorough study of engineering faculty by gender [Nelson and Brammer (2010) [34]] for the top 50 research universities with a breakdown by fields, so the average was known to be slightly below 10% women in EECS. The significant rise of Cal Tech (perhaps made easier by the small number of individuals involved) was remarkable, and showed the influence of a dedicated university President promoting active searches rather than simply lip service. MIT did relatively well, which reflects both the institutional policy and the fact that it draws on its own graduates, and its percentage of women graduates has been steadily increasing. I often used this table to remind Stanford that in spite of its constant claims of superiority, on this measure it was clearly below average. The addition of a single woman late in the year pushed them above average, which is a reminder of how small some of the numbers are and the large impact of a few appointments.

<table>
<thead>
<tr>
<th>Institution</th>
<th>% women</th>
<th>total faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>CalTech</td>
<td>19.2%</td>
<td>19</td>
</tr>
<tr>
<td>Duke</td>
<td>18.5%</td>
<td>27</td>
</tr>
<tr>
<td>University of Washington</td>
<td>17.5%</td>
<td>40</td>
</tr>
<tr>
<td>UCLA</td>
<td>13.0%</td>
<td>46</td>
</tr>
<tr>
<td>U Wisconsin</td>
<td>13.0%</td>
<td>38.5</td>
</tr>
<tr>
<td>RPI</td>
<td>12.6%</td>
<td>39</td>
</tr>
<tr>
<td>MIT</td>
<td>12.0%</td>
<td>151</td>
</tr>
<tr>
<td>Georgia Tech</td>
<td>11.4%</td>
<td>114</td>
</tr>
<tr>
<td>Texas A&amp;M</td>
<td>11.1%</td>
<td>72</td>
</tr>
<tr>
<td>Princeton</td>
<td>10.9%</td>
<td>27.5</td>
</tr>
<tr>
<td>Purdue</td>
<td>10.8%</td>
<td>83</td>
</tr>
<tr>
<td>Rice</td>
<td>10.0%</td>
<td>20</td>
</tr>
<tr>
<td>U Michigan</td>
<td>9.8%</td>
<td>71</td>
</tr>
<tr>
<td>UC Berkeley</td>
<td>9.8%</td>
<td>40.5</td>
</tr>
<tr>
<td><strong>Top 50 Average (2007)</strong></td>
<td>9.7%</td>
<td></td>
</tr>
<tr>
<td>Cornell</td>
<td>8.8%</td>
<td>34</td>
</tr>
<tr>
<td>Stanford</td>
<td>8.6%</td>
<td>41.5</td>
</tr>
<tr>
<td>Carnegie-Mellon</td>
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<td>49</td>
</tr>
<tr>
<td>U Illinois</td>
<td>8.2%</td>
<td>85</td>
</tr>
<tr>
<td>Northwestern</td>
<td>7.8%</td>
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<tr>
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<tr>
<td>U Maryland</td>
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<tr>
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<td>5.0%</td>
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</tr>
<tr>
<td>USC</td>
<td>4.9%</td>
<td>61</td>
</tr>
<tr>
<td>UCSD</td>
<td>3.8%</td>
<td>52</td>
</tr>
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</table>

By 2010, there have been and there remain serious problems of pipeline and pool, but the numbers of women Ph.D.’s have been steadily increasing, while the percentages of women faculty have not reflected those increases. Worse, the number of women Deans, Provosts, and Presidents remains minuscule. It is notable that even small increases can result in a significant percentage increase when the numbers are small, and that percentage increase can have an impact with more role models, more diverse experience, and more effective faculty, which in turn will draw more
students. While MIT has achieved balance in the overall student body, it is not there yet in engineering and in several specific engineering fields, including electrical engineering and computer science.

Are things any better now? I don’t know, I retired in 2013, but for a final talk at Stanford in 2017 I noticed that the published Stanford statics were

UCSD 5/52=9.6% ↑
vs. e.g. Caltech 3/19=15.8% ↓
U Washington 17% ↓

( actually it’s 5/51=9.8% ↓ )

So my own former institution seems pretty much stuck at around 10%, although they at least now have women as Dean of Engineering and Provost. Faculty change seems to come much more slowly than student body change.

So how is progress to be made in diversity in faculty at all levels, including the upper echelons? Much has been said and written on the topic during this millennium, but it is worth mentioning a few recurring themes that have been effectively developed by a few institutions:

- Active faculty recruiting across a wide spectrum. In particular, fair and open and active searches. A basic principle of optimization teaches that the richer the pool discovered in a search, the better the final candidates.

- Leadership must deal with residual and often unconscious bias, which often means
educating search committees (who too often see no problem in reproducing themselves).

The schools with the best records had activist Presidents and Provosts!

• Creating a respectful, productive, and fulfilling environment. (Another leadership challenge.)

• Lip service is not enough.

6 Acknowledgements

The material draws heavily from the papers of Emily L. Wick in the possession of her niece, Laura Hallowell (Wellesley ’64), *The Technique, The Tech, Technology Review, The MIT Handbook*, and the MIT Museum and MIT Archives, the articles and book of Amy Sue Bix, the biography of William Barton Rogers by his wife, the biography of Ellen Swallow Richards by Caroline L. Hunt, and the old Web pages of the Association of MIT Alumnae (AMITA) beginning at http://alumweb.mit.edu/groups/amita.old/esr/swallow.html

Extensive discussions with Susan Kannenberg, MIT ’61, have been invaluable regarding the “Hamilton Report” and the environment for women students at MIT in the 1950s–60s. Many of the comments herein have been improved by (or replaced by) her suggestions.

Thanks to classmate Emma Root ’64 for email conversations in the earliest stages of this project.

Most of the photos are courtesy of the MIT Museum and *Technique*, and many of the documents quoted or reproduced are from the MIT Archives. Special thanks to Laura Hallowell, to Denise Wernikoff, former Project Archivist at the MIT Museum, and to former Class of 1964 President and *Technique* Photo Editor and Editor, Bob Popadic.

Bibliography is work in progress, needs fixing.

References

Robert M Gray arrived at MIT in 1960 and received his BS and MS in EE at MIT in 1966 and the PhD from the University of Southern California in 1969. He is a Stanford Professor Emeritus and lives in Rockport, Massachusetts, where he hikes, sails, and practices and teaches tai chi when he is not hanging out in the MIT Archives.