



# THE PIONEERS OF EPP

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Remarks at the  
**EPP 40<sup>th</sup> Anniversary Gala**

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## Preface

I had the pleasure of being asked to speak about the early history of the Engineering and Public Policy Department (EPP) at the Gala celebration of its 40<sup>th</sup> anniversary as a department at Carnegie Mellon University.

Inspired by the warm response to that talk, I've tried here to reconstruct the narrative that went along with the slides I presented. I hope the reading of this story will give you some of the pleasure I've had in telling it.

Ed Rubin

May 2017

## The Setting

The story begins in 1969—year zero for the history of EPP. I was one of several new arrivals that year who are part of the story.

It was a turbulent time in the country's history. The civil rights movement of the 1960s was bringing widespread social change, often with conflict; an unpopular war in Vietnam was spurring protests and demonstrations across the nation; and the dark side of technological progress was becoming increasingly apparent as widespread industrial pollution, urban decay, congestion, and other concerns gained public attention.

The Carnegie Mellon campus reflected many of these issues and concerns. It was a much smaller campus then, not much to look at, with a total of about 4500 students—about a third of our size today. A new building, called Science Hall (now Wean Hall), was under construction, prompting student demonstrations against racial discrimination in contractor hiring. Protests against the Vietnam War also began to emerge on campus. And in the Pittsburgh community, a newly-formed citizens' group was calling for action against the widespread problem of air pollution from the local steel mills, power plants and other industrial sources (including Carnegie Mellon's own coal-fired boilers).

As the 1960s drew to a close, Carnegie Mellon was on the brink of a decade in which new leadership would begin to transform it from a well-respected regionally-based campus into a prominent world-class research university. The creation of EPP would be part of that story.

# Carnegie-Mellon in 1969-70



EPP 40<sup>th</sup> Anniversary Gala

Ed Rubin Remarks



## The Pioneers

Against this backdrop, let me introduce you first to Professor Rod Williams. In 1969, he had just stepped down after 19 years as head of the electrical engineering department. His focus now was on how to better educate engineering students to recognize and understand the broader societal impacts of technology—a goal he hoped would help make engineering more attractive in the face of growing disenchantment with technology and a national downturn in engineering enrollments.

With the help of a grant from the Esso Education Foundation, Williams began drafting plans for a program he called Sociotechnology—an effort to better link engineering studies with the humanities and societal concerns. A handful of other senior faculty also saw this as an important need.

One of those people, a colleague in mechanical engineering, connected me with Williams during my first semester here. We didn't know it at the time, but Rod was seriously ill and would be unable to pursue his ambitious plans. But his pioneering efforts to broaden engineering education would quickly be picked up by another senior faculty member and true believer, Herb Toor.

# Rod Williams



Everard M. Williams  
George Westinghouse Professor of Engineering  
Ph.D., Yale University [1945-]

## A program in "Sociotechnology"

SOCIOTECHNOLOGY: Theory (course title)

The following course is designed as a prerequisite for a Seminar in Sociotechnology; its primary goal is to familiarize students with the fundamental concepts of the discipline and to acquaint them with operational strategies for employing these concepts in the solution of existing sociotechnological problems.

The course is conceived of as a discussion section, probably containing no more than thirty students. It is planned as a twelve-unit program, with some degree of flexibility in the arrangement and size of the units. Units may be conceived of under two headings: **concepts**, where discussion concerns reading material assigned and recommended; and **strategies**, where behaviors useful in problem-solving are taught.

Each unit is outlined below, with a brief discussion of the purposes and the content of the material. At the conclusion, a suggested arrangement of units is described.

**CONCEPTS:** units based on reading material

1. Assigned reading: **Man, Machines and Modern Times.**

Morison's book is a model of available research in the history of technology. Students should attack two major questions: (1) what generalizations may be drawn about the nature of innovations and its impact on technology and society? and (2) are such generalizations valid for all time, our time, or only the specific times examined?

The intention of this unit, which should precede all other concept units, is to provide both a sense of the history of sociotechnological processes and a familiarity with developed case histories of specific instances. One week.

2. Assigned reading: **Understanding Media (selections).**

McLuhan's approach to the history of technological innovation is directly opposed to Morison's. By the assignment of such chapters as those on housing, automobiles, clothing, and the

In 1969, Herb was head of the chemical engineering department. He was a straight-talking, no-nonsense guy, with the radical idea that engineers should be more heavily involved in public decisions that involved technology, and that undergraduate engineers needed to be better trained to recognize and deal with the societal impacts of technology.

A year later Herb would become the first Dean of Engineering when the College of Engineering and Science was split into two separate colleges (called the Carnegie Institute of Technology, CIT, and the Mellon College of Science, MCS).

In a conversation many years later about the early days of EPP, one of Herb's most vivid recollections was the day as department head when he got a visit from an irate young faculty member:

"I'm in my office and a big bruiser comes in and pounds on the table and says, 'I've just been on top of a [frigin] coke oven, and you guys are poisoning the goddamn world and you have got to do something about it, Toor!' "

"I said, 'Who the hell is this young faculty member?' "

# Herb Toor

**The ChemE Department Head  
meets a new faculty member:**

*"I'm in my office and a big bruiser comes in  
and pounds on the table and says, 'I've just  
been on top of a [frigin] coke oven, and you  
guys are poisoning the goddamn world and  
you have got to do something about it, Toor!'"*

*"I said, 'Who the hell is this young faculty  
member?'"*



Herbert L. Toor  
Dean, Carnegie Institute of Technology  
Head & Professor, Chemical Engineering  
Ph.D., Northwestern University [1953-]



That faculty member was Bob Dunlap, an assistant professor in the Metallurgy and Materials Science (MMS) department who had joined CMU two years earlier in 1967. Bob frankly didn't care much for conventional metallurgy, but he was passionate about teaching, and since moving to Pittsburgh had become especially interested in the air pollution problems of the steel industry.

His stormy visit to Herb Toor that day would prove to be a Casablanca moment—the beginning of a beautiful friendship.

Their first collaboration was to organize and run a project course with chemical engineering students to study air pollution in Allegheny County. This later became the prototype for future EPP project courses. They were joined in that effort by Prof. Dave Ragone (Bob's thesis advisor, who had also moved to CMU's metallurgy department) and research assistant Mike Massey (whose PhD thesis would become another model for EPP).

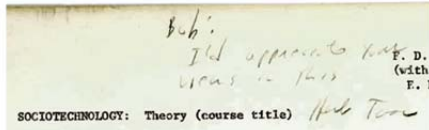
After Herb became dean of engineering the next year he turned to Dunlap to spearhead Rod Williams' idea for a sociotechnology program. A hand-written note on a copy of Rod's draft syllabus for an introductory course asked: "Bob, I'd appreciate your views on this."

# Bob Dunlap



Robert W. Dunlap  
Assistant Professor & Res. Met. Engineer,  
Metallurgy and Materials Science  
Ph.D., University of Michigan [1967- ]

**A request from the new Dean of CIT:**



**Bob,  
I'd appreciate your  
views on this.**

**Herb Toor**

Bob was also a big fan of Rod Williams and the concept of a sociotechnology program, but he thought the program needed to be more strongly focused on problem-solving skills as opposed to a broader grounding in the humanities. A strong influence that shaped those ideas was the creation of a new graduate school at Carnegie Mellon called the School of Urban and Public Affairs—commonly known as SUPA (now the Heinz School)—which opened its doors to students in the Fall 1970 semester.

Bill Cooper, the first dean of SUPA, and his associate dean, Toby Davis, had recruited a faculty of social scientists with strong quantitative analysis skills and interests in problem-solving that meshed well with what Dunlap and Toor had in mind.

Toor and Cooper agreed that the new undergraduate initiative in engineering would draw heavily on the SUPA faculty for its social analysis content. They identified Gordon Lewis, a new junior faculty member who headed the Department of Social Relations, to work with Dunlap on putting together a program that would deliver on the sociotechnology concept.

# The Attraction of SUPA

## (School of Urban and Public Affairs)



**Bill Cooper**  
Dean



**Toby Davis**  
Associate Dean



## Gordon Lewis

Gordon H. Lewis  
Head, Dept. of Social Relations  
Associate Professor,  
Sociology & Industrial Administration  
Ph.D., Stanford University [1969- ]

The result was the Program in Engineering and Public Affairs, E&PA. It would offer a new single-major degree in the college of engineering, as well as double-major degrees jointly with each of the five traditional engineering departments.

Co-chaired by Dunlap and Lewis, the faculty would be drawn from the ranks of existing CIT and SUPA faculty, some of who would be jointly appointed in E&PA as well as their traditional department.

During the 1970-71 academic year planning for the E&PA program got seriously underway.

## The Program in Engineering and Public Affairs (E&PA)

- A new undergraduate engineering program offering a major in E&PA and a double-major with a traditional engineering department
- Co-chaired by Profs. Bob Dunlap (CIT) and Gordon Lewis (SUPA)
- Staffed by CIT faculty members with joint appointments in E&PA, plus additional CIT and SUPA faculty contributing to the program

By April 1971, the E&PA program had taken shape. Its goal was to develop “a new breed of engineer” who could “work at the interface between the social and engineering sciences through the use of a genuinely interdisciplinary curriculum.”

Press releases, brochures and news articles were put out to publicize the new program and announce that it would begin admitting students in the fall of 1971.

# “A New Breed of Engineer”

***“The primary purpose of the program is to train individuals to work at the interface between the social and engineering sciences through the use of a genuinely interdisciplinary curriculum.”***





The E&PA curriculum was built on a core of science and engineering courses already embedded in the traditional disciplines, with the added dimensions of a concentration in one or more social analysis topics, a set of E&PA technical elective courses, skills in applied math, and a set of two capstone project courses in which E&PA students worked together with SUPA Masters students to address a current real-world problem under the guidance of an interdisciplinary faculty team (originally two from E&PA and two from SUPA).

My first job was to figure out how to get all this into double major curricula that could still be completed in four years, then get it accepted by each of the five engineering departments and a college-wide education committee headed by Dick Teare.


But we managed to do it, and the first class of 25 students was enrolled in the E&PA program in the Fall 1971 semester.

# The E&PA Curriculum

- Engineering & science core
- Social analysis concentrations
- E&PA technical electives
- Capstone project courses

***First class admitted  
in Fall 1971 semester***

**Carnegie-Mellon University**  
Engineering and Public Affairs

To: Educational Action Committee, Professor B. R. Teare, Jr., Chairman  
From: Professor E. S. Rubin, Engineering and Public Affairs Program Committee   
Date: November 9, 1971  
Subject: Engineering and Public Affairs Double Major Program

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At the request of Professor R. W. Dunlap, Co-Chairman of the Engineering and Public Affairs Program Committee, I am enclosing summary documentation of double major programs in Engineering and Public Affairs and each of the five engineering departments, for approval by the Educational Action Committee and transmittal to the CIT College Council. Documentation includes the following information:

1. Summary of degree requirements for a single major in Engineering and Public Affairs (EPA) (already approved by College Council).
2. Comparisons for each engineering department of specific course requirements for:
  - (a) the single major engineering degree
  - (b) the single major EPA degree with the particular departmental option
  - (c) the double major degree in the particular department and EPA.
3. Sample programs for each engineering department which lead to the double major degree in either eight or nine semesters. The nine semester programs are to be considered "normal", while the eight semester versions indicate the overloads necessary to complete the double major in four academic years.
4. A summary of the total number of courses and units required for each of the single and double major degree options.

As comparisons of the degree requirements indicate, variations among departments in the total number of units for the double major degree result principally from differences in the extent to which EPA requirements can be "made up" with departmental elective options. In other cases, specific departmental courses have also been replaced by EPA courses judged by the department to be equivalent (e.g., in the Mechanical Engineering Program, EAP Project replaces 2E-606, Engineering Design). All such substitutions are shown in the enclosed degree requirement comparison. The columns entitled Double Major Requirements indicate those courses in the double-major program which satisfy the engineering (departmental) degree requirement listed in the first column immediately adjacent. In all cases the EPA requirements of at least 400 units for the double major degree is also satisfied.

Please contact me if any additional information is required.

cc: Educational Action Committee Members  
Dean H. L. Toop  
Professor R. W. Dunlap  
Professor G. H. Lewis



So now let me introduce you to the first faculty members who held joint appointments in E&PA—the group later referred to as The Founding Fathers. Along with co-chairs Dunlap and Lewis, there were five other faculty members from CIT departments.

From chemical engineering there was Matt Reilly, a former undergrad at CMU who later returned as a faculty member. Matt taught courses on optimization and environmental quality.

In civil engineering, Fran McMichael was recruited in 1972 from the Mellon Institute, where he had been collaborating with Dunlap on water pollution problems in the steel industry.

In electrical engineering, Dave Pittle was part of my cohort. He was heavily involved in product safety issues, and left CMU a few years later to become a commissioner of the newly-created Consumer Products Safety Commission.

In mechanical engineering, Stan Angrist was a senior faculty member with broad interests who taught courses in energy utilization and engineering economics. I was the new kid on the block, with a background in energy and thermal sciences and a new interest in air pollution control since coming to Pittsburgh. My new course on that topic was one of the first E&PA electives.

Except for Stan, who had recently been promoted, all of us were untenured junior faculty. Most of us were advised by the senior faculty in our home departments that this E&PA thing was a risky move, better left for after we got tenure. But we were naïve enough about academic life and cocky enough to believe we could change the world, so the advice was respectfully ignored and the E&PA program was born.

## The E&PA Joint Faculty, 1971-72 (The Founding Fathers)

MMS



Co-Chairs  
Dunlap &  
Lewis



SUPA



**Matt  
Reilly**  
ChemE



**Fran  
McMichael**  
CivE



**Dave  
Pittle**  
ElecE






**Stan  
Angrist**  
MechE



**Ed  
Rubin**  
MechE

In addition to the core E&PA faculty with joint appointments, a larger group of engineering faculty supported the program through the courses they taught, or through participation on the E&PA curriculum committee. Many of the associated faculty members were tenured full professors, while others were early in their careers. A few of the junior faculty, like Henry Piehler and Wils Cooley, would soon take on a greater commitment via a joint appointment.



## Associated CIT Faculty, 1971-72

<u>Faculty Member</u>	<u>Title</u>	<u>Activity</u>
Tung Au 	Professor of Civil Engineering	Curriculum Committee
Edward M. Krokosky	Professor of Civil Engineering	Project Course
Richard L. Longini	Professor of Electrical Engineering	Elective Course
James P. Romualdi 	Professor of Civil Engineering	Elective Course
Alvin S. Weinstein	Professor of Mechanical Engineering	Elective Course
Everard M. Williams	Professor of Electrical Engineering	Curriculum Committee
Frank W. Paul	Associate Professor of Mechanical Engineering	Elective Course
Henry R. Piehler 	Associate Professor of Metallurgy & Materials Science	Elective Course
I. Melvin Bernstein	Assistant Professor of Metallurgy & Materials Science	Elective Course
Wils L. Cooley	Assistant Professor of Electrical Engineering	Elective Course

In SUPA, another group of associated faculty members supported the program, including Toby Davis and Al Blumstein. Other SUPA faculty would join in later years.

Faculty from other colleges also would soon affiliate with E&PA, including economist Lester Lave from GSIA (the Graduate School of Industrial Administration, now the Tepper School of Business) and historian Joel Tarr from H&SS (now the Dietrich College of Humanities and Social Sciences). Joel's career trajectory was forever changed by his new association with engineers!

## Associated SUPA Faculty, 1971-72

<u>Faculty Member</u>	<u>Title</u>	<u>Activity</u>
Otto A. Davis 	Associate Dean & Professor of Political Economy	Curriculum Committee
S. William Gouse, Jr.	Associate Dean of SUPA & CIT	Project Courses
Anthony S. Walters, Jr.	Assistant Dean & Assistant Professor of Urban Systems and Operations Research	Project Courses
Alfred Blumstein 	Professor of Urban Systems and Operations Research	Curriculum Committee
James D. Laing	Associate Professor of Political Science and Sociology	Social Analysis
Samuel Leinhardt	Associate Professor of Sociology	Social Analysis
Peter C. Ordeshook	Associate Professor of Political Science	Social Analysis

Later joined by faculty from other colleges, including Lester Lave (GSIA) and Joel Tarr (H&SS)





One person listed on the last slide who deserves special recognition is Bill Gouse. Herb Toor referred to him as “a key actor who never gets enough credit.” I heartily agree.

Bill was the senior faculty member in mechanical engineering who introduced me to Rod Williams and sociotechnology. When Herb became dean of engineering he named Bill as the Associate Dean of CIT. To cement the relationship with SUPA, Bill also was appointed Associate Dean of SUPA—a unique joint position that has never been replicated.

Bill was a strong supporter of the E&PA program. But his main job and biggest achievement as associate dean was to help build new interdisciplinary research programs, like the Environmental Studies Institute he created to promote the growing set of problem-oriented research activities in that area. As Carnegie Mellon began its transformation to a world-class research university, the ability to formulate an E&PA research agenda would prove essential to the long-term growth of the program and to the survival (and success) of the junior faculty.

Bill helped make that happen. He had spent time in Washington before coming to CMU and knew his way around. He taught us how to connect with government agencies and find the people who could help us. He opened doors.

Several years later Bill would return to Washington to run energy programs at ERDA (predecessor to the Department of Energy) and then the Mitre Corporation. But his connection and support for EPP always remained strong.

# Bill Gouse

*"We had another guy who is a key actor in here who never gets enough credit, and that was Bill Gouse." - Herb Toor*

- Strong supporter of E&PA
- Built interdisciplinary research activities
- Opened doors



S. William Gouse, Jr.  
Associate Dean of CIT; Associate Dean of S.U.P.A.,  
Professor of Mechanical Engineering  
Sc.D., Massachusetts Institute of Technology [1967- ]

Arguably the most important door that Bill Gouse helped to open was to the Alfred P. Sloan Foundation in New York. Bill's Washington friend Bob White (who later became president of the National Academy of Sciences) was now vice president at Sloan. In the spring of 1971 he agreed to meet Gouse, Toor, Dunlap and Lewis to hear about the plans for an E&PA program. White then invited them to submit a proposal to the Sloan Foundation to fund the startup of the program. It was that four-year grant that really launched E&PA.

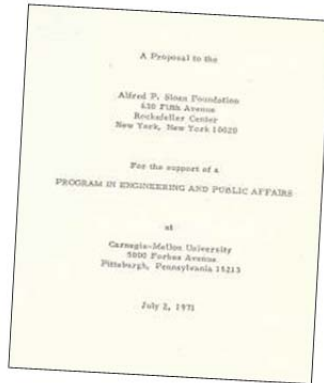
The Sloan grant provided the critical support needed for joint faculty appointments, elective course development and a number of other activities, including a summer internship program for E&PA students prior to their senior year. Most importantly, it included a commitment from CMU to phase in the institutional support needed to sustain the E&PA program after the four-year grant period.

With the Sloan grant in hand E&PA began to take root and grow, attracting about 15 percent of undergraduate engineers (typically the top students) into double major programs. The faculty roster also began to expand with new joint and affiliated appointments.

But as the jointly-appointed junior faculty began to face the requirements for promotion and tenure (beginning with Bob Dunlap), the need for a graduate research program became increasingly apparent. With the loss of a few junior faculty members to the siren song of Washington, an effort was launched to recruit new faculty who could help lead that effort.

# The Sloan Foundation

- 1971 proposal to build the E&PA program:
  - Support for joint faculty appointments
  - Elective course development
  - Summer internships
  - Other activities
  - Increasing CMU commitments



***This funding underpinned the institutional support for E&PA and allowed the program to take root and grow***

That's how we found Granger Morgan. Granger had taken a position at the National Science Foundation in Washington after finishing his PhD and a lectureship in the Applied Physics and Information Systems department at UC San Diego. We succeeded in bringing him to Pittsburgh in 1974 as an assistant professor in electrical engineering with a joint appointment in E&PA.

One of the things I still vividly remember was the resume Granger sent us with his application for the position. It was the first time (and only time) I had seen someone devote perhaps a third of a page of his own two to three-page resume to describe the background and accomplishments of his wife, Betty. At first it seemed a bit odd; but on reflection it struck me as very clever and creative—it was clear that if we hired Granger we'd be getting a "two-fer": two talents for the price of one.

Which is indeed what we got!

In addition to his normal faculty responsibilities, Granger was charged with helping to develop and coordinate a graduate program in E&PA. Together with Dunlap, Lewis, Toor and others he helped craft a new proposal to the Sloan Foundation in 1975 to create and grow a new graduate degree program in E&PA aimed at the PhD level. Again, the proposal committed the university to phase in a commitment to faculty support and other measures over a five-year period.

That proposal to the Sloan Foundation was successfully funded. The E&PA graduate program was off and running.

# Granger Morgan

- Joined CMU in 1974
- Joint appointment as assistant professor in E&PA and Electrical Engineering
- Charged with coordinating a graduate program in E&PA



***A new proposal to the Sloan Foundation in 1975 launched the E&PA graduate program***

## The New Department

In July 1976, the name of the program was changed from E&PA to EPP. The term “Public Affairs” was originally chosen to reflect union with SUPA. But many of us never much cared for it, nor was it clearly understood by people outside the university, especially the international community, who often translated it as “public relations” (or other more comical terms). So that summer E&PA was renamed “Engineering and Public Policy” —a name that was clearer and more descriptive of the EPP mission.

By fall 1976, the EPP program, now five years old, was looking more and more like a department, offering undergraduate and graduate degrees to a growing number of students, with a growing number of joint or associated faculty appointments. But as a program chair, Dunlap did not have a seat at the table of CIT department heads (Dean Toor’s Committee A).

He and others began lobbying Toor to grant EPP departmental status. Herb was sympathetic, though he knew it was politically risky—there had been no new engineering department since the university was founded and he knew that current department heads would object. So he never put it to a vote. In December 1976, Dean Toor elevated EPP to full departmental status.

At that point, Bob Dunlap decided that he had fulfilled his mission. He left on a sabbatical, returning only many years later—as a CMU trustee. The following summer, on July 1, 1977, Herb Toor named Granger Morgan as the first Head of EPP, on the recommendation of a search committee headed by Fran McMichael.

## EPP Comes of Age

- In July 1976, the program name was changed to Engineering and Public Policy (EPP)
- In December 1976, Dean Toor elevated EPP to full departmental status in CIT—the first new engineering department since the university's founding



***On July 1, 1977, Dean Toor named Granger Morgan as the first Head of the EPP Department***





Granger would be head of the EPP department for 37 years.

To realize just how extraordinary that is, see the attached graph, which I put together while chairing the CIT search committee to find Granger's successor. I was curious about the average length of service of prior CIT department heads, so I culled the records of each engineering department to gather data on the 62 people who had completed their service since the founding of the university.

The graph shows the years of service as department head (DH) as a function of the year in which they were appointed. While some of the earliest department heads served for several decades (Wilibald Trinks, the first head of mechanical engineering, holds the record at 38 years), the average DH tenure in CIT over the past 45 years, excluding Granger, had fallen to just 6.1 years (with a standard deviation of 2.7).

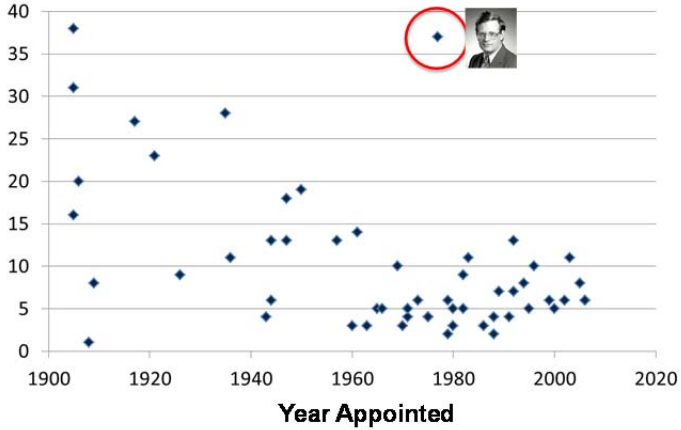
If this had been any other type of data, the point circled in red would likely be considered an outlier and discarded. But not in this case.

To see this extraordinary achievement in statistical terms, consider that Granger's tenure as department head is more than eleven standard deviations from the mean of his contemporaries— an incredible and highly improbable feat.

Granger Morgan is without peers as an 11-sigma department head!

# The Tenure of CIT Dep't Heads

Years as DH



Over the next few years the EPP department began to take shape under Granger's leadership. Others here tonight will recount and elaborate on some of his lasting accomplishments over the years, but in the interest of time let me highlight just two that were, without question, especially critical to the success of EPP.

I'm referring to two of Granger's earlier hires.

One was a bright young physicist, who became the Associate Department Head.<sup>1</sup>

The other was an 18 year old Wonder Woman.<sup>2</sup>

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<sup>1</sup> At this point, spontaneous applause broke out, with a standing ovation for Indira Nair, who was seated in the audience.

<sup>2</sup> Another standing ovation for Patti Steranchak, also in the audience.

# The New Department Takes Shape



**Indira Nair**  
Associate Dep't Head



**Patti Steranchak**  
Assistant to the Dep't Head

Of course, the real pioneers of EPP were the undergraduate and graduate students who first entered the program, and took a chance on the new department. Some of them are pictured in this slide, and several of them are here with us at this celebration.<sup>3</sup>

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<sup>3</sup> Yes, Bruce, that's you with a beard holding a lump of coal. And Bill, Ron—you've hardly changed at all!

## Some of the Real Pioneers



EPP 40<sup>th</sup> Anniversary Gala

Ed Rubin Remarks

## **The Next 40 Years**

You'll have to invite me back again in 40 years to see how EPP fares over the next four decades.

But I can tell you from my perspective heading the department head search committee that Doug Sicker is the perfect choice to lead EPP forward. He's done an outstanding job in his first three years as department head, and I'm confident he'll do us proud in the years ahead, just as Granger did for so many years.

So as we look to the future, EPP is indeed in good hands!

# The Next 40 Years



*In good hands!*

**Doug Sicker**  
EPP Dep't Head, 2014 –



Thanks very much for your attention. And now ...

*And now ...*  
***On with the Gala!***

## Photo credits

Campus photos from CMU archives (courtesy of Julia Corrin).

Air pollution photos from Herb Toor, Bob Dunlap and Ed Rubin.

Pioneer faculty photos from "A CMU Album," CMU Dep't of Public Relations, Jan. 1971.

Other faculty, staff and student photos from EPP archives Michael Massey and Ed Rubin.