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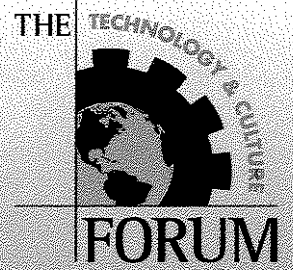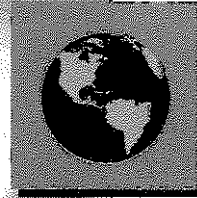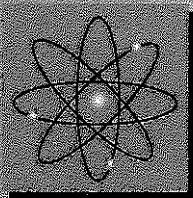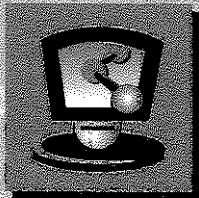
1997/1998

THE TECHNOLOGY & CULTURE

FORUM

THE TECHNOLOGY & CULTURE

FORUM AT MIT

1997-98 finished with a flourish and The Technology and Culture Forum at MIT has much to celebrate. Consistently, we provide the MIT community with quality programs that stimulate thoughtful reflection on the ethical implications of scientific discovery and technological innovation. T&C sponsored seven programs, explored ways to increase our impact on campus and beyond, and moved from crisis fund raising to focused development work.

After a Fall filled with program organizing and development planning, we launched our program year on January 13 with a half day symposium "Saving Life and Limb: The Technology of Landmine Removal." In light of the Ottawa Landmine Treaty Conference in December, the awarding of the Nobel Peace prize to the Campaign to Ban Landmines, and the US's commitment of billions of dollars to landmine removal, the timing was right and more than 100 people attended.

On the first panel, Georges Focsaneanu's extensive field work in landmine removal and experience setting up centers for humanitarian demining in Bosnia and Cambodia and David Feingold's evocative visual images and allowed us to see the consequences of landmines, to understand the multiple hazards of demining, to recognize the local and international political realities, and to develop a healthy skepticism toward the efficacy of new technologies created by those without field experience. Examining the political realities, Kosta Tsipis lamented our global inability to devote technological, human, and financial resources to humanitarian demining.

The second panel began with Paul Horowitz presenting his work including a stunning slide of demining activity in Harvard Yard as he and a student tested a new piece of equipment. Neil Goldfine offered a detailed presentation of his work developing new sensors. Col. Hap Hambric concluded with a focused discussion of what technologies exist, what has promise, and what needs to be created. Addressing a real world problem with significant engineering design challenges prompted a lively discussion during the program and over supper.

On February 24 we sponsored a two-part program. We began at 4:00 in the afternoon with a "Student Democracy Teach-In: Who Has Voice, Access, and Influence?" An ethusiastic group of students gathered to hear Jennifer Johnson's stories of making the MIT system work for her, an African-American female, Maria Rodriguez's experience doing research on women's health issues in the *machilladoras*, Simonetta Rodriguez's reflections on being a Black, Latina, female engineer, and Alan Shihadeh's remarks on the ways in which funding sources limit research opportunities for graduate students.
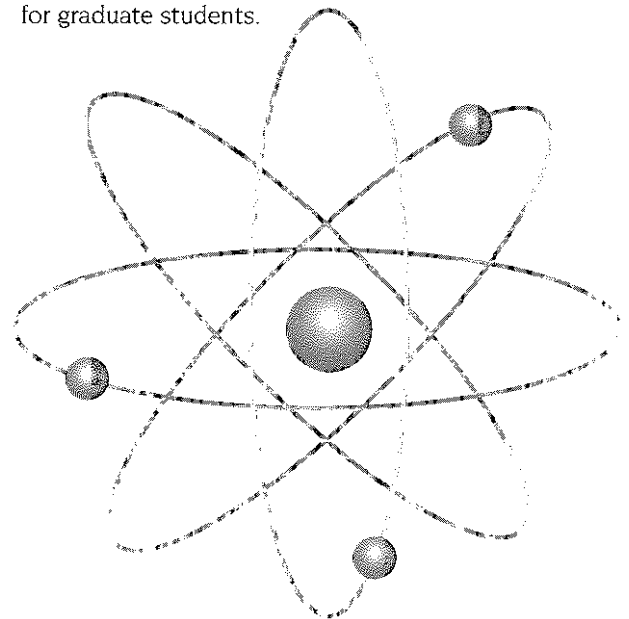
NOAM CHOMSKY SPEAKING ON "CORPORATIONS AND DEMOCRACY" ON FEBRUARY 24 TO AN OVERFLOW CROWD IN THE WONG AUDITORIUM
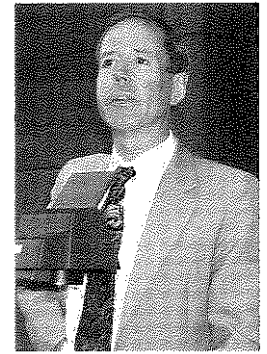
At 7:00 in the evening, a crowd of more than 500 mostly students overflowed the Wong Auditorium and the video hook up in the Ting Foyer to hear Noam Chomsky speak on "Corporations and Democracy." Chomsky began by outlining the changes in law and interpretations of the Constitution that gave rise to corporations in the twentieth century. He went on to detail the challenge multinational corporations present to free and just global governance.

April 7 we pulled off a day-night double header. At 4:00 about 150 people gathered for "The Science and Policy of Climate Change: Where Are We after Kyoto?" Ron Prinn made clear that, although we require more research to determine the extent of the "human finger print" and to create forecasts that integrate more variables, we need new and enhanced technologies coupled with a societal readiness for change even to slow global warming. Concurring with his colleague, Henry Jacoby argued eloquently for immediate action with a long-term vision—investing in more R&D while maintaining subsidies, engaging US policy makers, and bridging north-south gaps in the climate debate. While advocating for a global commitment to climate change, Kilaparti Ramakrishna offered a judicious presentation of the debilitating tension between the industrialized and the developing countries in the climate debate.

At 7:00, we filled the Wong Auditorium for "Privacy on the Line: The Politics of Wiretapping and Encryption." Ron Rivest argued for

policy following technology as he noted that preventing commercially available encryption software will not prevent well-organized criminals — drug cartels, organized crime, terrorists — from encrypting their communication. As Whitfield Diffie outlined the devastating potential for information warfare, he made bombs of the ticking sort seem positively benign; he argued for cooperation among government, business, industry, and academia to focus the creative energy of technologists on better security systems not better backdoor keys. Concurring with Rivest and Diffie, Susan Landau asked, "Given all the surveillance technology now available to law enforcement professionals, do we really want to lose our ability to communicate privately on the slight chance that a key recovery system might help in crime prevention and criminal apprehension?" Barry Smith, speaking for the FBI, patiently, pleasantly, and passionately defended the need for law enforcement to possess "front doors" for accessing legally seized encrypted information. He coolly maintained his position that we need to let policy shape technology so that we can protect both privacy and public safety.

On April 15th, we presented the eighth J.Herbert Hollomon Memorial Symposium, "Technology, Innovation, and the Musical Imagination." Hollomon's widow, Nancy gracefully introduced the audience to Herb, a powerful man of engineering and the arts. Darcy Kuronen provided a brief synopsis of technological innovation in keyboard instruments while chal-

lenging the audience to consider the relationship between the new technologies and the artists and the question of whether new is necessarily better. Barry Vercoe's multi-media presentation of the possibilities created by electronic music tantalized, entertained, and provoked the audience as he invited us to consider how technology can be a full partner in the creation of music. Maestro Gunther Schuller served as the grand philosopher as he reflected on the possibilities that technology creates and the moral questions raised by the use of new technologies. He told stories that made us wonder how we keep ourselves from being suffocated by information, how

we prevent the arts from being stiffled and mainstreamed by commercial control of production, how we support and encourage creativity, and how we know what we shouldn't do that technology might make possible.

On May 7, we closed out our program year with "On-Line Learning: What Are the Implications for Education?" Sonney Taragin and William Durden presented the on-line educational program of Sylvan Learning Systems contending that their "robust, new pedagogical space" enhances educational options. They envision the development of profit/not-for profit partnerships that offer the best and most affordable education to the greatest number of people on-line and in person. Jack Wilson described RPI's "new learning environments" based on a "distributed, collaborative model" for education contending that their technology enhanced program for undergraduates provides a more humane and engaging education. Concurring with Wilson's assessment and pointing to some of MIT's and CAES's technology-enhanced learning projects, Dick Larson advocated for more experimentation with technology enhanced learning.

Throughout the year, we worked on improving our web site and publicity for programs to increase our visibility and appeal. In addition, we have sought relationships that will allow us to deepen our impact and reach new audiences. We've increased our collaboration with the MIT Press and appreciate their willingness to provide book tables at our programs. We also enjoyed having their authors@mit series as a co-sponsor for "Privacy on the Line."

"Privacy on the Line" brought us into another new and potentially significant relationship. C-SPAN taped the program which they ultimately broadcast twice on August 1. Obviously, having our programs on C-SPAN extends our mission as we draw tens of thousands more people into the dialogue.

AS THE OTHER PANELISTS LISTEN, WHITFIELD DIFFIE, INVENTOR OF PUBLIC-KEY CRYPTOGRAPHY, ANSWERS A QUERY DURING THE "PRIVACY ON THE LINE" PROGRAM ON APRIL 7

In addition, we've talked with the MIT Center for Advanced Educational Services about creating a more vital and engaging T&C web site. We envision a dynamic site where people can engage the critical questions raised in our programs. Although we have not determined exactly how the site will work, we are convinced that T&C needs to provide a global space for consideration of the moral and ethical implications of science and technology. The number of people visiting our current passive web site and those outside the Boston area subscribing to our email list suggest we should use the web to foster a global dialogue.

In the midst of the programs and the relationship building, we have been working with the MIT Development Office and Development Consultant Walter Reeves to design a coherent development strategy for T&C. Some technical support and training in development plus a $3,500 grant from the Episcopal Society for Ministry in Higher Education have helped get our development efforts off the ground. Over the past year, we have focused primarily on identifying MIT alumni/ae who might support T&C. We have been blessed during the last four years by the generous support of Bill ('56) and Betsy Leitch and Phillip ('52) and Martha Smith. Surely, there are other MIT graduates who share the Smith's and the Leitch's commitment to educating the hearts and minds of MIT students.

On May 7, we invited old and new friends to a reception at which Nobel Laureate and long time T&C supporter Henry Kendall spoke about the importance to the Institute of the Forum.

Those present were impressed by the calibre of speakers and the scope of the programs offered by T&C during the last three decades. In June we mailed our first T&C fund-raising appeal letter which raised more than $2600. Over the course of the coming year, we plan several dinners in conjunction with programs to build relationships with new-found friends and to introduce others to the important work of the Technology and Culture Forum.

As you can see from this Annual Report, we've also committed time and resources to upgrading our public image. We have a new logo for all T&C posters and communications. We're also creating a brief historical piece that will celebrate our thirty years of programs.

Certainly, our desire to raise an endowment of one million dollars motivates our development efforts. Yet, the more development work I do, the clearer I am that our primary purpose is to cast a broader net for T&C not just for money but for potential speakers and members of the real and virtual audiences.

I look forward to working with Trish Weinmann and the Steering Committee as we face into the challenges ahead. T&C is one of the small gems of MIT and of the Episcopal Diocese of Massachusetts. It is my privilege to help it shine.

Sincerely,

(The Rev.) Jane Soyster Gould

SAVING LIFE AND LIMB: The Technology of Land Mine Removal

Tuesday January 13, 1998

PANEL I:

David Feingold, Anthropologist/producer of documentaries on land mines and land mine removal

Georges Focsaneanu, President, International Demining Consultants

Kosta Tsipis, Director, Program on Science, Technology and International Security, MIT

PANEL II:

Neil Goldfine, President, Jentek Sensors, Inc.

Colonel Harry Hambric, Head, Office for Humanitarian Demining, U.S. Army

Paul Horowitz, Professor of Physics, Harvard University; author of "The Art of Electronics"

Moderator: **Philip Morrison,** MIT Institute Professor Emeritus

STUDENT DEMOCRACY TEACH-IN

Tuesday February 24, 1998

Jennifer Johnson, Biology, Class of 1998

Maria Rodriguez, Biology, Class of 1998

Simonetta Rodriguez, Civil and Environmental Engineering, Graduate Student

Alan Shihadeh, Mechanical Engineering, Graduate Student

Moderator: **Zojeila Flores,** Biology, Class of 2000

CORPORATIONS AND DEMOCRACY

Noam Chomsky, Institute Professor, Linguistics and Philosophy, MIT

WHERE ARE WE AFTER KYOTO? The Science and Policy of Climate Change

Tuesday April 7, 1998

Henry Jacoby, Pounds Professor of Management; Co-Director, MIT Joint Program on the Science and Policy of Global Change

Ronald Prinn, TEPCO Professor of Atmospheric Chemistry; Co-Director, MIT Joint Program on the Science and Policy of Global Change

Kilaparti Ramakrishna, Director of the Program on Science in Public Affairs, Woods Hole Research Center; Special Advisor to the UN for the Kyoto Climate Treaty

Moderator: **Eugene Skolnikoff,** Professor, Political Science, MIT

PRIVACY ON THE LINE: The Politics of Wiretapping and Encryption

Tuesday April 7, 1998

Whitfield Diffie, Distinguished Engineer, Sun Microsystems; inventor of public-key cryptography

Susan Landau, Research Associate Professor, Dept. of Computer Science, UMASS Amherst

Ronald Rivest, Associate Director, Laboratory for Computer Science, E.S. Webster Professor of Electrical Engineering & Computer Science, MIT

Charles Barrry Smith, Unit Chief, Digital Telephony and Encription Program, FBI

Moderator: **Hal Abelson,** Professor of Electrical Engineering & Computer Science, MIT

TECHNOLOGY, INNOVATION AND THE MUSICAL IMAGINATION

Wednesday April 15, 1998

Darcy Kuronen, Keeper, Historical Musical Instruments, Museum of Fine Arts, Boston

Gunther Schuller, Pulitzer-prize winning composer, author and renowned conductor

Barry Vercoe, Founder, MIT Electronic Music Studio; Professor, MIT Media Lab

Moderator: **Peter Child,** Professor and Section Head, Music and Theater Arts, MIT

ON-LINE LEARNING WHAT ARE THE IMPLICATIONS FOR EDUCATION?

Tuesday May 7, 1998

William Durden, President, Sylvan Academy, Sylvan Learning Systems, Inc.

Richard Larson, Director, Center for Advanced Educational Services, MIT

Sonney Taragin, Vice President for Technology, Caliber Learning Network, Inc.

Jack Wilson, Professor, Physics and Engineering Science, Rensselaer Polytechnic Institute

Moderator: **Henry Jenkins,** Professor of Literature, MIT

THE TECHNOLOGY & CULTURE FORUM AT MIT

THE TECHNOLOGY AND CULTURE FORUM STEERING COMMITTEE 1997/1998

The Technology and Culture Forum at MIT 1997-98

STEERING COMMITTEE

Samuel M. Allen — *Materials Science and Engineering*

S.W. Chisholm — *Civil and Environmental Engineering*

John Paul Clarke — *Aeronautics and Astronautics*

James Fay — *Mechanical Engineering, Professor Emeritus*

Henry Jacoby — *Sloan School of Management*

Jay Keyser — *Linguistics and Philosophy, Special Assistant to the Provost*

Jonathan King — *Biology*

Kari Anne Hoier Kjolaas — *Class of '98, Computer Science*

William R. Leitch — *Class of '56, Economics*

Robert Mann — *Mechanical Engineering, Whitaker Professor Emeritus*

Lee McKnight — *Research Program on Communications Policy*

Louis Menand, III — *Special Assistant to the Provost Emeritus*

Philip Morrison — *Physics, Institute Professor Emeritus*

Ruth Perry — *Literature; Program in Women's Studies*

Daniel Roos — *Civil and Environmental Engineering*

Kosta Tsipis — *Director, Science and Technology for International Security*

Lisa Tucker-Kellogg—*Graduate Student, Computer Science*

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Patricia-Maria Weinmann, *Associate Coordinator*

Kari Anne Hoier Kjolaas, *Web Consultant*