

MIT Faculty Newsletter

<http://web.mit.edu/fnl>

in this issue we offer commentary on the continuing issue of graduate student housing (below); our From The Faculty Chair piece on the community engagement process (page 4); and the upcoming Institute Faculty Meeting motion on the establishment of a Faculty Campus Planning Committee (page 7).



Ashdown House

Analyzing the Draft Report by the Graduate Student Housing Working Group

Frederick P. Salvucci

THE DRAFT REPORT BY THE Graduate Student Housing Working Group does a very good job of providing data which documents the escalating cost of off-campus housing which threatens the quality of life of 5000 graduate students and post-docs who cannot currently have on-campus options. It makes clear the imminent threat posed by the need to renovate or replace 1000 of the existing 50-year-old on-campus units within the next 10 years. The report also notes the desirability of the Kendall/East Campus area as a location for new graduate student housing, and the urgency to locate a substantial number of units in the Kendall area before other development closes this option. The observation of the report that 500 to 600 units are needed to satisfy the current wait list, and 400 units to provide swing capacity to deal with the

continued on page 14

One Investment Worth Making: Graduate Student Housing

Caleb Waugh, Charlotte Seid,
Marzyeh Ghassemi, Andrea Dubin

Introduction
WITH RECENT CONVERSATIONS surrounding the Graduate Housing Working Group and East Campus Steering Committee, we are grateful for the opportunity to share what we see as primary drivers affecting graduate student living standards and how those drivers may impact graduate students' place in the MIT campus of the future. In doing so we recognize the history of constructive dialogue between student leadership and the administration in addressing numerous challenges including health insurance, student life spaces, childcare, dental insurance, and housing to name a few. While our needs are but some of many considerations in the broader context of campus planning and renewal, budget constraints, and the upcoming capital campaign, we present a

continued on page 10

Editorial The Importance and Value of Our Graduate Students

MIT GRADUATE STUDENTS ARE key to our scientific and engineering productivity; they will be the coming generation of researchers and innovators; and they will be the mentors and instructors of further generations of young people.

The research and education carried out on the MIT campus responds to pressing national needs – finding the causes of neurodegenerative diseases such as Alzheimer's, designing advanced electronics for computing and telecommunications, developing sustainable energy sources.

Our graduate students have been selected for their talent, willingness to work hard, and commitment to their fields. They are our skilled junior partners in carrying out experiments, making the measurements, developing new ideas and knowledge. Their research and their

continued on page 3

contents

The MIT Faculty Newsletter Editorial Board

Robert Berwick
Electrical Engineering & Computer Science

Nazli Choucri
Political Science

Ernst G. Frankel
Mechanical Engineering

Jean E. Jackson
Anthropology

***Gordon Kaufman**
Management Science/Statistics

***Jonathan King (Chair)**
Biology

Helen Elaine Lee
Writing and Humanistic Studies

Stephen J. Lippard (Treasurer)
Chemistry

Seth Lloyd
Mechanical Engineering

Fred Moavenzadeh
Civil & Environmental Engineering/Engineering Systems

Ruth Perry (Vice Chair)
Literature Section

***George Verghese (Secretary)**
Electrical Engineering & Computer Science

Patrick Henry Winston
Electrical Engineering & Computer Science

David Lewis
Managing Editor

*Editorial Subcommittee for this issue

Vol. XXVI No. 4 March/April 2014

	01	Analyzing the Draft Report by the Graduate Student Housing Working Group Frederick P. Salvucci
	01	One Investment Worth Making: Graduate Student Housing Caleb Waugh, Charlotte Seid, Marzyeh Ghjassemi, Andrea Dubin
Editorial	01	The Importance and Value of Our Graduate Students
From The Faculty Chair	04	Observations From the Swartz Report Community Engagement Process Steven Hall, Chris Kaiser
	07	Faculty Need a Campus Planning Committee as a Standing Committee Jonathan King
Letters	08	The Value of a Faculty Campus Planning Committee Patrick Henry Winston
	09	New Enrollment Tools to be Piloted in CI-H/HW Subjects Diana Henderson
	13	Executive Summary of the Draft Report to the Provost of the Graduate Student Housing Working Group
M.I.T. Numbers	16	Women as a Percentage of Total Undergraduates, Graduate Students, and Faculty: Academic Years 1901-2014

Photo credit: Page 1: Kunal Mukherjee

Address

MIT Faculty Newsletter
Bldg. 11-268
Cambridge, MA 02139

Website

<http://web.mit.edu/fnl>

Telephone 617-253-7303

Fax 617-253-0458

E-mail fnl@mit.edu

Subscriptions

\$15/year on campus

\$25/year off campus

The Importance of Our Graduate Students
continued from page 1

teaching also enrich the undergraduate curriculum and experience. They provide much of the innovative environment that permeates the surrounding Cambridge community and draws high-tech industry to the area.

Most of these students have to spend long hours at their desks or in the laboratory. Members of research teams responsible for key breakthroughs should not have to live an hour's commute from campus, but need to be close, almost on call. This is a major reason that all of the leading research universities in the United States are residential campuses. Though some students can work from home, this limits their interactions with other students, staff, and faculty, and weakens their contribution to the intellectual life of the campus.

As reported in the valuable January 2014 draft report of the Working Group on Graduate Student Housing, more than 4,000 graduate students live off campus. Well over 2,000 of these students live in Cambridge. However, rising rents in Cambridge, one of the hottest real estate markets in the nation, make it increasingly difficult for graduate students to secure adequate housing in Cambridge, and constitute a growing source of stress and uncertainty. The demand also increases the housing burden on the Cambridge community, making it more difficult for residents to stay in their apartments. This is a lose/lose proposition.

The report from the Working Group calls for 600 new units of quality graduate housing – not dormitories, but apartments – and 400 swing units that would transition to permanent units. Articles in this issue suggest that this number is not adequate to fill the emerging need.

The report also notes that thousands of new employees will be working in Cambridge as the new office and lab construction in Kendall Square and Central

Square is completed. Our graduate students will be unable to compete for nearby apartments and will be forced to move further away from the campus. We have no quantitative measure of the resulting loss of productivity, but most faculty and students understand the importance of lab time lost to excess commuting.

Assessing the cost of graduate student housing to MIT cannot be a simple accounting calculation. The contribution of productive and creative graduate students is not monetized in MIT's financial reports and projections. Treating graduate student housing simply as a cost to MIT's budget is short sighted. MIT has the land and access to capital required to build sufficient housing for our graduate students to fully satisfy the need. The Institute should make this critical investment.

.....

MIT "Town Gown Report" to the City of Cambridge

IN 1991, THE CAMBRIDGE Mayor's Committee on University and Community Relations called on the City's educational institutions to submit an annual "Town Gown Report." These reports were to present the institutions' current and future plans, statistics on their population, housing, academic facilities, land holdings, property transfers, real estate leases, tax payments for investment property, in lieu of tax payments for academic property, transportation policies, and a narrative outlining future campus planning and development activities.

In addition, the institutions were asked to address a number of key planning issues of concern to the City including housing, transportation, and environmental policies. MIT has submitted these reports for review by the Cambridge Planning Board and the City Council each year since this request was made.

The report often addresses how MIT's academic and research mission shapes campus physical development policies, so it is understandable that the faculty would have a vested interest in what is presented to the City.

The faculty, either at large or through its committees, have not been involved in the development of these reports. Nor have the reports been presented to the faculty and the MIT community-at-large prior to the submission to the City. The faculty have not had the opportunity to reflect on the implications of the data and conclusions in these reports, including the policies guiding the physical development of the campus and its relationship to MIT's academic and research mission.

This year's report raises a number of critical questions concerning MIT's changing demographics, housing policies for students, staff, and faculty, land acquisition, land use policies for the Institute's limited land resources, and our future relationships with the City of Cambridge.

The absence of the information in these reports from the normal discourse between the faculty and the MIT administration gives new urgency to the need for a more active and transparent participation by the faculty in the preparation of these and similar documents reflecting the Institute's plans. An informed and engaged faculty can only serve to strengthen the Institute's posture both within and beyond the Institute. The proposed Campus Planning Committee, reporting to the faculty, could serve as an excellent venue for discussions of the report.

The *Faculty Newsletter* will seek to provide the faculty with an analysis of the Town Gown Report in subsequent issues. ■

Editorial Subcommittee

From The Faculty Chair

Observations From the Swartz Report Community Engagement Process

Steven Hall
Chris Kaiser

Note: This issue's column is jointly authored by Chair of the Faculty Steven Hall and former Provost Chris Kaiser.

IN JULY 2013, A REVIEW PANEL led by Prof. Hal Abelson issued its report to President Reif on MIT's involvement in the Aaron Swartz case. In his letter sharing the report with the MIT community, President Reif noted that "the report's larger questions deserve the collective wisdom of the MIT community" and charged us in our roles as Chair of the Faculty and Provost "to design a process of community engagement that will allow students, alumni, faculty, staff and MIT Corporation members to explore these subjects together this fall and shape the best course for MIT."

Our process, which began in August and continued through late February, sought engagement with the community through three primary channels: a Website that allowed members of the MIT community to offer their thoughts on the eight questions presented in the report, informal outreach, and a series of group discussions with different segments of the MIT community. The latter included a meeting of the Faculty Policy Committee in October, and a series of four forums on Hacking, Ethics, and Community in December, January, and February. In addition, the report of the review panel was presented by Prof. Abelson at the September Institute Faculty Meeting.

The community forums were designed to collect the best ideas and observations from the community. We held forums for four separate cohorts (faculty, undergraduate students, graduate students, and

staff). We encouraged respectful debate and invited the community to focus on areas that could lead to specific, constructive actions. In keeping with President Reif's charge to us to consider the report's

Those who participated [in the forums] showed considerable thought, passion for the issues, and a sincere impulse to seek ways to make MIT a better place. Each of the four forums was different, but collectively we found the discussions helped us form a clear picture of the issues that people were concerned about and views they wanted to bring forward.

larger themes, we focused the discussion around the following three questions:

- What lessons can we draw for MIT's hacker culture from the Aaron Swartz case?
- Should an MIT education address the personal ethics and legal obligations of technology empowerment?
- What are the moral, ethical, and legal challenges that face MIT and the broader community in our increasingly technological and connected society?

Although these three questions formed the focal point of the discussion, we invited participants to discuss any aspect of the report of interest or concern to them, and the discussions were indeed wide-ranging, spanning MIT's mission, opportunities for community learning, and policy concerns.

The faculty, graduate, and undergraduate forums were lightly attended, with roughly 22, 15, and 10 attendees, respectively. The staff forum had greater attendance, with 35 attendees. Those who

participated showed considerable thought, passion for the issues, and a sincere impulse to seek ways to make MIT a better place. Each of the four forums was different, but collectively we found the discussions helped us form a clear picture of the issues that people were concerned about and views they wanted to bring forward. We estimated 30-50% of attendees at the forums had read the report, and we noted strong local pockets of interest among students in EECS and East Campus, faculty in Comparative Media Studies and STS, and staff in the Media Lab and Libraries. We also heard privately from quite a few members of the community who generally supported MIT's actions in the Swartz case, but shied away from participating in what they expected to be emotionally charged discussions.

Because we asked participants in forums to discuss broad principles that would help inform MIT's future actions, most of the discussion was not specific to

the Aaron Swartz case, but rather to the issues raised by the review panel report. Some of the key themes we heard are discussed below.

Risky business. In several discussions, participants observed a growing risk aversion to hacking in our student culture. Some further expressed concern that MIT as a whole is becoming more risk-averse, and that this risk aversion could undermine our proud history of innovation in research. In several discussions, we heard that MIT is known for tolerating risk, but doesn't seem to have clear and cohesive approaches for managing risk. Others thought that MIT's leadership should publicly articulate the Institute's values and risk management policies.

We note that in these discussions, the ideas of risk-taking in MIT's research enterprise readily became conflated with risk-taking in personal behavior. In research, we expect faculty to work at the boundaries of their fields on important and challenging problems. Such research always runs the risk of failure, but we encourage and celebrate researchers who take big risks to "push the boundary" of science and technology. On the other hand, "pushing the boundaries" in personal behavior puts the individual at risk of running afoul of civil or criminal laws and can jeopardize the safety of one's self and others. As the discussions about risk move forward, it will be important to maintain clear distinctions between these two very different types of risk-taking activities.

A place for ethics. Faculty, staff, and students consistently agreed that MIT as an educational institution has a responsibility to help students understand the ethical implications of the work that they do. On the other hand, there was no enthusiasm for a mandatory ethics curriculum imposed in a top-down fashion. We heard from both faculty and students examples of faculty incorporating big-picture ethical conversations into their existing subjects. We see an opportunity for the administration and faculty leadership to

encourage faculty impulses along these lines and to seek to provide the appropriate contexts.

Faculty and staff placed equal importance on communicating MIT values outside the classroom. From student life to UROPs, some suggest that there is more we should be doing to teach not just personal rights, but also encourage reflection on personal responsibility. While not a unanimously held view, we heard some

There is a sense that MIT officially sanctions and celebrates hacks, for example, by featuring hacks on the MIT Website and admissions tours, but also may punish hackers who are caught in the act of trespassing or some other relatively minor infraction. Students, in particular, described the challenge of not knowing where the boundaries are, and a sense that the consequences of overstepping those boundaries could be harsh.

support for finding ways to institutionalize "teachable moments," or community conversations on difficult topics.

Everything's allowed ... until you're caught. Mixed messages on hacking (in the MIT sense of a harmless, creative practical joke) have caused concern for faculty, staff, and students. There is a sense that MIT officially sanctions and celebrates hacks, for example, by featuring hacks on the MIT Website and admissions tours, but also may punish hackers who are caught in the act of trespassing or some other relatively minor infraction. Students, in particular, described the challenge of not knowing where the boundaries are, and a sense that the consequences of overstepping those boundaries could be harsh. Some perceive an unfair bargain in which students bear the risks, but the Institute reaps the benefits. While we heard some ideas on ways to facilitate "safe" hacking (e.g., training classes for accessing the Great Dome) or make boundaries clearer, we're also aware that part of the appeal of hacking is to do something that normally is not condoned.

Support for those in trouble. We heard that MIT needs to support individuals

from our community when they push against certain boundaries in service of research or other kinds of efforts that align with MIT values. Not surprisingly, students would like to have a sense that the first institutional response will always be to defend students. In our forums, we challenged the audience to enunciate principles that would help us determine who is a member of our community, under what circumstances MIT should

provide institutional support for community members in legal difficulty, and what sort of support would be appropriate. Attendees at our forums generally wanted a more inclusive definition of membership in our community, but had difficulty in enunciating general principles for deciding under what circumstances MIT should offer support.

In both student forums, mental health came up as an example of an area in which MIT could do more to support students. Graduate students pointed to the isolation that can stem from legal difficulties. A perception widely held by undergraduates is that MIT makes decisions with respect to mental health difficulties based on what is best for MIT, rather than what is best for the student. The undergraduates expressed concerns that students on medical leave for mental health reasons are generally not allowed to be on campus, and are thus cut off from their community, which they view as a source of support. Students cited MIT's response to mental health issues as supporting the idea that MIT's first instinct is to distance itself from students who might be a liability for the Institute.

continued on next page

Observations From the Engagement Process
Hall and Kaiser, from preceding page

Doing the right thing, quietly. In talking with students especially about MIT's response to hacking (in the MIT sense), students brought up cases that in their view were handled poorly, but which occurred years ago, long before they came to MIT. One prominent case from 2006 involved three students who faced felony breaking and entering charges for sneaking into the MIT Faculty Club. Although the charges were ultimately dropped by Middlesex County prosecutors at the urging of MIT police and administrators, the student collective memory still recalls that the charges were first filed by MIT police. (The initial decision to bring charges may have been influenced by prior thefts of items from the Faculty Club.) Not surprisingly, students would like all hacking cases heard before the Committee on Discipline rather than in the criminal justice system.

There is an information asymmetry that affects community perception of difficult cases such as the 2006 Faculty Club incident. Every day, faculty, staff, and members of the administration quietly resolve or overlook small infractions, and take others to the Committee on Discipline (CoD). In many cases before the CoD, students accept responsibility for their actions without a hearing, and appropriate (and usually fairly modest) sanctions are imposed. But the community rarely hears about such cases, because they are handled confidentially. As a result, the narrative can easily be shaped by negative examples, and surprising take-away conclusions can become accepted lore. This information asymmetry creates a perception that MIT often fails to support students in trouble.

More legal resources. Especially among graduate student and staff researchers, we heard that laws like the Computer Fraud and Abuse Act (CFAA) can pose risks to individuals pursuing legitimate academic and extracurricular activities. There were a number of suggestions on how to better

equip our community to navigate the current legal environment. This year, the IAP subject *Coders, Know Your Rights: A Practical Introduction to Technology and the Law*, was offered in the Media Lab,

There were a number of suggestions on how to better equip our community to navigate the current legal environment. This year, the IAP subject *Coders, Know Your Rights: A Practical Introduction to Technology and the Law*, was offered in the Media Lab, which covered legal issues around software coding, including issues in copyright law, the CFAA, and data privacy.

which covered legal issues around software coding, including issues in copyright law, the CFAA, and data privacy. Students suggested the expansion of formal curricular offerings in this area. (We note that the Anthropology Section is collaborating with Suffolk University to develop an IAP offering on intellectual property law.)

Also suggested were regular or on-demand briefings from the Office of the General Counsel on legal risks associated with computing activities, and Web resources on the CFAA and other potential legal risks. It's clear to us that there is an unmet demand for legal information, especially among students and researchers in the Media Lab and EECS. Similarly, students say there is a need for a path for questions and consultations related to ethics in the digital sphere, similar to that available through the Committee on the Use of Humans as Experimental Subjects (COUHES) for research involving human subjects. Finally, graduate students suggested that MIT create an administrative position of legal triage advisor to help students in need of legal advice. In parallel to our engagement process, President Reif has asked the Provost, Chancellor, and General Counsel to develop a proposal for creating a resource for student inventors and entrepreneurs to obtain independent legal advice.

What does it mean to be a leader? Finally, many in our community expressed pride

in MIT's reputation as a leader in technology and innovation, but were disappointed that MIT did not make a statement regarding the prosecution of Aaron Swartz specifically, and more

broadly on the merits (or lack thereof) of the CFAA. They believe that it is incumbent upon MIT to exercise its leadership by taking a public stance on issues of national importance. No doubt, this desire to have highly visible statements of public import emanating from MIT comes from a widely shared aspiration for MIT to exercise every opportunity to serve the public good. But we heard from many others who believe that it would have been inappropriate for MIT to have made a statement in the Swartz case.

Historically, MIT has rarely taken an institutional position on public issues that lie outside its research and educational missions, and for good reasons. But faculty can and should influence public debate on other matters of national importance. The expertise individual faculty bring to the debate is more powerful than necessarily conservative and muted expressions from the administration. Our faculty have helped shape the national debate in areas such as global warming, nuclear disarmament, and economic policy, to name just a few. No doubt our faculty and others in the MIT community with influential voices have a role to play in the national debate over computer security and privacy as well. ■

Steven Hall is a Professor in the Department of Aeronautics and Astronautics and Faculty Chair (srhall@mit.edu);

Chris Kaiser is a Professor in the Department of Biology and former Provost (ckaiser@mit.edu).

Faculty Need a Campus Planning Committee as a Standing Committee

Jonathan King

THE MOTION TO ESTABLISH a Campus Planning Committee as a standing committee of the faculty at the December Institute Faculty Meeting, (introduced by Profs. Nazli Choucri, Jean Jackson, Jonathan King, Helen E. Lee, David H. Marks, Nasser Rabbat, Ruth Perry, Roger Summons, Frank Solomon and Seth Teller) was catalyzed by the recent MITIMCo 2030 plan to build three large commercial office buildings on the East Campus, and to take no action with respect to the pressing need for graduate student housing. However, the origins of interest in a Faculty Committee on Campus Planning go back some decades and were focused on faculty needs for additional housing.

The original interest rose among three groups of faculty, with the issues periodically of sufficient concern that faculty wrote letters to the *Faculty Newsletter* or brought the problem to the FNL Editorial Board. Three such pieces are referenced below. Views supporting Dean Robert Redwine's were also published by former Provost Bob Brown and former Faculty Chair Stephen Graves. On occasion the issues were raised from the floor of faculty meetings. However, absent a Campus Planning Committee, there was not an adequate venue for faculty to fully develop or continue the discussions.

The three areas of greatest concern were:

a) Housing difficulties encountered by newly recruited and junior faculty. Thus, in arguing for the value of on-campus, near campus, or subsidized junior faculty housing, Prof. Gareth McKinley wrote:

"With my current commute, every offer of 'finger food with the faculty' or dinner with students at a fraternity or chatting about graduate opportunities with the

Society of Women Engineers/ASME chapter must be weighed against actually getting home to see my kids before they are in bed." [https://web.mit.edu/fnl/vol/155/gareth_letter.htm]

Dean Redwine, in arguing for purchasing units in 100 Memorial Drive for faculty, wrote:

"A longstanding issue at MIT has been the fact that relatively few faculty members live close to campus. The reasons for this phenomenon are well known, including the tightness and expense of housing in or near Boston and the worries of many faculty with children of school age concerning quality of education issues. However, many of us continue to believe that this represents an important opportunity lost, both for our faculty and for our students. It certainly makes it extremely difficult for many faculty to have significant interactions with students outside the classroom or laboratory. As we as a community...are taking important steps to improve housing and dining for our students, it is time to consider whether we can make real progress towards solving this longstanding issue of faculty housing. I believe we can. It will require some continuing investment of funds, but I believe the payoff will provide, in many ways, a wonderful return on investment." [<https://web.mit.edu/fnl/vol/154/redwine.htm>]

b) Concern over the absence of any facilities for housing short term or irregular term visiting scientists and researchers. Quoting McKinley again:

"...if the institutional commitment is made to develop the modest infrastructure needed to administer such a program, then

I would encourage us to leverage the effort to address another important concern: the possibility of providing visiting faculty short-term housing: I have a good colleague on sabbatical at Princeton this year living in a furnished apartment by a lake on campus in their faculty housing development. Many other universities offer similar programs...we don't!"

c) Housing for retired and retiring faculty: This has been a subject of numerous articles in the past few years.

Many of the institutions we consider our peers or competitors provide substantial resources on these fronts that MIT lacks. Thus, in 2003, O. Robert Simha wrote:

"By comparison with MIT, Princeton provides approximately 600 apartments, single-family houses and town houses for its faculty and staff within walking distance of the campus. Yale University has, since 1994, instituted a plan to encourage university employees to live in New Haven. Over 230 members of the faculty and staff have taken advantage of this program and are making a significant contribution to the attractiveness of New Haven as a place to live. Stanford University has one of the oldest faculty housing programs, which continues to be a major anchor in its ability to recruit and retain faculty. In addition, the City of Palo Alto now makes it mandatory for Stanford to build additional housing for its faculty and staff before the city will issue the 'general use' permit which controls all development on the Stanford campus. Columbia University has long depended on its stock of housing in the Morningside Heights neighborhood to recruit and retain

continued on next page

Faculty Need Campus Planning Committee
King, from preceding page

faculty.” [<https://web.mit.edu/fnl/vol/154/simha.htm>]

Simha’s article described clearly that earlier administrations had identified the need for various forms of faculty housing as an essential component of a residential campus, but never fully implemented the plans.

All of the issues above are of deepest concern to faculty. My own sharpest experience, shared with many colleagues who rely on collaborations with laboratories in other institutions, has been as expressed in b), above. Though successive administrations had the opportunity to provide short-term housing, and Deans in addition to Bob Redwine recognized the need, the issue never even reached the level of a proposal for discussion. I believe this is because it truly is a faculty concern, and has limited impact on the undergraduate and graduate programs.

However, the absence of such facilities makes life much more difficult for faculty who depend on such collaborations. This group is increasing as modern science becomes more multi-disciplinary and inter-disciplinary.

As I write this, I have just spent a considerable amount of time finding lodging for a three-week visit from our collaborator in Mexico – whose visit is financed by an MIT MISTI US/Mexico grant - and for a visiting senior scientist from CINVESTAV in Mexico who is the recipient of a Fulbright grant. For women and scientists with children, finding appropriate lodging can be an acute problem.

I note the significant underrepresentation on the Provost’s original Task Force, or on the East Campus Planning Committee, of faculty who lead research programs with large staffs, and thus continually have to deal with the absence of MIT housing for visiting scientists.

A number of us had the somewhat bizarre experience of learning that the

East Campus Planning Committee was making their plans without even having received or consulted with the Student Housing Working Group. Committees with a primary concern for real estate income, property, or commercial relationships are a completely inadequate forum for the consideration of the needs expressed above.

Only a Campus Planning Committee reporting to the faculty can be expected to seriously consider faculty needs and concerns in the areas above. The evidence is clear in the complete absence of these issues in any of the reports that have been produced recently. The 10 faculty who brought forth the original Motion represent a diverse cross section of the MIT faculty. With refinements from the Faculty Policy Committee, we hopefully will be able to vote for a Campus Planning committee as a Standing Committee of the Faculty at the next Faculty Meeting. ■

Jonathan King is a Professor in the Department of Biology (jaking@mit.edu).

letters

The Value of a Faculty Campus Planning Committee

To The Faculty Newsletter:

FOLLOWING THE FACULTY MEETING

at which a group of faculty moved to create a Campus Planning Committee, I had the pleasant sense that I agreed with everyone. I agreed that we should have a faculty-centered campus planning committee, and I agreed that its exact shape needed more thought. In particular, I wondered how we could ensure that our urban planning faculty are well represented on the committee.

Now, I expect the Faculty Policy Committee is working closely with those who introduced the motion to craft an improvement. I hope they can arrive at a wording that maintains the spirit of the original motion.

Why? Probably because I knew Herbert Simon. He was enough of a force in my field, Artificial Intelligence, to be considered one of its four founders. He was

enough of an economist to win the Nobel Memorial Prize in Economics in 1978 for his work on decision-making.

Simon famously noted that people in large organizations tend to champion options that favorably affect the various groups to which they belong, which may or may not be aligned with what is best for the organization as a whole. It is human nature.

We could argue at length about exactly how membership in various groups influences thinking, but I think no one could argue convincingly that there is no influence. When I served on the Provost’s Task Force on Community Engagement in 2030 Planning, it was evident that everyone wants what they believe is in MIT’s best interests; it was also evident that what one group believes is in MIT’s best interest can be different from what another group believes. Believing something different does not mean more or less right, just different.

Accordingly, it is important that those who make our biggest decisions hear from a variety of groups, certainly including the faculty, who think about the future of education, as well as MITIMCo investors, who think about the future of the endowment. We are entering a period of rapid change in education that we have to manage our way through. What we do in 2024 may be more different from what we do now than what we do now is different from what we did in 1914, so projections into the next few decades using just one kind of crystal ball may turn out to be wrong and impossible to reverse. Cambridge land is scarce, and buildings, once built, are not easily unbuilt. ■

Patrick Henry Winston

Ford Professor of Engineering
Department of Electrical Engineering
and Computer Science

New Enrollment Tools to be Piloted in CI-H/HW Subjects

Diana Henderson

WHEN PRE-REGISTRATION FOR fall term begins on May 1, a new suite of online enrollment tools will be piloted in subjects designated as Communication Intensive in the Humanities, Arts, and Social Sciences (CI-H). CI-H subjects are part of the undergraduate Communication Requirement and include a subset concentrating more particularly on the writing process, which are designated CI-HW subjects. The changes are important for undergraduates, advisors, and departments as the tools will help prioritize decisions made during pre-registration; thus advisor-student consultations during late spring, and related departmental planning over the summer, will become more meaningful.

The tools and process changes in this pilot have been designed to ease chronic enrollment issues for students, faculty, advisors, and departmental administrators involved with CI-H subjects. These are subjects that have enrollment caps for educational reasons mandated by the faculty and upheld by the Subcommittee on the Communication Requirement, and are part of the only “paced” General Institute Requirement (GIR). Therefore, it is crucial that students who need these subjects to proceed in a timely way towards their degrees receive priority.

This pilot is a subset of a larger enrollment project that began two years ago, when we surveyed all instructors, and is part of the Online Registration Phase Two Initiative.

The big change for continuing students this spring is that pre-registration for these CI-H subjects becomes necessary if they wish to be considered for prioritized placement. They must request CI-H/HW subjects by June 16 to be eligible for advance scheduling into the subjects. After that date they can only add

themselves to waitlists, to be considered by permission of the instructor after fall Registration Day.

Freshmen, other new students, and students returning from leaves will be able to request CI-H/HW subjects during Communication Orientation in the fall. Spaces will be available for them in accordance with the prioritization principles, with the goal that all students will be able to proceed to an appropriate CI-H or HW subject swiftly and can benefit from an entire semester of study.

In the fall, instructors and advisors as well as students will see the benefit of the new system, when the waitlists with real-time information on openings will be available for CI-H/HW subjects.

I am the business lead for the project, and the Office of Faculty Support, Registrar’s Office, and IS&T are jointly providing sponsorship and staffing. Faculty champions for this change include the Subcommittee on the Communication Requirement (SOCR) and the SHASS Dean’s Office.

Why CI-H/HW subjects?

CI-H/HW subjects were chosen for the pilot for a number of reasons:

- They are part of the Communication Requirement, which is a General Institute Requirement for all undergraduates.
- The HASS-D Lottery, which was the primary tool for limiting enrollment in some of these subjects, has been discontinued.
- The Communication Requirement is paced. Students are required to complete an appropriate CI-H/HW subject each year.

- Enrollment in CI-HW subjects is prioritized according to rules set by SOCR; not all students have an equal chance of registering. For example, a CI-HW Required upperclassman who has not completed a CI-HW subject would have a higher priority than an upperclassman who has completed it.

June 16 is the deadline for continuing students to select preferences for fall CI-H/HW subjects. This is the only way they will be scheduled into these subjects! If students wait beyond this deadline, they can add themselves to the waitlist, and they will be prioritized lower on the waitlist than those who met the deadline but were waitlisted instead of scheduled. Please stress this to your advisees, who may be under the assumption that they can always register “later.”

What’s next?

During and after the pilot, the tools used in this pilot will be assessed by the project team; please let them know your experiences and suggestions by e-mailing them at enrollment-tools@mit.edu. Any future expansion will be considered as part of the Education Systems Roadmap currently being developed.

We hope that these tools will help departments offering CI-Hs to plan more effectively; assist advisors in locating appropriate classes with available space more easily; allow our students to locate and join the appropriate classes from the start of the term; and support our faculty and instructors who teach these important Communication Intensive subjects in using the full semester effectively. ■

Diana Henderson is Dean for Curriculum and Faculty Support and a Professor of Literature (dianah@mit.edu).

One Investment Worth Making

Waugh et al., from page 1

case for the value of graduate students as an integral part of the MIT campus community and for one investment we feel is worth making.

Graduate Student Living Costs and Annual Stipend Increase

Since 2003, the Graduate Student Council (GSC) has partnered with the Office of the Dean for Graduate Education to analyze graduate student living costs. Each year we present an analysis to Dean’s Group along with recommendations for an average stipend increase. In addition to the GSC recommendation, Dean’s Group also takes into consideration future funding source availability, equity with faculty, staff, and post-doc wage increases, and MIT’s ability to compete for top talent with peer institutions.

The guiding principle behind the GSC stipend recommendation is to maintain existing graduate student standards of living accounting for expenditures and inflation. We determine expenditures using a cost of living survey conducted in collaboration with the MIT Office of Institutional Research in the Office of the Provost. Aggregate inflation is determined using regional inflation rates for non-housing expenditures as given by the U.S. Consumer Price Index. Housing inflation is estimated using MIT Off-Campus Housing Office and Cambridge Community Development Department (CDD) data on average asking rents in the micro-regions in Cambridge and Somerville where most graduate students reside. The historic implemented and GSC recommended average annual stipend increase is given in Figure 1. Since 2003, the average GSC recommended and implemented stipend increases have been 3.9% and 3.8% respectively.

Off-Campus Rent Inflation as the Primary Driver

MIT graduate students today on average spend 53% of their stipend on housing, an increasing trend from 47% in 2003. With

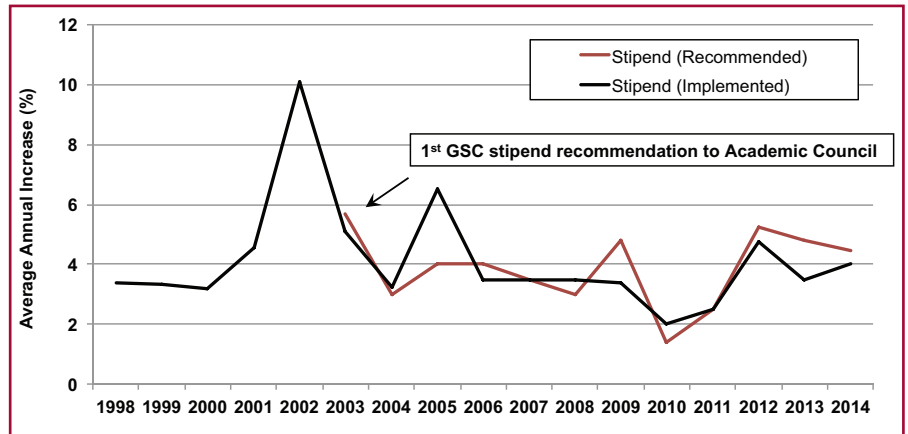


Figure 1. Institute implemented and GSC recommended average stipend increase from 1998-2014.

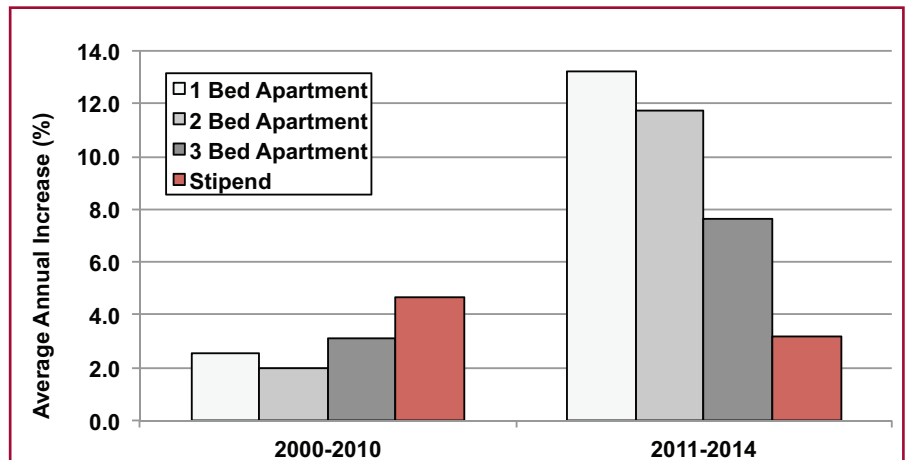


Figure 2. Average annual Cambridge rent and stipend increase between 2000-2010 and 2011-2014. [Cambridge Community Development Department Housing Profile Report]

approximately 60% of students living off campus in recent years, off-campus housing rent increases are the largest inflation driver. From 2000 to 2010, Cambridge rent increases trended between 2-3 percent; however, since 2011 we have seen a significant rise in Cambridge rent inflation compared to stipend increases (see Figure 2).

One of our primary concerns is that recent off-campus rent inflation in the areas students reside is unsustainable compared to recent stipend increases. Future commercial developments around Kendall Square, some of which have been identified by MITIMCo (MIT Investment Management Company) as valuable investment opportunities, are expected to generate additional demand for near-campus housing. As these developments

come online, higher wage earners are likely to outpace graduate students and post-docs for limited housing stock. In addition, current market-based housing projects in Cambridge focus almost exclusively on luxury apartments and condo conversion is expanding (the conversion of low-priced housing stock into higher priced condos). Under these conditions it is unlikely that students will be able to depend entirely on the market to provide affordable housing near campus as we have in the past. If unresolved, it is likely that off-campus housing pressures will push graduate students to live further from campus.

Impact on Graduate Families

While growing competition in the Cambridge housing market impacts all

graduate students, the growth disproportionately affects graduate student families. Single students and post-docs often share multi-bedroom low-priced units and are able to outprice families through their combined purchasing power. Whereas the median asking price for an apartment in Cambridge is \$2,500 for a one-bedroom and \$3,000 for a two-bedroom unit [Cambridge Community Development Department Housing Profile Report], the most inexpensive one- and two-bedroom units for families on campus are \$1,421 and \$1,640 respectively. Cost, therefore, is a major driver for on-campus family housing demand. Recently, the Graduate Housing Working Group recommended 500-600 new on-campus beds based on current unmet demand (as well as an additional 400 beds of swing space to accommodate renewal of existing housing stock). While graduate families are a smaller segment of the overall student population they constitute the majority of current unmet demand (see Figure 3).

Investment and Community

This year the average graduate RA, TA, or fellowship award was approximately \$75,000 [Based on tuition, medical insurance, and an average stipend of \$29,800]. In addition, MIT provided \$226 million in tuition support [2013 MIT Report of the Treasurer]. Factoring in existing subsidies for graduate housing – as much as \$12,000 per bed as

Chairman Reed indicated in the last Faculty Newsletter – MIT paid around \$256 million in graduate tuition support and rent subsidies. Considering all the

students and the upcoming capital campaign. In recent history, alumni have been the primary and most consistent source of philanthropic gifts to the Institute (see

Regardless the approach, all indicators suggest that any future effort to house graduate students near campus will come at an additional cost. We submit that keeping students near campus is not only worth the cost, but necessary for MIT to fulfill its mission as a vibrant, productive, and inclusive academic community that fosters interdisciplinary collaboration, innovation, and entrepreneurship.

present budgetary demands – including over \$2.5 billion in deferred maintenance – one may ask whether additional on-campus housing is warranted, or whether stipends should increase at a higher rate commensurate with the off-campus housing market. Regardless the approach, all indicators suggest that any future effort to house graduate students near campus will come at an additional cost. We submit that keeping students near campus is not only worth the cost, but necessary for MIT to fulfill its mission as a vibrant, productive, and inclusive academic community that fosters interdisciplinary collaboration, innovation, and entrepreneurship.

On a related note, the Graduate Housing Working Group report spoke briefly on the relation between graduate

Figure 4, next page). In 2012, graduates surpassed undergraduates as the majority of all living alumni, a shift that will continue to grow based on historic (see Figure 5, next page) and projected student body populations. As a result, MIT’s approach to alumni engagement and philanthropic gift giving will need to respond accordingly.

Recent analytics and market research indicate that the likelihood of alumni to give to MIT is based primarily on affinity, or a sense of belonging to the MIT community, and affinity can be highly influenced by a student’s level of engagement in extracurricular, club, sport, social and other activities outside of academics and research. To the extent that on-campus housing can play a vital role in building community and creating a sense of affinity, we submit that on-campus housing should not be viewed as an additional cost or subsidy but rather as one investment worth making. An investment that, in the face of current financial pressures, prioritizes graduate students as an integral part of the MIT community, not only in the limited view of graduate students as future alumni that will pave the way for MIT’s financial future, but an investment in the community of current students whose constant on-campus presence is at the heart of what uniquely drives MIT as a global leader in science, engineering, innovation, and entrepreneurship.

continued on next page

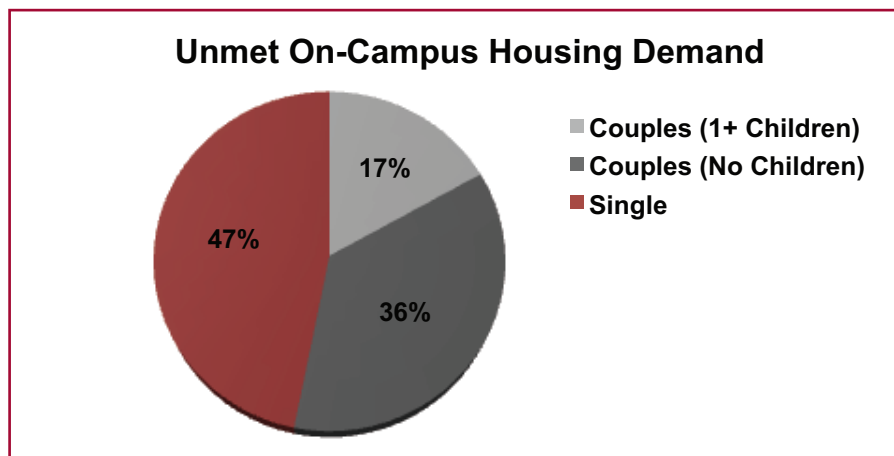


Figure 3. Unmet demand for on-campus housing.
 [2013 Chancellor’s Quality of Life Survey]

One Investment Worth Making
Vaugh et al., from preceding page

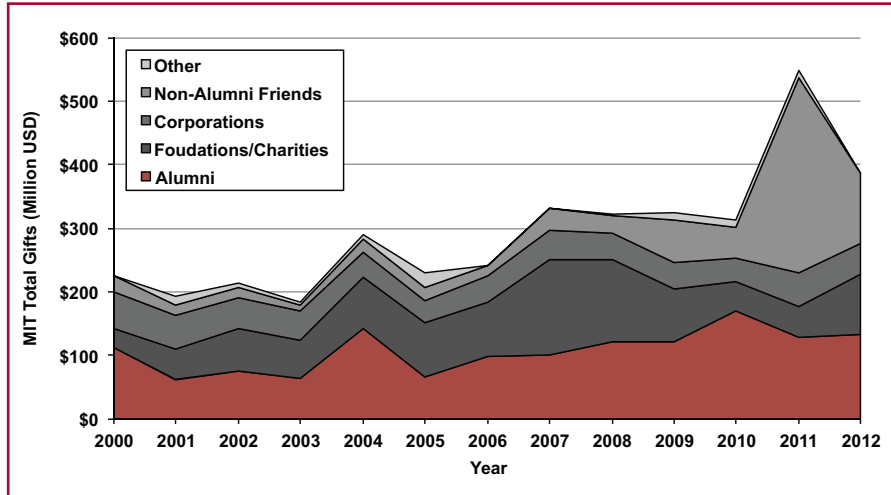


Figure 4. Major sources of MIT philanthropic gifts from 2000-2013.
[Annual Reports of the Vice-President for Resource Development (2000-2008)
and consultation with Resource Development (2009-2012)]

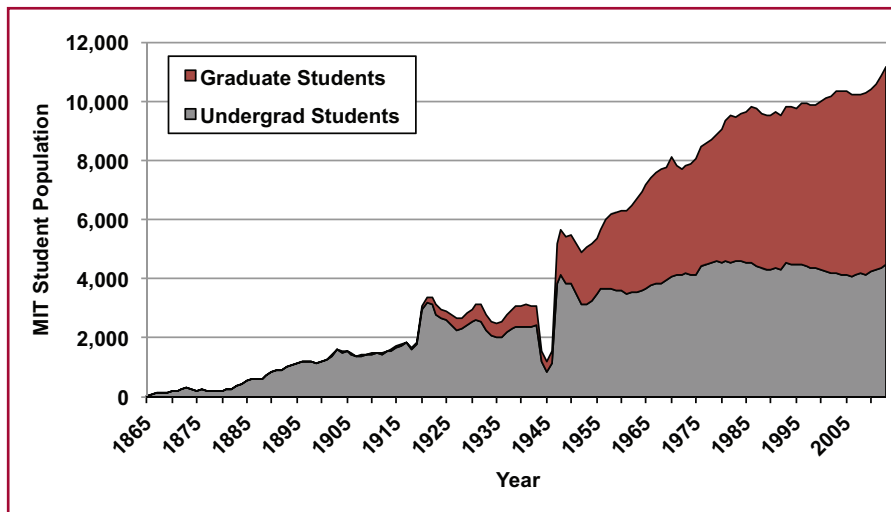


Figure 5. MIT undergraduate and graduate student composition over time.
[Office of the Provost/Institutional Research]

While the costs of an increasingly disparate graduate student body may be difficult to quantify, we strongly feel the impact will be real. How does one gauge the value of late night Energy Club lectures, collaborations at the Trust Center, GSC multicultural events at Morss Hall, and after work drinks at the Muddy

Charles Pub in driving MIT's inclusive and collaborative ecosystem? How will the frequency and accessibility of those interactions be impacted by an increasingly dispersed graduate student body pushed apart by the economic strains of a competitive housing market? What message are we sending to students about their

place in the MIT community if development decisions prioritize commercial development on and near campus while at the same time housing costs are pushing graduate students further away?

We express our deepest gratitude to the administration for engaging us this year in the Graduate Housing Working Group and East Campus Steering Committee and appreciate the constructive dialogue we have had in addressing these demanding issues. While we understand there are no simple answers to the challenges presented, we look forward to continuing the conversation as we work together to make MIT a better place. ■

Caleb Vaughn is a fifth-year graduate student in Nuclear Science and Engineering, President of the Graduate Student Council, and member of the East Campus Steering Committee (cjvaugh@mit.edu);

Charlotte Seid is a fourth-year graduate student in Biology and a member of the Graduate Housing Working Group (cseid@mit.edu);

Marzyeh Ghassemi is a second-year graduate student in Electrical Engineering and Computer Science and Co-Chair of the GSC Committee on Housing and Community Affairs (mghassem@mit.edu);

Andrea Dubin is a third-year graduate student in Earth Atmospheric and Planetary Sciences, Co-Chair of the GSC Committee on Housing and Community Affairs, and a member of the Graduate Housing Working Group (adubin@mit.edu).

Executive Summary of the Draft Report to the Provost of The Graduate Student Housing Working Group

Editor's Note. For the entire report see: orgchart.mit.edu/sites/default/files/reports/20140116_Provost_FinalGradHousing.pdf

In March 2013 the Provost appointed the Graduate Student Housing Working Group to evaluate how graduate student housing needs are currently met, identify strengths and weaknesses in the current system, and make recommendations for meeting graduate housing needs in the future.

The group reviewed past committee reports, analyzed existing and new data, consulted broadly with graduate students, faculty, and the Cambridge community, and reviewed the experience of peer institutions.

We settled on addressing five subtopics: graduate students' attitudes toward their current housing situation; the Boston-area housing market; the utilization, adequacy, quality, and sustainability of the graduate housing inventory; future graduate enrollment; and graduate housing at peer institutions.

Graduate students express high levels of satisfaction with the housing choices they have made. Housing is not a critical factor in their decision to attend MIT, but cost is a major concern. Graduate families and international students face special challenges in finding housing, and these groups express more desire to live on campus than single students do.

We estimated unmet on-campus housing demand using two measures: the number of students who live off

campus but would rather live on campus, and the durable size of the waitlist. These two measures revealed significant unmet demand for on-campus graduate housing.

In the Cambridge housing market, rents have been increasing steeply, condo conversions have been reducing the supply of affordable housing, and new housing construction consists mostly of luxury units. The 62% of MIT graduate students living off campus will likely be squeezed further by these trends. MIT cannot rely on the market to provide affordable housing as it has in the past.

Graduate students living on campus express high levels of satisfaction with their housing, although there is some dissatisfaction with deferred-maintenance and operational issues in three of the graduate residences. The Institute has already committed to a capital renewal plan that will ensure the continuance of existing housing resources. Including additional units in the renewal would be a way to meet graduate housing needs.

The number of graduate students is not likely to increase or decrease significantly in the next decade. Reliance on postdoctoral staff has grown in recent years, a trend that may continue.

Our survey of housing opportunities for graduate students at peer institutions revealed that MIT is a leader in supporting on-campus graduate housing.

We recommend that MIT build housing for 500–600 students, and that these housing units be configured not in tradi-

tional dormitory-style facilities but in buildings that can accommodate a variety of housing types, ranging from studios and multi-bedroom suites to apartments. We recommend further that these housing units be capable of accommodating both married and unmarried students and families.

We recommend that to facilitate capital renewal, MIT create 400 additional beds to meet swing-space needs over the course of the next decade and, at the end of that period, make that housing available to graduate students. A range of development options exist for this new housing in addition to traditional dormitory development channels. These include partnerships with developers, long-term leases on new housing, inclusion in already-planned capital renewal in graduate housing, and incorporation into nonresidential building on campus. We make no recommendations regarding potential locations for these projects.

We make other recommendations with the aim of supporting the service, renewal, and operational aspects of graduate housing. We also make the argument that as MIT undertakes capital planning both on the east end of the campus and in Kendall Square, graduate students should be considered as a vital population that could contribute significantly to an outstanding and enhanced environment. MIT faces an opportunity in the next few years to greatly enhance the value of the campus and to create a place worthy of our legacy, achievement, and ambition. ■

Analyzing the Draft Housing Report

Salvucci, from page 1

rehabilitation or replacement of 1000 units would without question be immediately filled provides a basis to immediately initiate design and implementation of at least 1000 units as part of the Kendall Square design and planning process already underway.

But dealing only with the need that has been visible and urgent for the past several years is not adequate to deal with the rapidly escalating rent level crisis documented in the report which threatens the entire off-campus population, especially the 2500 who live in the nearby Cambridge neighborhoods, where prices have risen 30 percent in the last three years and are continuing to increase at an exponential rate. These same pressures affect the ability of MIT junior faculty to find suitable housing.

The report also documents that the rapid escalation of rents are a severe threat to the quality of life for all Cambridge residents, and that 1600 to 3200 units of Cambridge housing are likely to be sought by some of the 4000 to 8000 new employees required to staff the new commercial development on land which MIT has secured permission to develop commercially and at greater density, further intensifying the pressure.

Recognizing that this crisis will continue over the next several years, I believe that it is necessary for MIT to commit now to develop enough housing at Kendall Square and at West Campus to provide 5000 net new housing units for the entire graduate student and post-doc population, and to prioritize planning for the Osborne triangle to develop affordable housing options for junior faculty and to accommodate some of the new employees MIT actions are attracting to the area.

The draft report provides essential basic information to understand the severity of the situation. Below are comments to

suggest ways the information can be organized to make the most essential factors more visible. They also include the following details on errors and omissions in the generally high quality report.

1) On page 57, the report notes that the number of grad students (and post-docs, who play very similar roles) has grown

Recognizing that this crisis will continue over the next several years, I believe that it is necessary for MIT to commit now to develop enough housing at Kendall Square and at West Campus to provide 5000 net new housing units for the entire graduate student and post-doc population, and to prioritize planning for the Osborne triangle to develop affordable housing options for junior faculty and to accommodate some of the new employees MIT actions are attracting to the area.

consistently by about 800 per decade, and about 1000 in the past five years, and that this growth has been critical to increasing the productivity of MIT research per faculty member, which is vital to maintaining the competitiveness of MIT for research funding.

Quite inconsistently, the report asserts that the number of graduate students is unlikely to grow in the next decade, (although this may be an assumption that the growth will be in post-docs instead). Even if the recent five years are viewed as unsustainable, it seems prudent to assume that the number will grow at its traditional rate of 800 in the next decade.

The issue of the importance of the graduate students to the productivity and relevance of MIT to research and professional practice is a fundamental aspect of the MIT brand of education, which requires that the quality of life of graduate students be recognized as a core issue essential to the future of MIT. Because of the importance of this point, it should be discussed much more visibly in the beginning of the report.

2) On page 62, in Section 2.5, the section Graduate Housing at Peer Institutions makes a false comparison. Because MIT is uniquely reliant on research and graduate students to maintain its special brand of education, it is much more vulnerable to the threat to quality of graduate student life posed by the extreme rental market in Cambridge.

3) On page 52, the report cites the Bush-Brown recommendation of 1962 that MIT should provide for on-campus housing for 50 percent of graduate students. It then makes a celebratory comment that in the period 1960-2008 MIT has made "significant strides" by reaching 40 percent (excluding post-docs). This does not seem like such significant progress in 48 years. If MIT had reached the 50 percent recommendation there would be approximately 1,835 added units on campus, built at less inflated construction cost, shielding a large number of students from the escalating market prices, and reducing the pressure on Cambridge rents. Elsewhere, in the recommendations section on page 70, the report denies that there ever was a 50 per cent "officially adopted goal," which contradicts not only the public statements of former MIT Planning Director Bob Simha, but also contradicts the reference to the 1960 recommendation of Bush-Brown cited on page 52 of the report itself. It undercuts the credibility of the report to engage in semantic distinctions of whether the 1962 Bush-Brown recommendation was ever an "officially accepted goal" (as Bob Simha insists to be the case).

The more significant issue is that the Bush-Brown recommendation that was made in 1960 was intended to deal with an issue of building a greater sense of community and collegiality among the graduate student population, an issue that remains important today. But in 1962 there was no housing affordability problem in Cambridge, MIT had not yet acquired so much land in Kendall Square, rapid economic development was not filling all available land with significant investment substantially foreclosing land acquisition options, and MIT was not entertaining using scarce Institute land for commercial purpose. In light of the severely escalating prices in the Boston area generally and most extremely in Cambridge, the policy issue confronting MIT is how to protect the quality of life of the essential graduate student population from the unprecedented price spikes now occurring which are likely to worsen.

4) In light of the strong case that the report makes that increasing stipends is not a reasonable option, as it would price MIT research out of the relevant market range, and would actually exacerbate the rental price escalation in Cambridge, (see the Recommendations section on page 70), the only remaining option to protect the graduate student quality of life is to build affordable housing on campus for the entire population of 5000 graduate students and post docs now facing escalating prices off campus.

5) On page 44, the report cites the number of new employees expected in the Kendall area, (4000 to 8000) of whom 1600 to 3200 are expected to seek Cambridge housing, and price out students and current residents, based on past experience. (The report erroneously discounts this number by 50 percent because many of the employees will be graduates already residing in Cambridge, but this ignores that the graduating students will be back-filled by new students).

The report does not make any calculation of the impact on the 100,000 net new

employees it expects Boston-based development to attract, and the number of these who will seek Cambridge residence, nor the impact on rental prices in the entire transit oriented Boston economy. These factors all lead to a conclusion that the extreme tightness in the Cambridge and Boston area rental market is certain to

The report expresses some sympathy for the plight of junior faculty and Cambridge residents, but does not link the superheated condition to MIT actions, nor propose that MIT take any action to help residents of its host community to deal with these pressures.

worsen in the future, posing extreme hardship on students and other residents alike, who are now already spending disproportionate proportions of their disposable income on rent.

The report expresses some sympathy for the plight of junior faculty and Cambridge residents, but does not link the superheated condition to MIT actions, nor propose that MIT take any action to help residents of its host community to deal with these pressures. It would seem that the redevelopment of the Osborne triangle would be an appropriate location for MIT to undertake to create some affordable options to absorb junior faculty and new economy worker demand.

6) The report does not consider the possibility that there is some element of exuberance in the upward spiral of rents, as speculators bid up the price of housing, nor of the possibility that a significant commitment by MIT to build housing might dampen this exuberance.

7) The report makes some useful suggestions about the beneficial impact that graduate student housing would have on the emerging Kendall area, and suggests some interesting urban design concepts

that might mix affordable graduate student housing on lower floors, with possible commercial high rise space above. But this report was not available to the urban design and landscape team working on the Kendall area who recently presented their concepts to the public.

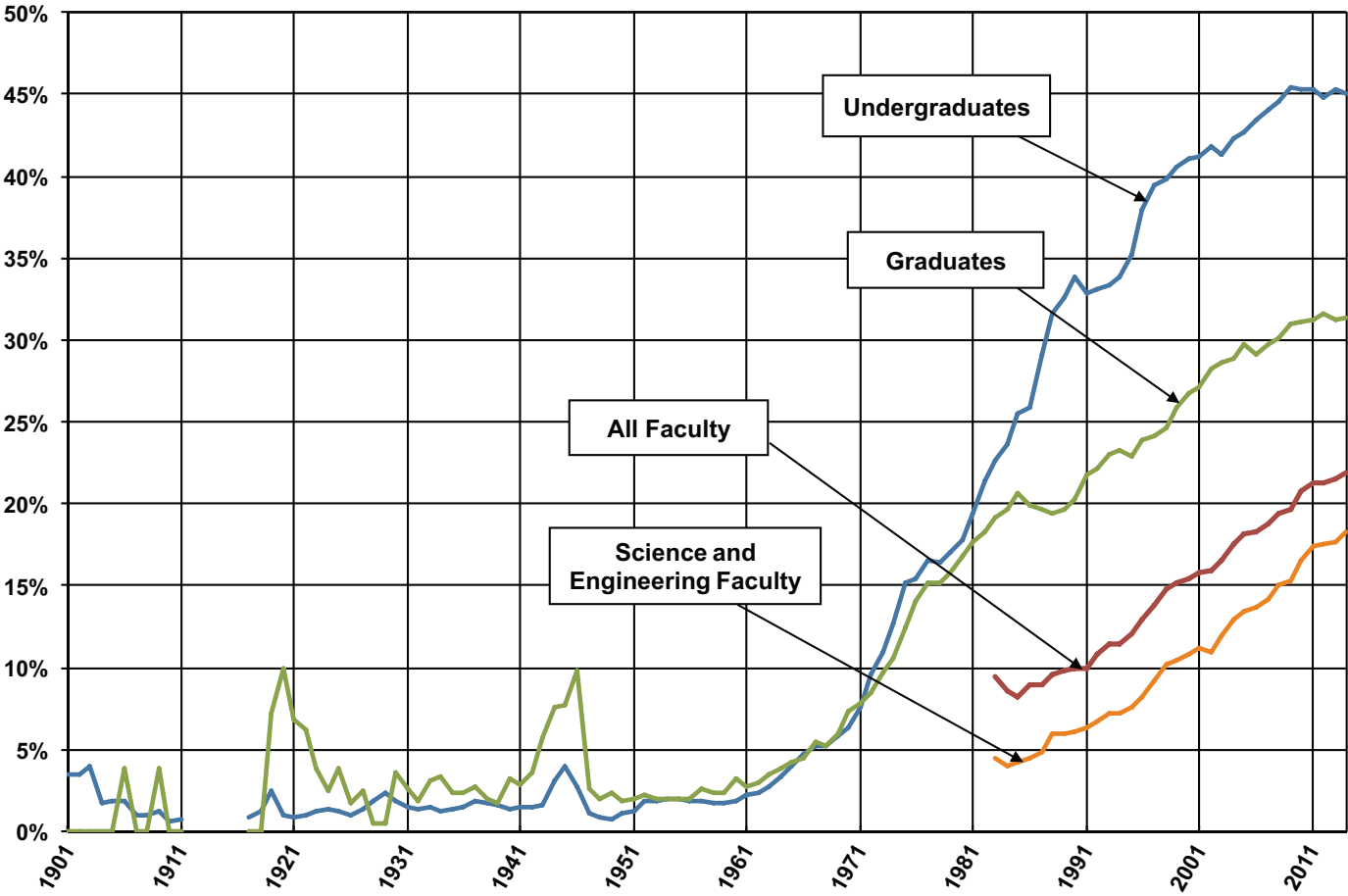
It is urgent that the urban design team be authorized and directed to integrate scenarios of a minimum of 1000 to several thousand housing units, recognizing the limits of other campus options at Westgate and elsewhere.

The report includes a wealth of important information, which makes clear the urgency of the situation, but it is written in a manner to consistently understate the severity of the situation. It is understandable that the challenge of funding the construction of thousands of units of affordable housing to support graduate students, post-docs, and junior faculty facing this hostile market is daunting. But it is not appropriate to camouflage the facts. Only by stating clearly the nature and dimension of the problem can it be possible to summons the energy and creativity to define and implement solutions to deal successfully with it. The draft report is a very good beginning, but it needs to be significantly strengthened, particularly in terms of the recommendations, to be a really useful document. ■

Frederick P. Salvucci is Senior Lecturer in the Department of Civil and Environmental Engineering (salvucci@mit.edu).

M.I.T. Numbers

Women as a Percentage of Total Undergraduates, Graduate Students, and Faculty: Academic Years 1901-2014



Source: Office of the Provost/Institutional Research