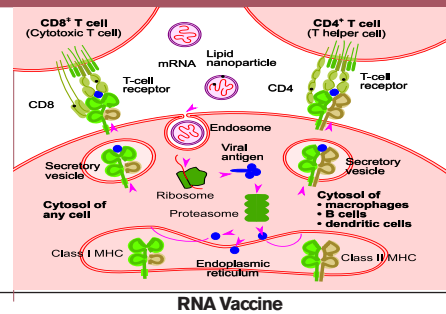


MIT Faculty Newsletter

<https://fnl.mit.edu>

in this issue we offer commentary on the Covid-19 vaccines, see Editorial below and “[Booster Recommendations and the Delta Variant](#)” (page 8); “[Mens, Manus et Cor](#)” (page 10); and “[Radius: Bringing Ethics to the Center of Science and Technology](#)” (page 12).



Immediate Priorities for Housing Justice in the Massachusetts State Legislature

State Representative Mike Connolly

MOST MIT FACULTY TEND to pay attention to the federal budget, which funds NIH, NSF, DOE, and other major granting agencies. However, thousands of graduate students, postdoctoral fellows, and faculty are also impacted by decisions made by our state legislature. One of the areas where we can have the biggest impact on quality-of-life issues is with our housing policies. Last year, we took action to pass the nation’s strongest eviction and foreclosure moratorium – and yet, as we look ahead to this fall, there’s a lot more work left to do.

As the State Representative for Cambridge and Somerville’s 26th Middlesex district – my constituents include significant numbers of MIT staff and students. In this legislative update, I summarize some of the critical housing issues that have been before us in the leg-

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Actions We Can Take to Address Misinformation and Safeguard the Freedom of Speech

Nicholas A. Ashford

FOLLOWING ON MY MARCH 29, 2021 op-ed in the *NYTimes*, I have given much thought to addressing the societal challenge presented by misinformation and disinformation. Faulty information and outright lies about stolen elections, the anthropogenic causes of and urgent need to address global climate change, all things Covid-19 (its existence, the efficacy of vaccines and masking, and the promotion of dangerous and unproven therapies), the consequences of funding a larger safety net on inflation, and much more, are an increasingly prominent part of public discourse.

Finding a pathway to resolve this disinformation crisis is complicated, given the political and legal complexities of reducing First Amendment free speech protections, as well as increasing government anti-trust activity against the media

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Editorial

I. Praise the Vaccines, Producers, and Public Funding II. Capturing Pandemic Teaching Experiences

Praise the Vaccines, Producers, and Public Funding

THOUGH THE DEATH TOLL in the U.S. from Covid-19 has passed 700,000, the rapid and intense mobilization of vaccine producers is saving hundreds of thousands of other lives. Kudos to the staffs of Moderna, Pfizer, and Johnson & Johnson in the U.S., and other vaccine producers in Europe, Russia, China, India, and Cuba. All of the successful efforts built upon the prior public investment in biomedical research: not only the basic technology for constructing the new mRNA vaccines, but also the existence of the [Protein Data Bank](#), making the structures of the coronavirus proteins publicly available to all, and nucleic acid databases such as GenBank, providing nucleic acid sequences. In short, almost all the fundamental technologies and almost all the

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Praise the Vaccines

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datasets in those resources came from individual laboratories and investigators, supported by federal programs funded by taxpayers. And of course, the decision of the U.S. government to publicly fund the costs of the vaccines accelerated entry of the biopharma industry into the effort.

However, it is clear that the deeply inadequate early response to the pandemic outbreak represented the failure of those programs in the period after the reports of the MERS viruses and the SARS viruses. U.S. programs, which should have been beefed up, were in fact cut back. The White House Pandemic Office, opened to respond to such threats, was disbanded under the previous administration. MERS and SARS research priorities were downgraded. Had efforts to develop SARS and MERS vaccines proceeded vigorously, the ability to respond to the coronavirus would have been greatly enhanced.

During that period, the National Institutes of Health (NIH) budget was about 3.7% of the Congressional discretionary budget. By way of comparison, the Pentagon budget in that period was more than 50% of the discretionary budget – more than half of our income tax dollars. The Trump administration stated publicly that they were limiting budgets of agencies like the NIH in order to increase the Defense budget.

When the dimensions of the pandemic became clear, Congress passed the CARES Act, which directed about \$1 billion to the NIH, \$4.5 billion to the Centers for Disease Control (CDC) and Prevention, and \$3.5 billion to the Biomedical

Advanced Research and Development Authority for vaccine development. The Trump administration's Project Warp Speed was also an attempt to respond to these needs, but was more a giant Band-Aid than a major reorientation of national investment priorities and investment in the basic public health and biomedical research infrastructure to protect the world from current and future threats. The investments listed above represent merely a few cents on the dollar of the fiscal costs of the Covid-19 pandemic. Hopefully the beefing up of the President's science advisory team being spearheaded by Eric Lander, will lead to sounder priorities.

Though the biopharma industry rose to the occasion once the government guaranteed their profits, their prior history was less laudable. Despite the effectiveness of vaccines, a recent report described the very limited investment of the biopharma industry in vaccine development. With an effective vaccine, only a few doses are needed per individual, compared to the case of blockbuster pharmaceuticals that have to be taken daily, generating billion-dollar markets. In addition, poor populations in need, such as in Africa, cannot afford the high prices charged for drugs. Preventive vaccines, if effective, further reduce the markets for the biopharma companies, as the infection they are addressing is contained.

From this history it is clear that robust public funds remain the foundation of a robust and humane public health and prevention policy in the period to come.

The sharpest conflicts have emerged in the efforts to provide U.S. vaccines to other countries. Though the World

Health Organization (WHO) and world leaders have continuously called for the sharing of vaccine technology, Moderna and Pfizer, protecting their patents, have resisted. Given that Project Warp Speed provided \$2.5 billion to Moderna, and the dependence of the vaccine developments on prior NIH-funded technology, the withholding of the vaccine technology has been sharply criticized by representatives of the international community (*NYTimes*, 23 September). President Biden, in his address to the United Nations, stated, "We should unite around the world on a few principles; that we commit to donating, not selling – donating, not selling – doses to low and lower-income countries, and that donations come with no strings attached." ■

Capturing Pandemic Teaching Experiences

The past year was almost certainly one of the most difficult for faculty, students, staff, and administration in the Post-Depression/Post WWII period, but though dispersed across the globe, we pulled together to pull through. The coming on-campus semester looks to be somewhat better, but still laced with the stresses of the continuing pandemic. Whatever further cooperation and collaboration can be developed within the campus community will aid in navigating the troubled waters ahead. The *Faculty Newsletter* welcomes any contributions from faculty reflecting on their experiences to date, or with recommendations for the coming period. Please email all submissions to: fnl@mit.edu. Good luck to all. ■

Editorial Subcommittee

Actions We Can Take

Ashford, from page 1

giants. In my op-ed, I recommended using citizen juries, commissions, and a revitalized and expanded federal fairness doctrine. Law professor Michael P. Vandenberg of Vanderbilt University has proposed a related approach in his law review article entitled “[Social Checks and Balances: A Private Fairness Doctrine](#).” This work has subsequently greatly influenced my thinking.

My decades of scholarly work at MIT have concentrated on promoting government regulation of health, safety, and the environment, primarily related to the chemical, pharmaceutical, and automotive industries. I have eschewed the role of industrial self-regulation as too little too late. However, private regulation is not the same as self-regulation, and it also minimizes the pitfalls and conflicts inherent in regulation by a reluctant government, or by one captured by the very industry it is supposed to regulate. Before opining on a revitalized and expanded private fairness doctrine, with credit to the seminal work of Professor Vandenberg, I provide some additional commentary on the current dilemma.

In general, the U.S. Constitution safeguards the freedom of speech from government interference, and lawmakers are understandingly reluctant to intervene. Yet politicians are increasingly concerned about the growing influence of online platforms. Both the House and the Senate are considering [legislation](#) that would revise Section 230 of the Communications Decency Act, which currently exempts so-called technology companies from being held liable for the material they publish. Facebook [has been](#) advocating the law’s reform.

The platform industry (Facebook, Google, Twitter, etc.) is also facing congressional scrutiny for potential antitrust violations. President Biden appointed Lina Khan, an anti-trust scholar and an advocate for its reform, as the new head of the Federal Trade Commission, with the

expectation she would strengthen anti-trust regulation and enforcement, especially with regard to the platform giants.

But false and damaging information is not just an online problem. It’s also evident in broadcast, cable, and print media. As politicians debate whether or how to regulate technology companies, they should also consider addressing the dangers implicit in allowing and enabling the spread of misinformation, wherever and however it’s published.

And it is not at all clear that reducing the dominance of technology [companies](#)

And it is not at all clear that reducing the dominance of [technology companies](#) through traditional anti-trust regulation and enforcement will go far enough. Having a larger number of smaller companies to scrutinize could make the task of reducing misinformation even more difficult.

through traditional anti-trust regulation and enforcement will go far enough. Having a larger number of smaller companies to scrutinize could make the task of reducing misinformation even more difficult. Traditional anti-trust regulation and enforcement, as viewed by the courts, are heavily influenced by a concern for the effects of industry concentration on markets and innovation, an influence dominated by perspectives of the University of Chicago, my alma mater in law and economics. My critique of that perspective, as well as that of [Lina Khan](#), is that the traditional concern with economic and innovation effects, or on economic exploitation of excessive power, overlooks much of the problem. Concentrated economic power gives rise to concentrated political power, which has an overwhelming effect on agenda-setting, policy implementation, and legislation. It is not at all clear the courts will reflect these concerns.

And oversight boards run by tech companies themselves, such as the one that Facebook [created](#) to hear issues of online

safety and free speech, are not sufficient. Those efforts can never be truly independent if they are assembled by, and are financially tied to, the very companies they are tasked with overseeing. Furthermore, addressing only the platform industry is not the cure-all. Misinformation spread on one medium is reinforced and amplified by falsehoods spread on another. A catchy phrase based on a lie and spread via Facebook, Instagram, and Twitter – “[stop the steal](#),” for example – becomes [fortified and legitimized](#) when it’s picked up by television

and radio reporters or commentators, whose coverage give it a whiff of legitimacy and then reappear on social media, fueling a tornado of misinformation.

In 2020, the non-profit Washington League for Increased Transparency and Ethics filed a lawsuit against the Fox News Network, alleging ongoing violations of the Washington Consumer Protection Act in its coverage of Covid-19. In general, the complaint asserted that the “pervasive campaign of misinformation and deception” perpetuated by Fox News misrepresented the dangers of Covid-19 regarding the threat, let alone the reality, of the disease. These misrepresentations, it was alleged, caused “widespread confusion” and persuaded people to ignore the risks, and to ignore the federal and state government warnings and directives designed to stop the spread. Likewise, it claimed the deception, which is still televised by Fox News, caused the public “to fail to take appropriate action to protect themselves and others from the disease, mitigate its spread, and contributed to a public health crisis.” The lawsuit was dismissed, perhaps

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sealing the likelihood that the first amendment will enjoy any reinterpretation by the courts in the near future.

Decades ago, long before there was a technology platform industry to regulate, the Federal Communications Commission (FCC) instituted the [fairness doctrine](#), a policy that required radio and television stations to present diverse points of view on controversial topics. The policy, which was designed to ensure that all sides of an issue be presented fully and fairly, was eliminated by the FCC in 1987, under President Ronald Reagan, and the implementing rule was removed from the Federal Register in August 2011.

I argue here that what we need is a *new private fairness doctrine, premised on the public's right to be fully informed, rather than on the government controlling free speech or regulating natural or otherwise beneficial monopolies*. Professor [Michael Vandenberg](#) has recommended the creation of a *private* multi-stakeholder organization to provide independent oversight of mis- and disinformation in online, broadcast, cable, and print media. Through independent auditors – perhaps akin to citizen juries – this non-governmental private body would certify and grade the performance of the news media and be populated by independent and respected experts, appointed by the government, and presumably funded by a tax on the industry. The certification system would not require participation by individual news organizations; nor could they escape scrutiny under this system. A certification scheme would elicit market and social pressure, thereby creating competition for better performance. It is not “balance of views” that should be the ultimate objective of certification, but rather the extent to which accuracy and completeness is achieved in coverage and presentation of news.

Licensing schemes could reflect the outcomes of certification. It is worth remembering that both Fox News and MSNBC were founded after the 1987 demise of the original fairness doctrine.

One wonders if they would have survived in their current form if the doctrine were in effect and applied to cable media.

Certification schemes may present a second-best approach to the problems discussed in this essay, but they may be as good as possible in today's climate. Stakeholders who might manage the system may be more responsive than politicians, and the results could serve as a proxy for a social license to operate. Displaying the results of certification could affect what people read, listen to, and watch – and affect advertisers as well.

I argue here that what we need is a new private fairness doctrine, premised on the public's right to be fully informed, rather than on the government controlling free speech or regulating natural or otherwise beneficial monopolies.

Certification pressures can drive improvements, even if they do not affect licensure.

Public trust in the media industry has been [declining](#) for years. Rigorous fact-checking, along with broad and complete coverage of issues important to news consumers can help restore trust. While accuracy has received the most attention, completeness in presenting “the whole picture” deserves as much attention.

Psychology, behavioral science, and neuroscience have helped us understand why people are susceptible to misinformation and what influences how they view facts. Individuals gravitate toward news sources that reinforce their prior impressions, values, and opinions. This is known as confirmation bias or “anchoring to prior views.” Exposing people to more balanced sources might help expand their perspectives, but science tells us that this can also serve to strengthen current beliefs. The purveyors of faulty information need to be confronted with – and not escape responding to – opposing views and facts, in the manner occasionally common to some (but too few) media interviews and in cross-examinations in

legal proceedings. But presenting all sides of an issue, by itself, may be passively received by a person, and may not serve to change one's views.

The original fairness doctrine required broadcast media companies to present alternative points of view on sensitive issues. A reimagined and expanded version of this policy [could enable](#) an independent body to review inaccurate and incomplete material and induce technology platforms and the print, cable, and broadcast media to publish and respond to criticism.

I am persuaded that government proposals to break big tech and platform companies into several smaller ones or to reform Section 230 of the Communications Decency Act (by removing immunity protection for media from liability) will not solve the misinformation problem. But increased fact-checking by independent bodies and requirements to present more reliable perspectives [will help](#). Because of the reinforcing influence one medium has on another, completeness and full scrutiny of ideas must be encouraged in the platform, cable, and broadcast industries, as well as print media.

There is clearly a need for more accountability in both the private sector and the government regarding the proliferation of mis- and disinformation. A new private fairness doctrine, coupled with independent oversight of the news industries, would help. ■

Nicholas A. Ashford is a Professor of Technology and Policy, Director of the Technology and Law Program (nashford@mit.edu).

Immediate Priorities for Housing Justice
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islature and outline my priorities for action this fall.

Extending the eviction and foreclosure moratorium

When the Covid-19 pandemic first struck Massachusetts last year, I immediately filed legislation to ban evictions and foreclosures. Working in close partnership with housing justice organizers, tenant advocates, and legislative leaders, we were able to pass the nation's strongest eviction and foreclosure moratorium, which was signed into law on April 20, 2020 despite strong objections from some Republicans and some in the real estate industry.

For the next six months, as the pandemic cut short thousands of lives and shut down large swaths of our Commonwealth, vulnerable tenants and at-risk homeowners were fully protected from the threat of displacement, and our approach was hailed as a national model that helped prevent further loss of life.

Our moratorium law provided Governor Baker with the option of implementing extensions – but by October of last year, the Governor decided to let the moratorium expire. In its place, he implemented something he called the Eviction Diversion Initiative (EDI). So far, EDI has had mixed results. Hundreds of millions of dollars in rental assistance funds have been made available, but many tenants are either unaware of these resources or have had their applications mishandled by overwhelmed service agencies. And the vast majority of tenants who face eviction continue to do so without legal representation.

Until very recently, the Centers for Disease Control (CDC) and Prevention had its own eviction moratorium in effect nationally. But last month the Supreme Court ruled that the CDC order is no longer valid in the absence of further Congressional action. The Biden administration is now calling on states to once again pass their own eviction moratoria to help mitigate the impact of the Delta

variant. For my part, I am continuing to advocate for action to ensure housing stability. Last month I testified before the Judiciary Committee and spoke out on the Housing Committee, imploring my colleagues to join me in answering the call of the Biden administration to halt evictions and foreclosures of Covid-impacted tenants. I continue to strongly advocate for the Covid-19 Housing Equity bill to do just that.

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The need for a truly comprehensive housing bill

Last year also saw Governor Baker's "Housing Choice" bill passed into law. This legislation adjusts the local approval threshold for certain zoning changes, from the standard two-thirds vote of a city council or town meeting, to a simple majority vote in cases where housing production can be enhanced.

Governor Baker introduced this bill back in 2017. After failing to make it to the floor during the regular 2017-18 legislative session, an effort was made in late 2018 to pass it during an "informal session" where there's no opportunity for debate or amendments. Any one legislator can object to passage of bills in informal sessions, and so I voiced my objection to this process because it excluded the people most impacted and deprived us of any chance to add important affordability and equity-related provisions to the Governor's proposal.

In 2019, Governor Baker reintroduced his bill to make certain zoning changes easier. Most states only require a simple majority vote to change zoning ordinances, and as a representative of a community that strongly supports housing

production, I recognized how this proposal could help push other communities to join us in doing their part, particularly those suburban communities that are often resistant to new, multifamily housing. However, I also remained clear that passage of the Governor's bill would have to include equity-based and pro-affordability measures, too.

Ultimately, Governor Baker opted to insert his Housing Choice proposal within a larger economic development bill

last year. The economic development bill is an "omnibus bill" that is always very popular because it provides funding for many local programs and initiatives. In the process of advancing the economic development bill, we in the legislature added several components to make the Governor's housing production proposal more equitable, including provisions to support truly affordable housing and measures to seal eviction records and provide tenants with an opportunity to purchase their buildings.

When the economic development bill finally reached the Governor's desk at the end of the 2019-2020 legislative session, the Governor vetoed all of the tenant protection and housing equity provisions we included. So in the end, he got his zoning reform bill, but all of the other progressive items were brushed aside. Frankly, I think this is outrageous, and I am calling on my colleagues to join me in supporting a more comprehensive housing bill this fall.

Against the backdrop of profound wealth and income inequality, with the continuing impact of systemic racism and white supremacy, where federal and state budgets for public housing have been

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Immediate Priorities for Housing Justice
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subject to decades of austerity and economic gains have mostly gone to the very wealthy – we must recognize that zoning changes alone cannot solve the ongoing housing emergency. Yes, zoning reform can be part of the solution – but we also need to take action to protect against displacement and to directly fund the construction of truly affordable housing.

To do this, the legislature should advance a comprehensive housing bill that starts by reinstating all of the progressive items Governor Baker recently vetoed. We need to make it easier to strengthen inclusionary housing ordi-

nances, and we need to seal eviction records and provide tenants with opportunities to purchase their buildings whenever they go on the market.

In addition, we need to offer a right to counsel to tenants facing eviction, and we should authorize local options for real estate transfer fees, vacancy taxes, and rent regulation. At present, cities and towns have fairly limited options for protecting tenants. We should repeal the statewide ban on local rent control so that cities can bring everyone to the table – that means renters, homeowners, and landlords alike – to craft meaningful tenant protections.

Finally, thinking more broadly, we need to focus on the real common denominator in the struggle for affordable

housing, i.e. money. On the federal level, we should advocate for reductions in the military budget and changes in tax policy to help boost the amount of funding that's available for public housing programs. Likewise, on the state level, we can look to raise taxes on the very wealthy and large corporations to support public investment in affordable housing.

Please feel free to contact me to discuss housing or any other issues of concern to you via mike@mikeconnolly.org or Mike.Connolly@MaHouse.gov. ■

Mike Connolly is the State Representative for Cambridge and Somerville's 26th Middlesex District (mike@mikeconnolly.org; Mike.Connolly@MaHouse.gov).

Elimination of Early Sophomore Standing Was a Step in the Right Direction; Eliminating Advanced Standing Credit Is the Next Step

W. Craig Carter

IN SPRING 2021, THE Faculty passed a change in the rules and regulations which – among other things – eliminated Early Sophomore Standing (ESS). The argument was *“Because it depends upon work students did prior to MIT, ESS effectively reinforces disparities in background/training among incoming students.”*

Removing inequalities that are reinforced by our rules and regulations is a noble goal and I applaud the Faculty for eliminating ESS for this reason. However, it is only a step in the right direction.

Elimination of ESS treats the symptom and not the root cause. As it was, ESS was practically available to those students who passed Advanced Standing Exams (ASEs) and AP credit – and those students are

predominately those who did not suffer from systemic inequities in K-12 education. In effect, the composition of students in subjects such as 8.01 and 18.01 is not representative of the incoming class. One reason students choose to come to MIT is to be co-educated with all the students we admit.

Thus, ASEs and AP credits propagate systemic inequities. They should be eliminated.

Yes: elimination would create more burden on those departments who provide MIT the essential service of GIR education. Arguments that the provision of extra resources would be too expensive indicates – I believe – a misguided ranking of priorities.

Yes: students would object to “retaking material they have already learned.” My responses are: 1) revision is pedagogically sound; 2) many, if not most, FY students who claim to understand calculus know how to manipulate equations, but with little fundamental understanding. I am confident that our faculty is ingenious enough to address this objection in a pedagogical and equitable way.

We've taken a great first step to reduce educational inequities. We can do more by eliminating advanced standing. ■

W. Craig Carter is POSCO Professor of Materials Science and a MacVicar Faculty Fellow (ccarter@mit.edu).

Booster Recommendations and the Delta Variant

James C. S. Liu, MD

THERE HAS BEEN A great deal of confusion and concern around getting an additional dose of CoViD-19 vaccine. This concern has been driven by the Delta variant, now the dominant SARS-CoV-2 variant in the United States because it propagates much more prolifically and quickly than previous sub-groups of SARS-CoV-2 (for more information, visit the MIT Medical blog page about the Delta variant <<https://medical.mit.edu/covid-19-updates/2021/07/are-things-different-delta>>).

Vaccines help to fight off SARS-CoV-2, but it takes time for your body to recognize the presence of an invader, figure out which part of the immune response will help to neutralize it, and ramp up production. The Delta variant reproduces so rapidly that we believe some of the treatment “failures” of vaccines may simply represent an immune system that is overwhelmed by a fast-reproducing virus. For example, a pre-print study in Singapore <<https://doi.org/10.1101/2021.07.28.21261295>> suggests that people with vaccine breakthrough infections can clear the Delta variant much faster than people who have not been immunized. (An MIT Medical blog post <<https://medical.mit.edu/covid-19-updates/2021/08/breakthrough-infections>> does a deeper dive on breakthrough infections.)

A number of studies (reviewed in this presentation <https://emergency.cdc.gov/coca/calls/2021/callinfo_092821.asp> from the Centers for Disease Control or CDC) suggest that recipients of the

Pfizer/BioNTech immunization were slightly likelier to have breakthrough infections more than six months after getting their second shot. A study in Israel <<https://www.nejm.org/doi/full/10.1056/NEJMoa2114255>> suggests that a third shot is effective in preventing breakthrough infections from Delta in older

A number of studies . . . suggest that recipients of the Pfizer/BioNTech immunization were slightly likelier to have breakthrough infections more than six months after getting their second shot. A study in Israel . . . suggests that a third shot is effective in preventing breakthrough infections from Delta in older people at least temporarily (we have no data on how long that protection lasts).

people at least temporarily (we have no data on how long that protection lasts).

Another study <<https://www.nejm.org/doi/full/10.1056/NEJMoa2113017>> followed Moderna vaccine recipients through the completion of the blinded phase (roughly the end of March, before Delta emerged). This study showed that breakthrough infections started to happen some three months after full immunization (once antibodies started to wane) but even seven months out, severe illness was not happening among this group, regardless of age or comorbidities. Data on the Janssen/Johnson and Johnson vaccine <<https://emergency.cdc.gov/>

[coca/calls/2021/callinfo_092821.asp](https://emergency.cdc.gov/coca/calls/2021/callinfo_092821.asp)> would suggest that protection rates stayed about the same or perhaps even increased somewhat.

All of the vaccines show high rates of efficacy in preventing severe illness, hospitalization, and death <https://emergency.cdc.gov/coca/calls/2021/callinfo_092821.asp>.

Multiple studies suggest that the Delta variant is worst among those unimmunized against CoViD-19.

The Food and Drug Administration (FDA), CDC, and Advisory Committee on Immunization Practices (ACIP, which makes the official recommendations on immunizations in the United States) have held meetings to review the data in the past two weeks. The weak strength of the data have led to disagreement among panel members about immunization policy recommendations. The consensus is that a third shot *should* be given to recipients of the Pfizer/BioNTech vaccine, at least six months after finishing their

[continued on next page](#)

Booster Recommendations

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primary vaccine series, if they are 65 years and older (this was the group likeliest to show waning immunity), residents of long-term care settings 18 years and older (because of the high risk of transmission of infection), and people aged 50-64 years with medical conditions such as cancer, chronic kidney disease, chronic obstructive pulmonary disease (COPD), diabetes mellitus, congestive heart failure, coronary artery disease, cardiomyopathies, obesity, pregnancy, and recent pregnancy (because they are at increased risk of poor outcomes if they get CoViD-19).

FDA, CDC, and ACIP have suggested that a third shot *may* be given to some recipients of the Pfizer/BioNTech vaccine where the evidence of benefit is not as clear, including people aged 18-49 with the above medical conditions, and people aged 18-64 with occupational or institutional risks for exposure and transmission (first responders including healthcare workers, firefighters, police, and congregate care staff; education staff such as teachers, support staff, daycare workers; food and agriculture workers; manufacturing workers; corrections workers; U.S. Postal Service workers; public transit workers; grocery store workers; residents

of correctional facilities and homeless shelters).

At the moment, there is no recommendation for additional immunization for recipients of the Moderna or Janssen/

At the moment, there is no recommendation for additional immunization for recipients of the Moderna or Janssen/Johnson and Johnson vaccines, as the data we have suggest that their protection has not waned significantly. However, more data are being collected, and recommendations may change as the data are analyzed.

Johnson and Johnson vaccines, as the data we have suggest that their protection has not waned significantly. However, more data are being collected, and recommendations may change as the data are analyzed. Dr. Anthony Fauci commented <<https://www.wbur.org/hereandnow/2021/09/29/anthony-fauci-covid-vaccines>> that data are also being analyzed in patients who received several different types of CoViD-19 vaccines to see if one strategy may work better to prevent transmission and disease, and additional recommendations may be forthcoming on the idea of mixing and matching vaccines as well.

The CDC maintains and regularly updates pages with information about CoViD-19 and immunization. Check <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/booster-shot.html> for

updates on booster recommendations and <https://www.cdc.gov/coronavirus/2019-ncov/science/science-and-research.html> for regularly updated science briefs with deep dives on the data on vaccines, transmission, and variants.

MIT Medical maintains an excellent blog on CoViD-19 at <https://medical.mit.edu/covid-19-updates> with thoughtful articles on masks, traveling, immunizations, variants, and much more. MIT Medical's recommendations will remain consistent with ACIP recommendations as they are updated. ■

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Mens, Manus et Cor

James H. Williams, Jr.

IN 2004, TO HONOR retiring MIT President Charles M. Vest, I published an *MIT Faculty Newsletter* (FNL) article entitled “[A Formal Recommendation to the MIT Corporation](#).” To celebrate the transcendent Vest presidency, I proposed a new MIT motto: “Mens, Manus et Cor” (Latin for “Mind, Hand and Heart”).

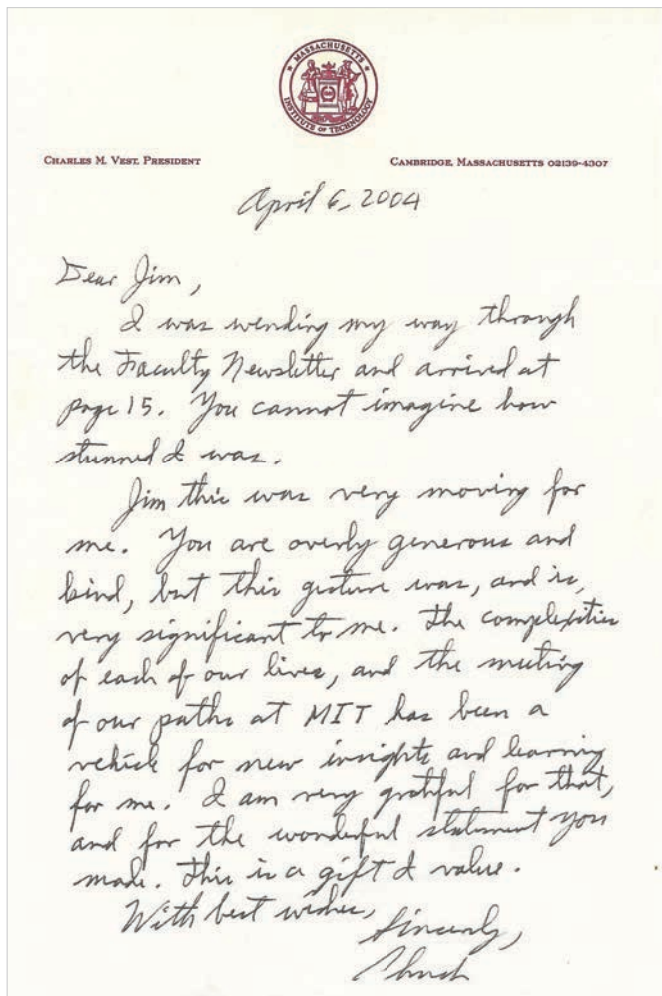
President Vest replied to me with a hand-written, deeply generous note of gratitude (see below), followed by an emotionally stunning telephone call.

In 1970, by virtue of my initial faculty appointment, I had become the only native-born black American faculty member in the MIT School of Engineering. In 1990, the first year of the Charles M. Vest presidency and by means of a few comings and goings, I would soon become the only native-born black American faculty member in the *combined* MIT School of Engineering and MIT School of Science.

My 2004 article was a heartfelt proposal, with rights I have sought to protect and goals I have sought to pursue, including through visits to a former MIT Corporation member, dozens of emails, meetings with faculty and *MIT News* staff, and repeated citations, such as the dedication of one of my recent textbooks, *Fundamentals of Applied Dynamics*. My commitment to the priority of my proposed motto has been driven not by any benefit of my own but rather by my desire to honor a rare former leader of MIT.

Within a year of publication, my proposed motto was being widely quoted, misappropriated, and even plagiarized, notably by MIT faculty in various appearances and by MIT administrators and invited guest speakers at MIT’s annual commencement. (Except for a lone casual acknowledgment coaxed by a thoughtful former Head of Mechanical Engineering, those numerous uses and misuses were *invariably, indeed doggedly, without a formal reference.*) Very notably, by omitting a proper reference for the motto, the user/misuser was also omitting and undermining my objective to honor former President Vest. My 2004 article was being plundered so frequently that the *MIT Faculty Newsletter* Editorial Board, in its September/October 2013 edition, chose to publish a front page note to remind the MIT community of the motto’s origin and my designated goals for the motto.

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Letter From Charles M. Vest

Mens, Manus et Cor
Williams, from preceding page

Plagiarism [pley-juh-riz-uhm]; noun:
An act or instance of using or closely imitating the language and thoughts of another author without authorization and the representation of that author's work as one's own, as by not crediting the original author.
[[Dictionary.com](https://www.dictionary.com)]

Notwithstanding the 2013 FNL statement, the déclassé trickery persisted, especially at MIT Commencements – some violations of which have been deleted from the Internet. I am choosing not to cite specific examples because of likely major embarrassment to individuals and

especially the Institute I cherish. Still, the totality of this misuse is a ghastly specimen of diminished academic integrity.

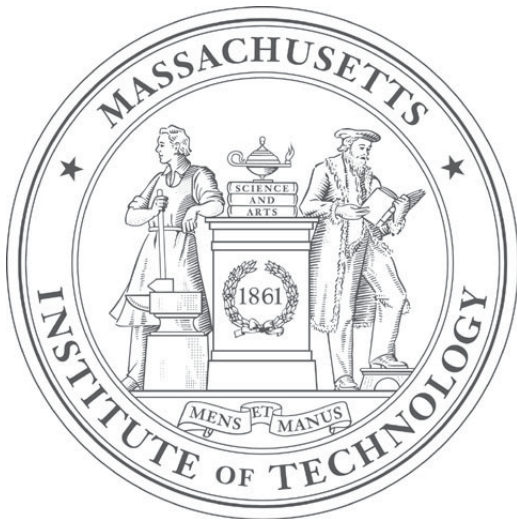
I have endured more than *15 years* of this sick and dirty business, with obstacle after obstacle strewn along my pathway. An institution that differentially appraises the contributions of its members – even to the extent of committing coordinated theft – will increasingly radicalize those members.

Extending the current MIT motto beyond “Mens et Manus” has been a protracted and often contentious endeavor. Nonetheless I believe President L. Rafael Reif has graciously led with mind, hand and heart throughout his decades of leadership at multiple administrative

levels within the Institute. On June 2, 2020, during the MIT Community Vigil, President Reif outlined his impassioned vision of a more DEI-based MIT, and on July 1, 2020 in his monumental email “Addressing Systemic Racism at MIT,” he laid the foundations of MIT’s historic opportunity to seize and implement his ardent vision.

Thus, I implore the MIT Corporation to formally amend the MIT motto in honor of Charles M. Vest and L. Rafael Reif to “Mens, Manus et Cor,” at which time, the motto that I created in 2004 will belong to us all. ■

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MIT's Official Seal



MIT's Future Seal?

Radius: Bringing Ethics to the Center of Science and Technology

“WE ARE AT THE POINT of being overwhelmed by the very bulk of our accumulated information, bewildered by the diversity of our manufactures. And we are failing today to assess clearly the implications of these developments for tomorrow.” Julius Stratton, President of MIT, Commencement Address, 1964

How would automation affect the workplace? How would access to computers shape our minds and our social life? Would we be able to keep up with the rapid changes caused by new technologies? In 1964, as now, MIT faculty were concerned about the effects of their discoveries on the world.

The anxieties seem very modern. Their response seems very 1964. Over 40 faculty members and administrators from across the Institute came together for a monthly seminar on Technology and Culture, convened by the Episcopal Chaplain, Myron B. (Mike) Bloy, Jr. It was a leisurely affair in the Faculty Club: cocktails at 6:30, dinner at 7:00, followed by a presentation and discussion. The first lecture offered a historical example, describing the U.S. Navy’s resistance to using steam-powered ships in the years after the Civil War. Over the next two years, the faculty explored the effects of current technology on politics, markets, the natural environment, art, human values, and the personalities of MIT students.

Chaplain Mike Bloy thought the seminar was a great first step, but he wanted MIT to go further and create a research center devoted to the study of technology and culture. He was not alone. One of the founding members of the

Seminar, Professor Jerome Wiesner, Dean of the School of Science, went on to become the President of MIT in 1971. Five years later, he invited Kenneth Keniston to come to MIT and lead a new program in Science, Technology, and Society.

For all that is new with Radius, the program still creates a space for MIT faculty to engage with questions about technology and culture.

The Technology and Culture Seminar continued to play an active role in bringing the MIT community together to reflect on ethical questions. It became the Technology and Culture Forum in the 1970s, opening up meaningful conversations with students in the midst of the protests against MIT’s role in developing military technology. It responded to emerging questions, including environmental sustainability, economic justice, new biotechnologies, and threats to privacy, by creating public programs and mentoring student activists.

At its 50th anniversary in 2014, the program was rebranded as Radius, with the motto “Bringing ethics to the center of science and technology.” Radius is coordinated by Thea Keith-Lucas, now Interim Chaplain to the Institute and Associate Dean of the Office of Religious, Spiritual, and Ethical Life. Chaplain Keith-Lucas says, “Radius is one of the key ways that our department lives up to its name as a home for ethical life at MIT.”

Since 2009, Patricia-Maria (Trish) Weinmann, Associate Coordinator of Radius, has partnered with the Department of Philosophy to offer applied ethics courses for undergraduates. With an exciting lineup of guest speakers

and discussions over dinner, these William R. and Betsy P. Leitch Ethics Seminars reflect the warm hospitality and lively conversation of those first faculty meetings. Sally Haslanger (Ford Professor of Philosophy and Women’s and Gender Studies) says: “Radius has given me an opportunity to connect with students who are keen to critically examine their own values and to think hard about how to integrate them in their lives. It is especially exciting to see the students engage with professionals – academics and non-academics – who, themselves, are similarly committed, and although a few steps ahead on the journey, are nevertheless open to exploring with us how to live meaningfully.”

For all that is new with Radius, the program still creates a space for MIT faculty to engage with questions about technology and culture. Professor Jonathan King (Biology, Emeritus) says, “MIT students, staff, and faculty are constantly confronted by pressing national

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Radius

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issues that are outside the relatively narrow compass of academic departments. For decades MIT Radius has explored these issues in public forums: patenting human genes, the invasion of Iraq, the Pentagon budget, the demise of democracy, fossil fuel divestment, and the need for nuclear disarmament, to name but a few. This contribution to the civic and intellectual life of the Institute community is essential to our efforts to maintain MIT as an environment supporting scientific, social, and economic progress.” Ruth Perry (Ann Fetter Friedlaender Professor of Humanities, Emeritus) adds, “Radius can always be counted on to offer serious factual analyses of the critical issues of the day.”

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Professors Haslanger, King, and Perry are three of the nine faculty members who join MIT alumni, students, and administrators on the Radius Steering Committee. The Radius team welcomes new ideas for partnerships and programs with faculty from across the Institute.

Please check out Radius' current programs at radius.mit.edu. You can reach the Radius team, Thea Keith-Lucas and Trish Weinmann, at radius@mit.edu. ■

Reflections On edX

John Guttag

THE IMPENDING CHANGES TO edX prompted me to reflect on my own experience.

I helped develop one of the first courses offered by edX, 6.00x. Over the years the course morphed into two separate courses, and was rebuilt twice. Developing and offering these courses was one of the better experiences in my academic career. It's easy to get caught up in the extraordinarily large number of learners who successfully completed the courses, and the even larger number of learners who sampled them. But my real source of satisfaction came from two other sources.

First, were the individual learners who took the time to write to thank me and my colleagues (Eric Grimson and Ana Bell) for the positive impact that taking these courses had on their lives. The emails from elderly people who spoke of

the thrill of learning to program (and then impressing their grandchildren), from college dropouts who were inspired to go back to school, from people stuck in jobs they didn't like who felt empowered to pursue a new career; inspired us to keep offering and updating these courses.

Second, were the changes that our edX experience led us to make in our on-campus offerings. After splitting the edX subject in two, we observed that the added flexibility it offered learners was appreciated. This led us to split the semester-long MIT subject 6.00 into two half-term subjects, 6.0001 and 6.0002. Many on-campus students take only one of these, and many students who take both take them in different terms. Our experiences with the edX subjects also led us to introduce multiple pedagogical changes into these residential offerings.

Like many who consider our edX offerings an important component of our professional activities, I was surprised to learn that edX was being sold to a for-profit company. It remains to be seen how this will work out in the long run. However, I am optimistic. Many years ago, MIT provided dialup Internet service, because there were no viable commercial providers. When it became easy and economical to acquire home Internet service from commercial sources, MIT got out of the business. The analogy is far from perfect, but perhaps online education is now at that stage where MIT doesn't need to be involved in providing the technological or distribution infrastructure, and can focus on creating content. ■

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Welcome Back: Library Locations Reopen for Fall 2021

Chris Bourg

FROM MARCH 2020 THROUGH August 2021, the dedicated staff of the MIT Libraries were able to provide remote services and ongoing access to both digital and tangible content to support the research, teaching, and learning needs of the MIT community. With the fall return of more students, faculty, and staff to campus, the Libraries opened up our physical spaces to the MIT community on August 23. Library spaces play a critical role in the life of MIT and its campus, and we are happy to welcome MIT back to the physical libraries.

While the MIT Libraries have always provided exceptional remote services and access to digital content, we honed and expanded those skills and services over the past 18 months. We also know that there are library experiences at MIT that cannot be meaningfully replicated digitally or online. A core principle of our [vision for libraries](#) in a digital-first future is that we aim to make our portfolio of physical collections, services, and spaces of exceptional quality and singular relevance to Institute research and teaching. The newly renovated Hayden Library expresses and supports that vision through a design that is beautiful, flexible, and inspiring.

Here is a brief overview of current MIT Libraries' remote and in-person services; more details are available on our website at libraries.mit.edu.

Library Access

All library locations are open to the MIT community in Covid Pass, and Institute policies regarding indoor spaces will apply for all spaces. The Distinctive Collections

Reading Room is open by appointment only, and virtual consultations are also available. With the reopening of Hayden Library, we're pleased to be able to offer significantly more campus study space available 24/7 to MIT ID holders.

Hayden Library and Building 14 Courtyard

We invite all MIT community members to explore these newly renovated spaces, conceived as an "intellectual crossroads" for the whole community. In Hayden Library, you'll find natural light and expansive views, a variety of study spaces, a dedicated event and teaching space, curated collections displays, and a new cafe. The redesigned spaces set a new standard for healthy and inclusive campus space and were designed with the well-being of our community and sustainability in mind. We hope the new Hayden will inspire new ways of using the Libraries and our collections and will be a catalyst for new ways of connecting with library experts and with each other.

The courtyard in the middle of Building 14 has also been renovated, with beautiful new landscaping, a new curved bench, and an accessible pathway and entrances. A covered indoor "porch" between the Lewis Music Library and the courtyard provides additional casual seating options, as well as a new entrance to Hayden Library.

Discovering, Borrowing, and Requesting

Discover our rich resources with both open stacks access for browsing and a [new](#)

[library search platform](#) launched in July. Our new search interface provides our community with a more intuitive and seamless experience searching and accessing our collections. Our users will appreciate new features such as content alerts, advanced search functions, and the ability to search and request materials beyond MIT's collections and subscriptions.

Course Support and Expert Help

Whether you come to Hayden's new Consultation Suite, visit the Distinctive Collections Reading Room, or schedule a Zoom, our staff is here to help – research consultations are available in person or virtually, and the answer to a quick question is just an email or chat away with Ask Us (libraries.mit.edu/ask). The Libraries will also offer a full course reserves service for the fall. The service includes access to article and chapter scans through our Scan & Deliver service, which instructors may post to their Canvas site for student use, as well as access to numerous e-books and databases. Additionally, print reserves for required textbooks are available.

Like all of you, we at the MIT Libraries have learned to respond quickly to changing circumstances so that we can continue to prioritize community safety and the MIT mission. Please check the [MIT Libraries website](#) for changes and updates, and don't hesitate to [ask us](#) if you have any questions about how we can partner with you in your research or teaching. ■

Chris Bourg is Director of Libraries
(cbourg@mit.edu).

Nominate a Colleague as a MacVicar Faculty Fellow

PROVOST MARTIN SCHMIDT IS calling for nominations of faculty as 2022 MacVicar Faculty Fellows.

The MacVicar Faculty Fellows Program recognizes MIT faculty who have made exemplary and sustained contributions to the teaching and education of undergraduates at the Institute. Together, the Fellows form a small academy of scholars committed to exceptional instruction and innovation in education.

MacVicar Faculty Fellows are selected through a competitive nomination process, appointed for 10-year terms, and receive \$10,000 per year of discretionary funds for educational activities, research, travel, and other scholarly expenses.

The MacVicar Program honors the life and contributions of the late Margaret

MacVicar, Professor of Physical Science and Dean for Undergraduate Education.

Nominations should include:

- a primary nomination letter detailing the contributions of the nominee to undergraduate education,
- three to six supporting letters from faculty colleagues, including one from his or her department head if the primary letter is not from the department head,
- three to six supporting letters from present or former undergraduate students, with specific comments about the nominee's undergraduate teaching,

- the nominee's curriculum vitae,
- a list of undergraduate subjects, including the number of students taught, and
- a summary of available student evaluation results for the nominee.

For more information, visit registrar.mit.edu/macvicar or contact the Registrar's Office, Curriculum and Faculty Support at x3-9763 or macvicarprogram@mit.edu.

Nominations are due by Friday, November 19, 2021.

Request for Proposals for Innovative Curricular Projects The Alex and Brit d'Arbeloff Fund for Excellence in Education

THE OFFICE OF THE VICE Chancellor is soliciting proposals to support larger-scale ambitious projects designed to strengthen MIT undergraduate education and enrich the academic experience of our undergraduates. Proposals can be focused at any level of undergraduate education; priority will be given to projects that:

- Enhance the first-year academic experience, especially innovating in the General Institute Requirements (GIRs).

- Integrate inclusive pedagogies or develop creative subject material to address issues of diversity, equity, and inclusion.

- Catalyze long-term, sustainable education improvements inspired by good practices developed in response to the pandemic and remote teaching.

Projects that advance relevant recommendations made by the Task Force 2021 and Beyond and/or transcend specific departmental curricula are encouraged.

Necessary forms, instructions, and descriptions of previously funded projects can be found on the Fund [website](#). If you have questions about applying for a grant, please contact the Registrar's Office, Curriculum and Faculty Support at darbeloff-fund@mit.edu.

Proposals are due by Friday, October 29, 2021.