

Provost's Committee on the Future of the American University Preliminary Framework on Research and Scholarship

Subcommittee

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Background: Why Research and Scholarship?

Research and scholarship as a core mission of the university

The foundation, size, and stated purposes of the American university have evolved over time. However, one common theme throughout has been intellectual development, or as John Henry Newman put it, the “enlargement of the mind.”¹ The first president of Johns Hopkins University, Daniel Gilman, stated that universities were responsible not only for disseminating existing knowledge but also “extending the realm of knowledge.” This sentiment, shared by Cornell University’s first president, Andrew Dickson White, was instrumental in shaping the American university’s core mission of research. From Humboldt University founder Wilhelm von Humboldt in the 19th century, whose ideas Gilman, White, and others leaned on heavily, to SUNY Chancellor Ernest Boyer in the 21st century, there has been a strong ethos in the American university that research and teaching are two sides of the same intellectual coin. White also emphasized that scholarship is not solely for personal curiosity and fulfillment, but to “bless the nation,” or, put in another way, promote the public good. In the 1963 book *The Uses of the University*, UC Berkeley Chancellor Clark Kerr reiterated that the university is not only a “hub for knowledge production” but also a “prime instrument of national purpose,” contributing to “economic and social growth” — a claim for which there is empirical evidence.² In other words, research and scholarship are a core mission of the university not only because they advance a long-standing goal of higher education — intellectual development — but also because they fuel and strengthen the core missions of teaching/education and public impact.

Research in the public interest

Not long after the meteoric rise of the research mission in the American university, particularly post-World War II, questions surfaced (even from within the academy) about whether universities should focus so much on the public interest. Harvard historian Howard Mumford Jones reflected in *The Meaning of a University* that “goodwill is one of the obscuring forces in academic life.” In other words, Jones believed universities may be diluting their efforts by worrying too much about being useful to society, and that they should refocus their mission on rigorous fundamental research. This sentiment is shared by some commentators today. It is important to note, though, that over the last century and a half, what has allowed intellectual inquiry, discovery, and creative practice to thrive so uniquely and exquisitely in the American research university is an extraordinary partnership with the federal government on behalf of society. Specifically, the government’s support, from tax advantages, research dollars, and tuition aid, is predicated on universities serving the public interest. Therefore, university research (especially that which is government-funded) is undeniably and inextricably linked to promoting the public good. Cornell’s founding as New York’s land-grant institution underscores its pioneering commitment to integrating public impact and engagement with education and research, which is well stated in the motto of Cornell Cooperative Extension: “putting knowledge to work.” It was partly for this reason that the Williams College

¹ Newman, J.H., 1852. The idea of a university.

² Valero, A. and Van Reenen, J., 2019. The economic impact of universities: Evidence from across the globe. *Economics of education review*, 68, pp.53-67.

historian Frederick Rudolph referred to Cornell as the “first American University.”³ Research in the public interest is a long-standing ethos of universities and is particularly woven into Cornell’s DNA.

Challenges Facing the Research and Scholarship Mission

This is a highly consequential moment of great uncertainty for the research and scholarship mission in American universities. The [unprecedented pace of technological change](#), represented most notably by artificial intelligence (AI), is rapidly altering the research landscape and challenging how we pursue scholarly activities. The recent but notable [shifts in university-government relations](#) have upended decades of relatively stable partnership, which has highlighted anew the historical strength and value of university research in America, but also revealed vulnerabilities, gaps, and fissures in our scholarly enterprise that merit careful consideration. [Public trust in higher education](#), which has been declining for decades, has eroded precipitously in the past decade. Although this is part of a decline in trust in public institutions [more broadly](#), there are university-specific concerns. Important questions about cost, transparency, workforce preparation, and other key areas have been well-documented and are covered by the other subcommittees. But what about public trust in research and scholarship specifically?

Public view of science researchers

A [recent Pew survey](#) on science corroborates other reports that trust in scientists appears reasonably high, especially compared to other institutions and groups. However, a closer look at the data shows that nearly twice as many people distrust scientists compared to even a decade ago. (The response to the COVID pandemic was a dominant acute factor, but there was skepticism of the scientific enterprise [well prior](#), and there is evidence of continued effects post-pandemic.) The study also highlights other troubling trends, including that the majority of Americans think that scientists are poor communicators, condescend to the general public, do not pay attention to society’s values, and are close-minded. Other broader, international surveys (e.g., [Cologna, V., Mede, N.G., Berger, S. et al.](#) in *Nature*) corroborate these findings. Although there appears to be higher trust in some research areas, there is also evidence of public concern about scientists’ openness, transparency, and clarity. A notable recommendation from the authors of that same *Nature* publication was: “[Scientists] could work on being more receptive to feedback and more transparent about their funding and data sources, and invest more effort into communicating about science with the public — which we found to be desired by 83% of respondents. We recommend avoiding top-down communication but encouraging public participation in genuine dialogue, in which scientists seek to consider the insights and needs of other societal actors.”

Disciplinary differences

Most surveys of public trust in research have focused on science, broadly defined. Unfortunately, this obscures discipline-specific declines in trust, especially beyond STEM, such as in the arts and humanities. That said, extensive conversations with stakeholders within and beyond the academy have brought to light certain themes around distrust in the university, including perceptions of bias in research and scholarship priorities in some disciplines, which must be examined carefully.

Not all public groups are the same

Most surveys of trust in university scholarship sample the U.S. as a whole. Sometimes the respondents are stratified by political affiliation, sex, or age, but these basic demographics can miss nuances in how different groups of the public view university research. For example, many rural farmers across New York state often view Cornell very favorably, in large part due to the

³ Rudolph, F., 1977. Curriculum. A History of the American Undergraduate Course of Study Since 1636.

dedicated work of Cornell Cooperative Extension to connect families and communities with university research and researchers. On the other hand, we have learned, through broad and deep conversations with stakeholders who represent (or have access to) a wide variety of communities, of long-standing and widespread misgivings regarding university research and scholarship pertaining to perceptions of “ivory tower condescension,” lack of transparency, dishonesty and fraud in the research enterprise, ideologically driven agendas, and other related issues that directly impinge on trust. Still others may not distrust university research per se, but they increasingly wonder whether universities really need all the money they get from the federal government for research due to large endowments or highly publicized corporate engagements. Finally, it has been noted by experts of higher education such as Nicholas Lemann that even prominent members of the public with significant influence on higher education policy often do not understand the centrality of research to the American university, in particular as it pertains to how it strengthens the educational mission.⁴

Defining core principles of research and scholarship

With the current context in mind, the committee performed a careful study of the research and scholarship mission, including an extensive listening tour. The goal of the next section of this document is to first set the stage with a very brief summary of what we learned about the key challenges and opportunities, and to define the core principles of the research and scholarship mission, which will serve as the bedrock upon which concrete recommendations can be made for the future of the American university.

Setting the Stage: Key Challenges and Opportunities

Below is a brief summary of what the subcommittee learned from extensive study and stakeholder conversations, which collectively informed our work to define the core research and scholarship principles.

Robust research and scholarly enterprise

The scale and breadth of U.S. federal funding for research since World War II has, as noted earlier, been significant. No combination of other existing sources of support can fully match what is at risk if university-government relations deteriorate over the long-term (this will naturally affect some disciplines that are more reliant on federal funding than others). The flip side of that coin, however, is that there is currently no substitute for the American research university in simultaneously producing fundamental discoveries, creative output, and economic and translational impact while training the next generation of scholars and residents/citizens. For example, an analysis from the Federal Reserve Bank of Dallas shows 150–300% return on federal investment in research.⁵ Research universities are committed to deep, fundamental work in which discoveries and breakthroughs are often slow, but the disciplinary knowledge gained lays a critical foundation upon which most applied or translational work depends. Many examples abound, from the research in atomic physics in the early 1900s that paved the way for the development of magnetic resonance imaging (MRI) in the 1970s, to highly specialized, arcane research in mathematics that led to the internet several decades later. Research universities also allow scholars-in-training (at all levels) to be exposed to and to participate in cutting-edge, state-of-the-art knowledge generation and creative endeavors, thereby developing valuable human capital for both personal and societal benefit.

⁴ Lemann, N., 2014. The soul of the research university. *Chronicle of Higher Education*, 28.

⁵ Fieldhouse, A.J. and Mertens, K., 2023. *The returns to government R&D: Evidence from US appropriations shocks*. Federal Reserve Bank of Dallas, Research Department.

Funding constraints imposed by shifts in university-government relations may shrink the research enterprise at some research universities, at least temporarily. Universities should strive to direct this shift proactively, so that the process more closely resembles pruning than it does indiscriminate cutting. Proper pruning removes plant parts, even healthy parts, to improve the long-term health of the central organism. Indiscriminate cutting driven by external forces is unlikely to have a salutary effect on research universities and has the potential to do significant long-term harm from both the smaller scale of the research enterprise and the limited directions in which it continues to prosper. Taking the driver's seat in this manner will require that research universities diversify funding streams for greater stability, and it may also require commitment of internal funds.

As universities diversify external funding sources by leaning into state, philanthropic, corporate, and other private partnership opportunities where possible, universities still require robust federal investment, especially for fundamental research, which often does not have an immediate payoff. None of these alternative categories of funding are without limitations and challenges. For example, recent research shows that when federal funding for university research is reduced and private corporate funding partially replaces it, the resulting scientific innovations are less accessible to the public and have smaller positive spillovers.⁶ That said, over-reliance on any one source (whether it be the federal government in the sciences or well-resourced foundations in the humanities) leaves us vulnerable and less empowered to define our own priorities.

The second tool to move from indiscriminate cutting to a pruning model — committing internal funds — also comes with some risk. External funding creates accountability, and it generates competitive pressure that helps reduce insularity and pushes researchers to ask compelling questions. It may be difficult to replicate this pressure within internal competitive funding opportunities. However, to the extent that the university can raise unrestricted funds and maintain or increase endowment returns, the establishment of internal, competitive funding sources may sustain research programs in areas where external support wanes and the university identifies high institutional and social priorities, giving university leadership the capacity to foster the desired pace and directions of growth in the research enterprise. Related to this, the university must grapple with the sustainable scale of the research enterprise, and how to strike a balance between offering broad individual research freedom on the one hand and team-oriented synergy that leans into areas of institutional strength on the other hand.

Other major areas where there is broad agreement about opportunities for meaningful and even transformative reform include sustainable models of publishing and peer review more generally; deeper integration of our research mission with our undergraduate educational mission; graduate education and training in research in a rapidly changing landscape of student and postdoctoral fellow availability, international relations, and job opportunities; and recognizing and rewarding societal impact through “research-in-action” outreach, engagement, and innovation for the public good.

Research and scholarship for the public good

Cornell has a long-standing commitment to positive public impact through its research — it is the only Ivy League institution that is also a land-grant university. Cornell Cooperative Extension is in every county of New York State (putting “knowledge to work”). The university has four contract

⁶ Babina, T., He, A.X., Howell, S.T., Perlman, E.R. and Staudt, J., 2023. Cutting the innovation engine: how federal funding shocks affect university patenting, entrepreneurship, and publications. *The Quarterly Journal of Economics*, 138(2), pp.895-954.

colleges that have direct partnerships with New York State, but it is important to note that the commitment to public engagement, derived originally from the land-grant mission, is intended to pervade across *all* colleges. There are many different examples across the university of Cornell's commitment to public impact. That said, while some public groups view Cornell research very favorably, especially when they are direct recipients of the benefit of the research findings, many others do not (also addressed earlier in this document).

Nuanced analysis of broad survey data and extensive discussions with students, staff, faculty, alumni, parents of current students, trustees, journalists, policymakers, think tanks, and other stakeholders indicates that the public view of university research and researchers is characterized by some positive perceptions, particularly pertaining to intelligence and teamwork, and also suffers from a number of negative perceptions. The latter appear to stem from the following four issues:

- Relevance/Merit: What is the benefit of the research to the public?
- Accountability: Is there bias in the areas of scholarship prioritized and what are the social/ethical implications of the research?
- Transparency/Integrity: How are research fraud and waste mitigated?
- Openness and Respect: Is the university research enterprise mindful of and willing to consider societal concerns, values, and priorities?

True public engagement is not simply better messaging; it requires real reciprocity that engenders trust and mutual benefit.

Research and scholarship in the age of AI

Generative AI tools are useful because they draw on the vast store of new knowledge and creative output generated and recorded by human beings (much of which has been produced in universities). Such tools can only grow in value if research and creative enterprise continue into the future. Moreover, the fact that AI tools increase access to what universities produce (e.g., research findings, creative output, teaching materials) only enhances the public value of those outputs. In these ways, the rapid changes brought about by AI have the potential for great synergy with the work of universities, though they also create notable challenges.

The main ways in which AI intersects with research and scholarship are as follows: (a) using AI for domain-specific research; (b) conducting research on how the rise of AI affects research and training; (c) developing and innovating with AI; and (d) training in AI literacy, governance, ethics, and responsible use (this cuts across the education, research, and public engagement missions). The Cornell AI Initiative (CAI) is leading the charge in all these areas, including developing training modules for the campus community. The major questions with respect to these modules are when and how to encourage or require training, how to keep them up to date as AI advances rapidly, and how to extend it beyond students and faculty to staff, alumni, and the broader community. Though there is disagreement across stakeholders about whether AI has a net positive effect on research, there is widespread agreement on the critical need to promote human connections, interactions, and creativity in our scholarly activities. The CAI has initiated the AI Innovation Lab and AI Office Hours to help connect AI experts with domain-specific experts to promote novel and responsible uses of AI for a wide-variety of research efforts spanning the humanities, social sciences, engineering, and medicine.

On the one hand, there are promising and exciting developments in the use of AI across many disciplines, including but not limited to art and design, paleography, architecture, sustainability, business, agriculture, nutrition, sciences, and medicine. For example, AI is already fueling exciting

progress in discovering drug combinations for animal and human clinical trials, modeling climate scenarios for effective energy policy, or restoring ancient art and manuscripts for cultural heritage preservation. On the other hand, there are also notable ethical questions, including access disparity, privacy concerns, intellectual theft, undue influence of the private sector, and energy use and environmental impact. There are also significant tension points. For example, generative AI has been a boon for non-native English speakers in terms of research communication, but it is also leading to a rapid proliferation of completely AI-generated research content (termed “AI slop”), which is causing a crisis in some disciplines. AI is also at the center of a tension between competitiveness and research security — American universities want to recruit the best minds from across the globe to remain leaders rather than followers in the AI space, but this pushes up against significant geopolitical concerns surrounding data security. Another pressure point is at the interface of research efficiency and student training.

Core Principles

Faculty teaching, scholarship, public engagement, and entrepreneurial activities are increasingly separated and siloed due to the enormous demands imposed by each professional activity. The culture created by university incentive structures and disciplinary and market pressures privilege scholarship; but the real strength of the university is the collaboration and integration across those, which elevates the quality of each of them.

Learning through discovery and creativity are at the heart of the university.

- Human interactions and creativity must be prioritized: While technology such as AI should be embraced for its benefits to research and education, in-person human interactions that spur collaboration, creativity, and lifelong learning must be considered essential components of discovery.
- The university drives transformation through both disciplinary focus and trans-disciplinarity: It is critical to *both* maintain robust individual disciplines and invest in endeavors that transcend traditional academic boundaries to cultivate judgment, to advance knowledge generation, and to put knowledge into action.
- Fundamental research, creative practice, and applied innovation are mutually reinforcing and must be well-protected: The university must develop nimble structures and mechanisms to buffer these different, but integrated aspects of the scholarship ecosystem against unpredictable shocks. Also, growth must be weighed against focus.

Scholarship must be anchored in rigor, accountability, and academic responsibility.

- Scholarship must be both open and rigorous: The university should be an environment that is open to a wide variety of scholarly topics, research questions, perspectives, and methods, which must be rigorous and evidence based. In turn, rigorous research depends upon long-term security that allows open inquiry.
- Scholarly integrity and academic civics are of paramount importance: The ethical underpinning and trustworthiness of research and creative activities are critical for appropriate stewardship of resources, meaningful progress, and maximal educational and public impact. Also, with tenure (or long-time security of some sort) comes not only the rights of research freedom but also the responsibilities of university citizenship.
- Mentorship and teaching are core values of university research: Research in the university setting is distinguished in large part by the commitment to training and developing the next generation of scholars. Scholarship advances the teaching mission; the research enterprise must be integrated deeply into undergraduate, graduate, and professional education.

Public engagement is a pillar of the research and scholarship enterprise.

- Public trust in scholarship matters: Public engagement is evidenced by a serious commitment to bidirectional exchange of information, values, and expertise with the local and wider community. This reciprocal relationship can help shape the questions scholars ask and how discoveries are translated.
- Public engagement and impact are deeply and broadly valued: Public engagement must be promoted and recognized through prominent and regular opportunities for scholars and faculty members across all colleges. Tenure and promotion expectations may need to be reevaluated to appropriately value public engagement and impact.
- Commitment to our local and global community is a crucial part of our identity: The original land-grant mission, which was intended to advance educational and economic opportunities in New York state, animates our commitment today to broad societal engagement in New York as well as across the country and world, in part through our research, innovation, and entrepreneurship.

Speculative Scenarios: Alternative Models of the Future of Faculty Life

The scenarios outlined below are meant to offer possibilities for the future of faculty life in the university, especially as it pertains to how research and scholarship relate to the other university missions. They cover some but not all the core principles, and they are purposefully designed to be somewhat competing in order to spur detailed and productive discussion about the relative strengths of different ways to envision achieving the core principles. **These scenarios are not recommendations and do not imply support from the committee.** Rather, they are illustrations of the wide range of options that these principles could open in practice and a way to play devil's advocate around some of the concerns articulated both inside and outside of Cornell.

Scenario 1: Integrated Model — revamped incentives in the university to promote an integrated faculty life with discovery and creative activity still at the center

The tenure-track faculty position is pictured as an integrated three-spoked wheel — research and scholarship at the center, *active/ly* influencing teaching, university/disciplinary service, and public engagement. In units and disciplines where the demands on the quantity of individual research output are increasingly untenable, evaluations will be re-centered to heavily emphasize quality over quantity. More time could be put toward team-oriented transdisciplinary research if desired, as well as three other critical aspects of integrated faculty life: teaching, university and disciplinary service, and public impact and community engagement. Tenure and promotion expectations would be redefined to appropriately value public engagement and impact.

This model of the university strongly leans into the communitarian ethos (an emphasis on the common good) and also acknowledges longer-term realities of reduced research funding and a smaller pipeline of research trainee-scholars. There will remain a strong incentive to develop a robust research program that advances discovery, while also raising the quality of teaching for students, putting knowledge into action for societal impact, and balancing individual research agendas with broader university goals. Public engagement and impact could involve a very wide range of efforts including but not limited to K-12 outreach, community listening sessions, public lectures, research communication through op-eds or podcasts, community-engaged learning, entrepreneurial endeavors, and policy development (many or all of these can prominently include undergraduate and graduate students). The vision is one in which freedom of inquiry remains valued and prized, but faculty are also less “lone rangers” and instead intimately part of something larger than their own personal research goals.

Scenario 2: Distributed Model — different tenurable faculty tracks that separately focus on research and scholarship, teaching, and public impact and community engagement

Separate faculty tracks are created in which the expectations for tenure are defined separately according to each track. Each track will focus 80%+ effort on research, teaching, or public engagement. Each department and college will ensure that they have a specified proportion of faculty in each track. In this [distributed](#) model, all core missions of the university are addressed by every unit, but not by the same individuals. This allows each faculty member to focus on one primary area of strength and interest, with modest involvement as time permits in other areas of university life. Individually, faculty efforts are not spread across different missions, but collectively all missions are accomplished. The vision is that each track will be held in equal esteem by the university but will be evaluated for tenure and promotion completely differently and separately. Specifically, tenure and promotion evaluations for those on the research track will be very similar to what is done at the present time, whereas new processes and sets of expectations will be established for those on the other tracks, including reduced focus on quantifiable metrics and more emphasis on pedagogical innovation, teaching evaluations, and/or public impact assessments.

This model of the university holds up the key missions but through a “sum of the parts” approach rather than an integrated, communitarian ethos. It allows faculty to lean into their respective strengths. There will likely be fewer research groups, as there will still be a need to accommodate the longer-term realities of reduced research funding and workforce as well as university costs associated with increasing the quantity of faculty in the teaching and engagement tracks. Interactions across the tracks will be encouraged and facilitated to create opportunities for the emergence of natural connections that could strengthen university life.

Scenario 3: Phased Model — tenure-track faculty start out research-heavy and transition later in their career to more teaching or public impact focus

The first part of a tenure-track faculty member’s career (e.g., approximately 20 years) could be focused on research and scholarship. Following that phase, interested faculty would become eligible **but not required** to consider transitioning to a different phase of their post-tenure career in which they focus much more on teaching and/or public engagement. In this phased model, tenure and promotion evaluations during the first career phase will be conducted very similarly to the way they are now, and post-tenure performance evaluations after the first phase will require a different approach tailored to teaching and/or public engagement. Faculty interested in this transition will be provided with the training and support needed.

This model of the university is closest to what we do now, but strongly leans into the concept of retooling, upskilling, and refocusing efforts as a career develops. It would also require extending faculty mentoring beyond the tenure decision to mid-career and beyond. This model exemplifies to some extent the lifelong learning ethos that we are hoping to instill in our students — the ability to be nimble and flexible in a new and evolving work landscape. There would likely be as many research groups as there are now, but the average shelf-lives may be shorter. This model affords the opportunity for interested tenured members of the research community to shift their contributions more toward other related missions of the university.

Finally, though not explicitly described here, there is also a model that mostly maintains status quo, with changes more focused on hiring staff and establishing dedicated offices to advance the intersection of research and public engagement, as well as research and teaching.

Example Next Steps

Below are examples (not intended as a comprehensive list) of concrete first steps that could be taken to instantiate the core principles and increase the degree to which the university takes a proactive, intentional approach to fostering the health and success of the research and scholarship enterprise:

Create nimble structures and mechanisms to promote the entire scholarship ecosystem.

- **Establish “creativity hubs” for bold ideas and initiatives that advance fundamental knowledge, encourage novel human expressions, and/or solve pressing and emerging societal challenges.** Projects could span multiple fields of study, including the arts, humanities, social sciences, natural sciences, and engineering. Seed money should be substantial. Additional funds would be made available if external grants were procured. Professional development can be provided for those transitioning from more independent work. This concept is related, but significantly more expansive in disciplinary scope, to the discovery and commercialization engines idea proposed by Cornell faculty [in this 2021 article](#).
- **Develop a center for innovative and responsible use of AI, in coordination with a new unified computing infrastructure.** A centralized unit on campus with robust expert and administrative support would help to connect AI experts with domain-specific experts to promote novel and responsible uses of AI for a wide variety of research efforts spanning the arts, humanities, social sciences, life and physical sciences, engineering, and veterinary and human medicine. This center would provide training in AI use as well as resources, workshops, and panel discussions on topics ranging from exciting and promising uses of AI on campus to important considerations regarding AI risks, governance, and ethics. This idea builds on the new Cornell AI Initiative programs including the AI Innovation Lab, AI Innovation Hub, and AI Office Hours. It could also be developed collaboratively among research universities in a consortium. Development of an integrated and broadly accessible AI center will require a unified computational ecosystem that is forward-looking to support the rapidly growing scale of data-driven research. This infrastructure should include data processing, data storage, dissemination, analysis visualization tools, security, and AI tools. The current model of siloed systems, such as standalone domain-specific platforms, limits scalability, collaboration, and the ability to fully leverage emerging technologies such as AI and large-scale data integration. Universities would benefit from an integrated infrastructure developed in close partnership with campus-wide computing leaders. A coordinated approach that bridges multiple domains of expertise with shared high-performance computing, scalable storage, and next-gen AI capabilities will better position universities to support collaborative, data-intensive research and scholarship over the next decades.
- **Establish a large research and innovation foundation operating on dedicated investment vehicles.** A prominent example of this is the Wisconsin Alumni Research Foundation ([WARF](#)), which manages an investment portfolio to promote research, discovery, technology development, and commercialization. This model would allow research labs to be supported by the foundation on the merit of individual or collaborative proposals and would not preclude grant applications to other agencies and sources (federal, state, independent foundation, industry, or otherwise).
- **Establish structures that empower coordination across colleges to achieve shared goals.** This encompasses everything from normalizing cross-unit collaboration on hiring to enhancing centralized shared resource centers to drive discovery and innovation. The former includes cross-college hiring, cluster hiring, and cooperative resource allocation (e.g., start-up funds). The latter includes streamlining approaches for determining what

technologies are most critical for the university to invest in, improving operational efficiency, and creating mechanisms for effective sharing and coordination across individual investigators, departments, and colleges. Additional ideas include centralized support for new technology development and training and education for students.

Support, incentivize, and integrate public engagement.

- **Create a central fund that seeks nominations of researchers from every college for a public engagement fellow (e.g., Sagan Fellow).** Every year, multiple named fellowships would be awarded across the university, achieving broad representation among colleges to create a diverse annual cohort. The fellowship would be an in-house sabbatical of sorts during which a fellow would dedicate a specific amount of time to developing and implementing public engagement projects (e.g., science and faith events in congregations around the country, research and culture op-ed series in popular venues, podcasts on various outlets on topics of public interest, etc.). The cohort of fellows would meet together quarterly to share ideas about their work, cross-fertilizing their plans and activities. (This example builds on an original idea from Karl Lewis, assistant professor of biomedical engineering in Cornell's Nancy E. and Peter C. Meinig School of Biomedical Engineering, and expands on the recent establishment of the Susan and Barton Winokur Distinguished Professorship for the Public Understanding of Science and Mathematics in the Cornell University College of Arts and Sciences, currently held by professor Steven Strogatz.)
- **Create a leadership position and/or office in every college focused on fostering public engagement in the scholarly processes and outputs of its faculty and staff.** Some colleges and schools at Cornell already have similar structures. The university could provide central support for these offices but ultimately allow them to instantiate in each college in a manner that makes the most sense.
- **Create a “funding boost” program to incentivize faculty members to develop and sustain public engagement efforts.** Any faculty member who receives an external grant for research will be eligible for additional funds from central university and/or individual colleges if they propose specific public outreach activities centered around their research. If the external award already has a public engagement supplement (e.g., some NSF mechanisms), then the university would provide matching funds into the faculty member's discretionary account.
- **Create a course for graduate students across all disciplines to learn through practicums about public engagement.** Our graduates will take these skills with them into their independent careers and may be future Cornell ambassadors beyond Ithaca. Cornell has significant expertise in this area in several units, which could be tapped for this effort. Relevant content and approaches could also be drawn from the Aldo Leopold Foundation's [Leopold Fellowship in Education and Communication](#) and the [AAAS Science & Technology Policy Fellowships](#) program.

Better connect the public to campus.

- **Create more opportunities to bring members of the local community to campus and engage with the research and creative activity of the faculty and staff.** One possibility could be a monthly “Cornell Day” — each college opens up its doors to the public once a year for a broad tour and showcase. This would be coordinated by a collaboration between the Provost's Office and college deans in terms of cost, scheduling colleges to specific months, and providing bus pick-ups and drop-offs for surrounding community members throughout the county. As another example, the university could host a once-per-month, highly accessible public talk by a faculty or staff member engaged in high-interest research. The idea is inspired by examples like the [Hot Science, Cool Talks](#) series at the University of

Texas at Austin (where the public talk, often drawing hundreds of attendees from young children to retirees, is preceded by a “science fair” in which students host tables with free interactive activities related to their research) and the Mindworks Lab at the University of Chicago Booth School of Business. The public talks could have an online option (both live and recorded) to be more accessible, and invitations could be extended directly to specific classes at local county schools, scout troops, community organizations, and clubs. Undergraduate researchers, graduate students, and postdoctoral fellows could be an important part of both types of showcases. Both ideas build on open houses and interactive experiences that some units currently run.

- **Create an “ask a researcher” platform.** Set up an online platform for community members to submit questions about topics of interest that Cornell researchers help answer. This has advantages over asking AI tools if community members are interested in possibly meeting in person, hosting a public forum for further discussion, and/or learning about Cornell-specific research topics. Some in the public may be ethically against the use of AI for these purposes or may distrust AI more than human researchers.

More deeply integrate research into the undergraduate experience.

- **Expand undergraduate research opportunities through a Provost’s Award for Summer Research.** Annually award a substantial number of undergraduates (on the order of hundreds) a ten-week summer research opportunity from the Provost’s Office with on-campus housing, stipend (to the student), and funds for research (to the faculty member serving as the advisor/mentor). Examining the success of similar programs already ongoing in different colleges may be helpful. Existing programs at Cornell could be expanded substantially.
- **Develop at least one required course in every undergraduate major in which students learn foundational principles of the subject matter, are exposed to cutting-edge research and scholarship from on-campus experts, and study the ethical and societal implications of the work.** State-of-the-art resources and cutting-edge research programs set research universities apart from all other types of educational institutions, but the majority of undergraduates are not highly exposed to this strength. A Cornell education must include instruction in what research is (and what it is not), how discoveries are made, how to distinguish evidence from conjecture, and exposure to the state-of-the-art. We aim to cultivate an informed, inquisitive population that will make evidence-based, responsible, and ethical decisions.

Other Important Issues

What follows below are additional, important issues that arose during the work of the committee that merit special mention and further discussion:

Research integrity

Some disciplines report a [reproducibility crisis](#) in research. Potential factors include the “publish or perish” mentality around tenure and promotion, the rapid proliferation in the last fifteen years of predatory journals, and even data manipulation and [ideologically-driven research design](#). The reporting on a few prominent examples of these phenomena, even if they are rare, can substantially diminish research credibility in the eyes of the public, with long-lasting and devastating effects on public trust in universities. A pervasive culture within the academy in which corrections of published work and publication of null results are looked down upon adds to the problem. In addition to a culture change, we would benefit from mechanisms that reduce biased, flawed, and/or fraudulent research.

One solution is the model of “[adversarial collaboration](#)” (AC), in which opposing theories are rigorously scientifically tested in a team composed of members with contradictory hypotheses. AC works best when scholars hold opposing viewpoints but exhibit shared intellectual humility. Even if AC as defined by Ceci et al. is impractical across all disciplines and projects, the spirit of the approach (slowing down and subjecting your work to constructive critique) could be more systematically adopted by departments and units across campus. In theory, this is what internal seminars, external conferences, and peer review aim to accomplish. But not every study is subject to the same careful scrutiny, and especially amid pressure to publish, irreproducible work still slips through the cracks.

Research funding setup

If federal funds for research remain unreliable in the future, research universities must consider alternative sources of funding to stably maintain the core scholarship goals of discovery, creativity, and innovation. The disciplines that will be most affected are likely those in the sciences that currently have the greatest dependence on federal support. Alternatives for research funding setup are outlined below:

Develop research institutes similar to focused research organizations (FROs). FROs such as Arc Institute or Arcadia Science accrued large sums of money from philanthropy to fund fundamental research: “These institutions do not pretend to operate like traditional academic departments. They present themselves not as collections of individual labs pursuing separate grants but as unified organizations with shared infrastructure, centralized operations, and coherent communication styles.”⁷ This would require rethinking research models in the university (more thematic and team-based), which would also require reimagining department structures, the tenure process, and promotion criteria. This model necessitates a greater emphasis on research communication — so perhaps an office is instituted in every college that is dedicated to helping departments and faculty articulate their ideas, work, and findings in an accessible and appealing way to donors and the broader public (imagine a separate set of faculty and department websites or other media intended primarily for the public including philanthropists and journalists, not other academics).

Establish a large research and innovation foundation operating on dedicated investment vehicles. This model is discussed earlier in this framework.

Set up a consortium of research universities that would create a cross-university “review panel” or “study section” that solicits proposals and makes awards. The idea behind the consortium, as opposed to keeping it completely internal, is that it would prevent insularity and ensure that stale research directions are not supported indefinitely. The Central New York Humanities Corridor, a consortium of eleven institutions, may provide a starting point or a helpful example.

Tenure

Recent reporting indicates that tenure is under fire (for a representative example, see [this recent Chronicle of Higher Education piece](#)). Though labor and employment scholars suggest that tenure comes under attack every couple decades or so, it appears to be under a particularly intense round of criticism right now.

⁷ Gan, J., 2026. The fight for slow and boring research. *Asterisk*. Available at: <https://asteriskmag.com/issues/13/the-fight-for-slow-and-boring-research>

According to some scholars studying tenure,⁸ the reasons for the criticism include but are not limited to the following perceptions: (a) tenure could incentivize bad behavior without consequences, (b) tenure could diminish accountability, and (c) it is unfair for academics to have “jobs for life” when the vast majority (nearly 80%) of individuals in the work force can be terminated “at will.” The evidence that the first two points represent pervasive problems is limited; the vast majority of our tenured colleagues are extraordinarily driven, hard-working, and productive. However, there are notable examples of misuse of tenure, and these must be taken seriously. As for (c), if the tenure system is to continue, a compelling explanation free of academic jargon and perceived self-importance is needed to be convincing to the public of why tenure is both sensible and desirable not only for the faculty but also for the benefit of society.

Tenure as an academic institution is so widespread that estimating its effects on research productivity (quality and quantity) is challenging. Analysis of a 2010 reform of the tenure system in Italian universities, which switched open-ended assistant professor positions to fixed-term contracts and instituted minimum publication requirements for promotion, resulted in tenure-track professors in economics publishing in higher-quality journals, but may also have reduced the share of economics Ph.D. graduates choosing academic careers.⁹ Another study investigated the impact of tenure in U.S. universities, finding that “publication rates rise sharply during the tenure-track, peaking just before tenure. However, post-tenure trajectories diverge: Researchers in lab-based fields sustain high output, while those in non-lab-based fields typically exhibit a decline. After tenure, faculty produce more novel works, though fewer highly cited papers.”¹⁰ It seems clear from such studies that tenure creates tradeoffs, rather than the simple effects described in (a) and (b) above.

What is tenure for? Historically, according to the American Association of University Professors (AAUP), tenure exists for two reasons: “(1) freedom of teaching and research and of extramural activities and (2) a sufficient degree of economic security to make the profession attractive to men and women of ability.” It has been suggested by some commentators that the traditional defense of tenure (AAUP point #1: academic freedom) is not sufficiently convincing. To be clear, the principle of academic freedom remains critical to the research enterprise: A valid argument for the job security provided by tenure is that it promotes risk-taking, experimentation, and creativity that is central to discovery and innovation. However, at a time when few workers have long-term job security, tenure can appear to some like academic exceptionalism.

It is also important to note that tenure provides a competitive advantage for recruitment in many disciplines (related to AAUP point #2). Academia generally cannot compete with industry (information technology, biotech, pharma, finance, etc.) in terms of salary or other perks, but the stability and risk-taking creativity that tenure affords, as well as the ability to build a self-directed research program that may extend for decades, are major draws to the academy.

Who is eligible for tenure? The original model proposed in 1915 by the AAUP, partially borrowed from Germany, is that faculty who are both educators and researchers (“teaching-scholars”) are worthy of tenure. However, this has long disenfranchised and disempowered full-time teaching

⁸ Acevedo, D.D., 2023. The War on Tenure. *Tenn. L. Rev.*, 91, p.1.

<https://scholarlycommons.law.emory.edu/cgi/viewcontent.cgi?article=1285&context=faculty-articles>

⁹ Nieddu, M.G., Nisticò, R. and Pandolfi, L., 2025. The effects of tenure-track systems on selection and productivity in Economics. *Labour Economics*, p.102779.

¹⁰ Tripodi, G., Zheng, X., Qian, Y., Murray, D., Jones, B.F., Ni, C. and Wang, D., 2025. Tenure and research trajectories. *Proceedings of the National Academy of Sciences*, 122(30), p.e2500322122.

faculty such as lecturers. The notion that teaching and scholarship are each half-time responsibilities of a whole faculty member is increasingly in question, at least in some disciplines and departments, as both pedagogical and scholarship demands are far greater than ever before. How can we think about tenure in the future in a manner that is consistent with the core principles stated above?

One model expands the tenurable faculty. This model suggests that we have a divided professoriate and the chasm is widening, which is leading to disenfranchisement, distrust, and lack of integration between the research and teaching missions within the academy. Tenure has to reflect the reality that teaching and scholarship are each very complex, near full-time roles. We have long recognized this implicitly and have responded by increasing numbers of adjunct; short-term; or research, teaching, and extension (RTE) faculty (or postdoctoral fellows and graduate students) to fill the gaps in teaching. But these untenured instructors may not feel empowered to speak up about important educational issues nor are they incentivized to question the status quo in the classroom, which not only may disenfranchise them, but also, importantly, could have a stagnating effect on education. One proposal for rectifying this problem is hiring professors of teaching on the tenure-track. At least one major concern about this model is that the “indefinite” nature of tenure is already under fire — both within and beyond the academy. Should we really be expanding this concept to cover even more faculty? If we did create a tenure-track for teaching faculty, we would need to develop a completely different set of criteria than what are currently used for research-focused faculty in order to determine whether teaching-focused faculty have carried out their work at the highest possible level.

Although serious faculty misuse of tenure (e.g., consistently unproductive or poor effort and performance) appears to us to be comparatively rare, it can and does happen, and it must not be ignored or justified. What steps can we take to mitigate abuses of tenure? We believe that the concept of “academic civics” is important here — crafting an institution in which rights and responsibilities are clear, and the latter are actually enforced. Also, the question has been raised by stakeholders as to how often faculty with tenure in the university actually make use of their academic freedom to try something new, bold, or controversial — we suspect that the answer to this question varies greatly by discipline in part due to variable market pressures, and as such, merits further study.

While there are a wide variety of opinions across the academy about tenure, there is broad agreement that the current system for granting tenure can be too focused on quantitative metrics, does not adequately value community engagement and public impact including patents and start-ups, disincentivizes collaboration and faculty life that is deeply integrated across the different university missions, and therefore would benefit from realignment with core principles.

Department structure

Opinions vary on whether the current academic structure (i.e., departments) is ideal for the future of a thriving research enterprise, but there is agreement that there are structural, budget-model related, and regulatory/compliance constraints that restrict adaptability, promote redundancy, and curtail the most creative research approaches and strategies.

Arguments *against* departments as the right structural unit in the academy:

- Many of the most pressing and important questions of the day demand highly interdisciplinary expertise and approaches. Traditional departments may be too archaic and restrictive to meet the moment. The advent of cross-college units at Cornell, like Design Tech, may suggest that traditional structures can be constraining.

- Departments are very rarely sunset; this creates rigidity in terms of hiring when what we need in a fast-evolving research landscape is nimbleness. An alternative would be cluster-hiring in topical areas of focus that are re-assessed regularly.

Arguments *in favor* of departments as the right structural unit in the academy:

- Departments exist to ensure that specific areas of learning and discovery have sustained representation in the university. Without departments, some disciplines may arbitrarily develop more vocal or influential advocates than others, leading to disparity and heavily skewed representation of research areas.
- Departments are aligned with historical areas of scholarship and are responsible for providing the core curricula for students. Constantly changing topical areas of focus could create instability in the educational mission and may create misalignment with field standards that would affect Cornell's competitiveness.
- Departments have a well-defined leadership structure to determine priorities in hiring, research focus, etc. Without departments, who would decide on what topical areas the university will focus on? Research foci may become even more subject to top-down governance. Also, if someone is hired as part of a topical area, will they have the freedom to pivot or shift focus the way they currently can in a department setting?

One model to consider that upholds the core principles is maintaining departments as the main academic unit but centrally investing even more in centers or collaborative groups to promote cross-fertilization that leads to research synergy. This could theoretically maintain the current budget model, but would allocate more money centrally for research teams, possibly through the example first step proposed above.

Another model to consider that upholds the core principles is maintaining departments primarily to ensure that teaching and service needs are met but having a different model entirely for hiring research teams based on thematic areas of focus. This would require a new structure for decision-making about cluster hiring, as well as a different space allocation model and budget model in terms of revenue and funding flow.

Both models lean into re-envisioning scholarship from a solo-endeavor mentality to a collaborative-engine mindset. Tenure and promotion decisions would have to reflect this shift in ethos.

Academic publishing

A major issue in publishing is that a few small, prominent publishers dominate the landscape and exercise market power in ways that raise the cost of publishing and access, limiting the positive public spillovers from university research. (Another problem is the rapid rise of predatory journals over the last fifteen years, which has created a glut of papers of questionable quality.) In 2025, Elsevier, Springer, Wiley, and MDPI were responsible for nearly 70% of all publications.¹¹ Publication costs, especially for open access, are exorbitant and even prohibitive. Due to the monopoly on prestige they have gained, these publishers are able to get faculty to provide their best content and extensive services for free while requiring excessive fees for the privilege to publish with them. These publishers have high subscription costs, which creates significant stress for many university libraries. Alternatives such as arXiv, bioRxiv, and eLife have gained popularity in some fields but not all; part of the challenge is that in some disciplines these venues are flooded with papers and the capacity for careful vetting is limited. The irony of our current situation is that while digitizing publications was supposed to make scholarship more accessible, under the control

¹¹ Scilit Rankings, www.scilit.com/rankings

of profit-making companies, the scholarship produced by universities is distributed only to those who can pay for digital subscriptions. How do we remedy this long-simmering problem?

One model leans into the Open Access commitment of Cornell University Press, founded in 1869 as the first university press in the country. What could it look like to significantly increase their budget in order to support large-scale publishing? Another related model takes a collaborative approach with a consortium of other research universities and leans into university presses that are already well supported and may have the capacity to scale (such as the University of Chicago Press). A third option is to lean heavily into society journals, which merits further discussion. All of these models seek to reduce the market power of ever-growing publishing oligopolies, thereby gaining more autonomy among universities and likely saving on costs. The models also have to answer the question of how rigorous peer review of submissions will be conducted, though it is presumed that a system could be devised in cooperation with other institutions.