Executive Board

Envisioning Research in the Post-Pandemic University

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December 9, 2021

Evelyn Blumenberg, Chair, Council on Planning and Budget
Alex Bui, Chair, Committee on Data, Information Technology, and Privacy CDITP
Marco Iacoboni, Chair, Council on Research

Re: Envisioning Research in the Post-Pandemic University Report

Dear Chairs Blumenberg, Bui, and Iacoboni,

The Executive Board reviewed the "Envisioning Research in the Post-Pandemic University" Report and the feedback of your councils and committee at its meeting on December 2, 2021. Members unanimously endorsed the report.

Members appreciated your initial feedback. The Executive Board asked for your respective councils and committee to look more closely at report recommendations to the Senate itself. Specifically, members asked for your assistance in developing specific plans of action with an emphasis on infrastructure, mitigation measures, inequities, and the future of research. Members encouraged the development of pragmatic, operational, practical ways to turn this report from an aspirational document to a concrete implementation plan for the UCLA Academic Senate. A main goal of the report was to think about the R1 university in the wake of this global pandemic. The pandemic has forced us to accelerate towards change with regard to research and technology; it is important to think proactively to shape the future of research at our campus.

The Executive Board requests your actionable guidance on the report's recommendations to the Senate by Thursday, February 24, 2022.

Sincerely,

Jody Kreiman
Chair
UCLA Academic Senate

Cc: Jessica Cattelino, Vice Chair/Chair Elect, UCLA Academic Senate
        April de Stefano, Executive Director, UCLA Academic Senate
        Elizabeth Feller, Assistant Director, UCLA Academic Senate
        Renee Rouzan-Kay, Senior Policy Analyst, UCLA Academic Senate
        Shane White, Immediate Past Chair, UCLA Academic Senate

Envisioning Research in the Post-Pandemic University

Prepared by UCLA's Post-Pandemic Research Visioning Working Group[1]
June 21, 2021

Executive Summary

Research in the post-pandemic university can and should change in light of the new opportunities and deep concerns that have arisen during the COVID-19 pandemic. This report envisions post-pandemic research. What can and should the research university be, in the pandemic's wake? Recommendations are not directed solely at administrators; rather, we implore all researchers to seize this moment to take a hard and creative look at our research questions, methods, infrastructures, priorities, and communities.

Although our vision is long-term, immediate measures must also be taken to recover from research problems during the pandemic. These include addressing research loss and inequities, with focus on researchers in training, early-career faculty, and those who lost the most. They also include supporting COVID-related research across the campus and advocating for renewed public support of research in higher education.

Post-pandemic, long-term measures must support the best of existing and new research landscapes. The university should monitor and explore the pandemic's long-term effects on the creation and value of knowledge, its public impact, and its diverse disciplinary and institutional formations. It should identify opportunities to use on-campus and off-campus research space more effectively, with openness to transformation in the bigger question of the "place" of the university. It must also rebuild the research community through the running of research events, support of research collaboration at a distance and new approaches to in-person research, reconsideration of promotion and tenure requirements, reexamination of childcare and family care policies, and promotion of racial equity. Finally, the university must move forward into a future that exploits the power of technology, while also interrogating it, to re-imagine how research within the university functions, engages with the broader community, and fulfills our mission. In our extensive interviews, questionnaire responses, and conversations, it became clear that research universities must not return to the old normal but rather must rebuild toward a better future.

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[1] See Appendix A for a list of the working group members.

Envisioning Research in the Post-Pandemic University

Prepared by UCLA's Post-Pandemic Research Visioning Working Group[2]
June 21, 2021

Section 1: Introduction

The purpose of this report is to envision research in the post-pandemic research university, and especially at UCLA. When the pandemic is declared over (or, at least, contained), research universities will not return to "normal." UCLA's response to the pandemic, the need to confront structural social inequities that have been laid bare during the pandemic, and the long-term impacts of our recovery will accelerate transformations already underway across campus and will introduce new ones. As such, it is imperative that the campus embrace the potential of this moment to build a better, smarter, more supportive, and inclusive research university. Sites of research transformation include realignment of scholarly fields and epistemes, emphasis on collaborative and interdisciplinary scholarship, spatial reconfiguration of research communities, training, technology and infrastructure, and shifting funding streams.

This report is not a guide for campus reopening, nor is it a retrospective or comprehensive analysis of the pandemic experience.[3] Instead, we discuss the pandemic effects on research and offer short- and long-term recommendations for a robust future-state research environment that embraces the lessons learned from our pandemic experience. Our goal is a research environment that is flexible and vibrant, and one that refuses to look away from, but instead endeavors to eradicate, the social injustices that the pandemic revealed and exacerbated.

The following establishes the guiding principles that informed our analysis; describes UCLA's current state; compiles short- and long-term research impacts, challenges, and concerns; and offers recommendations both for immediate needs as a part of our COVID research recovery and for embracing long-term research opportunities as we move forward. Our work has been guided by expansive conversations among faculty, staff, and student researchers, as well as targeted interviews with administrators.[4] We incorporated over two hundred researcher responses to open-ended questions collected via an online questionnaire. While our focus is on research, a companion report has been prepared to address the university workforce.[5]

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[2] See Appendix A for a list of the working group members.

[3] At the time of this writing, public cooperation with health officials and broad availability of vaccines has dropped case and death rates in California to new lows, and California "reopened" on June 15, while President Biden is steering the U.S. toward a July 4 reopening. The University of California Office of the President announced in January that it is "planning for a return to primarily in-person instruction systemwide starting fall 2021." Similarly, UCLA administration is steering toward "a broad expansion of on-campus learning and activities by fall."

[4] See Appendix D for selected questionnaire responses.

[5] See Joe Bristow and Lubbe Levin's report on "Reinventing the UCLA workplace of the Future."

This report aims to promote creative thinking on the part of researchers and administrators about what research can and should entail in a post-pandemic research university. It is both a call to thought and a call to action.[6] **Our Guiding Recommendation: All researchers should seize this moment to take a hard look at our research questions, methods, infrastructures, and communities.** We make institutional recommendations below, and fully acknowledge that there is some productive tension in this report between calls for centralized planning and support, on the one hand, and grassroots researcher efforts, on the other hand. But throughout, we emphasize that it is the creative thinking of scholars that, in the end, can and will define research in the post-pandemic university.

Section 2: Governing Principles

The creation of this report was governed by the following principles:[7]

1. **Reshaping Research, Guided By Values**. We are concerned not only with change in academic practices, but also with shifts in research conventions and values. Pandemic-related disruption and social transformation provide an opportunity to affirmatively reshape our institutions and reexamine our values toward a better research future.

2. **Equity, Inclusion, and Diversity**. We must ensure equity in all aspects of the research enterprise and value every member of our academic community. Diversity and inclusion in research leads to better outcomes, increases meaningful public impact, fosters innovation, and strengthens participatory democracy.[8]

3. **Safety**. Safety is paramount and being redefined by the pandemic. UCLA must continue to implement appropriate risk mitigation measures in consideration of the safety for the research community and all who participate in our research, whether in labs, fieldwork settings, archives, or libraries.

4. **Excellence.** UCLA is a tier 1 public research university, and we are guided by the principle of maintaining high research standards across the campus.

5. **Care.** Although this report goes on to discuss opportunities and make recommendations, we pause to acknowledge and extend sympathies for the suffering and loss experienced by our researchers. Members of this working group lost loved ones to COVID, and this report is written with, and toward, care.

6. **Building on Institutional Innovation**. UCLA can build on positive institutional changes already underway and rethink others, making sure that our research environment is addressed as part of planning processes. Such efforts include the contested reorganization of IT infrastructure, the

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[6] See Appendix B for a summary of the report recommendations and Appendix C for specific action items related to the recommendations organized by roles, units, and offices.

[7] It was also developed in accordance with UCLA's "Statement of Ethical Values," reflecting our commitment to integrity, excellence, accountability, and respect.

[8] See the Office of the Vice Chancellor for Research and Creative Activities' "Statement of Principles of Diversity in Research."

development of well-crafted online research collaborations and training, and fostering public impact research and community engagement.

7. **Stewardship of Public Dollars and Advancement of the Public Purpose of the Research University.** The pandemic has shone a light on the importance of public institutions and public dollars. This report keeps costs in mind. It also commits to keeping the "public" in the public research university, and to using research activities to support the other elements of our mission: education and service.

Section 3: The Current State of Research at UCLA and in Higher Education

Irrefutable changes underway across the academy will dictate the trajectory of UCLA's recovery from the effects of the pandemic and campus operations moving forward into the foreseeable future. Whether directly caused by the pandemic or part of an institutional development put into play years ago, these changes are forcing a reconsideration of the very nature of higher education and enabling considerable opportunities for positive transformation. At the same time, large-scale changes are, and will continue to be, disruptive, complicated, and challenging.

For many, research suffered during the pandemic. Field work was severely curtailed and in some cases entirely postponed. Researchers who rely on physical library resources such as archives and special collections were effectively cut off from their source materials. Artists, actors, dancers, and musicians have faced a unique set of challenges during COVID, as they sought to collaborate online and reach new audiences while grappling with the embodied and site-specific dimensions of their work. Some faced an extinction-level event with venues closing and performances on-hold indefinitely. Though severely affected by the sudden disruption of the pandemic lock-down and the inability to work for several months, many lab researchers were eventually able to resume operations, but often at limited capacity. The pandemic increased caregiving, teaching, and service commitments that crowded out research. At the same time, other researchers reported that remote work and reduced distractions enabled them to be more productive than ever. Online research collaborations and events, for some, transformed the space and place of research in ways that may persist. Equity and access challenges grew.

When the pandemic shut down university campuses, fieldwork, community-based research, and research travel, alarm grew over the state of research funding. The good news, in a nutshell, is that federal research funding mostly has been maintained, private foundation endowments have not taken as big a hit as feared, the University of California budget largely has been restored, and the May revision of Governor Gavin Newsom's 2021-22 budget proposal increases the UC general fund allocation by $136.3 million with a one-time augmentation of $225.3 million that includes funding for deferred maintenance of system physical infrastructure.[9] UCLA brought in more research funding than ever in 2019-20, at $1.4 billion, and 2020-21 is on track to continue this remarkable success (note, however, that the funding distribution may be skewed by an influx of COVID-related research funding). External affairs officers see opportunities for private and foundation giving, especially in areas of social justice, health, and environment. And UCLA financial officers recognize that low financing rates open up new opportunities for borrowing in support of research infrastructure.

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[9] 2021-22 Governor's Budget Proposal, University of California allocations.

Despite the better-than-anticipated research funding news, UCLA's financial situation is serious, and very real cuts are being implemented across the campus. Chancellor Block's winter 2021 update on UCLA's financial challenges acknowledged that our post-pandemic "recovery will take time and sacrifice, and academic and administrative units have been asked to plan for budget reductions over the next four years."[10] Block further stated that "between increased costs and lost revenue the pandemic has so far had a financial impact on UCLA of about $870 million – the greatest amount of any UC campus."[11] But short-term losses related to state funding, housing, dining, events, and conference services are balanced by "1) healthy enrollment and tuition revenue; 2) a robust research enterprise, which brought in a campus record-breaking $1.4 billion in research awards last fiscal year; 3) strong philanthropy; and 4) the revenue brought in by UCLA Health hospitals."[12]

Moving forward, there is the possibility of an influx of money for higher education from the federal government, on top of recent COVID relief programs. This report was prepared as a new Department of Education took shape and people were mobilizing for stronger support for higher education, as well as student debt relief. In a Systemwide Senate Assembly meeting, when asked whether he thinks there are realistic prospects for significant federal support and state re-commitment to funding public education in California in the next years, President Drake emphasized a shift at the federal level and the need for the state to "invest" in the University of California, not as an anchor that slows the state economy but rather as a way out of the problem. Governor Newsom's state budget proposals take a step in the right direction.

Section 4: Restoring Our Research Community: Immediate COVID-related Recovery Steps

The pandemic dramatically altered the academic community, creating the need for immediate measures to replace lost research, fund interdisciplinary COVID-related research, and advocate for research in government and other public arenas.

1. Address Research Loss and Inequities

Recovery Recommendation #1: **Establish and implement programs to redress the inequitably distributed research-related losses wrought by the pandemic**. Research suffered unevenly during the pandemic. UCLA was able to restore research access in many labs, and some research could continue remotely. However, many researchers were forced to halt their projects because of the shutdown, while others were unable to maintain research continuity during the pandemic because of the crushing demands of caregiving, teaching and mentoring, and pandemic-related service. International research likely will continue to be curtailed. These research losses, we hear over and again, were unevenly

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[10] Chancellor's Quarterly Update, Winter 2021.

[11] Ibid. Minutes from a UC Financial and Capital Strategies Committee September 16 agenda item on the 2020-21 operating budget reported that, "from March and the start of the pandemic through the end of August, the pandemic had a fiscal impact of $2.2 billion across the campuses and medical centers." The meeting backgrounder acknowledged that the impacts falls into two groups: "those where the impact has been immediate but where recovery over time is highly likely, and those where the financial impact is delayed and where recovery is less predictable."

[12] ibid

distributed, and the university has a responsibility to address these inequities. Four groups felt the pandemic's negative effects particularly strongly: caregivers, especially women; underrepresented minorities; early-career professors; and graduate students and postdoctoral fellows in some fields. This crisis calls for short- and middle-term mitigating solutions, but it also offers the opportunity to address long-standing inequalities that have been exacerbated by the pandemic.[13]

Support Researchers in Training and Early-Career Faculty

Mitigation measures need to address the challenges faced by junior researchers, including undergraduates, graduate students, postdoctoral fellows, and early-career faculty. An entire cohort of senior undergraduates will leave UCLA having had little or no chance to gain hands-on research experience. Undergraduate student enrollment in independent study courses decreased 23.7% during the pandemic, from ~1260 students in F18/F19 to 960 students in F20. This is concerning, as strong research opportunities for undergraduates set UCLA apart from other institutions. For graduates and postdocs, research disruption can be severe, and job opportunities are scarce. Graduate student funding has long been a concern and was facing a crisis prior to the pandemic, and this crisis has only been amplified.[14] The lack of funding opportunities for continuing graduate students impacted by COVID will also affect the ability of UCLA to recruit new graduate students. Indeed, without strong intervention there is a real risk of a lost generation of researchers due to COVID. According to the Office of Postdoctoral Affairs in the David Geffen School of Medicine, some international postdoctoral appointments were delayed, while other postdocs worked remotely and were unable to relocate to Los Angeles because of travel restrictions. Enrollment by international students plummeted at both undergraduate (-7%) and graduate (-11.6%) levels, suggesting that UCLA's research training will reach a narrower demographic in the coming years. Junior faculty lack protections against lost research on their paths to tenure unless the university acts, and many experienced research interruptions compounded by caregiving demands. We are also concerned about non-tenure track faculty and staff researchers, some of whose jobs became more precarious during the pandemic, and some of whom reported an intensification of hierarchies favoring senior faculty PIs.

Recovery Recommendation #1A: Establish a temporary program to implement and administer mitigation measures for junior researchers, including a research replacement funding program for graduate students most harmed by pandemic-related research constraints. Junior researchers are at an academic disadvantage because they were unable to advance their research training and development. Mitigating initiatives could include offering 2021 graduates the chance to acquire laboratory experience in special programs post-graduation, and a campaign by the Graduate Division to guide departments in graduate admissions to fairly consider strong candidates with pandemic-related gaps in their research experience. Other possibilities include, but are not limited to, one-time funding targeted at graduate students whose research was halted (especially in fields reliant on fieldwork, community engagement, archival travel, and collaborative artistic production), instituting bridge funding for junior researchers, providing opportunities for an additional fellowship year for graduate students (in

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[13] See the systemwide Academic Senate letter on "Mitigating COVID-19 Impacts on Faculty."

[14] The University of California Academic Planning Council Graduate Education Workgroup in 2019 issued a report on the longstanding issue of inadequate doctoral student funding. In March 2020 some UCLA and other UC graduate students were organizing around funding and the cost of living, with some withholding grades and a possible strike imminent. That activism built upon a grade strike at the University of California, Santa Cruz.

order to fund the year afforded by the extension to time-to-degree requirements), extending relief for payment of non-resident tuition fees, and establishing new postdoc positions for UCLA graduates. Department and IDP chairs should be especially concerned with the advancement of junior faculty and should make efforts to support their research above and beyond adding a year to their tenure clocks, which is insufficient.[15] UCLA could join UMASS Amherst in giving a retroactive pay bump with promotion (to cover the added year) and putting a higher value on diversity work for tenure and promotion.[16]

Restoring Lost Faculty Research

Various studies, responses to the UCLA research environment questionnaire, and responses to a questionnaire administered by the UCLA Center for the Study of Women indicate that, overall, women caregivers' productivity suffered more than male productivity.[17] In addition, women and minority faculty in at least some academic units have smaller labs, so research ramp-down had more negative effects on them. The systemic issues that became even more evident during the pandemic need to be addressed to confront equity disparities and benefit UCLA's faculty recruitment and retention efforts. UCLA's caregiving accommodations for teaching and service in response to the pandemic were scattershot and minimal, and mechanisms to stop the tenure clock provide immediate relief but do not address long-term costs (scholarly and career-wise alike) of lost research. Initial data show that women jump back onto their career path following an interruption less readily than men.[18] Faculty of color report more impacts because of added mentoring responsibilities for students of color in distress and because some of their communities and families were hardest hit by COVID-19. More must be done to support faculty, including the development of permanent caregiver and child care policies, expansion of the existing housing assistance program, opportunities for remote work, and changes in the assessment of academic excellence (e.g., consideration of whether to use the "Achievement Relative to Opportunity" principles that have been implemented at campuses in Australia and New Zealand or similar[19]).

Recovery Recommendation #1B: To mitigate the pandemic's unequal effects, launch a temporary research replacement program for faculty who can demonstrate lost research. Mitigation measures could include, but are not limited to, a staggered program of teaching releases dedicated for research, and establishing an internal pool of money to provide bridge funds for junior faculty that did not have the opportunity to write new grants during the pandemic.[20] Additionally, the ranks of Associate

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[15] See "Universities Are Freezing Tenure Clocks. What Will That Mean for Junior Faculty of Color?" "Gender Equity Considerations for Tenure and Promotion during COVID-19."

[16] See "Measures to Support Faculty During COVID-19."

[17] "The Pandemic Penalty: The Gendered Effects of COVID-19 on Scientific Productivity." "The decline of women's research production during the coronavirus pandemic." "Women's research plummets during lockdown - but articles from men increase." "Academic Productivity Differences by Gender and Child Age in Science, Technology, Engineering, Mathematics, and Medicine Faculty During the COVID-19 Pandemic." "Women Are Falling Behind." "COVID-19 Disruptions Disproportionately Affect Female Academics." "CSWAC COVID-19 Survey Results" (available from UCLA Center for the Study of Women).

[18] "Achieving an inclusive US economic recovery." "Women in the Workplace 2020." "The economic recovery is getting messy. Just ask working women."

[19] E.g., the "Achievement Relative to Opportunity Policy and Procedures" of Deakin University, ANU, University of Auckland, Monash University.

[20] Stanford is allowing most untenured faculty a semester of teaching and service release. Brown has offered untenured faculty the choice of applying for one of teaching release, additional research funding, or additional contract extension.

Professor Steps 4 and 5 could be reinstated for the next three to four years to offer affected mid-career faculty the possibility to progress in their careers and salaries while waiting for their research to ramp up again to pre-pandemic standards. We also endorse the UC Academic Senate's proposal that faculty who taught during the pandemic be given one sabbatical credit (see footnote 10) and encourage a push to hire junior faculty as an opportunity to diversify the faculty and help ease the disastrous job market that is hurting our PhD students.

2. Fund COVID-Related Research Across the Campus

The pandemic has catalyzed transformations in the lives of people around the world in ways that deserve researchers' attention. While funding was made available from multiple sources for urgent medical and public health research,[21] it is also critical to study the social, cultural, psychological, arts and creative, political, and other dimensions of the pandemic. These are remarkable times, and rapid funding should be made available to researchers who seek to understand the long-term implications of this moment. As one dean put it, this is a time for "deep listening." **Recovery Recommendation #2: Universities and other research funders should identify urgent research opportunities related to the pandemic, should (continue to) make rapid funding available accordingly, and should create mechanisms/hubs for interdisciplinary collaboration and conversation about COVID-19 and pandemic life.** We note that these might require new research infrastructure investments. Internal funding should be targeted toward fields that are not being supported with new streams of federal and other external funding. We encourage support for research that will build toward a more just and democratic future.

Recovery Recommendation #2A: UCLA should convene and support a cross-campus research group to share research on all facets of pandemic and post-pandemic life, from the arts to the social sciences to public health and more. This should not displace non-COVID-related research funding streams. Scholars and libraries should archive the pandemic, its before, and its aftermath; they should also build archives for the large number of research webinars and other virtual events now being recorded.

3. Advocate for Research

Finally, the pandemic has shown, yet again, the value of research and creative activities, not only in health but across the disciplines. It has also been a stark reminder of the importance of interdisciplinarity in understanding complex problems. This is an important moment for advocating for public support of research, both at federal and state levels: when asked about long-term effects of the pandemic, UCLA's Associate Vice Chancellor for Academic Planning and Budget Jeff Roth responded, "I think it's a demonstration of the government investment in research. UCLA is a better investment now than ever." **Recovery Recommendation #3: UCLA and other public universities should push harder than ever to get researchers in front of lawmakers, to give researchers the opportunity to tell their stories and make the case for renewed public support of research in higher education.**

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[21] Sources included the University of California, the NIH, and the NSF.

Section 5: The Post-Pandemic Research Environment: Long-Haul Recommendations and New Research Landscapes

At a moment when we seek to restore what has been lost, institutions may too easily default to going back to the old normal. This would be a mistake. For one thing, the old normal was structured by inequities that the pandemic revealed and exacerbated. For another, the deep transformations in how research universities worked during the pandemic offer us an opportunity to rethink in a variety of ways what research should look like in the post-pandemic university. The academic community will change in the pandemic's wake, so it behooves us to approach that change with intention, principles, and creativity. Bold visions are called for, but so are cautions and efforts to preserve that which might otherwise wrongly be swept aside by the forces of change.

1. Boldly Imagine Changes in Research Directions and Methods

Like other phenomena of massive global impact that restructure our social world (e.g., climate change, artificial intelligence), the pandemic has laid bare the fundamental interconnections between virtually every facet of collective human life: medicine, science, society, culture, economics, politics, communication, transportation, history, and more. The health of the body and the health of the body politic cannot be considered apart from one another – and both have histories that rest upon deep structural inequities. The pandemic blew up research practices and conventions in many fields and revealed possibilities for disciplinary realignment and resulting institutional change. What new opportunities might be developed to foster "convergence research" attuned to addressing the most complex challenges of today? What new modes of disciplinary, transdisciplinary, and inter-institutional cooperation will be needed? How can UCLA foster public impact research that draws on expertise and perspectives from across the entire campus and beyond? What new models of research infrastructure and disciplinary (re)alignment will be needed to address the massively distributed, urgent, and global phenomena in ways that drive justice and democratic values?

Not all intellectual transformations catalyzed by the pandemic will concern direct answers to these questions; some might be methodological or might emerge from shifts in the academic community or from technology infrastructure. Those potential paradigm shifts are no less important, and the university should make room, institutionally and intellectually, for them to unfold. Entire research fields may be restructured or reimagined, opportunities for public engagement may transform how and with whom research takes place, and new, cross-campus partnerships may emerge. We envision most of this transformation as occurring organically as researchers rethink and connect. That said, at all levels these disruptions must be carefully and critically considered, and principles of shared governance must guide us along the way. Still, UCLA and other research universities should not let paradigm shifts pass us by due to institutional inertia.

Post-Pandemic Recommendation #1: **Convene a faculty-led panel to critically consider, observe, and advise the Academic Senate and the administration on the pandemic's long-term effects on the creation and value of knowledge, its public impact, and its diverse disciplinary and institutional formations.** This panel, perhaps charged jointly by the Senate and the Vice Chancellor for Research and Creative Activities, should explore the short- and long-term changes in research directions in different disciplines, guide possible changes to the structure of the university, and establish a high-profile lecture series and events calendar on these topics. It should include faculty at all career stages. This is a "big

think," "pie in the sky" endeavor, examining how we do research, how we ask questions and answer them, and what "the university" is at this moment in history. While the outcome of such a panel might include specific recommendations, that is not the primary goal; rather, the panel should aim to spark conversation and engage researchers across the campus in ways that let creative thinking flourish in everyday practice. The goal is to push the conversation, think big, and let researchers lead the way.

Post-Pandemic Recommendation #1A: **Support and incentivize the retooling of research methods courses and other research training, in light of pandemic-related changes.** Not only campuses but also professional societies should support the researcher-led retooling of research training. This support should include, but is not limited to, providing course development support to retool methods, proseminar, and capstone courses; funding the development of new research training texts and other tools; adding equipment to research training spaces that accommodates new paradigms (e.g., screens and connectivity); and, if relevant, revising teaching assistant training. Academic units may use remote tools to enhance graduate student recruitment and retention.

2. Learning from the Pandemic's Social Lessons

We see two interrelated dangers in the otherwise welcome transition to a post-pandemic research university. First, that we will return to the old normal and fail to rectify inequities. And, second, that the pandemic will be defined so narrowly as to miss the extent to which it is about a virus not only in individual bodies but also in the social body.

Post-Pandemic Recommendation #2: **While preserving the best qualities of their campuses and identities, UCLA and other research universities must rectify the inequities that were revealed and exacerbated by the pandemic.**

Post-Pandemic Recommendation #2A: **Carefully consider and support ways that research can address injustices exposed by the pandemic**. The COVID-19 pandemic laid bare the injustices and disparities that long have been deeply embedded in our society; it has also exacerbated them. We must not look away as we rush back to our labs, field sites, archives, conferences, and classrooms. This is not only a moral matter (though it is that), it is also a matter of doing better research aligned with the challenges of our time. For example, the health disparities amplified by COVID-19 call for medical researchers, including those in basic science and not only in translational research, to reexamine how research questions, methods, and communities can be reshaped by attention to better health outcomes and equity. Attention to the environmental injustices that expose certain communities to COVID harms from lack of drinking water, unsafe living conditions, or class-based occupational hazards can improve and reshape research on environment and sustainability. Struggles for racial justice during the pandemic showed the close relationship between racialized state violence and other forms of illness and death; they also foregrounded community-based practices of mutual aid and care that can transform society in a post-pandemic world and reorient social scientific research topics and methods. The pandemic-necessitated reorientation to digital life in research practice and in the worlds we study was at once a diagnostic and a social force, bringing distant people together while also marking the social stratifications of our world. This included uneven access to important new COVID-related research that was paywalled, resulting in increased use of preprints and open access publications in ways that should be sustained and developed in the future. These examples show how this pandemic was a virus both in individual bodies and of the social body.

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Considering how the pandemic massively disrupted many researchers' lives, this moment should be taken as an opportunity to recognize and accommodate the socially-patterned life demands that researchers face even outside of pandemic conditions. As the subtitle of an *InsideHigherEd* op-ed by NSF-funded researchers puts it, "Without engaged interventions, higher education will most likely become less diverse and inclusive, given the pressure the pandemic is placing on women and faculty of color."[22] A University of Michigan report on pandemic faculty inequity similarly warned that "identity-neutral responses may inadvertently exacerbate inequality"[23] During the pandemic, faculty of color shouldered heavy mentoring and administrative responsibilities and often faced direct and disproportionate COVID impacts in their families and communities. Broader struggles for racial justice, including about racialized state violence, have been inextricably linked to the pandemic. **Post-Pandemic Recommendation #2B: UCLA should act quickly and decisively on the recommendations of the Moreno Implementation committee report, and all campus research-related units should incorporate the committee's findings and recommendations into their work; special attention must be paid to academic personnel considerations of tenure and promotion, as well as to faculty hiring, retention, and the more equitable distribution of, and rewarding for, service and teaching workloads.**[24]

Caregiving has been a pandemic emergency, but research universities also should address the enduring intersections of caregiving with research. **Post-Pandemic Recommendation #2C: UCLA and other research universities must re-examine their childcare and family care policies and offerings in light of pandemic and pre-pandemic researcher experience**. Responses to our questionnaire featured an outpouring of dismay about research constraints linked to childcare closure during the pandemic and to ongoing childcare needs.[25] We note that NIH and Mellon have instituted caregiving supplements to research grants, and we urge the university to do the same.

3. Rethinking Research Communities

UCLA's research has always extended beyond the confines of the physical university, but the pandemic has given us an opportunity to strengthen these links and embrace tools and technologies that connect research across space and bring in global audiences and collaborators. This past year has proved that we can virtually support a great deal of research activity, and this reality should extend into our post-pandemic research environment. By embracing virtual opportunities, we can strengthen our connections to the other UC campuses and foster prospects for systemwide collaboration. More broadly, we can reconceptualize the idea of a "campus" by more firmly establishing the digital world as a place for thinking and research. At the same time, in-person research contact is vital, and we should reinforce those physical engagements.

Post-Pandemic Recommendation #3: UCLA must heed the pandemic's lessons by taking this opportunity to think expansively about how our academic community is constituted and engaged. The

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[22] "Keeping COVID-19 From Sidelining Equity," Inside Higher Ed, February 10, 2021.
[23] "Faculty Equity and COVID-19."
[24] "Moreno Recommendations Implementation Committee Final Report." "'On the Verge of Burnout': Covid-19's impact on faculty well-being and career plans." The UCLA Rising to the Challenge initiative commits to hiring Black faculty and other measures, and faculty hiring is key, but so is retention and attention to workload.
[25] See also "Gender Equity Considerations for Tenure and Promotion during COVID-19."

availability and impact of UCLA's scholarship would be extended by curating the recordings of online research presentations (e.g., lectures, seminars) and coordinating promotion of them through research center websites, the UCLA YouTube channel, and worldwide listings of available live events or posted recordings curated by discipline-specific academic societies.[26] Research centers and departments should vigorously publicize lectures and events that are available to a broader public, though we recognize that there is deep value in smaller and closed research events and stress the need to continue to support these activities.

More and more, UCLA research takes place all around Los Angeles, throughout California, and around the world. Although in-the-field ethnographic, scientific, and other forms of research *are irreplaceable and should be no less supported*, UCLA researchers have innovated with remote techniques. These techniques should be supported in the long term, and they may allow for new kinds of beneficial data collection and community building. Research data sharing can and should take new forms, and in this respect the post-pandemic data sharing imperative can connect with open access and open data projects.

Scholarly gatherings and research presentations have taken new forms during the pandemic, and campuses, professional associations, and funders should foster creativity in this domain in the post-pandemic world. Across UCLA's campus, virtual research events have seen unprecedented attendance.[27] Webinars, and online research speaker series and seminars have democratized research dissemination and provided thrilling opportunities to attend events. Remote meetings, conferences, grant review panels, manuscript workshops, and other gatherings have been more accessible and allow participants to reduce their carbon footprints. **Post-Pandemic Recommendation #3A: Looking ahead, campus units should think creatively about how to run speaker series, seminars, local conferences, and other research events.** What ratio or mix of in-person and virtual events best fosters research dissemination, communication, and community-building? Should the UC system provide funds for faculty across the campuses to jointly run speaker series and events? What does it mean, and what should it cost, to "host" a lecture that anyone can watch from anywhere? Will remote research events, if not carefully considered, reinforce hierarchies by increasing opportunities for overbooked and highly paid "star" faculty and decreasing opportunities for junior faculty to present research and build networks?

Post-Pandemic Recommendation #3B: UCLA, along with other research universities and professional societies, should develop and socialize mechanisms to support research collaboration at a distance, including within the UC system. The pandemic and the radical shift to online communication have made it easier to connect with distant colleagues. For example, a collective formed around issues of Indigenous political ecologies has provided new opportunities for collaboration across North America of a kind that is unavailable on the members' campuses. How should such collaborations be supported? Remote research collaborations also could enhance citywide and regional collaborations. UCOP and the campuses should consider how to foster research collaboration and training across the UC campuses,

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[26] We have already seen the creation of discipline-specific events calendars that list scholarly and creative events from around the world.

[27] For example, within the Humanities Division research centers like the Pourdavoud Center for the Study of the Iranian World and the Leve Center for Jewish Studies have seen unprecedented attendance numbers since transitioning their lecture series into online offerings. The same has been true for the American Indian Studies Center in the Institute of American Cultures and the Center for the Study of Women in Social Sciences.

and should embrace this opportunity to strengthen the system as such. Of course, remote research collaboration is easier in some fields than in others; grant agencies, foundations, and research universities should consider this when allocating research funding.

Post-Pandemic Recommendation #3C: **UCLA should review academic personnel policies and procedures—including how we recruit, promote, and retain faculty, and rules for being in residence—in light of lessons learned during the pandemic.** Academic units should use remote tools to enhance faculty searches and recruitment, and faculty should have more opportunities to work remotely while being considered in residence. More generally, promotion and tenure requirements should be reviewed and possibly revised in light of pandemic research inequalities and public-impact research.

Post-Pandemic Recommendation #3D: **In line with shifts in the research community, research universities should examine intramural research funding programs (and advocate that external funders do the same) to determine where they should shift priorities and allowable expenses.** A working group that includes representation of researchers at all levels, including Academic Senate members, and of UCLA's Office of the Vice Chancellor for Research Administration and Creative Activities should be convened to examine accounting policies and allowable expenses for intramural grants. Post-pandemic funding shifts could allow more home office expenses, including equipment and connectivity-related costs; facilitate new research collaborations among researchers at multiple universities; and support the costs of the dissemination of research results, such as author publication fees for Open Access and flexible publishing subventions. Graduate students conducting full-time fieldwork while living in Los Angeles and California should be eligible for *in absentia* status, and funding agencies that cover living expenses related to research travel should also cover living expenses for full-time remote and local fieldwork.

Our concerns about the digital medium in research communities are many. It may make it harder to make deep connections with colleagues, and this may be especially detrimental for junior researchers who are still building up their networks. We worry about how undergraduate students will gain access to research and graduate students will be mentored. While many researchers have been able to sustain existing communities when going remote, orienting new people has been more challenging. One aspect of our remote world that is widely bemoaned is the loss of spontaneous interactions and informal discussions "in the corridor" or "at the fridge" where new ideas get sparked and collaborations are forged; researchers across the UCLA campus are worried about creativity suffering. Morale may decline over time. We do not know the outcomes, but we share concerns. Tech-savvy junior colleagues and students may have advice for how to support the research creativity that informal in-person conversation sparks. **Post-Pandemic Recommendation #3E:** **UCLA should support research groups across the campus that will investigate and cultivate the value of in-person research: its intrinsic value and the (possibly changing) role it plays alongside remote research exchange.**

4. Reconceptualize the "Place" of the University

The rupture from the physical campus experienced this past year by the bulk of our community and our ongoing recovery planning have opened up new ways of thinking about our space needs and the meaning of place in research. What is a campus? Remote work – a privilege before the pandemic and a requirement during – may become the norm for some researchers as "FlexWork," and units across campus are reconsidering the need for individual offices for workers who will continue working from

home post-pandemic. The continued digitization of research materials has engendered a mentality of "research anywhere" that further releases the academic community from our physical plant. These shifts bring to question the meaning of place for the university writ large, and they demand changes in our space utilization. **Post-Pandemic Recommendation #4: Identify opportunities to use on-campus and off-campus research space more innovatively, flexibly, and efficiently, with openness to transformation in the bigger question of the "place" of the university.**

Where is the university, when so much of our research takes place in digital space and has done so for years? For our campus community, place and aesthetics matter.[28] The beauty and buzz of the UCLA campus contribute to its research environment. To maintain the desirable aspects of our physical infrastructure, Capital Programs follows a design framework to successfully "ensure compatibility of new development with the existing built environment while continuing to strengthen the vibrant identity and design vernacular of the UCLA campus."[29] In other words, our campus is purposefully a welcoming environment that reinforces our mission and inspires creativity, loyalty, collegiality, and excellence. UCLA and other research universities should expand similar efforts to make off-campus and virtual spaces conducive to research excellence and supportive of the university's mission. But in doing so, we must ensure that research projects and fields that intrinsically require in-person exchange be protected and nourished.

On-Campus Research Space

When we consider the post-pandemic research environment, one challenge is to balance the realities of capital programs development with the changing needs of research and space utilization, while retaining a connection to the UCLA campus and mission. The following recommendations acknowledge the long-term planning and funding streams needed for capital projects related to UCLA's physical infrastructure, the budget shortfall for current campus construction plans, the need to address existing seismic deficiencies, and the impediments these challenges introduce for radical change.[30] We further acknowledge that the existing capital need for scheduled construction and renovation plans is such that any recommendations to be adopted must come with funding attached, a development strategy to secure funding, or be able to be included in an existing project (e.g., a planned building renovation). We also acknowledge that our return to the physical campus will require continued COVID-related risk mitigation measures. For example, Facilities Management is already working with Environmental Health and Safety to ensure that all buildings meet new ventilation and sanitization standards.

The challenges of time and money aside, we propose the transformation of the contiguous campus grounds into a space designated increasingly for research, teaching, and learning. Prior to the pandemic, back-office functions for central administrative units were actively being moved to university-owned or leased buildings in Westwood, and the probable shifts to remote working arrangements for some

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[28] UCLA routinely appears on lists of the most beautiful campuses in the U.S., notably tenth on the Architectural Digest list.

[29] UCLA Capital Programs' "Physical Design Framework."

[30] The Capital Financial Plan 2020-26 available online identifies over $4.7 billion in planned construction or renovations projects at UCLA. Of that total, funding is in place for 12% of the projected costs, leaving $4.1 billion in capital need currently unfunded. Moreover, the plan estimates that the 'deferred maintenance needs of the campus exceed $1.8 billion. Last accessed May 10, 2021. Some, but not all, of this capital need may be covered by the budget proposal released by Governor Newsom on May 14, 2021.

portion of our campus community will introduce additional opportunities for the reorganization of our campus space.[31] Space allocations are currently managed by the schools, divisions, and departments; these units must work together as the campus consolidates, with the goal of reclaiming space to make new flexible spaces dedicated to collaborative and interdisciplinary work, repurpose space for our under-served community members, transform moribund rooms into interactive classrooms and shared research labs, and provide energizing and inspiring communal spaces for students. Pre-pandemic, the University of California system envisioned increasing the number of overall undergraduate and undergraduate degrees granted annually by 20% by 2030 (i.e., 1.2 million degrees granted over ~10 years instead of 1 million).[32] This will require focus on spaces of research, teaching, and learning.

Post-Pandemic Recommendation #4A: Require that new campus development prioritize flexible spaces that can support a myriad of uses and be reconfigured as nimbly as possible. Our space should adapt quickly to our new mobility, as well as to the unfortunate possibility of future pandemics. Researchers who work primarily with computer resources should be able to move among workstations and between work and home, and research presentation space should be equipped so that participants can attend in person or virtually. We should provide flexibility so that lab space can be repurposed as necessary when a PI leaves the university or changes focus. Wet labs should be readily adaptable to new research and experiments, and, to the extent possible, labs should be set up so that researchers can share resources such as analytical instrumentation, fume hoods, and bench space. In this same spirit, we recommend establishing flexible spaces around campus that are able to host hybrid conferences, classes, and meetings.[33] Doing so would expand UCLA's reach in Los Angeles and around the world.

Post-Pandemic Recommendation #4B: Repurpose individual offices freed up by remote work for cowork spaces. Newly vacated research-related office space should give way to cowork spaces. Even without significant renovations, this would capitalize on the shift to remote work and better support staff, graduate student researchers, adjuncts, and temporary lecturers that have heretofore been space challenged. With renovations, additional work spaces could be gained by combining assigned offices into shared spaces that can accommodate shift work.

COVID has made clear the importance of the campus space to the student experience. **Post-Pandemic Recommendation #4C: Prioritize space for student researchers.** Students require areas where they can congregate, learn, and research together. On the UCLA campus, the Library has traditionally provided some of that space. In order to focus library spaces more squarely on research and accommodate more students, satellite study spaces should be created. These might be modelled on the first floor of the Young Research Library, where small group "pods" allow researchers to work together and co-present on shared screens in a flexible learning environment.

Off-Campus Research Space

The previous section addressed the bigger question of where research happens and what it means when so much of it takes place in virtual space. Here, the concern is more concrete: UCLA's off-campus

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[31] E.g., the Office of Research Administration shifted to the Hammer Building, portions of IT Services moved to Wilshire Center.

[32] This vision was promoted in 2019. See "UC's ambitious plan to help more students earn a degree."

[33] These hybrid spaces will require investment into the installation and maintenance of sophisticated audiovisual equipment as well as staff to operate the equipment.

presence in Los Angeles and, more generally, the role of research universities in their surrounding communities. UCLA's commitment to public service and community engagement is evidenced by the inventory of community partnerships maintained by the Office of Government and Community Relations, the work of the Center for Community Engagement and, most importantly, a vast array of decentralized research projects.[34] The vast majority of these relationships are intangible extensions into the city of UCLA's mission (e.g., research studies involving the citizenry, community service programs), not physical extensions of the campus itself. Instead, UCLA's research enterprise is constrained by our location in a densely populated urban area. Of the UC campuses, UCLA enrolls the largest number of students in the system across all our degree programs – 44,589 for fall 2020.[35] Yet UCLA's 419-acre footprint is the second smallest, larger only than UCSF, which only offers graduate degrees. While UCLA Health claims over 200 points of contact with the community across the city,[36] and UCLA Extension claims three locations,[37] with few exceptions UCLA is based on the Westwood campus.[38] **Post-Pandemic Recommendation #4D: Strongly consider establishing satellite academic campuses across Los Angeles and the region to expand UCLA's research capabilities and physical infrastructure.** Expanding into the Southland will allow UCLA to grow its research operations, allow UCLA to grow its research operations by removing constraints imposed by our current footprint, and serve additional students as mandated by the Office of the President and the State of California.[39] Moreover, expansion of UCLA's physical campus will allow more community-based and community-engaged research to flourish, though we also note that university expansions do not necessarily serve communities, so careful thought and participatory planning are called for.[40] This should be driven by UCLA's core values as a public research university and its commitment to engage with diverse and under-served communities.

5. Expand Upon the Best of the Technology-Enabled Pandemic Solutions

Technology fundamentally enabled successes in UCLA's response to and recovery from the pandemic. Had the campus shut down in the same way ten years ago, the outcome would have been very different. As it was, the combination of available infrastructure, software, connectivity, and the campus

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[34] See UCLA's Community Partnerships search feature and Center for Community Engagement.

[35] UCLA "Fall enrollment at a glance."

[36] UCLA Health Locations in Southern California and the UCLA Health interactive map.

[37] UCLA Extension locations listing.

[38] There are currently only a handful of UCLA research sites outside the campus boundaries including, but not limited to: the UCLA Film & Television Archive's administrative offices, preservations labs, and collection storage vaults are located in the Packard Humanities Institute Stoa in Santa Clarita and films are shown at the Billy Wilder Theater in Westwood; the William Andrews Clark Memorial Library with its collections of rare books and manuscripts is located in West Adams; AUD supports the IDEAS Campus near Culver City; TFT offers programming at the Geffen Playhouse and the Center for the Art of Performance recently acquired the UCLA Nimoy Theater, both in Westwood; the Institute of the Environment & Sustainability operates field sites in the White Mountain Research Center Field Station in Bishop, the Santa Monica Mountains (the La Kretz Center Field Station and UCNRS Stunt Ranch Reserve) and in Central Africa; and the UCLA downtown Labor Center advances education and employment for workers and focuses on policy work that strengthens communities, workers rights, and immigrant rights.

[39] See the State's Legislative Analyst's Office report "The 2020-21 Budget: Analyzing UC and CSU Cost Pressures," which suggests 'the Legislature may wish to grow enrollment to improve access at high demand campuses.'

[40] See Davarian Baldwin's *In the Shadow of the Ivory Tower: How Universities Are Plundering Our Cities* for a critical discussion of university expansions into urban areas.

community's technical prowess made possible the rapid transformation of our on-campus activities to remote operations. Faculty, staff, and students poured themselves into new ways to learn, investigate, convene, and share. **Post-Pandemic Recommendation #5: The campus must now examine the lessons learned from our pandemic response and move forward into a future that exploits the power of technology, while also interrogating it, to re-imagine how research within the university functions, engages with the broader community, and fulfills our mission of education, research, and service.** At the same time, we must remember that technology is also, always, about people and communities. Therefore, the campus must closely track the benefits and the costs of new ways that technology may shape research and our research communities.

Fund Research Infrastructure

The pandemic highlighted UCLA's need for seamless research infrastructure (e.g., networking, security, computing, data storage and movement, associated support personnel) that is integrated with departmental systems, and accessible both to UCLA researchers from locations around the world and to outside research collaborators (i.e., at other institutions, governmental agencies). Moving forward, this need will escalate as the campus shifts to remote work opportunities and expands its collaborations with external partners, and as some research methods shift to increased reliance on data- and computational-driven methods. **Post-Pandemic Recommendation #5A: Commit to the expansion and maintenance of our research infrastructure, defined broadly to include the technical, physical, and human elements required to support research activity.** We stress the importance of people in this equation. None of these technology goals can be achieved by technology alone; they require people with knowledge and experience. Researchers must have ready and ongoing access to research support personnel. Additionally, researchers should receive help and be guided by clear and compassionate policies as they set up permanent home offices and other remote research capacity.

Any systems and processes developed must be robust, accessible, and connect seamlessly with other campus infrastructure. More labs and controlled experiments are now monitored online. Remote research requires integrated research infrastructure for purposes of file access, cross-institutional file sharing, and easy collaborations (e.g., digital and media asset management systems supported by the Library should be available to remote researchers and link seamlessly with the campus learning management system, research labs, and the campus Hoffman2 shared high-performance computing cluster). Beyond efforts at UCLA, the University of California Office of the President and the other UC campuses should work collectively to evaluate economies of scale in adopting and perhaps developing digital technologies systemwide.[41]

Continue Development of Digital Alternatives to Pre-Pandemic Processes and Research Norms

Technology has enabled us not only to respond to changing circumstances but also to develop some new ways of doing things that provide welcome alternatives to pre-pandemic norms. **Post-Pandemic Recommendation #5B: UCLA, foundations, professional societies, and other institutions should develop and fund digitization of analog materials and digitalization of processes and workflows in order to better support new remote forms of research.** The increased need for digital research materials leads to recommendations for the digitization of key UCLA Library holdings, including in special

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[41] UCOP has already established efforts related to technology, most notably systemwide Information Technology Agreements with key software vendors.

collections, and presents an opportunity for collaboration across libraries and archives. This may require government advocacy for the modification of copyright laws to permit digitization of materials for research purposes. Professional societies, foundations, and other institutions should support these processes at a larger scale. Digital publishing and digital research (e.g., in the digital humanities) should be supported and recognized in academic personnel reviews and student degree requirements. To the extent possible, sources must be digitized, both on campus and in consortia of universities and libraries; our interviews showed that this was a priority of deans, chairs, and researchers in the humanities and social sciences. Although there are multiple legal obstacles to making all materials available digitally, researchers as authors can also contribute to this effort by publishing under open-access protocols.

Campuswide Software Licensing

UCLA has been able to respond quickly to new situations and convene nimbly, thanks not only to Zoom but to various technologies and applications used in nearly every aspect of our research. **Post-Pandemic Recommendation #5C: Expand UCLA's coordinated evaluation, licensing, and dissemination of research-appropriate softwares and technologies, and increasing training and support.**

As first steps, the campus should evaluate our existing campuswide software agreements and those available to us through UC agreements (e.g., Microsoft Office 365; Google Workspace including mail, sheets, docs, and drive; Box; Zoom; Slack), identify gaps in our available toolkit, and expand the existing Software Central team to build capacity for proactive investigation into new software and tools for research. Alternatives to our existing tools should be considered (e.g., Microsoft Teams, Asana, Podio, Trello), as well as convening and conferencing tools like GatherTown and Gatherly that offer possibilities for research dissemination and collaboration. Zoom has been an excellent tool, albeit raising serious concerns about academic freedom and censorship, but there are many other platforms that might favor more natural types of interaction and deserve consideration (e.g., SpatialChat, Wonder.me, CEvent). Similarly, the university would be wise to invest in software that facilitates remote lab supervision and machine manipulation such as Nomachine, which allows researchers to monitor equipment and analyze results remotely. The university should also attempt to make field-specific software, such as Matlab, Adobe Creative Suite, and others, available through cloud applications.

Section 6: Conclusions

We reiterate our guiding recommendation that all researchers should seize this moment to take a hard look at our research questions, methods, infrastructures, and communities. Instead of returning to the old normal, research universities must rebuild toward a better future. The pandemic has disrupted our practices, tested our commitments, brought new opportunities, and both highlighted and exacerbated injustices that are structural, including in higher education. As we "return" to campus, it would be too easy to slip back into old ways, or to limit our horizons to clawing back some of what was lost. Instead, we must intentionally build toward a better post-pandemic research university at UCLA and beyond. That work requires rethinking, reorganizing, repairing, and reinvesting. That cannot be a top-down process. It is the work of every member of the research faculty, as well as administrators, staff, student researchers and leaders, donors, and advocates in government. We have offered specific recommendations, but our overall conclusion is that this is a moment when none of us should look away from the intentional, reparative, exciting, and necessary work of rebuilding the post-pandemic research university. That is our shared responsibility and our opportunity.

Appendix A: Post-Pandemic Research Visioning Working Group

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Roger Wakimoto, *ex officio*
Vice Chancellor for Research and Creative Activities

Appendix B: Recommendation Summary (In Report Order)

Guiding Recommendation

All researchers should seize this moment to take a hard look at our research questions, methods, infrastructures, and communities.

Restoring Our Research Community: Immediate COVID-related Recovery Steps

Recovery Recommendation 1: Establish and implement programs to redress the inequitably distributed research-related losses wrought by the pandemic.

> **1A:** Establish a temporary program to implement and administer mitigation measures for junior researchers, including a research replacement funding program for graduate students most harmed by pandemic-related research constraints.

> **1B:** To mitigate the pandemic's unequal effects, launch a temporary research replacement program for faculty who can demonstrate lost research.

Recovery Recommendation 2: Universities and other research funders should identify urgent research opportunities related to the pandemic, should (continue to) make rapid funding available accordingly, and should create mechanisms/hubs for interdisciplinary collaboration and conversation about COVID-19 and pandemic life.

> **2A:** UCLA should convene and support a cross-campus research group to share research on all facets of pandemic and post-pandemic life.

Recovery Recommendation 3: UCLA and other public universities should push harder than ever to get researchers in front of lawmakers, to give researchers the opportunity to tell their stories and make the case for renewed public support of research in higher education.

The Post-Pandemic Research Environment: Long-Haul Recommendations and New Research Landscapes

Post-Pandemic Recommendation 1: Convene a faculty-led panel to critically consider, observe, and advise the Academic Senate and the administration on the pandemic's long-term effects on the creation and value of knowledge, its public impact, and its diverse disciplinary and institutional formations.

> **1A:** Support and incentivize the retooling of research methods courses and other research training, in light of pandemic-related changes.

Post-Pandemic Recommendation 2: While preserving the best qualities of their campuses and identities, UCLA and other research universities must rectify the inequities that were revealed and exacerbated by the pandemic.

2A: Carefully consider and support ways that research can address the injustices exposed by the pandemic.

2B: UCLA should act quickly and decisively on the recommendations of the Moreno Implementation committee report, and all campus research-related units should incorporate the committee's findings and recommendations into their work; special attention must be paid in academic personnel considerations of tenure and promotion, as well as to faculty hiring, retention, and the more equitable distribution of, and rewarding for, service and teaching workloads.

2C: UCLA and other research universities must re-examine their childcare and family care policies and offerings in light of pandemic and pre-pandemic researcher experience.

Post-Pandemic Recommendation 3: UCLA must heed the pandemic's lessons by taking this opportunity to think expansively about how our academic community is constituted and engaged.

3A: Looking ahead, campus units should think creatively about how to run speaker series, seminars, local conferences, and other research events.

3B: UCLA, along with other research universities and professional societies, should develop and socialize mechanisms to support research collaboration at a distance, including within the UC system.

3C: UCLA should review academic personnel policies and procedures—including how we recruit, promote, and retain faculty, and rules for being in residence—in light of lessons learned during the pandemic.

3D: In line with shifts in the research community, research universities should examine intramural research funding programs (and advocate that external funders do the same) to determine where they should shift priorities and allowable expenses.

3G: UCLA should support research groups across the campus that will investigate and cultivate the value of in-person research: its intrinsic value and (possibly changing) role it plays alongside remote research exchange.

Post-Pandemic Recommendation 4: Identify opportunities to use on-campus and off-campus research space more innovatively, flexibly, and more efficiently, with openness to transformation in the bigger question of the "place" of the university.

4A: Require that new campus development prioritize flexible spaces that can support a myriad of uses and be reconfigured as nimbly as possible.

4B: Repurpose individual offices freed up by remote work for cowork spaces.

4C: Prioritize space for student researchers.

4D: Strongly consider establishing satellite academic campuses across Los Angeles and the region to expand UCLA's research capabilities and physical infrastructure.

Post-Pandemic Recommendation 5: The campus must now examine the lessons learned from our pandemic response and move forward into a future that exploits the power of technology, while also

interrogating it, to re-imagine how research within the university functions, engages with the broader community, and fulfills our mission of education, research, and service.

5A: Commit to the expansion and maintenance of our research infrastructure, defined broadly to include the technical, physical, and human elements required to support research activity.

5B: UCLA, foundations, professional societies, and other institutions should develop and fund digitization of analog materials and digitalization of processes and workflows in order to better support new remote forms of research.

5C: Expand UCLA's coordinated evaluation, licensing, and dissemination of research-appropriate softwares and technologies.

Appendix C: Action Items

The recommendations detailed in this report are intended to spark action. Consider them charges to the entire campus community to reconsider our methods, infrastructure, and modes of operation, and to implement changes that will result in a more humane and just university. Below are specific action items prompted by the report recommendations, organized by unit, leadership, and participant level.

Chancellor/Executive Vice Chancellor and Provost (EVCP)

1. Approve funding for a temporary Academic Personnel Office and Academic Senate program to implement and administer mitigation measures for junior researchers to augment the COVID-19-related modifications in evaluation and advancement already in effect.[42] (Recovery Rec. 1A)
2. Approve funding for a temporary research replacement program for faculty who can demonstrate lost research. (Recovery Rec. 1B)
3. Working with the Academic Senate, convene a faculty-led panel to critically consider, observe, and advise on the pandemic's long-term effects on the creation and value of knowledge, its public impact, and its diverse disciplinary and institutional formations. (Post-Pandemic Rec. 1)
4. Act quickly and decisively on the tasks set forth in the Moreno Recommendations Implementation Committee report. (Post-Pandemic Rec. 2B)
5. Working with Capital Programs and the Office for Research and Creative Activities, explore and support opportunities to use on- and off-campus research space more innovatively, flexibly, and more efficiently. (Post-Pandemic Rec 4)
6. Encourage and steer campus development and renovation to include flexible spaces, cowork spaces over individual offices, and space for student researchers. (Post-Pandemic Recs 4A-4C)
7. Working with Capital Programs, explore opportunities for and establish satellite spaces across Los Angeles and the region to expand UCLA's research capabilities and physical infrastructure. (Post-Pandemic Rec. 4D)
8. Encourage and steer the campus to move toward a future that exploits the power of technology, while also interrogating it, to reimagine how research within the university functions. (Post-Pandemic Rec. 5)
9. Commit to and fund expansion and maintenance of our research infrastructure, defined broadly to include the technical, physical, and human elements required to support research activity. (Post-Pandemic Rec. 5A)
10. Commit to and fund the digitization of analog materials and the digitalization of processes and workflows in order to better support new remote forms of research. (Post-Pandemic Rec. 5B)
11. Support and fund the expansion of UCLA's coordinated evaluation, licensing, and dissemination of research-appropriate software and technologies. (Post-Pandemic Rec. 5C)

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[42] UCLA's Academic Personnel Office's "Guidance on New Modifications to Academic Personnel Evaluation Procedures."

Academic Senate

1. Working with the Academic Personnel Office, establish a temporary program to implement and administer mitigation measures for junior researchers to augment the COVID-19-related modifications in evaluation and advancement already in effect. (Recovery Rec. 1A)
2. Working with the Academic Personnel Office, establish a temporary research replacement program for faculty who can demonstrate lost research. (Recovery Rec. 1B)
3. Working with the EVCP, convene a faculty-led panel to critically consider, observe, and advise on the pandemic's long-term effects on the creation and value of knowledge, its public impact, and its diverse disciplinary and institutional formations. (Post-Pandemic Rec. 1)
4. Working with researchers, academic units, and ORCA, identify urgent research opportunities related to the pandemic. (Recovery Rec. 2)
5. With ORCA, convene a cross-campus research group to share research on all facets of pandemic and post-pandemic life. (Recovery Rec. 2A)
6. Act quickly and decisively on the tasks set forth in the Moreno Recommendations Implementation Committee report. (Post-Pandemic Rec. 2B)
7. With APO and EDI, examine and expand child and family care policies and offerings. (Post-Pandemic Rec. 2C)
8. Encourage, develop, and socialize mechanisms to support research collaboration at a distance. (Post-Pandemic Rec. 3B)
9. Working with APO, deans, and department chairs, review and change as appropriate academic personnel policies and procedures in light of lessons learned during the pandemic. These changes could include, but are not limited to, how we recruit, promote, and retain faculty, and rules for being in residence. (Post-Pandemic Rec. 3C)
10. With ORCA, convene a cross-campus research group to investigate and cultivate the value of in-person research: its intrinsic value and (possibly changing) role it plays alongside remote research. (Post-Pandemic Rec. 3G)
11. Advocate for and support all efforts to expand and maintain our research infrastructure, defined broadly to include the technical, physical, and human elements required to support research activity. (Post-Pandemic Rec. 5A)

Office for Research and Creative Activities (ORCA)

1. Working with researchers, academic units, and the Senate, identify urgent research opportunities related to the pandemic. (Recovery Rec. 2)
2. Press funding agencies to continue to make rapid funding available for COVID-19-related research. (Recovery Rec. 2)
3. Working with deans and department chairs, establish mechanisms and events to foster interdisciplinary collaboration and conversation around COVID-19 and pandemic life. (Recovery Rec. 2)
4. With the Academic Senate, convene a cross-campus research group to share research on all facets of pandemic and post-pandemic life. (Recovery Rec. 2A)
5. Working with Government and Community Relations, redouble efforts to get researchers in front of lawmakers, to give researchers the opportunity to tell their stories and make the case for renewed public support of research in higher education. (Recovery Rec. 3)

6. Encourage, develop, and socialize mechanisms to support research collaboration at a distance. (Post-Pandemic Rec. 3B)
7. Examine intramural funding programs (and advocate that external funders do the same) to determine where funding programs should shift priorities and allowable expenses in light of new research landscapes, including, but not limited to, opportunities for remote research, new costs of remote research and its dissemination, and ongoing costs like caregiving. (Post-Pandemic Rec. 3D)
8. With the Academic Senate, convene a cross-campus research group to investigate and cultivate the value of in-person research: its intrinsic value and (possibly changing) role it plays alongside remote research. (Post-Pandemic Rec. 3G)
9. Working with the Chancellor, EVCP, and Capital Programs, explore and support opportunities to use on- and off-campus research space more innovatively, flexibly, and more efficiently. (Post-Pandemic Rec 4)
10. Encourage and steer the campus to move toward a future that exploits the power of technology, while also interrogating it, to reimagine how research within the university functions. (Post-Pandemic Rec. 5)
11. Commit to and press for the expansion and maintenance of our research infrastructure, defined broadly to include the technical, physical, and human elements required to support research activity. (Post-Pandemic Rec. 5A)
12. Commit to and press for the digitization of analog materials and the digitalization of processes and workflows in order to better support new remote forms of research. (Post-Pandemic Rec. 5B)
13. Support and press for the expansion of UCLA's coordinated evaluation, licensing, and dissemination of research-appropriate software and technologies. (Post-Pandemic Rec. 5C)

Capital Programs

1. Working with the Chancellor, EVCP, and the Office for Research and Creative Activities, explore and support opportunities to use on- and off-campus research space more innovatively, flexibly, and more efficiently. (Post-Pandemic Rec 4)
2. Encourage and steer campus development and renovation to include flexible spaces, cowork spaces over individual offices, and space for student researchers. (Post-Pandemic Recs 4A-4C)
3. Write future project planning guides to reflect the goals articulated herein of creating flexible, adaptable, and equitable access to space. (Post-Pandemic Recs 4A-4C)
4. Working with the Chancellor, EVCP, and the Office for Research and Creative Activities, explore opportunities for and establish satellite spaces across Los Angeles and the region to expand UCLA's research capabilities and physical infrastructure. (Post-Pandemic Rec. 4D)

Office of Advanced Research Computing/IT Services

1. Working with the Chancellor, EVCP, and the Office for Research and Creative Activities, advocate for, plan, and implement changes to the campus infrastructure that moves us toward a future that exploits the power of technology, while also interrogating it, to reimagine how research within the university functions. (Post-Pandemic Rec. 5)

2. Working with the Chancellor, EVCP, and the Office for Research and Creative Activities, advocate for, plan, and implement changes to expand and maintain our research infrastructure, defined broadly to include the technical, physical, and human elements required to support research activity. (Post-Pandemic Rec. 5A)
3. Working with the Chancellor, EVCP, and the Office for Research and Creative Activities, commit to and implement the digitization of analog materials and the digitalization of processes and workflows in order to better support new remote forms of research. (Post-Pandemic Rec. 5B)
4. Working with the Chancellor, EVCP, and the Office for Research and Creative Activities, plan for and implement the expansion of UCLA's coordinated evaluation, licensing, and dissemination of research-appropriate software and technologies. (Post-Pandemic Rec. 5C)

Library

1. Advocate for and support all efforts to expand and maintain our research infrastructure, defined broadly to include the technical, physical, and human elements required to support research activity. (Post-Pandemic Rec. 5A)
2. Working with the Chancellor, EVCP, and the Office for Research and Creative Activities, commit to and implement the digitization of analog materials and the digitalization of processes and workflows in order to better support new remote forms of research. (Post-Pandemic Rec. 5B)

Academic Personnel Office (APO)

1. Working with the Academic Senate, establish a temporary program to implement and administer mitigation measures for junior researchers to augment the COVID-19-related modifications in evaluation and advancement already in effect. (Recovery Rec. 1A)
2. Working with the Academic Senate, establish a temporary research replacement program for faculty who can demonstrate lost research. (Recovery Rec. 1B)
3. Act quickly and decisively on the tasks set forth in the Moreno Recommendations Implementation Committee report including, but not limited to, making changes to tenure and promotion procedures and policies, "conducting departmental and division equity assessments to remedy salary and progression inequities" and conducting follow-up studies to "determine whether faculty salary inequities have been reduced or eliminated."[43] (Post-Pandemic Rec. 2B)
4. With the Senate Faculty Welfare Committee and EDI, examine and expand child and family care policies and offerings. (Post-Pandemic Rec. 2C)
5. Working with the Academic Senate, deans, and department chairs, review and change as appropriate academic personnel policies and procedures in light of lessons learned during the pandemic. These changes could include, but are not limited to, how we recruit, promote, and retain faculty, and rules for being in residence. (Post-Pandemic Rec. 3C)

Office of Equity, Diversity & Inclusion (EDI)

1. Act quickly and decisively on the tasks set forth in the Moreno Recommendations Implementation Committee report including, but not limited to, expanding the Discrimination Prevention Office as described in the report, clarifying the EDI website's "Report an Incident"

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[43] "Moreno Recommendations Implementation Committee Final Report."

page, creating a unified campus diversity gateway, and building closer ties to the Academic Senate. (Post-Pandemic Rec. 2B)
2. With the Senate Faculty Welfare Committee and APO, examine and expand child and family care policies and offerings. (Post-Pandemic Rec. 2C)

Government and Community Relations (GCR)

1. Working with ORCA, redouble efforts to get researchers in front of lawmakers, to give researchers the opportunity to tell their stories and make the case for renewed public support of research in higher education. (Recover Rec. 3)
2. Advocate for external funders to determine where funding programs should shift priorities and allowable expenses in light of new research landscapes, including, but not limited to, opportunities for remote research, new costs of remote research and its dissemination, and ongoing costs like caregiving. (Post-Pandemic Rec. 3D)
3. Working with the Office for Research and Creative Activities and Capital Programs, explore opportunities for and establish satellite spaces across Los Angeles and the region to expand UCLA's research capabilities and physical infrastructure. (Post-Pandemic Rec. 4D)

UCLA Graduate Division

1. Working with monies from the EVCP, establish a research replacement funding program for graduate students most harmed by pandemic-related research constraints. (Recovery Rec. 1A)

Deans

1. Working with ORCA, department chairs, and the Senate, establish mechanisms and events to foster interdisciplinary collaboration and conversation around COVID-19 and pandemic life. (Recovery Rec. 2)
2. Working with department chairs, support and incentivize the retooling of research methods courses and other research training in light of pandemic-related changes. (Post-Pandemic Rec. 1A)
3. Act quickly and decisively on the tasks set forth in the Moreno Recommendations Implementation Committee report including, but not limited to, making changes to tenure and promotion procedures and policies. (Post-Pandemic Rec. 2B)
4. Working with department chairs, think creatively about how to run speaker series, seminars, local conferences, and other research events. (Post-Pandemic Rec. 3A)
5. Encourage, develop, and socialize mechanisms to support research collaboration at a distance. (Post-Pandemic Rec. 3B)
6. Working with the Academic Senate, APO, EDI, and department chairs, review and change as appropriate academic personnel policies and procedures in light of lessons learned during the pandemic. These changes could include, but are not limited to, how we recruit, promote, and retain faculty, and rules for being in residence. (Post-Pandemic Rec. 3C)
7. Working with department chairs, encourage and steer campus development and renovation to include flexible spaces, cowork spaces over individual offices, and space for student researchers. (Post-Pandemic Recs 4A-4C)

8. Embrace and engage in opportunities for and establish satellite spaces across Los Angeles and the region to expand UCLA's research capabilities and physical infrastructure. (Post-Pandemic Rec. 4D)
9. Encourage and steer your school or division to move toward a future that exploits the power of technology, while also interrogating it, to reimagine how research within the university functions. (Post-Pandemic Rec. 5)
10. Advocate for and support all efforts to expand and maintain our research infrastructure, defined broadly to include the technical, physical, and human elements required to support research activity. (Post-Pandemic Rec. 5A)
11. Support efforts to expand UCLA's coordinated evaluation, licensing, and dissemination of research-appropriate software and technologies. (Post-Pandemic Rec. 5C)

Department Chairs and Institute Directors

1. Convene researchers in your units to examine possible discipline-specific realignments as a result of the pandemic and ensuing social disruptions. (Guiding Recommendation)
2. Working with ORCA and your dean, establish mechanisms and events to foster interdisciplinary collaboration and conversation around COVID-19 and pandemic life. (Recovery Rec. 2)
3. Working with your deans and faculty researchers, support and incentivize the retooling of research methods courses and other research training in light of pandemic-related changes. (Post-Pandemic Rec. 1A)
4. With your Faculty Executive Committee (FEC) and faculty researchers, host discussions about current research directions and strategies to rectify the inequities that were revealed and exacerbated by the pandemic. (Post-Pandemic Rec. 2)
5. Act quickly and decisively on the tasks set forth in the Moreno Recommendations Implementation Committee report including, but not limited to, making changes to tenure and promotion procedures and policies. (Post-Pandemic Rec. 2B)
6. Working with deans and faculty, think creatively about how to run speaker series, seminars, local conferences, and other research events. (Post-Pandemic Rec. 3A)
7. Encourage, develop, and socialize mechanisms to support research collaboration at a distance. (Post-Pandemic Rec. 3B)
8. Working with the Academic Senate, APO, EDI, and your deans, review and change as appropriate academic personnel policies and procedures in light of lessons learned during the pandemic. These changes could include, but are not limited to, how we recruit, promote, and retain faculty, and rules for being in residence. (Post-Pandemic Rec. 3C)
9. Working with your deans and faculty, encourage and steer campus development and renovation to include flexible spaces, cowork spaces over individual offices, and space for student researchers. (Post-Pandemic Recs 4A-4C)
10. Embrace and engage in opportunities for and establish satellite spaces across Los Angeles and the region to expand UCLA's research capabilities and physical infrastructure. (Post-Pandemic Rec. 4D)
11. Encourage and steer your department to move toward a future that exploits the power of technology, while also interrogating it, to reimagine how research within the university functions. (Post-Pandemic Rec. 5)

12. Advocate for and support all efforts to expand and maintain our research infrastructure, defined broadly to include the technical, physical, and human elements required to support research activity. (Post-Pandemic Rec. 5A)
13. Support efforts to expand UCLA's coordinated evaluation, licensing, and dissemination of research-appropriate software and technologies. (Post-Pandemic Rec. 5C)

Faculty/Researchers

1. Analyze your current research questions, methods, and communities of practice to identify opportunities to better engage with your colleagues and your discipline on key challenges of our time. (Guiding Recommendation)
2. Participate in panels and working groups to advocate for research activities at UCLA. (All appropriate recommendations)
3. Engage with ORCA and GCP's efforts to impress upon lawmakers the importance of renewed public support of research in higher education, and be willing to tell your story and make the case for research. (Recover Rec. 3)
4. Working with department chairs, analyze and retool research methods courses and other research training in light of pandemic-related changes. (Post-Pandemic Rec. 1A)
5. Participate in departmental and discipline-specific discussions about current research directions and strategies to rectify the inequities that were revealed and exacerbated by the pandemic.. (Post-Pandemic Rec. 2)
6. Working with department chairs and colleagues, think creatively about how to run speaker series, seminars, local conferences, and other research events. (Post-Pandemic Rec. 3A)
7. Advocate for campus development and renovation that prioritizes include flexible spaces, cowork spaces over individual offices, and space for student researchers. (Post-Pandemic Recs 4A-4C)
8. Embrace and engage in opportunities for campus development and renovation to include flexible spaces, cowork spaces over individual offices, and space for student researchers. (Post-Pandemic Recs 4A-4C)
9. Embrace and engage in opportunities for and establish satellite spaces across Los Angeles and the region to expand UCLA's research capabilities and physical infrastructure. (Post-Pandemic Rec. 4D)
10. Support and advocate for a move toward a future that exploits the power of technology, while also interrogating it, to reimagine how research and research support within the university functions. (Post-Pandemic Rec. 5)
11. Support and advocate for the expansion and maintenance of UCLA's research infrastructure, defined broadly to include the technical, physical, and human elements required to support research activity. (Post-Pandemic Rec. 5A)
12. Support and advocate for the expansion of UCLA's coordinated evaluation, licensing, and dissemination of research-appropriate software and technologies. (Post-Pandemic Rec. 5C)

Appendix D: Selected Quotes from Researcher Survey

The following responses to our researcher questionnaire support the recommendations made herein. That said, UCLA researchers hold varying perspectives, and statements with counterpoints are also included.

Section 4: Restoring Our Research Community: Immediate COVID-related Recovery Steps

1. Address Research Loss and Inequities

"I have had to reduce my workload to about 25% from March 2020 due to lack of childcare. As the mother of two young children, lack of in-person daycare and school for an entire year has had an enormous impact on my productivity. I have declined almost every professional opportunity this year to be able to take care of my family." *-Anonymous*

"Frankly I think all teachers on this campus deserve at least one course release to recognize the tremendous labor we have conducted – and we continue to conduct – just to get our students through." *-Professor*

"The pandemic was a disaster for my research. The disappearance of all my childcare meant that I had to devote all of my energy to teaching and caring for my kids. My research program, which was moving with strong momentum, stopped in its tracks, even though I work on a topic that is highly relevant to issues that have emerged during the pandemic. I can't express how painful it was to have to turn down interviews, writing slots, and other opportunities to share my expertise, simply because I could not spare the time. I'm watching helplessly as other scholars discover and build an international profile in my research area, even though I've spent many years building my expertise. Restitution... could come in the form of guaranteed course releases (not vague instructions to negotiate with one's chair), relaxed research expectations, or expanded research funding. I would love nothing so much as a fellowship that offered me a quiet room with time to write, since that is exactly what I've been deprived of for the past year…. " *-Assistant Professor*

"Biggest challenge has been managing pandemic lockdown in a limited home space. Most younger faculty have relatively small living spaces, shared with young families…. We will need a systemic approach to avoid penalizing younger faculty for declining productivity over the pandemic period. That message must come from the top. This is an equity issue." *-Professor*

"Extra time on the tenure clock will help ladder faculty, but without a financial stipend, does little for the large number of women faculty in DGSOM who are in the in-residence series." *-Professor*

"International travel will be restricted for some time, especially to less developed countries…. I worry about a multi-year pause in research on these areas." *-Professor*

"Working class students (faculty and staff) of color were more likely to experience illness, severe illness, death, and unemployment during the pandemic. The challenges were compounded … when we noted that those with more family financial resources were able to take this time to work in a concentrated way without the stress of those added crises. Working class researchers of color seemed less able to find the stability (economic and emotional) to thrive in their research, even when they had previously been doing well." *-Professor*

"[Because of childcare] I was unable to maintain my research at a level that I found satisfactory, and as a result decided to pursue a non-academic career track." *-Anonymous*

"There should be a round of funding just for jr faculty that arrived at UCLA in the last year or two that hasn't had the chance to get their program off the ground before the pandemic. Don't just extend their clocks, help them catch up." *-Assistant Professor*

"A quarter of teaching relief for assistant professor primary caregivers to write funding and papers would jump start research productivity and minimize attrition for caregivers and individuals of color who suffered disproportionately during COVID." *-Assistant Professor*

"People taking care of young children seemed to receive accommodations much more readily than those like me taking care of elderly parents." *-Professor*

"Researchers partnering with under-resourced communities and populations may have been further impacted by the pandemic and research restrictions." *-Assistant Professor in Residence*

"While some forms of accommodation have been offered to faculty, I have seen the opposite for staff." *-Associate Professor*

"There are students and postdocs from more disadvantaged backgrounds who have a strong reason to complete their training on time, as they do not want to continue to be a burden to their families. The delay in their being allowed to complete their research may tip them over the edge to not completing their training. This will have a longterm adverse effect and promulgate inequities." *-Professor*

"Ladder faculty seemed to carry on fine with research. Non-ladder faculty did not. Postdocs were exploited by having to come to work in conditions that were of dubious safety. Ditto for graduate students." *-Adjunct Full Professor*

"Many senior faculty don't come in at all, affecting mentoring in their own lab but also to junior members." *-Associate Research Faculty*

"Clear, unambiguous guidance on altered expectations for tenure & promotion (not just extended tenure clocks) would be useful and help not drive some of the most affected people out of science. Aim to ask: what was the individual able to do with what they had available to them?" *-Anonymous*

2. Fund COVID-related research Across the Campus

"UCLA is dramatically under invested in infectious disease research and basic immunology research. This should be a priority post pandemic." *-Anonymous*

"The university should fund and support research into pandemic preparedness and remote data collection in the social sciences." *-Assistant Professor*

Section 5: The Post-Pandemic Research Environment

1. Boldly Imagine Changes in Research Directions and Methods

"My hope is that we emerge out of the pandemic kinder to ourselves and others, with more consideration for the constraints that people are under, whether in the midst of a pandemic or not. In that vein, I hope that a more expansive sense of how to do research and what research means that necessity imposed upon us remains." *-Anonymous*

"I think we need to not forget what we learned during the last year and that it needs to shape the research questions we ask, the data we collect, and the lens through which we analyze the data. Within the social sciences, equity is so often an under-recognized factor." *-Career Researcher & Doctoral Student*

"I hope you can use this as a way to complicate what constitutes research and epistemology itself by drawing from black, feminist, indigenous and other models." *-Professor*

"What we've lost is creativity. We've lost frequent, casual, low-stakes interactions between lab members, and even more so, between lab and non-lab members …. If we don't inject new, exciting, innovative opportunities to build creativity and collaboration, we will suffer mightily in the years to come." *-Associate Professor*

Hope: "Higher degree of transdisciplinary collaboration, supported by the institution." *-Professor*

"I hope that a more expansive sense of how to do research and what research means that necessity imposed upon us remains." *-Anonymous*

2. Learning from the Pandemic's Social Lessons

"My hope is UCLA creates a more equitable environment. The pandemic exposed injustices in medicine, research, the workforce, etc. As physicians we have an obligation to be fair and inclusive." *-Anonymous*

"It would be great to come up with a specific award for associate and senior level women researchers."
-Professor

"I don't think a long-term career at UCLA is possible. The long-standing, systemic gender bias has been magnified by the pandemic, concentrating resources in the hands of the few men who were already more advantaged heading into this thing. I used to think that if I were just allowed to have my own ideas and pursue them, that I could make it anyway. I don't think that anymore. The barriers are just too high." *-Associate Professor*

"We need better family leave policies …. We need more abundant and cheaper childcare options for faculty and staff with young children. We need to encourage a culture on campus that normalizes caring for family and children- many faculty I know with young kids have largely tried to hide the struggles from public view within our departments because of disparaging comments from both more senior faculty and also from our graduate students who want more of our time." *-Associate Professor*

"Meaningful equity would mean making teaching load an equity issue …. Meaningful equity would mean access to grant infrastructural help particularly for people who don't already have a zillion grants. Meaningful equity would mean looking at service hours and determining exactly how many more of them are being done by women on this campus. Meaningful equity would mean real support for working parents such as teaching release to support grant writing or an on-campus residential center where faculty could take two quarters to focus on research without having to go somewhere else." *-Anonymous*

"My greatest fear is that things will never be even close to normal at UCLA to permit research that is not driven by perceptions and ill-defined, myopic characterizations of equity that undermine research across a broad base of interests, concerns, and fields that should make up the university. [Internal grants for social justice and equity are] a clear message about UCLA's priorities, which have evidently discarded excellence across a spectrum of research interests. The situation is sufficiently dire that I am seriously considering early retirement at 50 … from UCLA." *-Professor*

"There needs to be more attention paid to the work conditions our STAFF have endured for the past year and even before." *-Professor*

"More institutional support for pregnancy and parenting care is needed … I feel that I am often in a position when I need to choose between my career and my family." *-Postdoctoral Fellow*

"It feels like the graduate students were also just left completely on their own during this time. We are not given a liveable wage (as highlighted in our department's 8-year review) and this lack of income really compounded during the pandemic." *-Graduate Student*

"The university loves to suggest forms of "public/civic engagement" but when it comes to review, those things are not given much weight, if at all. As well as service that's primary focus is pipeline programs to help under-represented students gain access to the professoriate. Similarly, inter-disciplinary work is encouraged, but not supported, especially in the humanities." *-Associate Professor*

3. Rethinking Research Communities

"The pandemic has indirectly fostered the more rapid dissemination of research results without the many months of peer review. This more facile science can be a good thing." *-Professor*

"Online conferences are an acceptable substitute/adjunct for in-person, travel-based conferences. But not a complete replacement. We need time and space to socially interact with other scholars to build robust research networks." *-Professor*

"We … need to rethink our audiences. We have learned to more easily reach beyond the campus. Let's keep doing that. Administration must truly reward this work, which is time consuming and generally unrewarded." *-Professor*

"Video conferencing (zoom) shortens the distance between schools and departments, and actually make the inter-disciplinary collaborations easier. But I miss the hallway conversations that spiked some interesting discussions in the past." *-Anonymous*

"The main barrier that has been reduced is that in online presentations, people from all over the world can participate without having to bear the costs of travel. That is worth preserving ahead in hybrid formats." *-Distinguished Professor*

"Remote work can bring the flexibility and accommodations that people with disabilities may need and should be considered by UCLA for the future." -Anonymous

"What was effective … was to leave time at the beginning of meetings to just talk about anything; we celebrated birthdays; and we are on our third cycle of our HR person reaching out to every person individually to check in. We intend to maintain these practices after the pandemic." *-Anonymous*

"We can seize on opportunity lessons learned with research partnerships, project teams, public private partnerships and broader university engagement. There were some really interesting corporate examples of partnerships formed." *-Anonymous*

"UCLA should create new and permanent budgets for its divisions and professional schools to fund (1) the participation of cultural workers, scholars, and many others from different time zones (e.g., support for Zoom webinars, honoraria, tech assistance, live video-recording, archival storage, public dissemination via Facebook, etc) and (2) the captioning of live events and related tech support for disabled communities (e.g., sign language interpreters)." *-Anonymous*

"I think not traveling was a huge advantage to my quality of life. I like the fact that we could invite people from all over the country to give seminars and they did not have to travel. This (a) cut down costs, (b) allowed us to invite people we normally could not invite (from Japan for example) and (c) was much better for the environment (i.e. no gas used for airplanes, etc.)." *-Professor*

"My writing came to a halt based on service obligations related to covid. Put into place community email guidelines encouraging time away from inboxes. Increase staff numbers and support to offset administration responsibilities to allow faculty to spend more time on their research." *-Associate Professor*

4. Reconceptualize the "Place" of the University

"We should offer more flexible work arrangements for faculty, staff, and students. Before the pandemic, many staff were dealing with long commutes that impact their well-being and effectiveness. Remote work needs to be possible, but also requires improvements in how we can work efficiently in teams." *-Assistant Professor*

"We have learned what aspects of research can be communicated perfectly well via zoom, and what aspects cannot. As a result, the research community should be able to allocate its scarce time and money resources more effectively." *-Research Professor*

"At least half of all instruction and advising should take place remotely, permitting faculty and admins to extract themselves from the hellscape that is Los Angeles traffic. Less pollution and higher quality of life for all." *-Assistant Professor*

"Whatever can be done remotely should be kept remote so as to alleviate the burden on both people having to commute into campus, and the campus resources (parking, traffic, facilities) being strained." *-Professor*

"Working from home certainly boosts my research productivities. I can be more concentrated and focused." *-Anonymous*

"We are eager to get back to work. While we found that a lot of the administration can be done remotely, but the science needs to be done in person." *-Professor*

"On an infrastructural level, I hope the pandemic experience will help with major UCLA overcrowding issues and that more staggered work times and scheduling will become the norm." *-Professor*

"While I believe that remote participation through digital platforms is here to stay, and will combine with 'live' events in hybrid ways, I hope that the bulk of our research returns to real-time socially situated co-present modalities. Learning, teaching, and collecting data are all, in variable ways, social

processes, and to lose the real time social context would negatively affect the quality of our research and scholarship." -*Professor*

"I do research in a foreign country. All my research and that of postdocs and graduate students was halted. Research assistants that I had trained in the foreign country were able to continue some small amount of data collection activities. The benefit of the pandemic is that I will place a greater emphasis going forward on training foreign collaborators, anticipating future travel restrictions." -*Anonymous*

"Working from home is a perk for some people and a nightmare for others." -*Assistant Professor*

"I think it would be beneficial for all UCLA research staff to get a 1 time allowance (perhaps $100) for setting up distance/home office." -*Anonymous*

"Sharing apartment space with others that have to work or with children made the situation much worse for people on the lower end of the socio-economic structure .... A bedroom should not be mistaken as an appropriate home office." -*Anonymous*

"My PI knows very little of what I do now. I feel a little abandoned." -*Anonymous*

"A business model that relies on daily parking fees, inflated rents charged at UC-owned facilities, sales of athletic-branded items and athletic tickets, and elective surgeries at our hospitals is a lousy way to run an educational institution, as it showed with revenue losses during the pandemic." -*Anonymous*

"The absence of in-person conferences and research talks risks rendering U.S. researchers, including myself, more isolated than in pre-pandemic times, from the international research community." -*Anonymous*

5. Expand Upon the Best of the Technology-Enabled Pandemic Solutions

"[There are] massive infrastructure challenges associated with WFH - particularly IT related: internet speeds, latency, hardware, etc. We have learned that remote work is possible but inefficient. If we treat this as an opportunity to make it more efficient, our university would be better positioned for the future." -*Assistant Professor*

"UCLA needs to make sure that IT infrastructure for research activities is easy to use and up to date …. The IRB website needs to be updated. The contracting process also needs to be streamlined." -*Professor*

"One thing [remote work] brings up is concerns around hybrid environments. The university could facilitate this by setting up meeting rooms with appropriate audio visual technology to support hybrid research meetings." -*Assistant Professor*

"Looking ahead, the needs of humanists and social scientists will increasingly focus on management of digital data (broadly defined to include scanned archival documents and images). We need to do more to support our Library, which is woefully underfunded in these areas, or to build up the research support apparatus outside the Library. Currently, "data" is imagined only as discrete data sets. Archival collections, oral histories, and the metadata associated with these collections are also data and should be supported as such. The UCLA Library is in bad shape and needs major reinvestment and rethinking. We cannot have great humanities and humanistic social science research without a great library." - *Professor*

"UCLA continues to regulate research without providing proper research support and infrastructure." - *Anonymous*

"The adoption and acceptance of virtual consent led to larger enrollments in survey studies resulting in richer data and richer studies." *-Anonymous*

"Virtual meeting tools and greater investments in cloud computing environments could become a mainstay in research." *-Professor*

"I do wonder about data security and safety with online research and if we are going to do more of it, there should be a broad assessment of practices, create tools/guidelines to strengthen our data security measures and train up researchers." *-Research Director*

"I hope that all of the university services that were made readily available online continue to exist online in some format. Like library books!" *-Anonymous*

"I hope that more efforts can be made to maintain and improve the emergency library resources that were put in place, not least the mailing of books to peoples' homes as well as the scanning of books and the opening up of more online book and digital libraries." *-Anonymous*

"Our international collaborations in a decolonized research environment includes working closely with counterparts in countries in which access to facilities and infrastructure is limited or absent." - *Anonymous*

"I'd like to see copyrighted material in the form of books and essay collections made available online. This is the next step in "green" (not "gold") Open Access." *-Distinguished Professor*

"As we all know, digital infrastructure comes at a very high cost to the environment, human rights, and political stability throughout the world. Increasing the dependence on this infrastructure exacerbates the global North/South inequities and other disbalances within the US class-based social structure." - *Distinguished Professor*

"Universal, high-quality internet access is crucial and employers must be engaged in providing this for remote research. Computers with appropriate specs also must be provided. This could come at a considerable cost and trainees and researchers cannot be expected to pay for that." *-Anonymous*

"Cybersecurity will be a big issue. Consider more training/ stronger protection of data flow." *-Assistant Project Scientist*