ACADEMIC SENATE – Research, Scholarship and Creative Activities Committee
Spring 2021
Due: Friday, June 4, 2021

MEMBERS	
Name	**College/Unit**
Chavez, Ricky	ASI
Flores, Carlos	OCOB
Hagobian, Todd	Admin
Helms, Eleanor	CLA
Kachlakev, Damian	CENG
Jackson-Elmoore, Cynthia	Provost
Liddicoat, Al	Admin
Mewes, Matthew	CSM
Schwab, Keri (CH)	CAFES
Vestermark, Jesse	PCS
VACANT	CAED

CHARGES		
Charge	**Complete?**	**Status/Notes**
Work with campus stakeholders to determine a breakdown of how indirect costs (IDC) from external grants are being used. **AY 2020-21**	☒	Completed Winter 2021
Explore how IDC can be used to help equitably support the teacher-scholar model. **AY 2020-21**	☒	Completed Winter 2021
Discuss and explore the impact of COVID-19, working from home and virtualization on scholarship and work-life balance. **AY 2020-21**	X☐	See information below.
Identify college-level support opportunities for RSCA. **AY 2020-21**	☐	To be continued Fall 2021. We though that since funding was in such flux due to COVID-19 and the budgetary repercussions, we would want until budgets were more stable during the 2021-22 school year and assess then. We have the list of support from the previous year, but there was so much uncertainty that it did not make sense to update that document.

NOTES:

The committee decided to assess the impact of COVID-19 on faculty by gathering published studies on the impacts to faculty nationally and loosely organized by each Cal Poly college.

Humanities (CLA): (includes info on faculty, hiring, presses, and graduate students):

Research on Covid Impact on Research

1. Gender disparities

Emma Pettit, "Covid-19 Has Robbed Faculty Parents of Time for Research. Especially Mothers," *The Chronicle of Higher Education*, January 20, 2021.
https://www.chronicle.com/article/covid-19-has-robbed-faculty-parents-of-time-for-research-especially-mothers

- Impact on parents:
- "The worst disruptions were for families with children under the age of 7. Male and female parents of children under the age of 3 reported losing about an hour and 15 minutes and over an hour and a half of research time per day, respectively. Women with children who were under 1 year of age fared the worst, losing nearly two hours of research time per day. And single mothers reported spending about an hour and a half less per day on research than they spent before Covid-19, coupled with spending nearly an hour more on housekeeping and nearly two and a half hours more on child care and schooling."
- The data they refer to is collected by Tatyana Deryugina, Olga Shurchkov, Jenna E. Stearns, working paper titled "Covid-19 Disruptions Disproportionately Affect Female Academics," National Bureau of Economic Research

2. Graduate level research in humanities

Megan Zahneis and Audrey Williams June, "How Has the Pandemic Affected Graduate Students? This Study Has Answers," *The Chronicle of Higher Education* (September 3, 2020)
https://www.chronicle.com/article/how-has-the-pandemic-affected-graduate-students-this-study-has-answers

- The article reports on graduate student dissertation research and career path changes. 1 in 4 students expect to take longer to complete their degrees (most saying about 6 mo longer). More women than men extended their expected timeline.
- For career plans (in the section "A Change in Plans"), "The humanities was the discipline with the largest share of students making a shift." The % of humanities students whose career plans changed was 25%. Next were social and behavioral sciences (18%), computer science and engineering (17%), science and math (16%), business (15%), education (15%), and other (14%).

3. Changes in hiring, likely to affect young scholar research, and possibly teaching loads, in future years

Jonathan Kramnick, "The Humanities After Covid-19: What Happens When Hiring Dies?" *The Chronicle of Higher Education* (July 23, 2020)
https://www.chronicle.com/article/the-humanities-after-covid-19

- Kramnick notes that hiring in the humanities never recovered after 2008, and the Covid pandemic seems to have set things back even further.
- He includes a link to some quantitative data reported by Justin Weinberg on Daily Nous ("Much Fewer Academic Philosophy Jobs Advertised This Season," November 2020), collected by Charles Lassiter on jobs in Philosophy (from PhilJobs, which is currently the main advertising venue for academic jobs). According to Lassiter, "there are 53% fewer jobs posted on PhilJobs in 2020

compared to 2018 and 2019." In 2018 there were 270 jobs by November. In 2019 there were 276. In 2020, there were 126.

4. Changes to university presses

Charles Watkinson, "University Presses and the Impact of COVID-19," *Association of Learned and Professional Society Publishers* 34 (2021): 17-24.

- Emphasizes positive reactions to temporary free availability of free e-resources (like Cal Poly offered in spring of last year).
- New emphasis from libraries on materials that openly advance anti-racism and equity

5. One example of how someone's field research adapted at the start of Covid-19

"Neta Kligler-Vilenchik, Daniela Stoltenberg, Maya de Vries Kedem, Hadas Gur-Ze'ev, Annie Waldherr, and Barbara Pfetsch, "Tweeting in the time of Coronavirus: How Social Media Use and Academic Research Evolve during Times of Global Uncertainty," *Social Media + Society* (July-Sept 2020): 1-6.

- The team reports that they quickly adapted their research plan from a comparative study of two cities (made more difficult due to sudden travel restrictions in March 2020) to a survey that asked about how Twitter habits were changing as the pandemic unfolded.
- They cite Rahm Emmanuel's catch-phrase "Never let a crisis go to waste."

The Sciences: COSM:

1. Academic Productivity Differences by Gender and Child Age in Science, Technology, Engineering, Mathematics, and Medicine Faculty During the COVID-19 Pandemic

https://doi.org/10.1089/jwh.2020.8710

This is a survey of 284 US STEMM faculty comparing the two months before and after the pandemic shutdown in mid-March 2020.
- The key findings indicate that the shutdown had a significant impact on parents with young children, while faculty without young children at home may have even seen an increase in productivity in some areas, such as grant submissions. Some measures of academic productivity show a greater impact on women compared to men. Key findings:
- A significant difference is reported between the hours worked for full-time faculty with young children: 33.7hr for parents with children 0-5yr, 48.3hr for 6–11yr children, 49.5hr for 12–17yr children, compared to 49.2hr for faculty without children.
- Faculty with children 0-5yr report significant decrease in peer-review activity and publications, while those with older children or no children at home reported no change in activity or an increase in some areas (e.g. grant submissions).
- Little difference was seen between the pandemic hours worked per week reported by men and women who were working full time: 45.8hr vs 43.1hr.
- Women reported a significant drop in publication authorship, while no change is seen for men.

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2. Unequal effects of the COVID-19 pandemic on scientists

Myers, K. R., Tham, W. Y., Yin, Y., Cohodes, N., Thursby, J. G., Thursby, M. C., ... & Wang, D. (2020). Unequal effects of the COVID-19 pandemic on scientists. *Nature human behaviour*, *4*(9), 880-883.

https://doi.org/10.1038/s41562-020-0921-y

This is survey of 4,535 US and European faculty and principle investigators in April, 2020. Key findings:
- On average, respondents reported a drop of working hours, 61hr -> 54hr. 55% reported a decrease in hours worked, 27% reported no change, 18% reported and increase.
- The hours spent on research saw the largest decline compared to teaching, fundraising, and other activities.
- Research areas depending heavily on laboratory activites such as biology and chemistry saw the greatest decrease in research time, around 30%-40%, while more theoretical/computational areas such as mathematics and computer science only experienced ~10% decreases.
- Correcting for other factors, gender was an important factor in the decrease in time spent on research, with females experiencing a 5% larger decline. Parents with small children experienced a 17% large decline compared to peers. Career stage an other factors had little affect on the time spend on research.

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3. Only Second-Class Tickets for Women in the COVID-19 Race. A Study on Manuscript Submissions and Reviews in 2329 Elsevier Journals

https://dx.doi.org/10.2139/ssrn.3712813

Compares the February-May submission and peer review activity of Elsevier journals between 2018-2020.
- They found a 30% increase in submissions during the first wave of the pandemic compared to the previous year, with an even larger increase (63%) in health and medicine journals.
- The also found a 29% increase in review acceptances in 2020 compared to 2019.
- The publication data are split according to gender, age (measured using years since first record in Scopus), and field of study (health/medicine, life sciences, physical sciences/engineering, social sciences/economics). An increase in submissions is seen in all categories, however women saw a smaller increase in each. The effect was most pronounced in health and medicine, which saw the largest increase in submissions. The effect was also more pronounced for younger women.
- While the total review activity increased in 2020, the acceptance rate of review invitations decreased. Little difference is seen between men and women in the decrease in acceptances except for older researchers in health and medicine and in the physical sciences, where women saw a larger decrease in acceptances.

Library Science : **Library and Information Science**

At this point, there is almost no published research specifically on the impact of the COVID-19 pandemic on members of the Library and Information Science (LIS) profession's ability to conduct research. I use the word "almost" because, on a meta- level, the pandemic itself laid bare the challenge of seeking and providing reliable, accurate and timely information on the disease and its spread, providing new opportunities to address the issues of reliability, credibility, misinformation spread, etc. Because of this, about half of the literature I uncovered before narrowing it down to the three below focused specifically on medical libraries and health metadata dissemination. However, I have chosen to highlight three articles that take a more broad, cross-disciplinary view of the challenges. Ultimately, in some sense the heightened awareness of muddled and misinformation engendered by the pandemic could be viewed as a benefit to the LIS field, though it's unclear whether and how this would translate directly to easing the research process itself.

Herman, E., Nicholas, D., Watkinson, A., Rodríguez-Bravo, B., Abrizah, A., Boukacem-Zeghmouri, C., Jamali, H. R., Sims, D., Allard, S., Tenopir, C., Jie Xu, Świgoń, M., Serbina, G., & Cannon, L. P. (2021). The impact of the pandemic on early career researchers: What we already know from the internationally published literature. *El Profesional de La Información*, *30*(2), 1–17. https://doi.org/10.3145/epi.2021.mar.08

- The large team of international authors, most of whom are LIS professionals, asks several open-ended questions about ECRs (Early Career Researchers) and the pandemic's impact on their progress.
- They conclude that ECRs have been disproportionately impacted when compared to their more senior peers. The pandemic has claimed funding, cause hiring freezes, and upended work-life balance, especially for women and mothers.
- In the final sentence, the authors state that "much needs to be done on the institutional and governmental policy-making level" to prevent "a secondary epidemic of lost early career scientists."
- This also highlights a weakness of the study, that it appears to have been entirely science-focused, omitting the impact on the academic humanities and creative activities.

Lor, P., Wiles, B., & Britz, J. (2021). Re-thinking Information Ethics: Truth, Conspiracy Theories, and Librarians in the COVID-19 Era. *Libri: International Journal of Libraries & Information Services*, *71*(1), 1–14. https://doi.org/10.1515/libri-2020-0158

- This article addresses the COVID-19 conspiracy theories and the related "infodemic"—a portmanteau initially coined to describe confusion associated with the SARS outbreak of 2003.
- It touches on the concurrent initiation and rise of "information epidemiology" in examining the course of information flow from expert beliefs to related public behavior, proposing an

ethical framework based on Italian philosopher Franca Di Agostini's concept of "rights to truth" or *alethic* rights.

Kaiser, K. A., Chodacki, J., Habermann, T., Kemp, J., Paglione, L., Urberg, M., Scott Plutchak, T., & Lawlor, B. (2020). Metadata: The accelerant we need. *Information Services & Use*, *40*(3), 181–191. https://doi.org/10.3233/ISU-200094

- The authors advocate for metadata and metadata system flows in addressing issues of speed, clarity and nuance in combating the pandemic.
- They assert that the COVID-19 communication struggle indicates that not enough had been learned by previous outbreaks such as SARS and the flu outbreak of 1918, and that metadata control can help to more quickly cross barriers between the diverse disciplines that are necessarily connected by the complexities of the pandemic.

Architecture and Environmental Design

Architecture lies in the nebulous gap between research and creative activity, though it hews towards the latter. A trend in several architecture-specific articles suggested that the challenges of the pandemic were mitigated by the use of visual and virtual technology (such as YouTube and 360-degree viewing software) to address a discipline whose outcome is most often expressed and experienced in the physical realm. Several more articles were consulted than the two listed below but all revealed themselves upon examination to be rushed, sloppy, vague and/or overly speculative.

Maturana Cossio, B., Salama, A. M., & McInneny, A. (2021). Architecture, urbanism and health in a post-pandemic virtual world. *Archnet-IJAR, International Journal of Architectural Research*. https://doi.org/10.1108/ARCH-02-2021-0024

- In this viewpoint essay, the authors use plenty of architectural doublespeak but eventually do elucidate their vision of heightened "transdisciplinarity" required to meet the post-pandemic moment in architecture, requiring more complex knowledge, collaboration, interdisciplinary communication and understanding.
- This is presented as a global and environmental imperative.

Keenan, J. M. (2020). COVID, resilience, and the built environment. *Environment Systems and Decisions*, *40*(2), 216–221. https://doi.org/10.1007/s10669-020-09773-0

- The author takes a pro-active and optimistic a lens to view how the early stages of the COVID-19 outbreak both benefitted from pre-pandemic resilience can be examined to inform future resilience measures and planning for the built environment.
- One of the conclusions is that planning for climate change also benefitted the response to the pandemic.
- A particularly powerful quote from the conclusion reads, "the future of research and practice across various domains of resilience and adaptation will be defined not only by the

quantifications of socioeconomic indicators but also by the qualification of the human experience in all its capacities for ingenuity, empathy, and moral responsibility."

Business: OCOB:

Amano-Patiño, N., Faraglia, E., Giannitsarou, C., & Hasna, Z. (2020). The Unequal Effects of Covid-19 on Economists' Research Productivity. https://doi.org/10.17863/CAM.57979

- Relative number of female authors in non-pandemic related research has remained stable with respect to recent years (at around 20%),
- Women constitute only 12% of total number of authors working on COVID-19 research.
- Primarily senior economists who are contributing to this new area.
- Mid-career and junior economists record the biggest gap between non-COVID and COVID research, and the gender differences are particularly stark at the mid-career level.
- Mid-career female economists have not yet started working on this new research area: only 12 mid-career female authors have contributed to COVID-19 related research so far, out of a total of 647 distinct authors in our dataset of papers (NBER, CEPR and CEPR Covid Economics).

- reported negative impacts to mental health due to social isolation

Cui, R., Ding, H., & Zhu, F. (2021). Gender inequality in research productivity during the COVID-19 pandemic. *Manufacturing & Service Operations Management*. https://doi.org/10.1287/msom.2021.0991

- 10 weeks after lockdown in the US, although total research productivity increased by 35%, female academics' productivity dropped by 13.2% relative to that of male academics.
- The productivity gap is more pronounced for assistant professors and for academics in top-ranked universities and is found in six other countries.
- There are issues in the fairness in productivity caused by the lockdown, a finding that universities will find helpful when evaluating faculty productivity.
- Managers should be aware of the potential unintended consequences from telecommuting.

CAFES (and ecology/biology overlap)

Aubry, Lise M, Laverty, Theresa M, & Ma, Zhao. (2021). Impacts of COVID-19 on ecology and evolutionary biology faculty in the United States. *Ecological Applications*, *31*(2), e2265–n/a. https://doi.org/10.1002/eap.2265

- Ecologists and evolutionary biologists in American universities
- Female respondents, assistant professors, and those who care for at least one child or teenager, were significantly more dissatisfied with their work–life balance during this pandemic than others,
- Online teaching support, relaxed expectations on publications, possibility of pausing tenure clock, and acknowledgment of "no business as usual" by administrators were thought to be effective policies in mitigating these negative impacts.

Impact on field-based teaching

Barton, D. C. (2020). Impacts of the COVID-19 pandemic on field instruction and remote teaching alternatives: Results from a survey of instructors. *Ecology and evolution*, *10*(22), 12499-12507.

- Survey of 117 faculty conducted during spring 2020
- Substantial reduction of learning outcomes typically taught in the field
- Frequent substitutions of less active and more instructor-centered remote activities for field activities.
- Generally negative instructor views on many remote teaching substitutions

CAFES-specific information was difficult to find, most studies were in medical or biological sciences.

General National Research

The NIH conducted a large study of the NIH workforce, and the RSCA committee thought this could provide insight into faculty experiences during COVID.
https://acd.od.nih.gov/documents/presentations/12112020_PreliminaryFindings.pdf

- 16,892 responses
- 43.9% had caretaking responsibilities
- 1 in 5 reported caretaking made doing their work more difficult
- 25% reported lower productivity, 36% reported no change in productivity, 38% reported higher than normal
- 61% reported reduced access to onsite labs
- 54% reduced access to colleagues

- 69% reported increased expenses related to ensuring safety of students and staff
- 63% reported negative impacts to mental health due to societal or political events