

Exploring the Gendered Impacts of COVID-19 on Faculty

Sarah Trainer, Seattle University

Sarah Trainer is a medical anthropologist. Her work examines everyday negotiations around identity, wellness, and challenges to these within the context of large organizations. She is currently the Research & Program Coordinator for a National Science Foundation–funded ADVANCE Program at Seattle University.

Dr. Agnieszka Miguel, Seattle University

Agnieszka Miguel received her Ph.D. in Electrical Engineering in 2001 from the University of Washington, and MSEE and BSEE from Florida Atlantic University in 1996 and 1994. Dr. Miguel's professional interests involve image processing, machine learning, and engineering education especially active learning, diversity, equity, and inclusion, retention, and recruitment. Her teaching interests include MATLAB, circuits, linear systems, and digital image processing. She is an ASEE Fellow and a member of the IEEE, SWE, and Tau Beta Pi. Currently, Dr. Miguel is the ASEE First Vice President and Vice President for External Relations which gives her a seat on the ASEE Board of Directors. Dr. Miguel has held several other officer positions across the ASEE including: Professional Interest Council I Chair, Division Chair and Program Chair of the ECE and New Engineering Educators Divisions, and ASEE Campus Representative. Dr. Miguel is also a member-at-large of the Electrical and Computer Engineering Department Heads Association (ECEDHA) Board of Directors. She has been a member of the ECEDHA Annual Conference Program Committee since 2013.

Dr. Jean M. Jacoby, Seattle University

Jean Jacoby is an Associate Dean and a Professor of Civil and Environmental Engineering in the College of Science and Engineering at Seattle University. Dr. Jacoby joined SU as the Clare Boothe Luce Professor of Environmental Engineering. Since 2010, she has served as the director of the SU Project Center and coordinates the college's undergraduate research program. Dr. Jacoby is the co-Principal Investigator on an NSF Institutional Transformation grant-funded project "What Counts as Success? Recognizing and Rewarding Women Faculty's Differential Contributions in a Comprehensive Liberal Arts University" (2016-2021).

Dr. Jodi O'Brien, Seattle University

Jodi O'Brien is Professor of Sociology at Seattle University and Director of SU ADVANCE, a National Science Foundation-funded program for the advancement of women and minoritized faculty. Her work focuses on everyday discrimination, and transgressive identities and communities. Her books include The Production of Reality; Social Prisms: Reflections on Everyday Myths and Paradoxes; and Everyday Inequalities. Her recent articles include, Stained-Glass Ceilings: Religion, Leadership, and the Cultural Politics of Belonging, and Seeing Agnes: Notes on a Transgender Biocultural Ethnomethodology. She is Co-Chair for the Board of Directors for Ingersoll Gender Center and is also the editor of the SAGE Encyclopedia of Gender and Society, and the recent former editor of the public sociology journal, Contexts.

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Introduction

Institutions of higher education in the United States have been riddled with different kinds of discrimination from their inception, reflecting the larger sociocultural and political economic contexts in which they are inevitably embedded. Evidence of gendered and race-based discrimination is particularly robust, indicating that women and faculty of color experience a range of overt and covert inequities throughout their professional careers when compared to men and white faculty respectively [1, 2, 3, 4, 5, 6, 7, 8, 9, 10] [11, 12, 13, 14, 15, 16, 17, 18, 19, 20]. Covert inequities and microaggressions as they play out in 2020 in colleges and universities in the U.S. are often very difficult to address because they are subtle, even invisible (especially to the often well-intended perpetrator); other equities are still far from subtle. In STEM fields, gendered discrimination issues have often been described with the "leaky pipeline" metaphor: women leave STEM fields in greater numbers, first in undergraduate, then in graduate school, and then from faculty and/or industry positions [21, 22, 23, 24, 25, 26]. STEM also faces persistent issues with racial diversity, including retention of non-White and non-Asian identifying degree holders [27]. Patching up the leaks by increasing the sheer numbers of women and BIPOC faculty in science, math, and engineering was the focus of a number of early initiatives within STEM, but the focus has since broadened to include initiatives aimed at changing institutional climate as well. Other work, including from outside STEM fields, has also suggested that equity and inclusion issues extend beyond increasing numbers and representation [28, 29, 30, 2, 3, 7, 10, 31, 11, 12] [13, 14, 32, 18].

Formal institutional policies (or lack thereof), professional and personal networks, interactions with colleagues and students, and articulated (or not) expectations all combine to create particular climates and experiences for faculty at institutions of higher education throughout the United States in 2020. Those show gendered and race-based patterns. Many of the activities that are integral to the reputation and function of an organization are often performed by women and faculty of color. These activities, especially administrative and curriculum-based ones, tend to require time and expertise but are not typically rewarded in traditional academic promotion structures [1, 33, 6, 34, 31, 35]. In fact, research indicates that women faculty overwhelmingly are tasked with "taking care of the academic family," i.e. they are disproportionately asked to take on time-intensive teaching and low-prestige institutional service work [33, 6, 11, 12, 13, 35]. They are also overtasked with taking care of their families at home [36]. One result is that many women faculty members in institutions of higher education remain "stalled" at the associate professor rank [37, 38, 39].

Data shows that in some instances, the more women in a field – especially women of color – the less that field is valued (measured in expressed attitudes towards the field and in salaries) because of persistent perceptions inside and outside the academy that women – especially women of color – are less competent. The trends we have recently seen in fields like psychology and sociology further undermine simplistic arguments for simply increasing numbers will fix the equity issues. Furthermore, when given an option, faculty still overwhelmingly try to hire and/or promote white men. Almost a decade ago, Sarah Ahmed wrote that institutions of higher

education rest on nested systems of White privilege that are not only central to the ways that institutions work, but are actively bolstered and continually reimagined through a myriad of everyday practices [40]. Eight years later, on an entirely different continent, in the midst of a pandemic and a national reckoning about racial justice, this is still largely true.

If an organization does not explicitly put policies in place that counter the effects of larger inequities and biased expectations, then those inequities and biases remain powerful, disadvantaging women and faculty of color. The COVID-19 pandemic has highlighted such discrepancies, as for example, the strains on women faculty who are juggling work and the "second shift" to a demonstrably greater degree than are men faculty have been increasingly written about. Currently, universities are still grappling with addressing the multitude of stressors on faculty; formulating responses that specifically help women faculty has been notably missing thus far.

Analyzing the Impacts of COVID-19: A Snapshot of U.S. Higher Education

The impacts of COVID-19 are therefore only exacerbating already-existing faculty experiences of stressful workloads and systemic inequities at colleges and universities across the country. In other words, the pandemic is placing additional stress on existing factures.

With the exponential increase in COVID-19 cases across the United States in February and March 2020, many universities around the country moved to remote instruction. The novel COVID-19 pandemic swept the country, with resulting shortages, political and economic turmoil, social panic, and widespread economic shut-downs. In response to public health information and changing directives from local and state authorities, universities made necessary decisions to keep their campuses closed for the entire spring, with faculty and staff administrative work, teaching, and research all moving to remote bases. Faculty in institutions of higher education throughout the U.S. have experienced additional demands necessitated by the move to online platforms for all teaching and administrative work, as well as strains placed on research agendas as laboratories have been closed, fieldwork has been limited, and in-person contact has been curtailed. At the time of this writing, many universities have remained shuttered, relying on remote instruction and administration; others have adopted hybrid models. Of those that attempted to fully open for in-person instruction in fall of 2020, many had to as quickly shut down again and send students home, as outbreaks have followed openings [41, 42, 43, 44].

The economic impacts of the pandemic on the U.S. are many and range in severity. The fall-out for universities is already being felt at the institutional level, in terms of budget shortfalls, hiring freezes, staff furloughs, and financial retrenchments [45, 46, 47]. The effects on non-tenure track (NTT) faculty and on university staff – none of whom enjoy the benefits of tenure – will likely also be extremely negative, as positions are eliminated and people are placed on furloughs or fired outright [45, 46, 47]. The effects on tenured and tenure-track faculty, however, have also been immensely fraught. Teaching and mentoring remotely can be a time-consuming challenge, many faculty's research programs have been profoundly disrupted by the shut-downs, administrative duties have increased, and all of these demands are occurring largely over a computer screen, in individual living rooms, home offices, and kitchens [48, 46, 4, 49].

The broader context outside higher education has also been fraught with shifting challenges and change precipitated by COVID-19, its accompanying social distancing, and the widespread economic fall-out for the United States. Many public and private pre-K through 12 schools, as well as daycares and aftercare centers have closed or moved to distance learning. This has been politically and socially controversial across state- and county-lines. Regulations around social distancing and public health regulations still affect many counties, closing libraries, parks, playgrounds, and extracurricular activities for children. Eldercare and assisted living facilities have faced a multiplicity of challenges, given the particular susceptibility of people over 60 to developing severe symptoms associated with COVID-19. The pandemic has also impacted some, but not all, businesses: many people now work routinely from home and many people have been laid off or had their salaries and workdays reduced. A stream of articles in a variety of media outlets, including *The Washington Post* and *The New York Times* have charted the impacts that working from home have had on people in the U.S., in a context of reduced economic power and reduced childcare options [50, 9].

In the case of higher education specifically, faculty who are parents of school-age children struggle to balance teaching virtually while also caring for their families. Faculty with elderly parents face extremely difficult decisions about social distancing and best care practices. Single faculty are isolated at home, separated from their friends and families. Extensive evidence indicates that women disproportionately shouldered more caregiving at home before February-March 2020, and burgeoning evidence conducted since COVID-19 began affecting daily life in the U.S. indicates that these kinds of inequities in caregiving are deepening during the crises, especially as external, paid caregiving options have shrunk [51, 52, 4, 53, 54, 55, 56, 57, 58, 59]. Less is known, however, about the nature and quantity of the work that women faculty are being asked to do (remotely, from home) for and by their universities.

COVID-19 has also been shown to be disproportionately impacting already-marginalized communities in the U.S. and existing racial inequalities and structural inequities mean that many of these communities are composed of people of color. The Black Lives Matter and other movements for racial justice have brought necessary issues to the fore, but the hostility with which the movements have been met at many political and social levels has added another stressful layer that disproportionately affects people of color, including faculty of color at institutions of higher education.

The research described in this paper responds to the unprecedented challenges that academics are currently facing. These include isolation from colleagues, increased teaching and service asks in the workplace, increased caregiving responsibilities at home, increased caregiving at work, personal economic hardship, decreased resources for scholarship and teaching, changing requirements demanded by remote instruction and the effects this has expressed on faculty and student satisfaction with classes, and insufficient institutional and administrative support. These challenges also include the broader context – because despite the lingering image of the ivory tower, faculty are inevitably embedded in larger communities professionally and personally – the emotional tolls of COVID-19 and the sociopolitical factures erupting around Black Lives Matter and retaliatory White Supremacy groups.

In this research, we hypothesize that gendered and racialized differences emerge across all of these challenges. We are investigating the following research questions:

- 1. How has COVID-19 impacted faculty scholarship, teaching, and service responsibilities?
- 2. How do these impacts differ by gender, other demographic variables such as race, faculty rank and tenure status, and discipline?
- 3. How has COVID-19 impacted the resources that the university is able to provide faculty?

Methods

This paper is primarily based on data from a single research site (Seattle University). Research activities have included multi-year participant observation across multiple venues on-campus; 77 in-depth interviews and two focus groups with faculty; and analyses of 26 statements in which faculty reflect on the impacts the COVID-19 crisis and its associated shut-downs have had on their work. Faculty participants came from the College of Arts & Sciences, the College of Science & Engineering, the College of Nursing, the College of Education, the School of Theology & Ministry, and the Albers School of Business & Economics. Participants included NTT faculty; assistant, tenure-track faculty; and tenured associate and full professors. 56 of the faculty interviewed were women and 21 were men; eleven women participated in the focus groups in total; and 20 women and six men wrote COVID-19 reflections. The CVs and Promotion statements, which less directly inform the research described here, were more evenly split between men and women in terms of authorship. The data are thus a representative sample of the institution's faculty. Note that Seattle University does not have comprehensive institutional data on the racial demographics of its faculty but the numbers of faculty who identify as Black, Latinx, and/or Indigenous are low enough that any reference to a more specific racial identity – especially coupled with gender and rank – is highly identifying. In response to feedback from participants, we use the broader descriptor, "faculty of color" throughout.

Importantly, our methods of data collection experienced a profound shift in response to the COVID-19 pandemic. Pre-pandemic, methods centered on in-depth, in-person interactions: semi-structured interviews, participant observation across multiple spaces and venues and with various communities on the university campus, and focus groups. Since the onset of the pandemic, methods have necessarily shifted to remote status: the gathering of written faculty reflections, recruited via faculty listservs and submitted via email by individual faculty, as well as participant observation across Zoom meetings, general faculty and staff listservs, administrative announcements, and the like. Significantly, however, in both the in-person and the online ethnographic research, our emphasis on paying close attention to what people said, did, and wrote when directly prompted by us and what they said, did, and wrote in more general settings remained unchanged. Participant observation thus added a rich, contextualized layer to the other data.

In this paper, we focus our attention on the data emerging from our COVID-19 reflections and discuss the other data only as it supplements the reflections. During Spring Quarter 2020, we emailed all faculty (tenured, tenure-track, non-tenure track) and asked them to provide us with a written reflection concerning their recent professional and personal experiences. We asked faculty to reflect on the following questions:

- 1. What am I struggling to get done professionally during this time?
- 2. What has been easier to do professionally during this time?

- 3. Have I noticed any differences in how much time I spend on research vs. teaching vs. service activities since COVID-19 started impacting my professional life?
- 4. How am I balancing personal demands with professional ones during this time?
- 5. How have I felt supported (or not) by university administration?

The reflections are typically 1-2 pages in length. Initial thematic analysis of the reflections indicates the following emergent themes are proving important:

- 1. Faculty are balancing more caregiving at home.
- 2. Certain faculty are doing essential work in marginalized communities that they worry "won't count" for tenure or promotion.
- 3. Teaching and administrative service have overwhelmed research and writing time for most faculty.
- 4. "The collapse of the professional into the personal" in terms of time and space is having a ripple effect across all areas of life.
- 5. There is pervasive worry about student evaluations, external reviewers, tenure clock delays, promotion delays, and expected levels of productivity.

Each of these themes can be further analyzed with an equity lens. Many women are experiencing the collapse of the professional into the personal more acutely, for example, as they struggle to share workspace with school-aged children. Faculty of color are disproportionately being asked to contribute expertise in areas that have not traditionally been "counted" in tenure and promotion policies. Importantly, all five themes were present in the interview data as well, prepandemic, but the crises the pandemic is precipitating – both at our own institution and more broadly, across higher education – are increasing the impact on faculty. Data from in-person and online participant observation corroborates both these themes and their "uptick" in 2020.

Our data thus consists of an ethnographic body of research conducted at one institution, with limited observations drawn from other institutions in the region. All aspects of this research were approved by the institution's Human Subjects Office.

Preliminary Findings: What Fresh Hell Is This?

Two data sets emerged from this effort. One was composed of fieldnotes compiled by First Author, based on her experiences at Zoom meetings with other faculty, both at Seattle University and other institutions around the country; as well as her reading of online public chat forums amongst faculty and emails and notifications coming across her listsery. The second data set is composed of the reflection statements from twenty-six Seattle University faculty. The reflections served as the primary focus of this project, while the participant observation-based fieldnotes simply served as a point of data triangulation. This was particularly important for interpreting sub-themes within the data where our N was small (for example, for assistant professors and faculty of color). Importantly, the fieldnotes reflected similar themes to those of the reflections. The overarching meta-theme of all our data is best summed up by a full professor at Seattle University, a woman who remarked that her initial thought every morning upon opening her inbox, was (and quoting Dorothy Parker) "What fresh hell is this?"

THEME ONE: Faculty are balancing more caregiving at home.

Exemplar: Full Professor, Woman. Finding time to work productively is a struggle. My husband and I are both working from home and I am home schooling... As a result, childcare is a full time job for at least one parent. Currently, my husband is taking one sick day each week and I am the primary caretaker the other four days. However, even my once-weekly dedicated work days are fragmented. It is hard to maintain physical space in our house... So, to answer the question, I am struggling to get anything done professionally.

THEME TWO: Certain faculty are doing essential work in marginalized communities that they worry "won't count" for tenure or promotion.

Exemplar: Assistant Professor, Women. I am worried about submitting a reflection because anything I say of value will be too identifying, especially of the communities where I work... None of that work is going to count on my tenure portfolio.

THEME THREE: Teaching and administrative service have overwhelmed research and writing time for most faculty.

Exemplar: Associate Professor. All the time I have to work, which is very limited due to having to provide childcare and education for a young child who had school and summer camps cancelled, is put towards teaching. Then service according only to approaching urgency due to deadlines. Research is not happening at all. This is not how my time was allocated prior to COVID. I had much more time for research... My family is suffering and I am also suffering. This is not sustainable and I don't know how long it will be possible to continue.

THEME FOUR: "The collapse of the professional into the personal" in terms of time and space is having a ripple effect across all areas of life and is disproportionately impacting certain faculty – although all faculty are implicated.

Exemplar: Full Professor, Woman. I feel like I am literally working or dreaming work around the clock. I feel like I am in a permanent soundless Zoom bubble... I'm facing the blur we all face with the collapse of private/professional space... Colleagues have all frequently and repeatedly raised the challenges of faculty dealing with childcare issues and I get that. I see how challenging it is. However there has been no verbal acknowledgement from leaders or colleagues that SOME of us don't have children, and still face challenges in navigating work/life balances; still have rights to have a weekend; still have families/friends or relationships that are of equal value; still have rights to spend time with our partners or reading a book. Some of us live alone.

THEME FIVE: There is pervasive worry about student evaluations, external reviewers, tenure clock delays, promotion delays, expected levels of productivity.

Exemplar: Assistant Professor, Man. I would much prefer an administrative message that said something like 'this will probably be sub-par, and that's ok' rather than... [well-intended messages] about faculty 'quickly crafting excellent remote learning courses'. Nothing about this has been excellent. I trust my department to remember that, but I worry that when I do come up for tenure, college and university leadership will be less accommodating.

These quotes serve as exemplars of larger thematic patterns in the data. By this we mean that the perspectives presented here were voiced (albeit using different words and framing) by others – often, many others. For example, THEME ONE was echoed by all but one of the women with children under 18 and still living at home (and the exception stated at the outset of her reflection, "I think I'm an anomaly, in a good way"). Although some of the men also noted substantially increased childcare, only one said he was the primary caregiver and clearly stated that he was suffering from the dual burden. Thus, our data shows parallels with other research indicating a gendered difference in caregiving. The limitation of the reflection exercise was that there was no room for us as researchers to push further on some questions, especially in encouraging people to contextualize their personal experiences with patterns observed in the workplace and home more generally. In this respect, being able to continue to conduct participant observation (albeit online) was essential because it filled in some gaps in the reflection data. In casual conversation with a group of women faculty after a Zoom meeting wrapped up, for example, one attendee mentioned that "All the women I know are doing three quarters of the childcare labor now," and pointed out that it's just not possible to care give well and work productively when the two are occurring simultaneously. In another faculty Zoom meeting, a different woman faculty self-described as the "command central" at her house, coordinating everything that needed to get done.

THEME THREE and THEME FOUR were mentioned by almost every respondent, with the exception of the woman "anomaly" just mentioned. However, THEME FOUR was particularly affecting respondents without young children, who were taking on significant administrative service. Participant observation also reinforces these reflection themes. People who were already serving on key university committees, as departmental chairs and program directors, and in upper administration are currently inundated with daily crises and longer-term emergencies stemming from the move to remote instruction, financial shortfalls, and massive sociocultural and political economic changes in the national and academic landscapes. Several administrators spoke of days packed with fourteen hours' worth of Zoom meetings, others described bracing themselves every morning as they opened their inboxes at 6am.

THEME TWO was mentioned by all of the respondents who identified as faculty of color. Participant observation reinforced the finding that certain faculty of color are experiencing particularly acute and intense asks stemming from involvement in specific communities during a year that has been tumultuous for people of color in the United States. National data, for example, indicates that Black people, Latinx communities, and Indigenous groups are dying at markedly higher rates from COVID-19. The national convulsions around issues of racial justice are also disproportionately affecting certain communities of color, both in terms of the systemic injustices and racialized violence that precipitated the movements in the first place and in terms of community-based activism. All our faculty have been implicated to some extent, but the impacts on certain faculty have been much greater.

THEME FIVE was mentioned by all of the respondents who identified as being pre-tenure. It has also been a heated topic of conversation – and the subject of some rapid policy changes around tenure clock delays and annual performance review accommodations – in Zoom meetings and online faculty forums across the university. Despite the institutional responses, anxiety among assistant professors remains high. Once again, this finding parallels national-level data, as discussions around tenure clock delays and other policies appear across our networks.

Conclusions

Our goal for this research was to think strategically and systematically about the implications of the profound shifts in faculty work caused by COVID-19 for the long term, and how this will differentially impact diverse faculty in terms of workload, tenure and promotion, salaries, and teaching evaluations. For instance, a focus on women as overburdened partners and mothers cannot be the sole focus of either research or policy. Other types of caregiving are also taking place in homes, in communities, and within institutions. These have been under-explored. What is happening to the elderly parents of faculty, for example? How are faculty who are not partners and mothers being impacted? Is it possible to be a university administrator right now and also have an outside life?

Some institutions of higher education are actively implementing initiatives to support the needs of faculty who have caregiving responsibilities [60]. They are compiling resources for caregivers, while urging administrators and supervisors to show compassion and flexibility toward their faculty and staff with regard to non-essential deadlines and work schedule and adjust their expectations about work load. At Seattle University, for instance, faculty are being encouraged to work with their chairs/directors to adjust their teaching schedules for next term to account for caregiving duties or other personal circumstances. However, if a university cannot allocate additional staffing (one frequent result of budgets shrinking is a wave of staff furloughs) and other resources to mitigate the reductions in work for caregivers, it is likely that faculty who are not caregivers will experience an increase in administrative and teaching asks. As the respondent who mentions living in a constant "Zoom bubble" notes, that is not a long-term equitable solution. If institutional responses center – as they well might, given staff furloughs and layoffs and overall budget tightening – on asking more of the few left, then how do those few reply?

Other examples currently being implemented at universities across the country include an option to delay one's promotion and tenure clock for a year and to negotiate a one- or two-term reduction in teaching load (with proportional reduction in salary) while maintaining full benefits. Other institutions have made campus-based daycare opportunities available to faculty at reduced cost (although this practice does not necessarily accommodate COVID-19 shut-downs in all counties and states). A lively debate about overhauling faculty CVs to better capture pivotal work being done by faculty in communities and within their institutions during the pandemic is currently taking place [56]. These are all great examples of understanding and acknowledging the additional strains and opportunities that COVID-19 has imposed on faculty work-life balance and careers. They are probably also insufficient at this point. As one of our respondents said, "My family is suffering and I am also suffering. This is not sustainable."

As we pointed out, however, COVID-19 did not cause new inequalities and tensions for faculty; it has simply exposed existing inequalities and furthermore, it has accelerated trends that have existed for some time. Current tenure processes were designed by and for different populations of faculty as well as for different times. The crises following in the wake of COVID-19 are showing us that it is time to reimagine institutional processes – including tenure and promotion – through the lenses of diversity, equity, and inclusion.

References

- [1] S. Bird, J. S. Litt and Y. Wang, "Creative Status of Women Reports: Institutional Housekeeping as 'Women's work'," *NWSA Journal*, vol. 16, no. 1, pp. 194-206, 2004.
- [2] D. Britton and L. Logan, "Gendered Organizations: Progress and Prospects," *Sociological Compass* 2, pp. 107-121, 2008.
- [3] M. L. Daut, "Becoming Full Professor While Black," *The Chronicle of Higher Education*, 28 July 2019.
- [4] C. Flaherty, "Babar in the Room," *Inside Higher Ed*, 2020.
- [5] C. Flaherty, "Relying on Women, Not Rewarding Them," Inside Higher Ed, 12 April 2017.
- [6] C. M. Guarino and V. M. Borden, "Faculty Service Loads and Gender: Are Women Taking Care of the Academic Family?," *Research in Higher Education*, vol. 58, no. 6, pp. 672-694, 2017.
- [7] G. Gutierrez y Muhs, Y. Flores, C. G. Gonzalez and A. P. Harris, Presumed Incompetent: The Intersections of Race and Class for Women in Academia, University of Utah Press, 2012.
- [8] D. A. Louis and S. Freeman Jr., "Mentoring and the Passion for Propagation: Narratives of Two Black Male Faculty Members Who Emerged From Higher Education and Student Affairs Leadership," *Journal of African American Males in Education*, vol. 19, no. 1, pp. 19-39, 2018.
- [9] F. Manjoo, "Two Parents. Two Kids. Two Jobs. No Child Care," *The New York Times*, 22 April 2020.
- [10] H. McCoy, "The Life of a Black Academic: Tired and Terrorized," *Inside Higher Ed*, 12 June 2020.
- [11] J. Misra, J. H. Lundquist, E. Holmes and S. Agiomavritis, "The Ivory Ceiling of Service Work," AAUP: American Association of University Professors, 2011.
- [12] K. O'Meara, "Whose Problem Is It? Gender Differences in Faculty Thinking About Campus Service," *Teachers College Record*, no. 118, 2016.
- [13] K. O'Meara, A. Kuveava and G. Nyunt, "Constrained Choices: A View of Campus Service from Annual Faculty Reports," *The Journal of Higher Education*, 27 January 2017.
- [14] A. J. Stewart and V. Valian, An Inclusive Academy: Achieving Diversity and Excellence, MIT Press, 2018.
- [15] C. Turner and L. Grauerholz, "Introducing the Invisible Man: Black Male Professionals in Higher Education," *Humboldt Journal of Social Relations*, vol. 1, no. 39, pp. 212-227, 2017.
- [16] A. Vongalis-Macrow, "Worker Bees and Wild Roses: The Pleasure and Pain of Mid-Career Female Academics," *Women in Leadership*, vol. 36, no. 1, pp. 17-25, 2016.
- [17] A. H. Wingfield, "We Built a Diverse Academic Department in 5 Years. Here's How," *Harvard Business Review*, 1 July 2020.
- [18] J. L. Young and D. E. Hines, "Killing My Spirit, Renewing My Soul: Black Female Professors' Critical Reflections on Spirit Killings While Teaching," *Women, Gender, and Families of Color*, vol. 6, no. 1, 2018.
- [19] CDC, "Mental Health: Household Pulse Survey. Centers for Disease Control and Prevention.," 2020.
- [20] A. Fowers and W. Wan, "A third of Americans now show signs of clinical anxiety or depression, Census Bureau finds amid coronavirus pandemic," *The Washington Post*, 2020.
- [21] J. Alper, "The pipeline is leaking women all the way along," *Science*, no. 260, pp. 409-411, 1993.

- [22] S. E. Berryman, Who will do Science? Trends, and their Causes in Minority and Female Representation among Holders of Advanced Degrees in Science and Mathematics, New York, NY: Rockefeller Foundation, 1983.
- [23] S. J. Ceci, W. M. Williams and S. M. Barnett, "Women's underrepresentation in science: sociocultural and biological considerations," *Psychological Bulletin*, no. 135, pp. 218-261, 2009.
- [24] N. Dasgupta and J. G. Stout, "Girls and Women in Science, Technology, Engineering, and Mathematics: STEMing the Tide and Broadening Participation in STEM Careers," *Policy Insights from the Behavioral and Brain Sciences*, vol. 1, no. 1, pp. 21-29, 2014.
- [25] M. A. Cannady, E. Greenwald and K. N. Harris, "Problematizing the STEM pipeline metaphor: is the STEM pipeline metaphor serving our students and the STEM workforce?," *Science Education*, no. 98, pp. 443-460, 2014.
- [26] G. Stoet and D. C. Geary, "The Gender-Equality Paradox in Science, Technology, Engineering, and Mathematics Education.," *Psychological Science*, vol. 29, no. 4, 2018.
- [27] S. M. Jelks and A. M. Crain, "Sticking with STEM: Understanding STEM Career Persistence among STEM Bachelor's Degree Holders," *The Journal of Higher Education*, vol. 91, no. 5, pp. 805-831, 2020.
- [28] J. Acker, "Hierarchies, Jobs, Bodies: A Theory of Gendered Organizations," *Gender & Society*, no. 4, pp. 139-158, 1990.
- [29] D. Britton, "Engendering the University through Policy and Practice," in *Gender Change in Academia: Re-Mapping the Fields of Work, Knowledge, and Politics from a Gender Perspective*, B. Riegraf, B. Aulenbacher, E. Kirsch-Auwärter and U. Müller, Eds., Heidelberg, Germany, Springer Verlag, 2010, pp. 15-26.
- [30] D. Britton, "The Epistemology of the Gendered Organization," *Gender & Society*, no. 14, pp. 418-435, 2000.
- [31] C. Medina and G. Luna, "Narratives from Latina Professors in Higher Education," *Anthropology & Education Quarterly*, vol. 31, no. 1, 2008.
- [32] C. Ridgeway, Framed by Gender, Oxford: Oxford University Press, 2011.
- [33] H. Cummins, "Literature Review of The University Teaching Trap of Academic Women," *Advancing Women in Leadership*, no. 37, pp. 13-19, 2017.
- [34] A. W. Gouldner, "Cosmopolitans and Locals," *Administrative Science Quarterly*, no. 2, pp. 281-306, 1957.
- [35] S. Winslow, "Gender Inequality and Time Allocations Among Academic Faculty," *Gender & Society*, vol. 24, no. 6, pp. 769-793, 2010.
- [36] A. H. Rao, "Even Breadwinning Wives Don't Get Equality at Home," *The Atlantic*, 12 May 2019.
- [37] K. Buch, Y. Huet, A. Rorrer and L. Roberson, "Removing the Barriers to Full Professor: A Mentoring Program for Associate Professors," *Change: The Magazine of Higher Learning*, no. 46, pp. 38-45, 2011.
- [38] C. Geisler, D. Kaminski and R. Berkeley, "The 13+ Club: An Index for Understanding, Documenting, and Resisting Patterns of Non-Promotion to Full Professor," *Feminist Formations*, vol. 19, no. 3, pp. 145-162, 2007.
- [39] W. Rocque and S. Laursen, "Faculty Career Trajectories and the Institutional Factors that Shape Them: Comparative Analysis of Longitudinal Faculty Interview Data, A Report to the LEAP Project," University of Colorado, 2007.
- [40] S. Ahmed, On Being Included: Racism and Diversity in Institutional Life, Duke University Press, 2012.

- [41] B. Anderson and D. Pitt, "College towns growing alarmed over outbreaks among students," *The Associate Press*, 28 August 2020.
- [42] M. Burke, "Coronavirus cases among students at University of Alabama climb to more than 1,000," NBC News, 2020.
- [43] E. Redden, "Trigger Warnings," Inside Higher Ed, 28 August 2020.
- [44] H. Yamada, "Colleges rethink reopening: "If these steps are not successful, we'll have to send students home."," 2020.
- [45] L. Burke, "More tuition cuts," Inside Higher Ed, 14 August 2020.
- [46] C. Flaherty, "Not "Glorified Skype."," Inside Higher Ed, 17 August 2020.
- [47] S. Hubler, "As colleges move classes online, families rebel against the cost," *The New York Times*, 15 August 2020.
- [48] C. Flaherty, "Burning Out," Inside Higher Ed, 14 September 2020.
- [49] C. Wright, "The Pandemic Could Derail a Generation of Young Scientists," Wired, 27 August 2020.
- [50] J. Gruber, J. J. Van Bavel, W. A. Cunningham, L. H. Somerville and N. A. Lewis Jr., "Academia needs a reality check: Life is not back to normal," *Science Magazine*, 28 August 2020.
- [51] J. P. Andersen, M. W. Nielsen, N. L. Simone, R. E. Lewiss and R. Jagsi, "Meta-Research: COVID-19 medical papers have fewer women first authors than expected," *eLife*, 15 June 2020.
- [52] C. Collins, L. C. Landivar, L. Ruppanner and W. J. Scarborough, "COVID-19 and the gender gap in work hours," *Gender, Work & Organization*, pp. 1-12, 2020.
- [53] V. Giuliana, "Are Women Publishing Less During the Pandemic? Here's What the Data Say," *Nature*, no. 581, p. 365, 2020.
- [54] S. A. Goodwin and B. Mitchneck, "STEM Equity and Inclusion (Un)Interrupted?," *Inside Higher Ed*, 13 May 2020.
- [55] J. Kramer, "Women in Science May Suffer Lasting Career Damage from COVID-19," *Scientific American*, 12 August 2020.
- [56] J. L. Malisch, B. N. Harris, S. M. Sherrer, K. A. Lewis, S. L. Shepherd, P. C. McCarthy, J. L. Spott, E. P. Karam, N. Moustaid-Moussa, J. M. Calarco, L. Ramalingam, A. E. Talley, J. E. Cañas-Carrell, K. Ardon-Dryer, D. A. Weiser, X. E. Bernal and J. Deitloff, "Opinion: In the wake of COVID-19, academia needs new solutions to ensure gender equity," *PNAS*, vol. 117, no. 27, pp. 15378-15381, 2020.
- [57] A. Minello, "The pandemic and the female academic," *Nature*, 17 April 2020.
- [58] K. R. Myers, W. Y. Tham, Y. Yin, N. Cohodes, J. G. Thursby, M. C. Thursby, P. Schiffer, J. T. Walsh, K. R. Lakhani and D. Wang, "Unequal effects of the COVID-19 pandemic on scientists," *Nature, Human Behavior*, no. 4, pp. 880-883, 2020.
- [59] P. Vincent-Lamarre, C. R. Sugimoto and V. Larivière, "The decline of women's research production during the coronavirus pandemic," *Nature Index*, 2020.
- [60] E. Corbera, I. Anguelovski and J. Honey-Rosés, "Academia in the Time of COVID-19: Towards an Ethics of Care," *Planning Theory & Practice*, vol. 21, no. 2, pp. 191-199, 2020.
- [61] M. Alvarez, "On a Knife's Edge," The Chronicle of Higher Education, 21 May 2020.
- [62] R. K. Anderson, "Preaching to the Choir: University Diversity Committees as Affective Communities," *Anthropology & Education Quarterly*, vol. 51, no. 1, p. 47–65, 2019.
- [63] A. Barlow, C. Betensky, R. S. Buurma, S. Kahn and T. Schaffer, "A Very Stable and Secure Position? The Executive Committee of Tenure for the Common Good," *Inside Higher Ed*, 30 April 2020.

- [64] C. Bose, R. Felderg and N. Sokoloff, Hidden Aspects of Women's Work, Westport, CT: Praeger, 1987.
- [65] C. Flaherty, "Next-Level Precarity," *Inside Higher Ed*, 10 April 2020.
- [66] N. M. Graham, F. B. Lynn and L. I. McCloud, "By Lack of Reciprocity: Positioning Historically Black Colleges and Universities in the Organizational Field of Higher Education," *The Journal of Higher Education*, 3 September 2020.
- [67] L. M. Jaremka, J. M. Ackerman, B. Gawronski, N. O. Rule, K. Sweeny, L. R. Tropp, M. A. Metz, L. Molina, W. S. Ryan and S. B. Vick, "Common Academic Experiences No One Talks About: Repeated Rejection, Impostor Syndrome, and Burnout," *Perspectives Psychological Sciences*, vol. 15, no. 3, pp. 519-543, 2020.
- [68] L. D. Patton and N. R. Njoku, "Theorizing Black women's experiences with institution-sanctioned violence: a #BlackLivesMatter imperative toward Black liberation on campus," *International Journal of Qualitative Studies in Education*, vol. 32, no. 9, pp. 1162-1182, 2019.
- [69] M. Salminen-Karlsson, A. Wolffram and N. Almgren, "Excellence, Masculinity and Work-Life Balance in Academia: Voices from Researchers in Germany and Sweden," *International Journal of Gender, Science and Technology*, vol. 10, no. 1, pp. 52-71, 2018.
- [70] L. Schiebinger, Gendered Innovations in Science and Engineering, Palo Alto: Stanford University Press, 2008.
- [71] D. K. White-Lewis, "The Facade of Fit in Faculty Search Processes," *The Journal of Higher Education*, vol. 91, no. 6, pp. 833-857, 2020.
- [72] J. C. Williams and J. L. Smith, "The Myth that Academic Science Isn't Biased against Women," *The Chronicle of Higher Education*, 8 July 2015.
- [73] C. Williams, "The Glass Escalator: Hidden Advantages for Men in the 'Female' Professions," *Social Problems*, no. 39, pp. 253-267, 1992.