

Institutional Support Structure for Extramural Research Funding Acquisition Academic Senate Report

October 2023

Executive Summary

- We need to rethink OR's range of responsibilities to produce a comprehensive view, vision, and strategy for the whole campus.
- We need to recalibrate support so that it is more efficiently and equitably distributed across campus.
- We need to reconfigure and increase C&G Staff Teams via a two-pronged strategy: (1) Reconfigure C&G Staff Teams to offer equitably similar support to faculty in HFA and Social Sciences. (2) Increase existing highly functional C&G Staff Teams and make them accessible to all faculty.
- We need to rethink the promotion capacity for C&G staff so that they can improve their prospects without changing jobs.
- We need to better publicize and promote Red Teams, and make them more widely available to faculty.
- We need to more specifically target PI training for faculty with smaller grants so as to assist them in scaling up to larger extramural grants.

Background

Through most of the academic year 2022–2023, the Academic Senate conducted an analysis of the faculty experience of UC Santa Barbara's Institutional Support Structure for Extramural Research Funding Acquisition (from here: Support Structure). By Support Structure we mean the entire package of grant development support, strategic research support (writing, review, competitiveness), incentivization structures for faculty to pursue extramural funding sources, and contracts and grants (C&G) staff teams advising on funder policy, budgets, completing transactions, and reporting.

The twin goal of the analysis was to understand how faculty experience the current Support Structure and to identify ways to better support faculty across campus, regardless of discipline, in their efforts to generate successful extramural research funding applications.

This analysis was prompted by a number of individual reports to Academic Senate leadership about instances of inequity and inadequacy—across divisions and departments—of the current Support Structure, along with concerns that those instances

undermine extramural research grant funding generation, research productivity, the functionality of research groups, the ability to retain the most energetic and high-profile faculty researchers, the robustness of graduate programs, and, ultimately, UC Santa Barbara's status as a research institution.

The present analysis was further shaped by the current environment within which faculty conduct much of their research and aim to pursue extramural research funding—and which is fueled by both the complexity of our time's problems and funding agencies' priorities, as follows:

Grant-competitive STEM research increasingly involves Humanities and Social Sciences expertise. This is true for a broad range of research: from conceptualizing emerging areas of research, including use-inspired engineering and biotechnologies; to societal impacts of environmental science solutions to climate change, artificial intelligence and how its inputs and outputs are fundamentally linked to politics, economics, society, and culture; and the incorporation of diverse science teams and inclusive project management practices.

Grant-competitive Humanities and Social Sciences research increasingly necessitates collaboration across the university. This includes STEM expertise, the demonstration of DEI goals, the promise of non-academic outputs or community engagement, among other aspects.

Across campus, the most successful grant generators are faculty who meet and drive the challenges and opportunities that have arisen from the tidal wave of collaborative projects.

Adequately meeting these possibilities and challenges with a consistent and potent Support Structure will be essential to maintaining high-caliber research capacity and volume across the university, increasing extramural grant funding in-flow across the university, and creating more vibrant and connected research communities across the university. For STEM, UC Santa Barbara's status as a globally competitive research institution is on the line. For the Humanities and the Social Sciences, this is even more critical.

The Academic Senate invited all ladder faculty to scheduled focus group discussions. Additionally, the Senate reached out to individual faculty—beginning with a sample of the top grant generators, then, following the [snowball sampling method](#), aiming for a broad sample across ranks and fields with a tilt toward successful grant generators of all ranks and mentees among early-career faculty. More than ninety 30–45-minute focus groups and individual discussions—in person, remotely, and via email—were conducted with ladder faculty; deans; department and senate committee and council chairs; institute, center, and ORU directors; grant support specialists; and OR leadership. The Senate obtained extramural grant funding data from OR in order to both contextualize the qualitative findings from interviews and identify key structural issues that impede

extramural grant funding activity by faculty. On February 28, 2023, the Senate conducted a Town Hall to present preliminary findings and solicit feedback from Senate faculty.

As noted, for the purposes of this report, we focused on research funding awarded to PIs whose home departments are in Humanities & Fine Arts (HFA), Social Sciences, Graduate School of Education (GGSE), Environmental Science and Management (Bren), the College of Engineering (COE), and Mathematical, Life & Physical Sciences (MLPS). Thus, this report excludes other funding the campus receives for which faculty are usually PIs, for student success, and for HSI grants.

Basic Data

UC Santa Barbara employs 936 ladder faculty or 959 ladder faculty FTE, distributed as follows (see [Campus Profile, 2021–22](#), p. 8):

Division	Ladder faculty FTE
CCS	7
Bren	25
GGSE	43
Engineering	160
Social Sciences	172
HFA	255
MLPS	297
Total	959

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Accordingly, the Office of Research reports the [total funding awarded in fiscal year 2023](#) as \$257.6 million, broken down for categories noted above as follows:

[Extramural research funding for fiscal year 2023](#)

College/School/Division	US\$ million
HFA	2.4
Social Sciences	4.5
GGSE	5.0
Bren	8.5
COE	94.7
MLPS	106.9

Findings

(1) The highly atomized Support Structure undermines transparency, efficiency, and equitable faculty access.

- Regarding the **transparency** of grant funding inflow and management, faculty across the university find that grant accounting does not map onto individual researchers' grant categories; additionally, they note that they “usually have no idea” about their grant budgets and spending. They attribute the intractability of such reports to “extremely poorly designed software,” resulting in discrepancies between funding categories from the faculty perspective and OR accounting.

OR collects proposal and award information for all extramural grants, regardless of size, but *accounting* of extramural funding that either entirely or partially supports research, including gifts and endowments, is collected by a number of other offices on campus. Likewise, reporting lines are manifold with 30–40% of C&G staff reporting to the VCR, the MLPS Dean, and the COE Dean respectively, and smaller portfolios reporting to the EVC and Student Affairs respectively.

- Regarding **efficiency**, faculty perceive a disconnect among ORUs, OR, and the Office of Development that further obfuscates potential funding channels, as well as how to access, cultivate, and maximize them. Faculty see themselves working with at least two disconnected systems of extramural-funding development and support, and feel that they end up investing double the time with ORUs/OR on the one hand and the Office of Development on the other.

Early-career faculty in particular find that they are “completely in the dark” about how to tap into Office of Development resources.

- Regarding **equitable faculty access** to the Support Structure, successful PIs across campus describe the grant information they receive (via a service that SPO subscribes to) as “completely useless” and wish there were an easily accessible database naming who among their faculty colleagues received what kind of grant in order to tap into local peer expertise.

Particularly faculty with large, complex grant applications also find their grant activity efforts complicated by the fully remote work arrangements of OR post-pandemic. Many faculty find the physical presence of staff in general essential to developing functional relationships and facilitating the smooth process—from the identification of appropriate funding sources to the application, administration, and reporting of extramural grant funding.

Faculty in fields with smaller extramural grant funding volume—and particularly early career faculty—find that communication about research funding is “shaped in the science mold,” and find the various control points—particularly SPO and OR—opaque and inaccessible.

(2) Contracts & Grants Staff Team capacity and distribution is extremely uneven.

This **pronounced inequity** results in dramatically different experiences for faculty—ranging from faculty grant generators who are “highly satisfied” with the C&G Staff Team/s available to them (e.g., Physics, ERI, MSI, etc.); to the “satisfied, with room for improvement” (e.g., ISBER); to the “consistently catastrophic” (IHC). Some faculty have the choice of two or three C&G Staff Teams, including those in their own departments and one or even two ORUs, depending on the funding agency, project configuration, or familiarity and experience with specific C&G staff. Other faculty, by contrast, compete with dozens of faculty for one C&G staff member’s attention and availability.

Distribution of C&G staff in *a sample* of departments and ORUs

Department/Division	Faculty	C&G staff	Faculty/C&G ratio	Number of grants per year
GGSE	43	4	10:1	32
Physics	54	3+	18 or fewer:1	130
ISBER for Social Sciences	172	4+	43 or fewer:1	110
IHC for HFA	255	1	255:1	31

The **shortage and frequent turnover of high-caliber C&G Staff Teams** further impedes grant activity. Regrettably, because of this shortage PIs of multi-PI/multi-institutions grants leave GSR components to PIs at other institutions with stronger institutional grant support, not only disadvantaging their own research capacity but also undermining potential GSR funding at UC Santa Barbara. Other faculty refrain from pursuing extramural grant funding altogether because vying for highly competitive funding with minimal support is not a wise use of their time.

(3) Differences across the university concern volume, source, and conventions of grant acquisition.

- Extramural research funding volumes differ across divisions, departments, ORUs, disciplines, and faculty. In some divisions and departments, all or a majority of faculty receive extramural grant funding (e.g., COE and Physics). In about half the departments in Social Sciences and all departments in HFA, less than 5 percent of faculty receive extramural grant funding. And in some departments, 0 to 1 percent of faculty received extramural research grant funding in 2023; in many cases, this figure applies to a number of years.

- **Sources** of extramural research funding vary greatly across divisions and disciplines. Awards from funding sources for HFA, Social Sciences, GGSE, and Bren are nearly evenly divided among federal, state/local, and private (industry and nonprofit) sources. Also, prestigious fellowships that are awarded to HFA and Social Sciences faculty from, for instance, the American Council of Learned Societies, National Endowment for the Humanities, and the Guggenheim Foundation (along with a number of residential fellowships at Stanford, Princeton, or Cornell) are not consistently accounted for as grants.

Much support for HFA and Social Sciences research comes from foundations, arriving at UC Santa Barbara either as grant funding (and, thus, channeled through ORUs/OR) or as gift funding (received by the Office of Development).

For STEM, by contrast, federal agencies constitute the primary source of funding.

Sources of extramural research grant funding in % (rounded)

Division	Federal	Industry	State/local/other	Non-profit
COE	80	11	5	5
MLPS	75	2	7	15
Social Sciences	45	3	26	26
GGSE	41	18	41	0
HFA	35	0	29	35
Bren	30	3	33	33

- **Volumes** of extramural research grant funding differ dramatically and are tied to both the necessity for and the availability of such funding. This is most visible at the federal level. Annually, the total funding volume of the National Science Foundation (NSF) is \$8.61B. The National Endowment for the Humanities ([NEH](#)) awards 258 projects with a total of \$35.63M or \$138,000/project on average. Only a very small number of HFA and Social Sciences faculty tap into the same funding sources as STEM faculty do, most typically in collaborate projects.

- Some **disciplinary conventions** impact energetic extramural research grant acquisition activity.

Research in HFA, most Social Sciences, and some MLPS fields don't require large amounts of funding to undertake. Instead of laboratories, equipment, or large research groups, faculty in such fields need time rather than additional funding.

Differences in teaching loads impact grant acquisition activity.

Faculty in HFA, the Social Sciences, and theorists in MLPS tend to work and publish individually. In many such fields, the single-authored book publication continues to rank supreme and is required for both tenure and subsequent promotions at research institutions.

Faculty in disciplines with smaller maximum grant amounts tend to conceive of the indirect cost share rates as prohibitively high; they are further discouraged by the fact that only a nominal percentage of the IDC is returned to their department or division to reenergize grant acquisition activity. (Among large groups of faculty across HFA, Social Sciences, and GGSE, the rules regarding the IDC are poorly understood.)

Conclusions and Recommendations

On the basis of the information and findings summarized below, we put forward the following conclusions and recommendations:

- The faculty feedback and analysis presented in this report show that a rethinking of OR's range of responsibilities is needed in the interest of a comprehensive view, vision, and strategy for the whole campus rather than for a selection of ORUs, regardless of reporting lines.

- Furthermore, a recalibration of the current confusing mix of support in *some* departments, *some* centers, and ORUs—along with OR's role for research support—is necessary in order to organize both grant development and grant administration more efficiently and equitably across campus.

- This report also shows that C&G Staff Teams need to be reconfigured and increased. And while we understand that an analysis of staff support across campus is currently being carried out as a component of the Financial Management Modernization project, we also know those results are still years away.

Given the fact that high-caliber C&G Staff Teams are currently available to STEM faculty in many centers and institutes—where they are in part clustered around and/or accustomed to specific funding agencies, sources of funding, and/or types of grants rather than being assigned to specific departments or divisions (although those exist as well)—we propose a two-pronged strategy: One, we believe that reconfiguring C&G Staff Teams to offer faculty in HFA and Social Sciences similar support will be critical for cross-training purposes and efficiency, particularly because grant activity in these divisions is very unevenly distributed across faculty, departments, and divisions. Two, building on existing highly functional C&G Staff Teams and making them accessible to faculty regardless of their divisional or departmental homes will have a more immediate and long-lasting impact on grant activity.

- It is abundantly clear that, as long as insufficient numbers of high-caliber C&G staff are hired, and as long as they cannot be promoted within their positions, C&G staff will be hired and trained (at considerable investment) only for them to move on to better-paid positions elsewhere. This disproportionately disadvantages departments and divisions that are already underfunded in other ways—and applies not only to C&G staff but to staff more generally as well.

- Red Teams (grant application review teams that come together on campus to provide feedback on proposals and are composed of faculty, C&G staff, and a dean or two, with faculty receiving service credit) should be publicized and promoted better. and made available to a broader swath of faculty.

- The present report also highlights untapped potential of faculty in fields that have minimal support in pursuing the primarily smaller grants available to them. We recommend more specifically targeted PI training for faculty with smaller grants so as to assist them in scaling up to bigger, extramural, and possibly collaborative grant applications.

- We also recommend the creation of a database of grants and fellowships by

methodology or discipline, and/or a database of grants that faculty have successfully applied for—particularly for non-STEM fields where funding agencies frequently change direction and funding categories frequently transmorph along with sociopolitical changes in the US and the world.