
38. Research labs: concept, utility, and application

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INTRODUCTION

Collaborative research in the social sciences has risen over the past several decades, including in political science (Fisher et al. 1998; Laband and Tollison 2000; Henriksen 2016). Scholars increasingly recognize that they can produce higher-volume, higher-impact research when working in pairs and in teams than when working alone (Djupe et al. 2019; Wuchty et al. 2007; Woolley et al. 2010). Studies of editorial decisions at leading, peer-reviewed political science journals show that co-authored manuscripts are more likely to result in a positive outcome at each stage of review (Nedal and Nexon 2018; Peterson 2018; Samuels 2018). Relative to sole-authored submissions, co-authored submissions are more likely to: (1) be sent for peer review than they are to be desk rejected; (2) receive an invitation to revise and resubmit than they are to be rejected after an initial round of review; and ultimately, (3) be accepted for publication. In addition, co-authored work is more likely to receive a wide readership, be cited in subsequent scholarly works, and be included in undergraduate and graduate course syllabi, influencing the future of one's field of study (Hardt et al. 2019; Wuchty et al. 2007). But what exactly is collaboration and how does one do it?

For some, collaboration is a simple matter of identifying individuals with whom one shares substantive research interests, suggesting a partnership, and undertaking a mutually beneficial project or set of projects. Yet, collaboration can be, and for many academics is, so much more. Finholt (2003) describes collaboration as a form of scientific organization. At its most efficient, it is a system of research, not an ad hoc practice. Yet, collaboration as a system is not explicitly taught, particularly in social science disciplines such as political science. So the question remains: How does one collaborate: organizing, executing, and publishing high-volume, high-impact research? What are the means and methods that support collaboration, and how does one develop and sustain them? I propose the laboratory (hereafter, lab) model of research from the natural sciences. This model has until fairly recently been underappreciated and underused to ground and structure political science research, including in the international relations (IR) subfield, where the use of labs holds especially great promise (Becker 2020; Becker et al. 2021).

As publishing expectations and tenure standards increase across political science and other social science fields (Rothgeb and Burger 2009), it is vital that academics cultivate and sustain collaborative systems such as labs. This is especially true for those training the next generation of scholars (Becker and Zvobgo 2020). Certainly, “guidance on effective collaborative strategies might be a useful investment for graduate programs and other professional-development initiatives” (Djupe et al. 2019, 77). This guidance might be especially helpful for individuals from historically-excluded backgrounds, including women and scholars of color. Due to structural inequalities and patterns of discrimination in academia, these scholars tend to have smaller research networks than their more privileged counterparts, and tend to benefit less from research collaboration, notably in mixed teams where they get less credit for equal

work.¹ Research labs, I suggest, represent one opportunity for scholars to correct for systemic inequalities and advance diversity, equity, and inclusion in the profession, especially when scholars use labs to recruit, train, and retain undergraduate and graduate students, that is, the next generation of researchers and professors.

This chapter proceeds in six sections. In the first section, I define research labs, describing their general function and operation. I leverage my knowledge of political science labs across the United States (US) and discuss the relationship between: (1) university type (for example, research- versus teaching-focused, graduate- versus undergraduate-serving) and lab composition; (2) research needs (for example, quantitative versus qualitative data collection and analysis) and lab size; and (3) pedagogical and mentoring priorities and lab organization. In the second section, I propose that labs are not only useful for enhancing faculty research; they can also improve undergraduate and graduate teaching and mentoring. In addition, I suggest that labs can serve broader professional and institutional goals such as diversity, equity, and inclusion. In the third section, I provide an illustration of labs as sites of research, teaching, mentoring, and expanding professional opportunities for individuals from diverse backgrounds. I draw on my experience as a graduate researcher in an IR lab at a large, private research university and, later, as the lab's director. I also share how I drew on this experience to build from the ground up a human rights lab at a medium-sized, public comprehensive university. In the fourth section, I make suggestions about planning out research across semesters and years to create a steady pipeline of work. Here, I reflect on my experience directing a three-year data collection effort for my book project. In the fifth section, I cover the nuts and bolts of getting started, including student recruitment and monetary and non-monetary compensation for student work. I conclude the chapter with a discussion of the special potential for labs to improve IR research and teaching, and the makeup and composition of our field moving forward.

WHAT IS A RESEARCH LAB?

A research lab is a community of scholars working collaboratively on projects under a specific theme or set of topics. Labs are both vertical and horizontal in nature: vertical because they are led by faculty who supervise research assistants (RAs), and horizontal because faculty leaders work together and RAs work together. This model for research originates in the natural sciences but has been imported to the social sciences in recent years (Becker 2020; Jenkins et al. 2007; Kilburn et al. 2014). To give an example from political science and, more specifically, IR and comparative politics, a group of scholars at Vanderbilt University have assembled Research on Conflict and Collective Action (ROCCA) to study topics such as alliances and arms transfers, motivations for terrorism, and prejudice toward refugees.²

Labs are not ad hoc bodies. Rather, they are standing institutions designed to meet research and training needs over the long term. For instance, Monika Nalepa at the University of Chicago formed the Transitional Justice and Democratic Stability Lab to advance research projects that examine whether and to what extent various modalities of transitional justice—for example, truth commissions, lustrations, and purges—prevent democratic backsliding and reversion to autocracy.³

Individual lab projects and lab personnel may change over time, but a lab's motivating principles and research objectives should remain mostly intact. Consider the following

example from my former lab at the University of Southern California (USC), which is celebrating its seventh anniversary in 2022:

The Security and Political Economy (SPEC) Lab conducts interdisciplinary, policy-relevant research on issues at the intersection of climate change, security, and economic development. These research projects provide opportunities for undergraduate students to develop data science and other research skills and apply them directly to the policy challenges facing national governments and international institutions. (Security and Political Economy Lab 2020)

Labs are excellent ecosystems for academic research, as evidenced by the growing stream of work coming out of SPEC, ROCCA, and the Transitional Justice and Democratic Stability Lab.⁴ As I will elaborate later in the chapter, labs can benefit academics and academic institutions not only by streamlining and accelerating research, but also by enhancing student training and expanding opportunities to diverse scholars.

How Does a Lab Work?

Much like labs in the “hard sciences,” labs in the social sciences are generally comprised of a mix of faculty and students. To illustrate, Pablo Barberá’s Networked Democracy Lab (NetDem)⁵ at USC serves an even mix of half a dozen graduate students and undergraduate students, with support from several affiliated scholars at different universities around the world. There are also some labs that primarily, and in some instances exclusively, serve either undergraduate students or graduate students. Jaime Settle’s Social Networks and Political Psychology (SNaPP) Lab⁶ at William & Mary (W&M) is an example of the former, with a team of approximately 20 undergraduates working under her supervision. James Druckman’s Political Science Research Lab (PSRL) at Northwestern University is an example of the latter, with a team of roughly ten PhD students working directly with him (Druckman et al. 2018).

Just as scholars must approach research projects with a clear set of objectives that are determined by their bandwidth and available resources, so too must scholars approach research labs. Key items to address in advance of starting a lab include: composition, size, and organization, which are, respectively, a function of university type, research type, and pedagogical and mentoring priorities.

Different Universities, Different Lab Members

Lab composition, both in terms of faculty and students, is shaped in part by the type of academic institution. For instance, W&M is a medium-sized, undergraduate-focused public university, with most academic units only conferring Bachelor’s degrees. The Government Department is one such unit. Given this, it makes sense that the SNaPP Lab exclusively serves undergraduates. In contrast, USC is a large, private PhD-granting institution. Thus, NetDem and SPEC can serve both graduate and undergraduate students. Building on this, because W&M is a medium-sized university, with fewer faculty in the Government Department working on the same types of research, it makes sense that we would see most labs there being headed by a single principal investigator (PI)⁷ rather than by two or more PIs, as we might see at a large research institution such as USC.

As I have just indicated, labs can have different numbers of PIs. But, how many PIs should a given lab have? The answer to this question depends in part on how a scholar envisions their

current and future co-author relationships. If a significant portion of their planned research will be undertaken with colleagues in their department, then it makes sense to pursue a joint venture rather than a solo one.⁸ Co-PIs can advance both shared and independent research within a single lab. Similarly, if a PI or a group of PIs wishes to use a lab to provide hands-on apprenticeships to jumpstart graduate students' (and possibly even undergraduate students') publication pipelines, they can bring them on as research collaborators and co-authors.

There are several advantages to having a co-PI or multiple co-PIs. The first is sharing responsibility for the lab, including student recruitment, training, and management. Another advantage is pooling resources such as extramural and intramural grants. A third advantage is expanding the breadth and the depth of experiential learning for research apprentices. If one PI is a quantitative methodologist and another is a qualitative methodologist, working with both PIs, on separate or shared projects, uniquely equips students to produce multi-method research.

Some labs have external faculty affiliates. Typically, affiliated scholars are drawn from the PI's or co-PIs' external co-author networks, notably those individuals with whom they plan to undertake a series of collaborative projects in the future. Faculty affiliates can compensate for the lack of research partners at a scholar's home institution and make up for gaps in training for one's research apprentices. Affiliated faculty can also expand both undergraduate and graduate students' professional networks, something that can serve them well as they pursue careers in social science.

Different Types of Research, Different Lab Sizes

Lab size is influenced by the number of PIs and the type of research they conduct. Take, for instance, W&M's AidData. AidData was established roughly 15 years ago as a collaboration between Michael Tierney, a faculty member, and his student Brad Parks. The lab has since been transformed and significantly scaled up. AidData now has five distinct faculty-led research programs staffed by full-time researchers and analysts, and supported by dozens of research affiliates around the world. The large-scale, professional operation is the site of dozens of research projects on economic development and investment. AidData researchers study topics such as sustainability and other priorities among development financiers. Researchers there use geospatial information and methods to evaluate project impact, and apply novel data and techniques to correct for underreporting in international financial flows. Now well into its second decade, AidData has employed hundreds of undergraduate and graduate students over the years to collect, code, and analyze large-N quantitative datasets, drawing materials from such sources as the World Bank, the Organisation for Economic Co-operation and Development, and national development banks and aid agencies.

But not all research and labs can be scaled up in this way, notably where PIs rely on qualitative and mixed methods. This type of work requires greater supervision from a PI or group of PIs, for example, qualitative analyses of the drafting and development of human rights laws, or the type and degree of gender mainstreaming in policy-making bodies around the world. Labs working on these types of research may, in contrast to organizations such as AidData, employ many fewer students.

Different Priorities, Different Organization

Another important dimension of variation in the size and organization of labs is the pedagogical and mentoring priorities of the PI or co-PIs. If one is concerned about creating and preserving “high-impact” or “high-touch” experiences where students are in frequent direct communication with faculty—experiences that also offer professionalization opportunities and support students’ overall academic development and psychosocial well-being—one’s lab must necessarily be smaller.

I will add a caveat here for labs with more than one PI. In labs led by a pair or team of PIs who differ in terms of the exact type of research experience they want to create for students, co-PIs can vary the size of the teams working with them on different projects. On a shared project, two co-PIs could work with eight students, and on separate projects, one PI could work with four students while the other works with 12. There is no one-size-fits-all scenario or solution, just choices for PIs to make. In the next section, I elaborate on the promise of research labs as sites of innovation in student training and mentoring, and in how we attract, train, and retain scholars from diverse backgrounds.

LABS AS SITES OF RESEARCH GROWTH AND INNOVATION

Labs enhance faculty research in several key ways. First, labs increase people power on a given project. Over the years, I have heard countless colleagues say that they would have been unable to take on a particular project without a group of students supporting them. Where data collection would have taken a colleague several years to compile on their own, data collection executed by a team took a fraction of that time, opening up more time for more research.

Second, labs increase the intellectual capital on a given project. When, for example, my co-author Benjamin Graham and I were developing the data coding protocol for a paper on human rights enforcement at the World Bank, our RAs in the SPEC Lab confronted human rights complaints that did not fit neatly within our codebook’s parameters. Essentially, students alerted us to our own blind spots and prompted us to revise the codebook and approach the project in a slightly different way. Our project was the better for it. Relatedly, if PIs can make their research legible to students, then the research will likely also be legible to readers.

Third, and bringing together the preceding two points, labs can offer scholars efficiency gains. Where faculty engage students seriously in all aspects of the research process—from idea conception to data coding and analysis, to manuscript preparation and publication—they can develop among their research mentees experience that mentees can then build on and translate to other projects. Just as students start their undergraduate and graduate careers with introductory courses and then advance to intermediate and advanced courses, building skills along the way, so lab RAs who are assigned different tasks, sequenced in order of difficulty, can better assist PIs in their work, notably those RAs who work in a lab over multiple academic terms, or even years. Crucially, multi-term, multi-year RAs become equipped to undertake their own independent research and, in the case of graduate RAs like me, start their own research labs when they enter the professoriate.

Beyond faculty research, labs can improve other aspects of faculty work and meet different university goals. These include undergraduate and graduate teaching and mentoring, and initiatives relating to equity and access in higher education. I explore these next.

A Different Way to Recruit, Train, and Retain Undergraduates

Undergraduate research experiences (UREs) are a high-impact practice, with demonstrated positive effects on a variety of outcomes such as student retention and satisfaction (Jacobi 1991; Gregerman et al. 1998; Jordan-Zachery 2004; Ponjuan 2011). Through labs, faculty have the opportunity to expand access to opportunity, skills training, and experiential learning. Faculty can scale research with students, from one to two students without a lab, to perhaps four to eight or even more with a lab.

Through the team structure and student involvement in different stages of the research process, labs can cultivate student interest in academic research, provide training and support, and bolster student retention. I remember vividly my third year in graduate school, when I launched my first independent project in the SPEC Lab and one of my students, a young woman of color, shared with me, “I didn’t know IR could be like this.” Because her first taste of the field had been limited to international security—the typical focus of IR courses—she did not know that IR encompasses subjects such as transitional justice, and that IR could encompass her interests. Mentored research gives students a clearer and more concrete idea of what avenues are available to them and also what avenues they can open for themselves. This is essential to increasing representation of students from diverse backgrounds who may have interests outside of the mainstream and who are concerned about being constrained to exploring more traditional ideas and questions.

Critically, research experiences show students how the proverbial sausage is made. Research is complicated and messy. Scholars start, stop, deliberate, revise, stop again, restate, and so on. It is a non-linear process that involves a fair amount of trial and error, and rejection, something mentors should normalize among their mentees. Mentored research makes legible to students the production of knowledge and, accordingly, makes research careers appear more attainable and perhaps even more appealing.

A Different Way to Professionalize Graduate Students

In traditional academic mentoring relationships, faculty are mentors and graduate students are mentees. Faculty use research mentorship to socialize graduate students into the profession. To this end, faculty give feedback on research: in one-on-one settings, in department workshops and colloquia, and at conferences. In addition, some graduate programs offer professional development seminars on a range of career topics such as publishing, public speaking, and applying for grants and jobs. Yet, the practicalities of how to be a researcher—which is distinct from how to do research—is not always covered. Indeed, few are trained in how to manage projects and teams, and how to build and sustain a research pipeline, all while fulfilling other institutional responsibilities such as teaching, mentoring, and service.

Our jobs as academics are multifaceted and so too should be our training and professionalization of students. Becker and Zvobgo (2020) lay out how faculty can use labs to train PhD students. By placing graduate students in a hierarchical structure, where faculty train and supervise them and where they, in turn, help to train and supervise undergraduates, graduate students can prepare for the professional demands of professorship. Certainly, graduate students who mentor undergraduate students in a research context enjoy “improved qualifications and career preparation” and “improved teaching and communication skills.” What is more, graduate student mentors benefit from “cognitive and socioemotional growth

... and greater enjoyment of their own apprenticeship experience” (Dolan and Johnson 2009, 487).

Addressing Diversity, Equity, and Inclusion

Regrettably, the above-referenced benefits that mentored research experiences offer undergraduate and graduate students are not enjoyed by all. Students from historically-excluded backgrounds are “less likely to be invited to serve as RAs, coauthor peer-reviewed publications, and receive research support” (Becker and Zvobgo 2020, 364). This is due in large part to a two-dimensional “pipeline problem”: barriers to access and barriers to retention. Barriers to access include, for example, less technical training prior to college and graduate school. While college and graduate school are precisely the environments to be trained in, some professors have implicit, if not explicit, expectations of what students should already know, expectations that may effectively preclude underrepresented students, notably first-generation students and students of color, from applying for research experiences in the first instance, and in the second instance, from being accepted to participate. Meanwhile, barriers to retention refer to how faculty, academic departments, and more generally universities may recruit but nevertheless fail to retain diverse scholars. This can be caused by a number of things, including the hidden curriculum; that is, “the unstated promotion and enforcement of certain behavioral patterns, professional standards, and social beliefs” (Alsubaie 2015, 125). Barriers to retention can also be caused by explicit or implicit bias from professors and peers that makes the environment feel hostile if not altogether unsafe.

When students and/or faculty do not see certain students as viable candidates and do not support them to become so, a pipeline problem results: fewer undergraduates from diverse backgrounds pursue graduate education and, later, careers in academia, industry, non-profits, and policy. Fortunately, the pipeline problem is not inevitable; it can be corrected. And faculty who choose to run research labs may be well positioned to help to correct it. Indeed, faculty can use labs to level the playing field, namely through targeted recruitment of women, first-generation students, and students of color, guiding them through both the substantive and the organizational aspects of research, and providing them with psychosocial support (Becker et al. 2021). I present applications of these ideas in the sections below.

APPLYING THE PRINCIPLES: LESSONS FROM TWO RESEARCH LABS

As previously discussed, labs are sites of research growth and innovation. Below, I provide two illustrations. The first draws on my time as a graduate researcher in the SPEC Lab. The second draws on my experience starting and running my own lab.

Becoming a Graduate Investigator

I was recruited to join the SPEC Lab by co-PIs Benjamin Graham and Jonathan Markowitz when I was a second-year PhD student at USC. I first served as a graduate researcher, supporting Ben’s research in international political economy. After a couple of months, we set out to find a project that would combine our interests, a project through which Ben would

model how to lead a team of undergraduate RAs, something I had never done before. After tossing some ideas back and forth, we settled on studying human rights complaints at the World Bank, dovetailing my interest in quasi-judicial bodies for human rights enforcement and Ben's work on international finance and development.

Once we had decided on our project, we determined a list of explanatory and outcome variables, including the types of individuals and groups that bring human rights complaints to the Bank, the issues they raise, and the outcomes they win (Zvobgo and Graham 2020). We then designed a codebook for an original dataset of World Bank human rights complaints. Ultimately, our team would code nearly 100 variables across more than 200 human rights complaints spanning three decades. After developing our codebook, we trained over a period of several weeks a team of six undergraduates to read and code the complaints.

We spent the first few weeks onboarding students to the topic. We discussed the World Bank's founding following the Second World War, and the long history of adverse social and environmental harms produced by many of its development projects around the globe. We then instructed students on the development and functioning of two novel accountability mechanisms that the Bank inaugurated in the 1990s, the Inspection Panel and the Compliance Advisor/Ombudsman (CAO), which receive complaints from project-affected communities and their civil society representatives. We spent several meetings going line-by-line through the variables and their definitions, and discussing the constructs that they were intended to capture. After about a month, we gave each student a personal draft coding manuscript (Microsoft Word document) and workbook (Microsoft Excel spreadsheet), and had them code an initial set of cases on their own. We compared the results the following week (that is, we performed intercoder reliability checks). We did this for a few more weeks until team members were coding cases in a uniform manner. After this, intercoder reliability checks were limited to pairs, rather than the full team. In all, it took our team of six a full semester to collect and code the data.

While the students collected data, Ben and I worked on the "front-end" of the paper, including fleshing out our theoretical framework and clarifying our contribution to scholarship. Following data collection, students helped to prepare the supplementary appendices, in which we described the data collection process at length. Students who had been learning data visualization using the R statistical software program in lab-run workshops also helped us produce graphs and maps using the newly collected data. We decided at one point that the paper would benefit from interviews with directors, managers, and staff at non-governmental organizations that had joined project-affected communities in filing complaints. We believed that they would provide important insights and add nuance that we could not glean from the quantitative data alone. We thought about conducting the interviews ourselves, but ultimately decided instead to have students conduct them. We designed with our students an interview protocol that we submitted to our institutional review board after team members had completed human subjects research training through the Collaborative Institutional Training Initiative (CITI) Program. Upon approval of our interview protocol, we drew up a list of organizations and contact information for personnel who we wanted to interview, and then the students interviewed them.

I learned through this process just how sharp undergraduates are, and what valuable research contributors they can be, especially with the proper training, support, and encouragement. I learned that they could be trusted to take the work seriously, and to meet new and more challenging assignments with energy and enthusiasm. I learned that they truly could be integrated into all aspects of faculty and graduate students' research.

Following completion of this project, I began directing my own team in the lab, this time to collect and code data for a novel series of datasets now collectively known as the Varieties of Truth Commissions (Zvobgo 2020), the foundation of my PhD dissertation and later book project. I recruited my team after I had completed my qualifying exams, settled on my dissertation topic, and designed the codebooks. I ran the team in much the same way that I ran the World Bank and Human Rights team with Ben. But, I added at the beginning a more formal short course, complete with a syllabus, learning objectives, and short assignments and assessments. Students completed four modules that introduced them to the various modalities of transitional justice and the existing research on different mechanisms, including truth commissions, the focus of their work with me. By the end of the short course, students were able to:

1. Describe the political, philosophical, and legal foundations for transitional justice.
2. Differentiate between truth commissions and other elements of the transitional justice “toolkit” with respect to goals, mandates, and powers, and key actors.
3. Evaluate the extent to which truth seeking is necessary for justice, reparations, and institutional reform.
4. Identify the strengths and limitations of existing comparative studies of truth commissions.

As the short course progressed, students began to see for themselves the gap in scholarship and how my project would fill it. This was essential for students to not lose sight of the forest for the trees, and to feel highly engaged and invested in the project.

Because of my previous experience working with Ben, I was able to transition from mentee to mentor fairly seamlessly. Just as graduate students benefit from classroom observation and serving as teaching assistants (Brandt 2002), graduate students benefit from research observation and working as collaborators and research mentors. Indeed, this experience prepares them to be successful researchers.

Becoming a Lab Director

After a year of service in the SPEC Lab, the PIs invited me to serve as the lab director. In this role, I helped to lead student recruitment, training, and professionalization. I also helped to supervise 65-plus undergraduates and five PhD students. Combined with my experience as a co-investigator and graduate investigator, my experience as director of the SPEC Lab equipped me to launch my own lab, the International Justice Lab (IJL)⁹ when I moved to W&M. Here is how I did it.

I arrived at W&M in July 2019 and began laying the groundwork for IJL right away. The first task was to define the lab’s mission:

The International Justice Lab brings together faculty and students from across the United States to conduct collaborative research on human rights, transitional justice, and international law and courts. Our mission is to produce high-quality social science research that is relevant to policy makers, practitioners, and civil society advocates. (International Justice Lab 2020)

The second task was to determine the lab’s composition, size, and organization. I recap for the reader that these are shaped by university type, research needs, and pedagogical and mentoring priorities. To begin, since W&M is an undergraduate-focused institution and the Government Department, where I expected to draw most lab applicants, only confers Bachelor’s degrees,

I planned for IJL to be comprised of undergraduate students, also known as “IJL fellows.” Next, given my diverse research needs, including both quantitative and qualitative data collection and analysis, I opted for a small- to medium-sized lab of roughly half a dozen students, with an expected one to two students cycling off and one to two students cycling on each year. Finally, since I would be the lab’s only PI, and since I wanted to create a high-touch experience for students, I set my own personal “by-laws,” which included setting the lab’s maximum capacity to eight fellows.

The third task was to recruit students through a university-wide call for applications. The call included information on the main research project for the coming academic year, a general description of RA tasks (for example, background research, annotated bibliographies, interview questionnaire design, and data collection and coding), and preferred qualifications (that is, professionalism, reliability, the ability to set and meet deadlines, and attention to detail). The call indicated that this was a paid position, with a 100-hour semesterly time commitment. The call also made note of my special interest in recruiting first- and second-year students who could work in the lab over multiple years, though I still welcomed applications from more senior students. I also communicated my commitment to recruiting a diverse team. The student application was hosted online as a Google Forms survey.

Ultimately, I hired five student fellows based at W&M. I brought on an additional two fellows who had worked for me in the SPEC Lab and who had expressed an interest in further developing their expertise. They would work remotely from Los Angeles. I was—and remain—proud of the fact that I was able to recruit a team that is substantially more diverse than the field of IR. Whereas women account for approximately four in ten and people of color represent roughly three in ten IR scholars (American Political Science Association 2019), IJL started with an all-women team, with a majority of fellows being people of color. In addition to the fellows, I recruited four affiliated scholars, all drawn from my existing co-author network. While I would be responsible for student wages, additional expenses (for example, for fielding a survey) would be split between me and the faculty affiliate on a given project.

Once the team was assembled, I launched the lab website, which includes information on who we are and on our members, research, and teaching. We also have a page for announcements and lab news. The teaching page includes student resources such as links to general and subfield peer-reviewed political science journals, a set of research methods resources developed by Jaime Settle and the Social Science Research Methods Center (SSRMC) at W&M, and information on graduate school and preparatory programs such as the Ralph Bunche Summer Institute co-organized by the American Political Science Association for undergraduates interested in pursuing a graduate degree in political science. I welcome readers to consult and share the listed resources with their students and colleagues.

I ran the first few IJL meetings much like I had done with my previous two teams at USC: introducing students to the material and onboarding them on lab procedures (for example, file sharing on Dropbox, expected email response times, filling out time sheets, and so on), introducing them to tasks they would perform during that semester, and previewing research goals for the following semester and following year. Beyond the weekly lab meetings, we meet once or twice a semester for a group excursion or meal. Small touches go a long way toward cultivating connectedness and boosting team morale.

In the next section, I discuss research planning and developing an increasingly expert and adept cohort of student researchers.

RESEARCH PLANNING IN LABS

A research lab's success rests in large part on careful planning. PIs must look several months, even years, ahead, deciding what projects they will undertake, when, and with whom. If a lab is to be run by a single PI, I advise working with students on one project at a time. For PIs who are just starting out, I also recommend that student assistants work on the same set of tasks within that project to minimize the costs of supervision. Such a system is also helpful for developing a cohort of student assistants who have mastered one set of simpler tasks and who can then undertake a set of more complex tasks (that is, vertical learning). Essentially, students are trained to do more and better, extending the degree of their contributions to a PI's research. I recall for the reader that labs are systems. Accordingly, there should be a method and a rationale for determining and sequencing tasks, ideally from less difficult to more difficult. Certainly, there will be ad hoc assignments from time to time such as copy-editing, citation management, and so on, even for experienced student researchers. However, PIs should be mindful to not have these tasks dominate student work.

An Illustration from a Multi-Year Data Collection Effort

Take, for instance, how I planned and organized data collection for my doctoral dissertation and later book project, "Governing Truth: NGOs and the Politics of Transitional Justice." In addition to qualitative data gathered during fieldwork, the project leverages three novel datasets that cover: (1) mandates and institutional design of truth commissions; (2) policy recommendations made by truth commissions; and (3) civil society activism around and government responses to truth commission recommendations. The datasets, termed the Varieties of Truth Commissions, serve the project's empirical chapters (Zvobgo 2021).

Data collection began in spring 2018 and concluded in fall 2020. Over this three-year period, I worked with a team of four to six RAs, integrating one or two new members each academic term as one or two other members rotated off due to study abroad, graduation, and so on. Students worked for approximately 100 hours each semester and 300 hours over the summer. The team built the first dataset in spring 2018. The dataset codes 60 variables relating to truth commission mandates and design across more than 70 commissions. The team began building the second dataset in summer 2018 and completed it in fall 2018. This dataset codes roughly 70 variables relating to truth commission recommendations across nearly 6000 recommendations. The team started building the third dataset in spring 2019. It codes approximately 30 variables relating to civil society advocacy around certain truth commission recommendations and governments' decision to implement them (or not) across 600 recommendations made by the commissions in Guatemala, South Africa, and Timor-Leste. The coding for Guatemala, South Africa, and Timor-Leste was done country by country, with the last wave of coding concluding in fall 2020.

For timely and low-stress completion of my dissertation, I planned for each dataset to be completed one semester before I would need to analyze it. I made a minor adjustment for the third dataset. For this dataset, I conducted a country-by-country analysis prior to conducting an all-country analysis. As such, I did not wait to begin data analysis until data collection for all three countries (that is Guatemala, South Africa, and Timor-Leste) was complete.

In the next section, I discuss some practical considerations for getting a research lab off the ground, for student recruitment and compensation, and cultivating institutional buy-in.

THE NUTS AND BOLTS OF GETTING STARTED

A key question for anyone interested in starting a lab is how to recruit members and how to compensate them for their labor. This is something that I have touched on earlier in the chapter but that I now discuss at greater length. Acknowledging variation in resources available to faculty at different types of institutions, I present several options for monetary and non-monetary compensation for undergraduate and graduate students working in labs.

Student Recruitment

There are different ways to recruit students into a research lab. Some PIs hand-select individuals that they have taught in a lecture course or seminar, while others send out an open call for applications. While the first method may be appealing because faculty have an existing relationship with a student or group of students, and have prior knowledge of their skills, the second method is preferable, for several reasons (Becker et al. 2021).

A call for applications opens up the candidate pool to more diverse talent. In contrast to hand-selection, which is vulnerable to implicit bias against women, first-generation students, and students of color, open recruitment is more equitable and inclusive. As I mentioned earlier in the chapter, it breaks down one part of the “pipeline problem”: barriers to access. When a faculty member chooses an RA simply because they know them, they effectively close off access to students who they do not yet know but who may be equally, if not more, deserving of the opportunity. When I send out a call for applications, I always make sure to include the following:

I am committed to recruiting and developing the best talent. Towards that end, I put particular emphasis on recruiting an intellectually diverse team that includes people who have historically been underrepresented in International Relations and academia more generally—that is, women, first-generation college students, and students of color. (Author’s recruitment materials)

A call for applications also expands the pool of prospective RAs with different skills and expertise that can benefit faculty projects. A comparative politics scholar researching topics in Central and South America, for example, may benefit from recruiting a student studying Spanish language and literature or majoring in Hispanic studies, either for the student’s linguistic competencies or for their substantive knowledge of issues in a particular region. In a similar vein, an IR scholar requiring assistance with data management, visualization, and analysis may benefit from recruiting a student majoring in computer science, for the student’s background working with different software and programming languages. Relatedly, an open call enhances prospects for students hailing from different academic backgrounds and majors. This supports interdisciplinary research, as students bring outside concepts and ideas to their research with faculty.

The above bears special relevance for recruiting undergraduate students, but the principles outlined can also be extended to recruiting graduate students to serve in more senior roles in a lab.

Student Compensation

One potentially thorny issue is paying graduate and undergraduate students for their assistance with research. In some university systems and countries, student labor is compensated either as a matter of policy or as a matter of course. But there are many instances in which students are not paid for their work.

One argument against paying students is that they do not need to be paid. Essentially, they are gaining on-the-job experience, a good in its own right. Certainly, assistantships provide students valuable professional experience that they can translate in academic, policy, non-profit, and industry jobs. This experience potentially improves future job attainment and earnings potential. Regardless, students should be paid. While experience may be valuable in the long term, it does not cover expenses such as books, housing, or food in the short term. Not every student can afford an unpaid position, and it is not reasonable to think otherwise. Unpaid assistantships can result in several suboptimal outcomes, including students either forgoing the experience or securing a second job to cover bills not covered by the first job. This connects back to barriers to access and barriers to retention. These adverse consequences—having to forgo an opportunity or having to work double—are likely to have the greatest impact on first-generation students and students of color, many of whose families rely on them having a paying job while in college. Research should not be a luxury good, easily accessible to those who can afford to work for free, and out of reach for those who cannot. Faculty members must be sensitive to this.

A second argument against paying students is that it effectively restricts the number of available positions. Resource scarcity is real and no doubt a challenge. Faculty may have small research budgets and/or insufficient funds to fund large cohorts of students for projects that require many hands on deck. But the seemingly utilitarian logic of not paying students so as to be able to have the greatest number of RAs is not actually utilitarian. Unpaid assistantships do not produce the “most good for the most people.” Rather, unpaid assistantships create the most good for certain people. This is the crux of the problem. As members of the professoriate, we are poised to address socioeconomic inequalities, if only in part. To the extent that we can, we should. Below, I present some suggestions for securing funds for research assistantships, with a view to making available opportunities for the broadest swath of young scholars.

For faculty who have some resources to fund student research, such as from their research start-up budget, they should consider prioritizing funding students with greater financial need. Financial need can be determined in one of two ways. First, in the initial job application, faculty can include a question about student eligibility for funds from university and government programs. For instance, the US Department of Education’s Federal Work-Study Program supports part-time employment for low-income undergraduate, graduate, and professional students on their home campuses (US Department of Education 2020). While a blunt measure, assessing student eligibility for programs such as US Federal Work-Study can give a PI a rough picture of financial need among prospective RAs. Second, faculty can also include in the job application a question about whether a student will only accept a paid position. Faculty can then follow up later in the interview process to better understand the extent of the need. Once faculty have determined student need, they can prioritize securing funds for those with the greatest need.

There are several options that faculty can pursue to reduce wage costs. As my colleagues and I have written elsewhere, faculty in US colleges and universities can reduce wage costs by

prioritizing employment for students who are Work-Study eligible. For every dollar a student earns, the US Department of Education pays 70 cents (administered by the university) and the PI just 30 cents. A unique opportunity to level the playing field, this program allows faculty members to employ three lower-income students for the cost of employing one higher-income student.

Other options include soliciting funds from university-wide offices, centers, and initiatives with a mandate to support student research, both during and between academic terms (Becker et al. 2021). For example, at USC, the Provost's office offers grants ranging between \$1000 and \$3000 that are paid directly to students working with faculty on research. Diversity offices are another potential resource, especially if one has a clear plan to integrate students from historically-excluded backgrounds into one's research. It is important to note that one does not need to request a large sum from a single source. One can request smaller sums from multiple sources which, together, can cover the costs of paying students.

Yet another option is applying for external funds. Faculty can apply for small or large grants from several sources. For IR scholars, different sections and caucuses in the International Studies Association (ISA) offer small research grants, with some aimed specifically at early-career researchers and faculty at institutions where funding opportunities are limited. For example, the ISA Women's Caucus awards annually the Deborah "Misty" Gerner Grant for Professional Development, a \$2000 research grant for early-career researchers sponsored by Lynne Rienner Publishers. The terms of the grant are broad and could encompass paying students for research assistance. In the broader discipline of political science, the American Political Science Association (APSA) offers through its various offices grants of varying sizes. Consider, for instance, the APSA Centennial Center for Political Science and Public Affairs, which awards grants between \$500 and \$2500 that can cover, among other things, salary for research assistants. In terms of larger awards, faculty can apply for grants from public organizations such as the National Science Foundation, as well as from private groups such as the Russell Sage Foundation, which unveiled in 2020 the Pipeline Grants Competition, a partnership with the Bill and Melinda Gates Foundation to promote diversity in academia (Russell Sage Foundation 2020). Larger external funding awards are especially important for ensuring the sustainability of one's lab.

Non-Monetary Compensation

I have discussed monetary compensation; however, non-monetary compensation is also an option that can be combined with or used instead of monetary compensation.

Co-authorship

One ethical alternative to monetary compensation for undergraduate and graduate students in a lab is co-authorship: of articles, book chapters, white papers, and op-eds. Co-authorship, as an alternative to monetary compensation, is not without its challenges, however. It requires identifying the right students: individuals who have both the interest in and, in the case of lengthier projects, the stamina for this type of work. Because professional incentives differ for undergraduate and graduate students, I address each group in turn.

With respect to undergraduates, not every student will be interested in (or understand the expectations of) working on a manuscript for review and publication in academic journals and books. These can require a year of work (if not more) for the initial draft, another year (if not

longer) of refining and presenting the manuscript at professional conferences and workshops, and yet another year (if not longer) to undergo editor or peer review, proofing, and ultimately, print publication. During this time, students may lose interest or change their minds as other opportunities present themselves, opportunities such as internships, study abroad, and so on. PIs should keep all of this in mind prior to employing a student and deciding to compensate them in this way. PIs should also take into account the student's career stage. While perhaps counterintuitive, it is more practical to start a multi-year collaboration with a more junior student than a more senior student because it is more likely that the project will be completed in the time that they are enrolled.¹⁰

Co-authorship may be most practical for compensating Master's and PhD students. Their professional career incentives more clearly align with those of faculty. They are just as motivated (if not more so) to get projects off the ground and completed in as timely a manner as possible.

For-credit opportunities

Another alternative to monetary compensation is offering academic credit for lab work. This is not only beneficial for students who require a certain number of elective course requirements that they might prefer to meet while working with a professor on research; it is also beneficial for the faculty member because they also receive credit. This route may be especially valuable for faculty with heavy course loads and who otherwise have little to no time for research (Becker et al. 2021). Certainly, for-credit lab experiences require more consistent and sustained engagement from both the faculty member and students than paid assistantships, but it is one worth considering for those faculty who have substantial time constraints and/or who cannot afford to pay their students.

Institutional Buy-In

Support from gatekeepers—whether senior colleagues, department heads, or university leaders—is a key part of a lab's success. Because the value of research labs may not be evident to all, it is worth investing time and effort into communicating to key actors (and would-be veto players) how and why a lab will support one's professional goals and, very importantly, department and university goals. At a research-intensive institution, one might communicate that a lab will boost productivity and increase research outputs. At a teaching-intensive institution, one might describe research with students as "laboratory-based teaching," an established high-impact practice that enhances student satisfaction, retention, and timely completion of degree programs. One might also frame in-lab learning as filling a curricular gap. And at a comprehensive institution, one might explain that student learning in the classroom and student research in the lab are mutually constitutive and reinforcing. Certainly, different messages may be required in different situations within a single institution. The main task is to know one's audience and speak in their language. Otherwise, one may be discouraged, and perhaps even impeded, from proceeding with a lab.

Senior scholars may advise against junior scholars launching a lab prior to their promotion and tenure. Directing a lab is time- and labor-intensive, and colleagues might see it as a distraction. But, as with countless other colleagues who direct labs, my experience has been that I am able to do better research, teach more effectively, and mentor students holistically precisely because I run a lab. As I discussed earlier in the chapter, on the research side, I have

benefitted from my students collecting data at the same time as I am developing the theory for a project. On the teaching side, explaining variables and coding protocols has helped me to refine my communication of ideas to subject-matter novices. And, on the mentoring side, creating a community of researchers has helped me to better support my student, both directly, in one-on-one and group settings, and indirectly, as my student have another peer group to learn from, lean on, and support. Again, these and other benefits of labs are not apparent to all who are on the outside looking in, so “public diplomacy” can go a long way.

Once a lab is finally off the ground, it is advisable to establish communication and cultivate relationships with the university’s admissions, communications, diversity, and advancement offices. Labs that produce innovative research, teach important skills, and cultivate strong student leaders can widen the institution’s talent pool, drawing in exceptional prospective undergraduate and graduate students. Likewise, news related to a lab, such as publication of research articles and op-eds, is highly valued, as this brings good press to an institution. In a similar vein, labs can benefit from and themselves benefit campus-wide diversity and inclusion initiatives as well as fundraising efforts. To be sure, none of this can—or should—be done overnight and all at once. It is best to start small and build from there. The key is to develop a message that resonates with different stakeholders, communicate it, execute on it, and regularly send out updates on lab achievements.

CONCLUSION

The rise in research collaboration in the social sciences prompts academics, including political scientists, to build structures that support it. One such option is a research lab, a model for collaboration drawn from the natural sciences that presents the opportunity to systematize and scale up collaboration. As discussed, labs do not only hold great promise for enhancing faculty research, but they also present a means to improve undergraduate and graduate teaching and mentoring, as well as an opportunity to begin rectifying, if in part, systemic inequalities in the profession. This chapter has offered different models for labs based on a variety of goals, opportunities, and constraints, at the level of the prospective PI and at the level of the academic institution. It drew primarily on examples of labs with research focuses in IR and comparative politics, but nonetheless laid out possible designs and plans for labs in other political science subfields and indeed other social science disciplines.

I discussed at the outset how political science labs hold especially great promise for IR scholars, as we research, teach, train, and mentor. Why? First, IR needs data—more data, better data, granular data—to continue answering questions of concern and urgency in the world today. Labs are one vehicle through which we can build these data. Second, many IR scholars teach IR differently than they research it, giving students an incomplete idea of what IR scholarship is and can be (Zvobgo and Loken 2020). As I mentioned earlier, this can discourage undergraduates, notably those from diverse backgrounds, from attending graduate school and pursuing a career in academe, among a range of careers in social science. Labs are one means by which we can change the perception that IR is not for them. Third, and related to the point just addressed, IR lags behind other political science subfields in terms of representation of diverse scholars. Whereas Black and Latinx scholars make up 12 and 14 percent of US-based comparativists and Americanists, they make up only 8 percent of US-based IR scholars (American Political Science Association 2019). Labs can help us to improve these numbers,

not only in IR but across political science. In this vein, we must not only raise awareness of the problem, but we must also actively correct it.

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NOTES

1. Collaboration tends to benefit men more than it benefits women (Kadera 2013; Sarsons et al. 2021; Teele and Thelen 2017). Co-authorship increases manuscript submissions and publications more for men than it does for women (Djupe et al. 2019, 71). Co-authorship also increases citations to men's work more than it does for women's work (Dion et al. 2018; Hardt et al. 2019; Maliniak et al. 2013; Mitchell et al. 2013). These patterns likely obtain for scholars of color, individuals whose presence and status in political science, and specifically IR, tends to follow that of women in the discipline.
2. For more information, visit <https://lab.vanderbilt.edu/rocca/>.
3. For more information, visit <https://www.tjdemstabilitylab.com>.
4. See, for example, Markowitz et al. (2020) and Schram (2019). See also Bates et al. (2020) and Nalepa (2021).
5. For more information, visit <https://dornsife.usc.edu/labs/netdem>.
6. For more information, visit <https://snapp-lab.wm.edu>.
7. For additional examples, visit <https://www.wm.edu/offices/global-research/>.
8. While it is possible that a lab could be led by PIs at different institutions, I am not aware of any multi-institutional labs.
9. For more information, visit <https://www.internationaljusticelab.org>.
10. The cognitive, personal, and career gains of student research are also more pronounced for students who engage in multi-year research experiences relative to those who engage in shorter-term experiences. For more on this, see Thiry et al. (2012).

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