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The Unbearable Opportunity Costs of the Political Science PhD: Evidence and Lessons from Canada

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Abstract

Limited academic career prospects are pushing PhD graduates in political science and other disciplines to nonacademic careers. Understanding the mismatch between student and supervisor perceptions of doctoral career training is a starting point for suggesting program reforms. This research note examines the perceptions of PhD students and supervisors on doctoral career training. We compare results from two surveys of English-speaking Canadian universities on doctoral political science programs; one surveys PhD students and the other surveys supervisors. These survey results suggest that 1) students are more aware of the limited academic job market and interested in nonacademic careers than supervisors realize; 2) supervisors are unaware of the sunk costs PhD students face; 3) supervisors and students have different preferences for change in doctoral programs; and 4) students overestimate supervisors' confidence in preparing them for nonacademic careers. Changes in program design can better meet student needs in these PhD programs.

Résumé

Les perspectives de carrière universitaire limitées poussent les titulaires d'un diplôme de troisième cycle en science politique et dans d'autres disciplines à se tourner vers des carrières non universitaires. Comprendre le décalage entre les perceptions des étudiants et des directeurs de thèse sur la formation doctorale est un point de départ pour suggérer des réformes aux programmes. Cette note de recherche examine les perceptions des doctorants et des directeurs de thèse sur la formation au niveau doctoral. Nous comparons les résultats de deux enquêtes menées dans des universités canadiennes anglophones sur les programmes de doctorat en science politique ; l'une porte sur les étudiants en doctorat et l'autre sur les directeurs de thèse. Les résultats de l'enquête suggèrent que 1) les étudiants sont plus conscients des limites du marché de l'emploi universitaire et s'intéressent davantage aux carrières non universitaires que ne le pensent les

directeurs de thèse ; 2) les directeurs de thèse ne sont pas conscients des coûts irrécupérables auxquels sont confrontés les doctorants ; 3) les directeurs de thèse et les étudiants ont des préférences différentes en ce qui concerne les changements à apporter aux programmes de doctorat ; et 4) les étudiants surestiment la confiance des directeurs de thèse en ce qui concerne leur préparation à des carrières non universitaires. Des changements dans la conception des programmes peuvent permettre de mieux répondre aux besoins des étudiants dans ces programmes de doctorat.

Perspectives on doctoral career training in political science and other disciplines have changed significantly in recent years. In recognition of the limited academic job market, more attention has been paid to nonacademic career outcomes and training. It is not clear that administrators, faculty supervisors and students are on the same page when it comes to careers or professional development (Rutledge-Prior and Casey, 2023). There is evidence that faculty are increasingly aware of the poor academic job market (Berdahl, Malloy and Young, 2020), but it is less clear whether students enter their programs with the same knowledge about job prospects. In the American context, Pashayan et al. (2023) found American political science graduate students struggle to find work and do not believe they are sufficiently prepared for the job search. Supervisory styles differ (Berdahl, Malloy and Young, 2022), as do students' own supervision preferences (Casey et al., 2023), meaning conversations and mentoring structures for career outcomes will vary. Administrators may have a high-level understanding of the issues and can pursue institutional solutions (Berdahl and Malloy, 2019) but students typically have limited knowledge of these conversations. Some of this disjointedness is undoubtedly due to the general problem of the "hidden curriculum" of norms and knowledge that is not clearly disseminated to students (Barham and Wood, 2022). More generally, it reflects the differing knowledge and experiences of each group, insufficient understanding of where the key gaps lie and an absence of space and opportunity in which to communicate effectively. What is the effect of these different perspectives? Are they leading to common or disjointed conversations, and toward agreement or disagreement on what changes, if any, are needed to graduate programs?

In this research note, we investigate these questions by reporting the responses of supervisors and PhD students to the same questions on doctoral career training. Side-by-side comparison between supervisors and students gives us important insights into both the views of each group individually and the areas of convergence and divergence. Drawing on two surveys of political science faculty and graduate students in Canadian English-language PhD programs, we find that supervisors underestimate students' knowledge of the academic job market and overestimate the degree to which students are intent on academic jobs. We also find that supervisors overestimate students' sense of agency, particularly whether or not to continue with the PhD program. In both groups, there is some agreement about the complexity of the issue and possible solutions. However, supervisors are more likely

to suggest shrinking PhD programs as a solution, while students are more likely to call for adapting programs. Further, students have greater confidence in their supervisors' capacity to mentor them for nonacademic careers than do the supervisors themselves. Overall, these findings suggest that conversations are not completely disjointed; but there are striking and sometimes unexpected differences that have consequences for the design and effectiveness of doctoral programs. Perhaps most important is that while students may be more informed than supervisors think, they lack feelings of agency.

Our study points to the need to clarify expectations for both supervisors and students about doctoral career training. It helps to inform these conversations by offering systematic data from English-language PhD programs across Canada on where faculty and PhD students tend to share similar perceptions and those issues on which their perspectives vary in meaningful ways. We also suggest solutions to help bridge the conversations and particular changes in program design (such as more rigorous comprehensive exams, rigorous annual progress reviews and the development of explicit "off ramp" options) to promote greater clarity and communication that ultimately promote greater student agency rather than letting students and supervisors drift in opposite directions. While perceptions of graduate career training will always be shaped by one's own status and role, there are ways to reduce the gap.

Methods

This research draws on two online surveys of political science faculty members and graduate students. We conducted the faculty survey between 19 September and 26 October 2018. The sampling frame included tenure-stream faculty members working in the seventeen Canadian political science departments offering English-language PhD programs, as identified by departmental websites. A total of 566 faculty members were invited to participate in the survey, with 167 completing the survey (response rate of 30%; see Supplementary Materials for Berdahl, Malloy and Young, 2020, for institution-specific sample information and survey questionnaire). Each university surveyed had a response within four percentage points of its share of the sampling frame, while each career rank had a response within five percentage points of its share of the sampling frame, suggesting that the sample is generally representative. Within our faculty sample, almost 80 per cent reported supervising at least one PhD student, and the median number of PhD supervisions per faculty member was three. For this article, analysis is limited to those faculty who reported supervising at least one PhD student ($N = 131$), identified in this article as "supervisors."

We conducted the student survey between February and April 2021. The University of Saskatchewan Behavioural Research Ethics Board and the Carleton University Research Ethics Board granted ethics approval, with other relevant universities providing ethics acknowledgments, approvals or waivers. The survey was advertised over social media and shared with relevant department and graduate chairs to be shared with students. For this article, analysis is limited to PhD students ($N = 99$). Additional survey information is available in replication data for Casey, Rutledge-Prior, Young et al. (2023). Like all surveys, response bias is possible

in our data. For the faculty survey, responses may over-represent faculty with a stronger interest in PhD training and/or graduate education. For the student survey, because enrolments at Canadian universities are not consistently made public, we lack a true sampling frame and the size of the population is not available; thus, we cannot assess the representativeness of the sample. The vast majority of student survey respondents are domestic students (82%) with full-time status (98%); 50 per cent of the respondents identified as male and 44 per cent as female; a plurality of students (30%) are in their fifth year or higher, followed by those in their first year (22%); the average age of student respondent is 31, with a median of 30 (see Supplementary Materials for this note for institution-specific information).

As our study populations are relatively small and our surveys have limited sample sizes, we note that findings from our study are used for exploratory and theory-building purposes, rather than hypothesis testing. The value of the analyses, we suggest, is to provide information on an understudied topic of significance to the Canadian political science discipline. These data can in turn support future quantitative and qualitative research to inform the discipline as a whole and assessments of institution-specific programs.

These are the first multi-institution surveys of political science faculty members and PhD students in Canada. As such, they should be understood as a preliminary study. Not having a French version of the survey is an important limitation. As a preliminary study, the decision was made to focus only on English-speaking institutions operating doctoral programs within a similar cultural and linguistic context. Future research should include both French- and English-language institutions. It should also engage political science departments to increase survey response rates. The current surveys can inform qualitative research involving both faculty and current and former PhD students to provide a more nuanced portrait of the perspectives and motivations of both groups. The Canadian Political Science Association might play a role in convening such research and/or structuring conversations about its implications for practice.

For this research note, our variables of interest are student awareness of the academic job market, student definitions of success, student confidence in academic job market success, student willingness to discontinue graduate study, preferences for changing the political science PhD program, and supervisor ability to assist with nonacademic career preparation. All questions are based on a five-point agreement scale of strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, strongly disagree. Table 1 summarizes the exact question wordings.

Results and Discussion

Assessing the supervisor and PhD student responses leads us to draw five key conclusions, summarized below.

1. Students are not as naive about or exclusively focused on academic career prospects as supervisors think.

Canada lacks systematic data on the placement of doctoral graduates in academic positions, but there is a clear trend (CCA 2021) of a growing mismatch between

Table 1. Summary of Measures

Variable	Supervisor Question	Student Question
Awareness of limited academic job prospects	PhD students in our program were aware of limited academic job prospects before they began their doctoral program.	I was aware of limited academic job prospects before I began my doctoral program.
Perceptions of student success	PhD students in our program measure their own success in terms of whether or not they successfully attain an academic position.	I measure my own success in terms of whether or not I successfully attain an academic position.
Willingness to quit: sunk costs	PhD students in our program feel they cannot quit their programs given the amount of time and money they have invested.	I feel I cannot quit my program given the amount of time and money I have invested.
Willingness to quit: embarrassment	PhD students in our program feel they cannot quit their programs due to potential embarrassment.	I feel I cannot quit my program due to potential embarrassment.
Changing political science PhD programs: career skills training	Departments should explicitly build the development of skills transferable to non-academic careers, such as professional writing and project management, into the PhD curriculum.	Departments/ units should explicitly build the development of career skills, such as professional writing and project management, into their graduate courses.
Changing political science PhD programs: reduce admissions	If PhDs in Political Science aren't getting academic jobs, we should reduce the number of students we accept into our PhD programs.	If PhDs aren't getting academic jobs, universities should reduce the number of students they accept into PhD programs.
Supervisor ability to assist with non-academic training	I feel well-equipped to help PhD students pursue non-academic career paths.	Faculty in my program feel well-equipped to help graduate students prepare for future careers.

the number of PhD graduates and the number of academic positions available. In light of this, faculty members are confronted with what many might perceive as an ethical question about whether to admit PhD students if they are unlikely to secure traditional academic jobs. But these conversations may occur in the absence of a systematic understanding of students' level of information regarding their likely career outcomes or the intensity of students' desire for an academic career.

Our data show that supervisors underestimate students' awareness of the limited availability of academic jobs. Although a majority of supervisors agree with the statement "PhD students in our program were aware of limited academic job prospects before they began their doctoral program," their agreement is tentative, with only 29 per cent of supervisors strongly agreeing and 43 per cent somewhat agreeing. PhD students, on the other hand, are more definitive, with 68 per cent strongly agreeing and 19 per cent somewhat agreeing with the statement "I was aware of limited academic job prospects before I began my doctoral program" (see Figure 1). Faculty members can safely set aside their concern that students are enrolling in a PhD program because they believe it is a direct route to the professoriate.

Supervisors also significantly overestimate how much PhD students connect their success to attaining an academic position. This overestimation is important to correct: previous analysis found that faculty members believe PhD students want academic positions and "are making a calculated risk" (Berdahl, Malloy
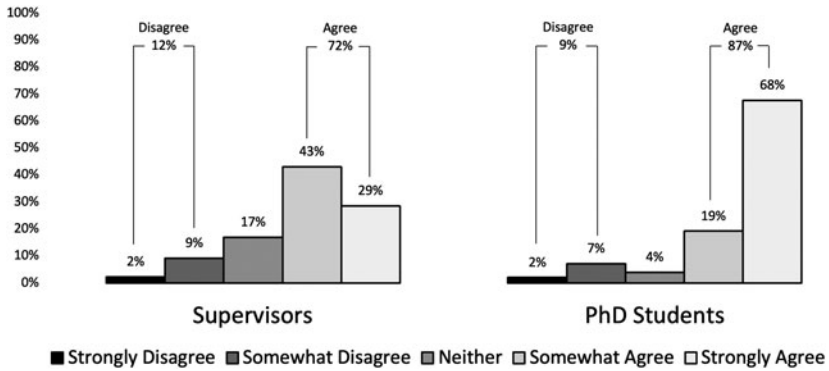
Figure 1. PhD Students Knew Academic Positions Were Limited Going Into Their PhD.
Note: For supervisors, *N* = 130. For PhD students, *N* = 99.

and Young, 2020: 754). Supervisors (85%) were over 30 percentage points more likely than PhD students (54%) to agree that students measure success in terms of obtaining an academic position (Figure 2). This mismatch is important because it may shape faculty members' views on the importance of changes to the program. If faculty members believe that PhD students equate success with achieving an academic career, then it is logical to maintain program orientations aimed at helping students maximize the likelihood of doing so. If faculty members understand that PhD students, while favouring academic careers, appreciate the poor job market and are not exclusively defining success in terms of tenure-track academia, they may be more willing to reimagine and redesign their department's PhD program. As noted in Table 1, students were asked the question in individual terms: "I measure my own success in terms of whether or not I successfully attain an academic
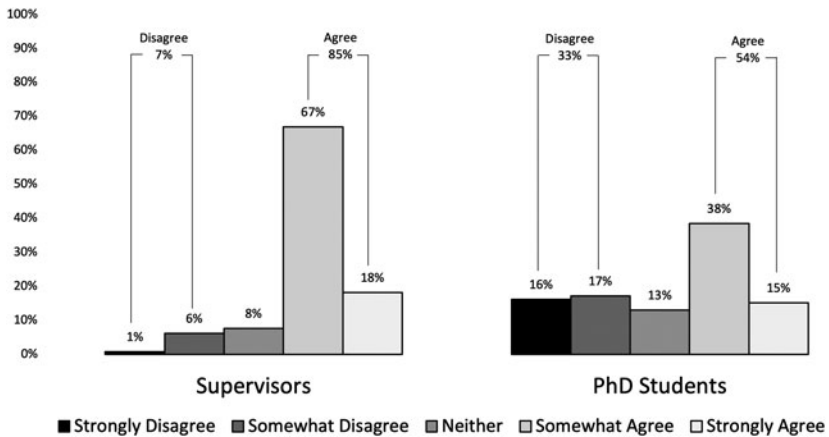

Figure 2. Supervisor and Student: PhD Students Measure Success in Terms of Obtaining an Academic Position.
Note: For supervisors, *N* = 130. For PhD students, *N* = 99.

position." With only 15 per cent of the students strongly agreeing, the results suggest that PhD students are open to defining success in terms beyond simply tenure-track employment.

By underestimating students' understanding of the prospects of an academic career and overestimating their desire for it, faculty members risk making decisions not grounded in evidence. Believing that students are naive to likely career outcomes might render faculty members inclined to reduce student numbers unnecessarily. Believing that students only want academic careers might make faculty resistant to program changes that would make their PhD program more valuable to a substantial subset of students.

These data do not, on their own, point to changes in policy or program design for political science graduate programs. They do, however, suggest the need to consider changes to program structure and requirements.

2. Supervisors underestimate the large issues of sunk costs for PhD programs.

The mismatch between students' and supervisors' perceptions of students' knowledge of the academic job market and their reasons for embarking on a doctoral program are relevant to faculty members' decisions about admitting students and optimal program size. A related mismatch has to do with students' reasons for continuing in a doctoral program. Each year of enrolment in a graduate program involves opportunity costs as students forgo salary and seniority that they would gain in whatever employment they had instead of doing a PhD. As the number of years in a PhD program increases, those costs accumulate. Faculty members might think that students are remaining enrolled in their program because they are convinced of the value of the program or the improvement to their career prospects after graduating.

Both supervisors and PhD students identify sunk costs (time and money invested) and embarrassment as the major barriers to students discontinuing their studies. There is, however, a significant gap in understanding the magnitude of the issue with faculty members less likely than students to perceive these as reasons for students not terminating their degree.

Looking first at sunk costs (see Figure 3), there is almost a ten-percentage point gap between supervisors (50%) and students (59%) agreeing that students are unwilling to quit their programs due to time and money invested. Notably, when we look only at the strongly agree responses, the gap grows to 25 percentage points (13% for supervisors, 38% for students). Simply put, PhD students are 2.5 times more likely than supervisors think to report that they strongly agree that they *personally* cannot quit their doctoral programs because of the time and money they have invested. The sunk costs issue increases over time, as might be expected (see Figure 4). After they reach their fifth year, 67 per cent of students strongly agree that they have invested too much time and money to quit their PhD.

The gap between supervisor and student responses is even larger around the issue of students being unwilling to quit their programs due to embarrassment (Figure 5). There is a 14 percentage point gap between supervisors (40%) and students (54%) agreeing that students are unwilling to quit their programs due to embarrassment. Looking just at the strongly agree responses, supervisors (9%
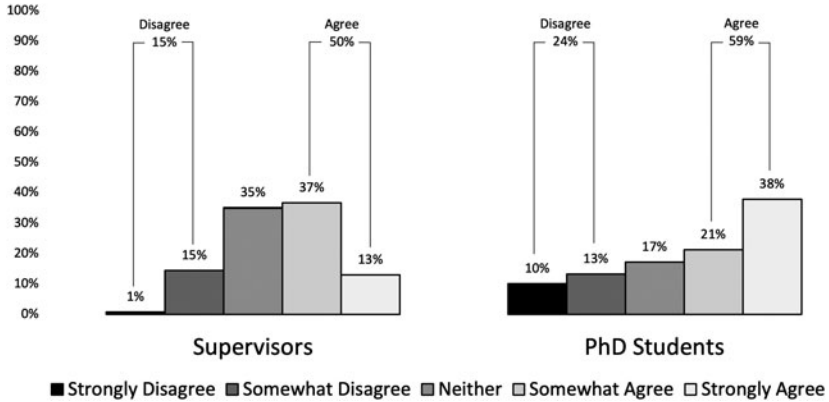
Figure 3. PhD Students Unwilling to Quit Due to Time and Resources Invested.
Note: For supervisor responses, N = 131. For PhD student responses, N = 98.

strongly agree) underestimate students' (27%) personal unwillingness to discontinue studies due to embarrassment by 18 percentage points. Stated differently, PhD students are 3 times more likely than supervisors think to report that they strongly agree that they *personally* cannot quit their doctoral programs because of embarrassment. The embarrassment issue also increases over time, as might be expected (see Figure 6). After they reach their fifth year, 37 per cent of students strongly agree that they would be too embarrassed to quit their PhD.

Finally, across both the sunk costs and embarrassment questions, it is noted that supervisors report a great deal of uncertainty in how PhD students feel about quitting their studies. As shown in Figure 7, 35 per cent and 44 per cent of supervisors report neither agreeing nor disagreeing with whether PhD students feel they cannot quit due to resources invested and embarrassment, respectively. PhD student responses, on the other hand, are less uncertain, with only 17 per cent for each question responding that they neither agree nor disagree.
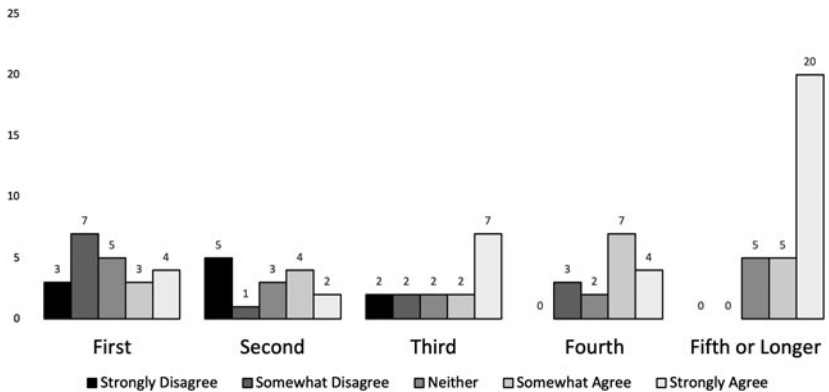

Figure 4. Students Unwilling to Quit Because of Sunk Costs by Time in Program.
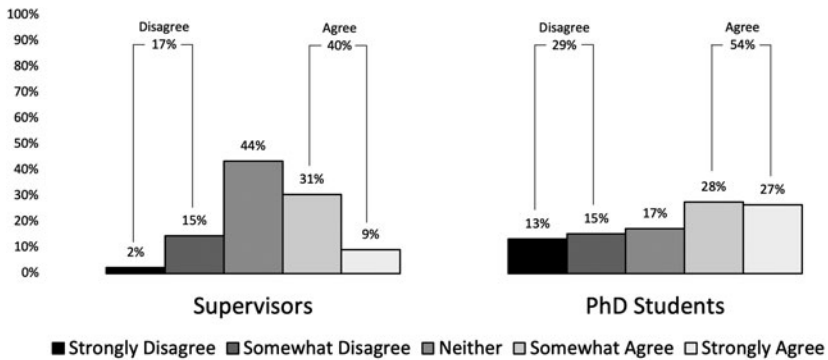*Note:* N = 98.

Figure 5. Supervisor and Student: PhD Students Unwilling to Quit Due to Embarrassment.
Note: For supervisor responses, $N = 131$. For PhD student responses, $N = 98$.

Faculty members' uncertainty about students' reasons for continuing in their degree programs has the potential to affect the kind of advice they give students who are wrestling with the question of whether they should remain enrolled in a doctoral program. Knowledge of students' propensity to focus on sunk costs and potential embarrassment might help faculty members provide more helpful advice.

Beyond advice at the individual level, understanding the prevalence of students' reluctance to quit their program because of sunk costs or embarrassment is potentially useful to conversations relating to program design. Understanding that reluctance to quit the program grows with each additional year in program, it may be useful to design PhD programs to offer structured exit opportunities earlier in the program.

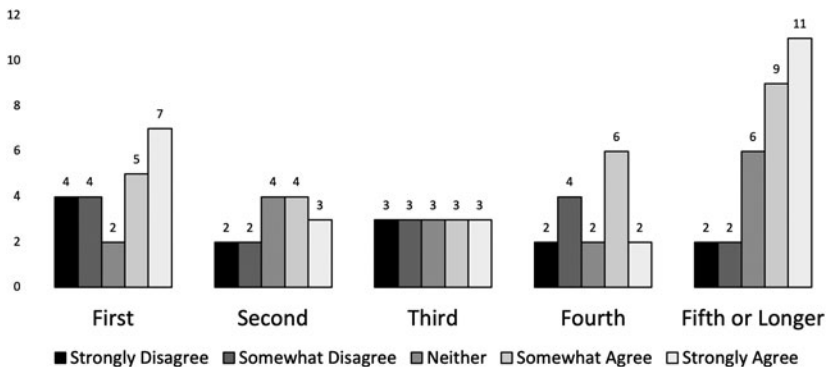## 3. Students and supervisors have different preferences for program change versus reducing enrolments

Figure 6. Student Embarrassment Over Time: Year of Study.
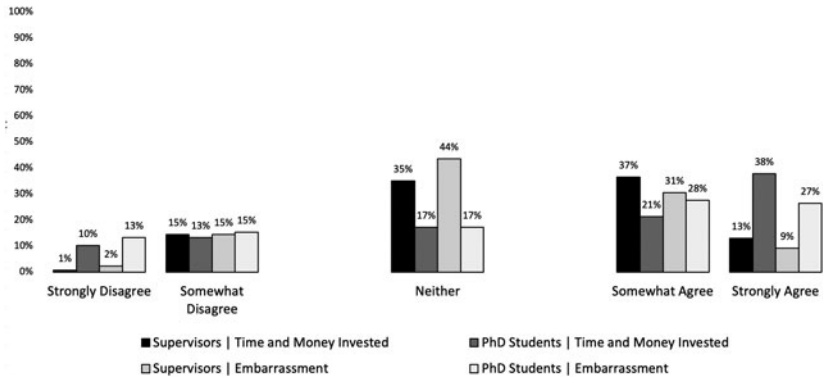*Note:* N = 98.

Figure 7. Summary of Sunk Costs and Embarrassment, Student and Supervisor Responses.
Note: For PhD student responses, *N* = 98. For supervisor responses, *N* = 131.

As Friedman (1977) pointed out almost fifty years ago, the mismatch between the number of PhDs graduating each year and the availability of tenure-stream academic jobs can be addressed in one of two ways: by changing doctoral programs so that they better prepare students for careers outside the academy or by reducing enrolments or the number of programs.

Although there are considerable similarities in the attitudes of supervisors and students on these two options, there are also patterns of difference worth consideration. Supervisors are more likely than students to prefer the status quo or support reducing enrolments. Students are more likely than supervisors to support program changes and training for nonacademic careers.

Figure 8 shows that, while the majority of PhD students (75%) and supervisors (57%) each want PhD programs to include nonacademic training, there is a 17 percentage point gap between the two in agreeing with this statement, and nearly twice
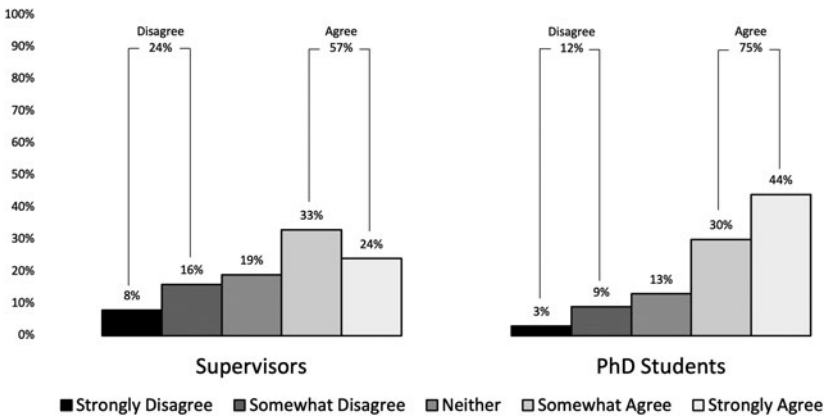

Figure 8. Include Non-academic Training in PhD Curriculum.
Note: For supervisor responses, *N* = 131. For PhD student responses, *N* = 99.

as many PhD students (44%) than supervisors (24%) strongly agree (Figure 8). Twice as many supervisors (24%) than PhD students (12%) do not want to include nonacademic training in the PhD curriculum.

Supervisors (56%) and PhD students (52%) agree that if PhD students are not getting academic jobs after their PhDs, PhD programs should shrink their enrolment (Figure 9). For both "strongly agree" and "strongly disagree," results for PhD students are 11 percentage points higher than supervisors. This difference indicates that PhD students feel more strongly than supervisors about shrinking enrolment, whether they support or oppose that change.

To consider the responses to the political science program changes questions together, for each variable, we combined the agree responses (strongly agreeing or somewhat agreeing) and the neutral and disagree responses (neither agree nor disagree, somewhat disagreeing or strongly disagreeing). We combined the neutral and disagree responses to reflect "not agreeing." Where figures show a five-point scale ranging from strongly agree to strongly disagree, neutral responses are separate from "disagree" responses. Respondents who both agree with reducing the number of admissions (shrinking programs) *and* agree with building career skills into PhD programs (adapting programs) are represented as "Shrink AND Adapt." Those who only agree with reducing the number of admissions are represented as "Shrink ONLY." Those who only agree with building career skills into PhD programs are represented as "Adapt ONLY." Respondents who do not agree with either are represented as "Neither and Neutral."

Putting the questions together, we see that both students and supervisors want change. As shown in Figure 10, not decreasing enrolment and not adapting the PhD is the least popular choice for both supervisors and students. The majority (83% of supervisors and 89% of students) believe change should happen. Students are more likely to prefer some type of adapting the PhD (38% prefer decreasing and adapt; 37% prefer to adapt only). Supervisors are more evenly split among the three options for change: 30 per cent prefer adapting the program
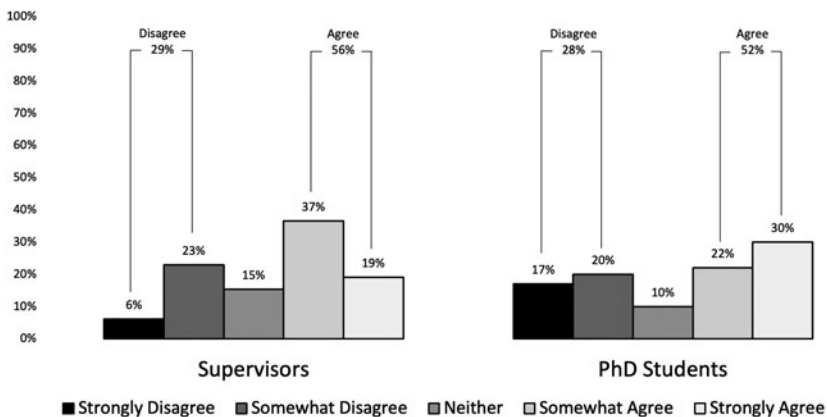

Figure 9. Shrink Enrollment.
Note: For supervisor responses, *N* = 131. For PhD student responses, *N* = 99.
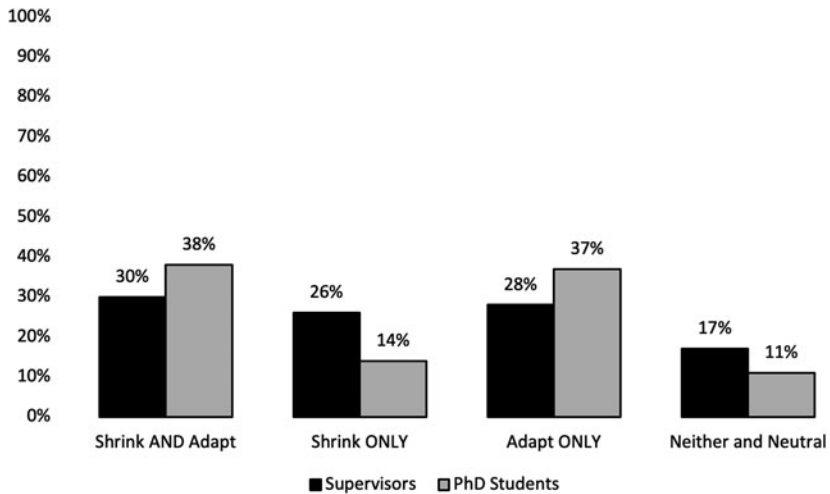
Figure 10. PhD Student and Supervisor Attitudes Toward Decreasing Enrolment and Adapting the PhD. *Note:* For supervisor responses, $N = 131$. For student responses, $N = 98$.

and decreasing enrolment, 28 per cent prefer only adapting the PhD program, and 26 per cent prefer only decreasing enrolment. Given the sample sizes for each group, the differences between students and supervisors regarding the options for change to doctoral programs should not be overstated.

It is not surprising that students enrolled in a doctoral program are not highly supportive of reducing enrolments in PhD programs. The substantial support for curriculum change and preparation for nonacademic careers can send an important message to faculty members, particularly those engaged in program changes.

4. Supervisors don't feel equipped to help students pursue non-academic jobs—but PhD students do not realize this.

Despite differences in magnitude, the majority of students and supervisors feel students need training for nonacademic careers. This raises the question of who should provide it. Students and supervisors offer similar answers when asked to apportion responsibility for providing preparation for nonacademic careers. Both groups think that PhD students should have most[1]—approximately one quarter (PhD students report 27% and supervisors report 29%)—of the responsibility for preparing for nonacademic careers. Other actors presented as options have similar percentages of perceived responsibility between 16 and 20 per cent: academic departments,[2] university career centres and graduate faculties.

Where we find an interesting difference is in students' and supervisors' perceptions of supervisors' capacity to mentor students for nonacademic careers. Figure 11 shows that while almost half of the PhD students feel that supervisors are equipped to take on this role, an equal share of supervisors report that they are *not* able to support PhD students with their nonacademic career preparation. In fact, only a third of supervisors report that they believe they can. This feeling
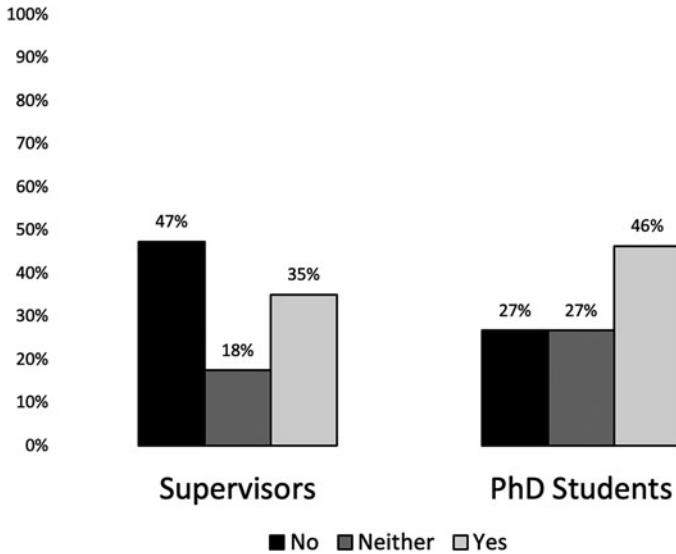
Figure 11. Perceptions of Supervisor Capacity to Help Students Pursue Nonacademic Career.
Note: For supervisors, *N* = 131. For PhD students, *N* = 97.

may be more common for marginalized supervisors (Thomas, 2020). In the American context, Pashayan et al. (2023) similarly find that political science graduate students are "not well supported" (2023: 394) in their job searches. This is an important gap between supervisors and students that may impact mutual expectations and supervisory relationships as students look to supervisors for mentorship they feel unprepared to offer.

This mismatch of expectations has implications for departments' and other units' provision of training for nonacademic careers. Although both students and supervisors assign supervisors 16 per cent and 17 per cent, respectively, of the overall responsibility for providing training for nonacademic careers, this may overestimate many supervisors' capacity to do so. It follows from this that other units, such as university career centres or graduate faculties, need to assume a greater share of responsibility for providing this training. Alternatively, to the extent that such preparation is discipline specific, it might need to be integrated into the curriculum with responsibility given to a faculty member with relevant expertise or bringing in outside expertise.

5. The gaps are larger at prestigious universities.

As a final note, we found clear differences between the three most prestigious English-language universities in Canada (Toronto, McGill and UBC, which we will call the "Big 3") and other institutions, for both students and supervisors. Students and supervisors were largely from the same institutions. While the relatively small numbers per institution require us to be somewhat cautious in our conclusions,[3] there are clear differences between the Big 3 and other universities in several categories. Supervisors at the Big 3 (58% compared to 35% for students)

overestimate student confidence in the job market notably compared to other universities (32% compared to 37% for students). At the Big 3, supervisors overestimate (83%) how much PhD students (50%) feel safe discussing nonacademic careers with them, while there is no difference between supervisors and students at other universities. And compared to their PhD students (4%), supervisors at the Big 3 are overrepresented (16%) in reporting that they invest more time in PhD students planning to pursue an academic career, while for universities outside the Big 3, supervisors appear to be less confident than their Big 3 counterparts in their abilities to help PhD students pursue nonacademic career paths (33%) than PhD students realize (47%). On the other hand, at the Big 3, supervisors and students are on the same page that supervisors do not measure a PhD student's success based on attaining an academic career, with little difference in their responses. At other universities, there is a gap: 71 per cent of supervisors and 89 per cent of PhD students say they do not measure a PhD student's success based on whether they attain an academic career. Overall, there is evidence of larger gaps between supervisors and students at the most prestigious institutions. With limited sample sizes, qualitative research—such as interviews and focus groups—could further explore focusing on the gaps between the Big 3 and other universities.

Conclusion

The good news in these findings might be that supervisors and students are not on entirely different planets, with supervisors oblivious to the realities of the academic job market and/or students naively expecting success in that market. Rather, there are similar understandings of the general and growing mismatch between doctoral graduates and academic positions. But there are other discrepancies; most importantly, evidence of misunderstanding of each other. Most supervisors do not feel equipped to help students pursue nonacademic careers, but students do not fully realize that. In turn, supervisors may underestimate the degree to which PhD students feel stuck in their programs, and unable to withdraw due to sunk costs and embarrassment. Students may be informed but lack a sense of agency. This discrepancy in attitudes and lack of student agency is observable in other dimensions, such as supervisors' much greater confidence in institutional responses to COVID-19 disruptions compared to the actual experiences of students (Rutledge-Prior and Casey, 2023).

These discrepancies and lack of perceived agency are not entirely surprising when we reflect on the design of most political science PhD programs in Canada. Most originated in the mid- and late twentieth century and were designed and oriented for the primary purpose of producing future professors. Only in recent years, and very gradually, has there been a realization of the mismatch with academic jobs. While there has been considerable progress in recognizing and validating nonacademic careers after a PhD, programs remain largely wedded to the traditional academic design, and students feel limited ability to move off the designated path or challenge the preferred conversation—or at least what they perceive to be designated and preferred. Even if students enter programs well aware of the academic job market and assume they will not get an academic job, programs remain oriented towards the original default. Moreover, the vast majority of

supervisors have limited experience outside academia, having been fortunate enough to prevail in the academic job market; arguably they may feel their own lack of agency (Berdahl, Malloy and Young, 2020). This stifles and deflects more robust conversations and understandings of each other's perspectives, and encourages status quo thinking on both sides.

If design is part of the problem, it can also be part of the solution. These findings suggest that programs should build in more opportunities for clarifying expectations on both sides, bringing conversations closer together and generating more sense of agency. One obvious and underutilized spot is the comprehensive exam. Rather than a minimum bar used to weed out only the most academically weak students, the comp stage might be turned into a mid-program review in which students are not only robustly assessed, but also given a frank opportunity to self-evaluate and discuss their future in the PhD. Another design option that should be considered is explicit "off ramp" options. Alternative exits such as certificates might be created to allow students to discontinue or redirect their studies with dignity. Annual progress reviews and reports could present two equal options: continue or discontinue, requiring supervisors and students to discuss the merits of both.

An obvious risk of the above is that they can act as discriminatory gatekeeping and end up primarily discouraging students with unconventional ideas or those with weaker financial resources, mental health challenges, limited social and cultural capital and limited connections and/or sufficient role models and representatives in the discipline. Yet the alternative—a largely hands-off encouragement to all students to just keep persisting in the PhD, despite their progress and ability—is not working. It only perpetuates the sense of a "hidden curriculum": the knowledge that PhDs are not taught to have through classwork, but are expected to have (Barham and Wood, 2022). A hidden curriculum places great strain on students and increases the risk of disjointed and divergent conversations and mutual misunderstandings between supervisors and students. We thus advocate design solutions, like the above, that can advance—indeed, force—clearer and franker communication. A middle ground is clearly needed, and will be most effective if built specifically into program design and structures, rather than left to informal and sporadic conversations.

Our findings do find a strong appetite for general change in PhD programs among the vast majority of both supervisors and students. But these changes fall along different dimensions. Both groups are divided on whether it is best to adapt PhD programs, to reduce PhD numbers entirely or a combination of both. But we do find that while supervisors are more likely to favour reducing PhD numbers across the board, students—who by definition are already in their program— are more likely to call for adaptation. We suggest, as above, that the most important adaptation is a redesign of programs to produce more decision points in which students and supervisors are required to candidly assess their options. More broadly, there is clear support for continuing to update and retool the curriculum and all aspects of doctoral programs to reflect current student needs and aspirations and the realities of the doctoral job market.

The bottom line is this: political science PhD supervisors and programs should be careful to not underestimate student knowledge and agency about academic career realities within our discipline—and should be careful not to underestimate

the challenges students face when considering the prospects of discontinuing their programs after they have started. Thoughtful attention to program design can help to update programs to meet current student needs.

Supplementary Material. The supplementary material for this article can be found at https://doi.org/10.1017/S0008423924000441.

Notes

1 Options for both questions were the same, with one exception: PhD students were presented with options for "PhD students individually" and "PhD students collectively." In comparison, supervisors received one option for PhD students: "PhD students."
2 The supervisor survey presented this option as "political science departments."
3 The sample size for supervisors at the Big 3 was 37. The sample size for other university supervisors was 94. For students at the Big 3, the sample size was 24. The sample size for other university students was 75.

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