WRITING

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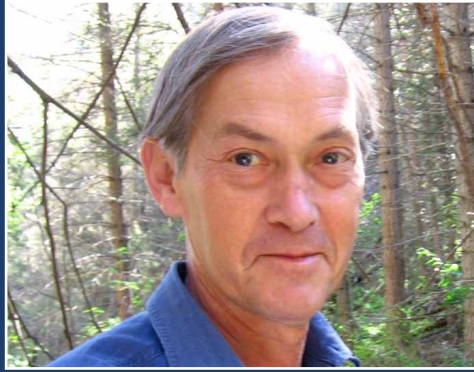# A to B

A Guide to Completing the
Dissertation Phase of Doctoral Studies

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The Mystery of Graduate Writing

Imagine that you are observing production in a widget factory and that your view toward the end of the process is obstructed. As a result, you witness only partial assembly and then, somewhat miraculously, a string of finished products. Given the complexity of their design, you become curious: What occurred in between? In the production of PhDs, this blind spot is the dissertation process. Because it is decentralized and largely privatized, the process remains hidden to most graduate students, leaving them unprepared to negotiate the multifaceted challenges of the dissertation stage.

Karen Cardozo*,* "Demystifying the Dissertation"

The Admission to Candidacy Exam, or "A Exam," is one of the few common requirements among Cornell's diverse PhD programs. According to the Cornell *Guide to Graduate Study,* passing the A Exam means that you are "ready to present a dissertation." Before you can present a dissertation, of course, you have to produce one, and doing so is your main job description as a PhD candidate in transit between the A Exam and the B Exam. Passing the B Exam and filing an approved copy of the dissertation are the last common requirements for the PhD.

Producing a dissertation is therefore the main subject of this guide for those of you *en route* between the A and B Exams.

Because the dissertation is a complex written document that all successful PhD candidates must complete, writing is critically important in this last phase of doctoral work. For reasons explained in following sections, the process of completing a dissertation is *normally* difficult. Writing projects on a comparable scale, such as book manuscripts, remain challenging and

frustrating even for the most experienced and productive scholars. For the great majority of PhD candidates, producing a document of such length over months or years is also an unfamiliar task, requiring new methods, motivations, standards, and uses of time. In all fields, increasing competition for jobs and postdoctoral fellowships favors PhD candidates who not only complete their dissertations efficiently but also complete research proposals and articles, conference papers, and other professional writing. In these final years of doctoral study, progress is almost synonymous with getting things written.

The typical challenges involved in this process should not be mysterious. Everyone who has a PhD, including your advisors and other members of your departments, has successfully completed a dissertation. At large research universities, hundreds of doctoral candidates are currently working on these projects. Our libraries contain thousands of dissertations, approved, bound, and catalogued for circulation. More than any other form of writing, the dissertation

represents an essential, nearly universal credential and shared experience among scholars.

It seems very odd, therefore, that as you embark on this heavily traveled path to the PhD, many of you will feel that you are entering uncharted territory with unknown pitfalls, mires, and false turns. If these are *normal* difficulties, why do PhD candidates tend to view them as *personal* struggles, peculiar to their own circumstances, research projects, or dispositions? In this kind of academic writing, why does experience seem to produce amnesia and uncertainty rather than common knowledge? Why is help with writing so rarely available at this level of academic work?

To illuminate the most common challenges of completing dissertations, we begin with some general answers to those questions. Later sections of this guide will give more detailed explanations and practical advice.

A popular myth encourages us to believe that by the early years of college, good writers establish basic skills and strategies that remain a stable, sufficient platform for writing throughout their lives and careers. If this were true, writing would become increasingly easy, without further instruction or fundamental changes in our writing strategies.

But all experienced writers, including the most productive scholars, know that the development of writing ability is a lifelong process. Successful approaches that students develop in high school no longer work in college. Forms of essays or lab reports that received good grades in freshman courses no longer meet expectations in advanced undergraduate or graduate courses. Methods used to complete papers for graduate courses no longer work for producing dissertations, research articles, or books. The most successful writers are those who adapt most quickly and flexibly to changing conditions.

From one level to the next, writing projects tend to become more difficult and time-consuming, not easier.

At ascending levels of higher education, the diverse forms and functions of writing seem increasingly to defy generalization. This is one reason that "graduate writing" seems mysterious. Advanced studies among the disciplines do not produce good writers in general; they produce highly specialized good writers who have become familiar with distinct forms of explanation and argument, presented in diverse styles and terminologies. If we asked successful writers in physics or chemical engineering to produce a professional article in literary studies, most of them would become weak or hopelessly blocked writers in that alien academic form. Scholars in the humanities would be equally incompetent at producing scientific research articles.

Specialization also helps to explain the scarcity of writing assistance for graduate students, especially at advanced levels of doctoral programs. Beginning in the late 19th century, college writing instruction developed in response to perceived weaknesses in the writing skills of college freshmen, often attributed to "preparation deficits" in secondary education. Writing courses and programs still focus primarily on the first year of college and rapidly diminish at higher levels, nearly vanishing at the beginning of graduate studies. Although graduate advisors sometimes tell struggling advisees that they should "take a writing course," those designed for undergraduates rarely address the needs of graduate students, especially in advanced studies outside the humanities. Because writing instruction retains some of its original association with the remediation of "basic skills" in general education, acknowledging difficulty with writing at higher levels appears to be an admission of weakness.

When combined with factors of

specialization, this association of writing difficulties with deficits in basic skills may also explain why studies of common problems in graduate education rarely mention struggles with "writing" as distinct causes of attrition or delay in doctoral programs. For example, the 2008 Council of Graduate Schools report on its elaborate "PhD Completion Project" makes no explicit reference to writing problems as matters of concern. Instead, categories of potential "interventions" to improve completion rates and times include *selection/matching* (meaning admissions), *mentoring and advising, financial support and structure, program environments, research experiences,* and *curricular and administrative processes and procedures*. Other studies of doctoral programs have mentioned factors such as *family responsibilities, time management, relative isolation, confidence,* and *adjustment to the culture of a research university,* also without direct reference to writing problems *per se.* To the extent that these problems arise in the process of completing dissertations, they seem inseparable from the unique circumstances of individual doctoral students in diverse programs, where the products of writing vary as well.

Beyond the A Exam at Cornell, the complex processes of completing diverse forms of dissertations therefore appear to be entangled with peculiar features of your own doctoral programs, research projects, special committees, and individual circumstances. These diverse entanglements largely explain why doctoral candidates tend to view normal, widespread writing difficulties as individual, "personal" struggles. Within the narrow contexts of specialized fields and subfields, where your own departments and advisors determine all of the specific expectations you must meet, the challenges of completing a PhD appear to represent unique configurations. Because attrition and delay in PhD programs often occur in the

process of dissertation research and writing, common difficulties in this process must account for a large proportion of the obstacles that individuals encounter. To the extent that doctoral candidates in specific fields seem to be heading off in different directions, in separate little boats into uncharted and potentially troubled waters, these patterns of difficulty across disciplines remain invisible.

2. A Rhetoric of Transition for the End of Schooling

To explain the ways in which you are in the same boat, despite differences among your research programs and experiences, we need to establish much broader views of writing difficulty and the development of writing ability. For this purpose, imagine a trajectory of academic accomplishment that begins at high school graduation, long before your current position, and extends far beyond it, to the ranks of senior scholars in your fields. How do individuals move from the beginning of this trajectory to the end?

We can observe, first of all, that most do not. About 69 percent of American high school graduates go on to college, but 25 percent of these entering students drop out by the end of their first year, and only 50 percent of them graduate. Only 5 percent of college graduates enter PhD programs. Nationally and across disciplines, about 50 percent of doctoral students complete PhD requirements: 2.5 percent of all college graduates. When we follow the trajectory of higher education in this direction, "defection" is the norm, and those of you who have reached the stage of doctoral candidacy represent an extremely

small proportion of former undergraduates. High percentages of attrition at each stage partly explain the disconnections and necessary adjustments between levels. Very few undergraduates (about 2 out of 100), for example, will actually need to develop the specialized skills and motivations necessary to complete dissertation research and writing.

When we view this trajectory in the opposite direction, however, those of you who have reached the dissertation stage represent a more homogeneous population of individuals who have survived these challenges and share unusual skills, motivations, and experiences. With negligible exceptions, all university professors are former PhD candidates. All PhD candidates are former undergraduates and high school graduates who adapted successfully to the next level. If this path to the PhD were straight and smooth, a lot more of you would remain on it.

But this path is not straight and smooth, and those who believe that it is or should be tend to get lost. A basic premise of this guide is that *writing and other dimensions of academic work become most difficult*

and disorienting at turning points—periods of transition—when we write in unfamiliar contexts or forms, to meet new sets of expectations.

To demystify and facilitate dissertation writing, therefore, we should identify the features of the transition that you must now negotiate, as doctoral candidates. What, exactly, are you in transition from and to?

Designating someone who has graduated but remains a student in some respects, the term "graduate student" indicates the transitional nature of this period in your development. Being a good graduate student means that you are effectively *becoming* something else: a process of transformation from the status of a student to that of a professional research specialist, a scholar, and in many cases a teacher. In a doctoral program, this long period of transition typically continues for five years or more, with changing implications as you complete graduate course requirements, become a doctoral candidate following the A Exam, and pursue dissertation research and writing. The skills and motivations that led you into your PhD program therefore differ from the ones that will lead you out.

In your first two or three years of graduate school, the "school" part probably seemed most appropriate, because you were taking classes with assignments, deadlines, exams, and grades that institutionally regulated your schedules and motivations. Departmental graduate requirements largely defined your use of time: to go to class or to complete readings, papers, problem sets, and other scheduled course assignments. The two or three years preceding the A Exam at Cornell represent academic preparations for dissertation research and real scholarship.

Among Cornell departments, A Exams have diverse forms and functions. Beyond them you will disperse further into offices, library stacks, labs, and field sites to pursue diverse objects of investigation with differing

research methods, conceptual frameworks, and criteria for significance or validity. But these variations obscure the general significance of the A Exam as a major turning point in the lives and careers of doctoral students. *"Admission to Candidacy" for the PhD marks the end of schooling after 18 years or more of classroom instruction.*

Though still registered as a graduate student, you are finally done with school. Among specialized fields and subfields of research, the following period of metamorphosis produces a great variety of academic creatures. At the end, however, you are all supposed to emerge, dissertations in hand, as blossoming scholars, the vestiges of your student identities left behind you like shed skins.

If we think of the A Exam as a turning point *away* from schooling and toward real scholarship, many of the writing and learning strategies developed for schooling will become unreliable for the development of scholarship. The end of schooling also marks the end of what composition specialists call "school writing": almost all the written work you have produced for teachers and classes throughout your formal education. You are now obliged to produce writing that resembles professional scholarship in your fields. To understand the changes this task requires, we should identify the underlying factors that distinguish school writing from professional writing—factors that remain consistent across wide variations among specialized fields.

These factors can be best described as *rhetorical* variations. The term "rhetoric" has diverse meanings, but in this guide the term will refer both to the *features* of written texts (their forms, levels of complexity, styles, and so on) and to the *circumstances* in which they are written (including their audiences, purposes, perceived standards, and other contextual factors). We can think of the rhetorical features of a writing task as

answers to a series of questions:

- What are you writing?
- Why you are writing it?
- For whom?
- With what voice and authority as the author, in relation to this audience?

Answers to these questions raise some other relevant questions about *methods, time frames,* and *standards*. In other words, when you understand the nature of a writing task, *how* can you get it done effectively and efficiently, in the broader contexts of your lives, in ways that meet standards for finished writing of this kind? Without considering these rhetorical changes, you will tend to drift into dissertation work with an approach to writing and a sense of yourself as a writer based on past experience. New difficulties you encounter can then seem to represent unique circumstances or insurmountable limits of your ability rather than common, identifiable problems you can solve by deliberately altering your writing strategies.

The *normal* difficulties of dissertation writing often result from the rhetorical ambiguities of your transitional status, as a former student who is still becoming a certified member of your academic profession. We can reduce this ambiguity by considering the roles and strategies you must leave behind and the ones you are moving toward. Trying to write *as* a graduate student, between these positions, tends to underscore the ambiguity, and we often prefer familiar strategies to the potential hazards of the unknown.

The clearest reference points and models for your work should lie ahead. Greater awareness of approaches you used as student writers will show you, like rear view mirrors, what you should have left behind.

What Is a Dissertation?

In response to the *What?* question, we can think of a dissertation as a continuation of student writing, used to *demonstrate acquired knowledge,* or as a form of professional writing, used to *produce and convey knowledge.* Because dissertations represent your potential for professional scholarship, they should *resemble* forms of professional writing in your fields, with corresponding writing methods, styles, motivations, and other rhetorical factors. Finished dissertations in many programs will resemble academic book manuscripts. In other cases, in the sciences or social sciences, a dissertation may resemble an expanded version of a research article or manuscripts for two or more related research articles, in formats required for submission to journals. You can reasonably expect that, with some further revision, your dissertations will *become* submitted manuscripts for publication.

Thinking of your dissertations as forms of professional writing—as working drafts of books or articles—generally corresponds with the expectations of graduate advisors and departments. Most graduate advisors look back at their own dissertations as necessary stepping-stones or working drafts for later, more refined books and articles. As a rule, standards for dissertations are somewhat lower than those for publications, even at the submission stage, and the audience and focus for a book-length dissertation are usually narrower than those for a scholarly book in the same field. Remember that your committee members will almost certainly recommend revisions both before and after your B Exam, just as editors and reviewers will require changes to submitted manuscripts. In most cases, therefore, you can think of your dissertation as a finished, promising *draft* of a book manuscript or set of research articles. This orientation toward professional writing provides readily available models for dissertations in specialized fields, in academic books and research articles. You can also clarify the form, style, and scope

of a dissertation in your field by examining finished dissertations on file, as close as possible to the type of research you are doing and preferably those approved by your own advisors.

Your dissertation will remain at all stages a work in progress, providing working drafts, data, and ideas for future publications. Efforts to avoid further revision at every stage or to include everything you know about the subject represent student writing strategies that will make the process unnecessarily slow and frustrating. In following sections, we will extend this analysis to other differences between student writing and professional writing, with attention to *focus, frame of reference, time management,* and other factors relevant to getting complex writing projects done.

3.

Rhetorical Differences Between Student and Professional Writing

In American research universities, the boundaries and rhetorical shifts between undergraduate and graduate studies are somewhat blurred. Like professional academic writing, student writing takes many forms, most of them based on the kinds of writing that college teachers do. Undergraduate lab reports resemble scientific research articles. Student research papers for literature, history, or sociology courses resemble research articles in those fields. Doctoral programs and advanced research facilities coexist in the same departments with undergraduate studies. Graduate advisors in these departments also teach and advise undergraduates. Some courses enroll both advanced undergraduates and entering graduate students. And many of you serve as teaching assistants in undergraduate courses. Undergraduates sometimes begin to adopt approaches to writing characteristic of real scholarship, especially in honors projects or co-authored articles with advisors. In turn, rhetorical features of "school writing" often continue into graduate studies, in papers and projects assigned in graduate-level courses.

The following contrasts therefore polarize rhetorical factors that can be difficult to observe in intermediate, overlapping contexts. Their purpose is not to criticize student writing or to distinguish good approaches from bad ones. As a rule, undergraduates produce writing in the way they do because the situations in which they write favor those approaches, not because their methods and motivations are "wrong." Descriptions of these contrasting positions will include some discussion of their implications for dissertation writers, who are moving between them.

The Rhetorical Features of Student Writing

Because assignments across the disciplines ask undergraduates to produce many types of writing, the *What?* question we posed earlier is most difficult to answer. Writing assignments in diverse courses, however, share some underlying rhetorical features that condition the ways students typically complete them.

Regardless of its form and field of study, "school writing" is produced:

- to complete assignments,
- in fairly short time frames,
- to demonstrate knowledge or skills,
- to audiences of teachers,
- in exchange for grades and other forms of evaluation.

These rhetorical features of school writing influence methods, stakes, and standards for writing as well. In high school and in college, successful students develop some standard methods for producing school writing efficiently, usually under pressure in the midst of hectic schedules. One of their most basic strategies is *the effort to make the first draft the last,* with varying amounts of revision and editing depending on the task's difficulty and the time available. Undergraduates typically produce at least one page of nearly finished writing per hour, which most scholars and other professional writers would consider blinding speed.

How do they do this—and how did *you* do it if you fit this pattern in your undergraduate work? And why does the process of completing a dissertation or a professional article usually become so much slower and more arduous?

For most of us, writing isn't intrinsically slow or fast, easy or difficult. Instead, rhetorical factors contribute to varying relationships between **motivations** and **standards** at the moment. In other words, writing becomes relatively easy and fast when our motivations (at the moment) to get the work done are high and our standards (at the moment) are low. In turn, writing can become excruciatingly slow and difficult when immediate motivations are extremely low and standards are extremely high.

Note that motivations and standards *at the moment* are crucial factors of productivity, especially for large-scale and long-term projects such as dissertations.

When undergraduates produce an essay in one draft and at one sitting, their standards and motivations at the moment and those for the end product will be more or less the same. In work on a dissertation over a period of months, however, you may have high motivation to get the project done *eventually,* but your motivation to work on it at the moment, on a given day, may be quite low, especially when more expedient, short-term chores are calling for attention. If a text will go through several drafts, furthermore, your standards for writing at the moment can be low, even if standards for the finished product are high. We will explore these variables further in Section 6.

When completing a paper with a close deadline in the midst of other assignments, an undergraduate will tend to avoid the second (or third, or fourth) thoughts that might improve the finished product but would complicate the task and require extensive revision. These circumstances encourage students either to follow an initial plan (or "outline") for writing or to settle for a strategy that emerges in the process of writing. Even if they discover a better approach that would require rewriting, motivations to complete the task will usually trump the higher standards they could meet through revision. We can observe these factors at play in this Cornell junior's account of her work on a 13-page research paper:

Right from the beginning I knew that my first draft was going to be my last. The only revisions that I made to the first draft of my paper were typos, and occasionally I would fix awkward sentences. There were absolutely no changes in the ideas, theme, and organization of the paper because they were already determined before I started writing. Part of the reason I did this was time constraints, but most of the time I just didn't feel like it: the sense of completion was so great that I just couldn't bring myself to go back and correct the paper.

With clear deadlines and limited time, student writers tend to postpone working on an assignment until the pressure builds, along with their incentives to produce writing quickly. Stakes and standards for the quality of this work are relatively low because an assigned paper counts only for some portion of a grade in one course. And because school writing mainly serves the purposes of learning (rather than the dissemination of knowledge or communication with broader audiences), it typically has no future beyond submission and grading. A Cornell PhD candidate therefore described the undergraduate papers he wrote as "a series of one-night stands."

College students typically assume that the skills and strategies they developed in undergraduate studies will serve their purposes in post-graduate studies and careers. Very few of these students are aware that the writing their teachers produce, especially for publication, results from fundamentally different processes, approaches, and motivations.

The Rhetorical Features of Professional Academic Writing

Although scholars, like undergraduates, produce many kinds of formal and informal writing, the projects most relevant to doctoral candidates are manuscripts for publication. In contrast with student writers, scholars produce manuscripts:

- to communicate research findings or arguments in a field of inquiry,
- over comparatively long time frames,
- to audiences of other research specialists,
- in exchange for professional satisfaction, recognition, and credentials.

These rhetorical features of professional writing influence methods, stakes, and standards. Reflecting on the contrast with school writing, one graduate student observed that "all manuscripts and proposals are graded pass/fail"; but a large proportion are actually graded "revise and resubmit." And these judgments occur toward the end of extremely complex and convoluted writing processes, with ongoing evaluations and extensive revisions over months or (especially for book manuscripts) years. If an undergraduate paper is a "one-night stand," a research article, book, or dissertation is a "long-term relationship." For scholars who hope to get their work published, the undergraduate ideal of making the first draft the last is a childish fantasy. Competition, stakes, and standards for publication are simply too high. No one can reasonably expect to meet those standards quickly in a single draft. Even if optimism or vanity leads us to try, colleagues, referees, and editors will defeat that intention.

While school writing is typically an individual enterprise, academic publication is a *social* endeavor, as lengthy acknowledgements usually demonstrate. Accomplished, productive scholars know that they can meet standards for publication only incrementally, with lots of help from others. Most scientific writing is a social activity from the beginning, especially if it is co-authored, but even an individually authored publication in the humanities ultimately results from collaboration with other scholars (including reviewers of manuscripts) and editors.

Adapting to these circumstances, productive scholars must abandon the romantic notion that brilliant writing emerges directly from brilliant utterance and solitary, creative inspiration. They know from experience that to meet high standards at the end of the process they need to keep standards relatively low toward the beginning for three reasons:

- With lower standards at the moment they can produce working drafts more quickly.

- They can't accurately assess the quality of their work while producing it.
- Whatever they are saying will no doubt change considerably before the work is published.

Scholars who have effectively adapted to the realities of professional writing also keep their motivations fairly high and consistent in the time devoted to a project. Accepting that writing for publication is a substantial part of their job as scholars, and one that requires sustained attention, they schedule regular blocks of time for this work and avoid distractions during those blocks of time. If they wait for the right mood, for inspiration, or for their schedules to clear, they'll never get serious projects finished.

When scholars do *not* adapt their approaches to the unavoidable demands of publication, they typically develop what the psychologist Robert Boice described as "binge patterns of creative illness." In a comparative study of "binge writers" and "regular writers" among assistant professors, Boice argued that binge writing results from belief that the most creative, original work results from a combination of eccentric brilliance and intense, manic concentration. Writers of this type believed that "binges of writing offer special advantages, including loosened, brilliant thinking and rare opportunities for quick, efficient completions of long overdue projects." Boice observed that binges of writing often follow periods of procrastination or blocking that induce the feelings of pressure and desperation these writers consider necessary for productivity. By contrast, the "regular writers" in this study typically worked on writing projects at least three days each week in "relatively brief but regular sessions." They were moderate in their expectations, in their feelings of "mild happiness" with their progress, and in their methods.

Assessing the results of these methods after a year, Boice found that "binge writers (a) accomplished far less writing overall, (b) got fewer editorial acceptances, (c) scored higher on the Beck Depression Inventory, and (d) listed fewer creative ideas for writing" in the judgment of their peers.

Although Boice argued that binge writing results from widely held, romantic beliefs that extraordinary writing cannot result from ordinary minds and methods, we can usually trace the origins of academic binge writing under pressure to undergraduate writing methods. A majority of undergraduates are binge writers who postpone writing assignments until deadlines loom, pressure builds, and motivations rise. Graduate students who procrastinate and struggle to complete writing projects often report that they cannot concentrate and sustain attention to their work in what should be the best conditions: when they are feeling fresh, unhurried, and relaxed. Habituated to years of procrastination and binge writing as students, they still associate productive writing with heightened anxiety and stress.

When these habitual associations and related methods no longer work, they can be difficult to alter, as undergraduates often discover when they face the challenge of completing honors theses over a period of months. One PhD candidate recalled her confusion and distress, as a college senior, when she realized that her previous writing strategies were useless in this new endeavor:

Not only was I traumatized by having to start working in November for a 'paper' that was due in June, but the comments from my advising professor were painful. I distinctly remember turning in a chapter that was largely copied from a course paper I had written a year earlier that received a very good grade. The comment from my advising professor: throw it away and start over.

Most professional writers learn to accept the futility of trying to produce brilliant,

finished writing in the first draft through the sobering experience of publication. Due to high standards driven by intense competition, manuscripts that have even marginal prospects for acceptance have been thoroughly revised through multiple drafts. Following peer review, many of these are rejected and must be further revised for submission to other journals or publishers. Even acceptances are almost invariably provisional, requiring significant changes in response to diverse and often conflicting criticism from reviewers. When a book manuscript is finally "done," and the author never wants to see it again, the copy editors work it over and the text staggers back like the undead, marked with hundreds of suggestions for editorial changes.

When you begin to compose a dissertation, a book manuscript, or a journal article, such an awareness of the process can be daunting and disheartening if you still believe that good writing represents brilliant utterance. The end of the process tells you that even your best efforts at the beginning won't be good enough. What you say now will probably be no more than the basis for saying something else instead.

If you abandon such romantic ideas of good writing, however, this realization can also be liberating. Considering all the revision and copy editing that occurs even at the end of a professional writing project, it seems silly, even vain, to think that those first drafts eventually buried in scrap files were precious or intact. First drafts, and even later ones, don't have to be wonderful. Writing doesn't have to be a stressful performance before an imagined audience of scathing critics. Even the referees of a manuscript won't read its early versions. When you are producing them, therefore, you are actually quite free to say whatever occurs to you, without feeling that it has to be profound, eloquent, or even true.

Following sections will suggest ways of streamlining this typically laborious, reiterative process of professional writing and revision, but even the most experienced scholars cannot avoid extensive revisions of drafts, potential rejections of their manuscripts, further revisions, resubmissions, and resulting frustrations. This sobering realization also carries potentially liberating implications for young scholars. Because the process of writing for publication involves so much revision and uncertainty, spontaneously brilliant, eloquent writers are not necessarily the most productive or successful. Instead, this process favors writers who are the most

- patient,
- persistent, and
- open to advice and criticism from others.

For this reason, scholars who struggle to write clearly but produce rougher drafts quickly, inviting extensive help from colleagues, typically publish more than those who expect to complete brilliant work without assistance. As a professor in English observed, "There's always a point in a writing project where I can't improve it further on my own. I have to let other writers help me, and let it not be entirely my own."

Some Conclusions

To summarize these contrasts, school writing is comparatively linear, and professional writing is typically "loopy" or recursive. Professional writers continually go back to reconsider and revise previously written words, sentences, passages, and drafts. Undergraduates can more easily reduce the writing process to a linear sequence of procedures (e.g., *write, proofread,* and *turn in*) because their projects are simpler, stakes and standards are fairly low, and the products usually have no future. With rare exceptions, the papers students turn in will never go through the messy stages of further review, revision, and editing that occur *after* scholars "turn in" manuscripts

for publication. One Cornell senior realized this fundamental difference when he first co-authored a journal article in biology with one of his professors—a manuscript that was, as he said, "examined, criticized, corrected, submitted, returned, resubmitted, returned, etc., and finally accepted." In comparison with finishing papers for his courses, completing this process seemed "almost impossible," and he concluded, "The only way I think people will realize the effort that has to be put into a paper to raise it to the standards of a good journal and hard, cold reviewers is for them to publish."

What do ALL advanced graduate students need to learn, regardless of their fields and academic backgrounds?

They need to learn how to think of a dissertation or professional article not as a form of accomplishment (or polished utterance) but as a process through which such a text gradually comes about. At this level of writing, accomplished texts come about through patience and persistence more than through innate linguistic and intellectual brilliance. Because publications involve extremely frustrating processes that require dogged determination, thick-skinned response to criticism, and extensive revision, failure typically results from faint-heartedness, vanity, impatience, and false expectations, not from lack of ability. When a large interdisciplinary group of university faculty was asked whether any of them had ever heard of an academic book or article manuscript that was accepted and published without revision, only one said that he heard such a rumor, but he doubted that it was true.

To what extent does this convoluted ordeal of publication apply to dissertations?

We previously noted that dissertations are comparable to complete working *drafts* of publications, which need further revision before publishers will accept them as manuscripts. Because they should approach publication standards, most dissertations will need to be extensively revised before you submit drafts for your B Exams, where committee members will usually ask for further changes. In these last stages, the roles of advisors resemble those of interim manuscript reviewers and editors. In earlier stages, some advisors will closely monitor your progress, reading plans or rough drafts and recommending changes along the way. Others remain in the background, waiting to see nearly complete versions before they tell you how much work remains. Although these expectations vary, the average dissertation requires fewer rounds of revision and editing than comparable publications do, especially in later stages of the process.

4

Focus and Frame of Reference

There are some core features of professional academic writing that are equally essential to effective dissertations and further distinguish them from most student work: *Every effective dissertation (or research article) must bring into focus a specific **research question** it intends to answer (or hypothesis it will test, or argument it will defend) and explain the significance of that question within a broader **frame of reference**.* This frame of reference includes both the subject area of inquiry, from which your research draws data or evidence, and the previous research most relevant to your own.

Doctoral candidates who focus their research questions within a frame of reference early in the process tend to complete acceptable dissertations most efficiently, in part because this early focus resolves so many other issues about the organization and scope of their projects, relevant reading, and other potential dilemmas. Long-term struggles with dissertation writing often result from delayed, unresolved decisions about the central focus and significance of the project.

Dissertation writers often delay making these decisions because the task before them seems so *different* from the research and writing they have done as students: so much longer and more complex, with so many possible approaches to consider, and so much time still available. A romantic notion of true scholarship also may suggest that if they pursue open-ended research, reading, and contemplation, the form and focus of the dissertation will eventually materialize like a vision, ready to be written.

But this postponement represents, on a much larger scale, a continuation of the writing strategies undergraduates use to delay writing papers until deadlines loom, hoping that inspired approaches to their assignments will then emerge out of thin air. Desperation then passes for inspiration, and most student papers are really assembled more or less haphazardly from the material and ideas nearest at hand.

Effective dissertations do not materialize from inspiration or imagination. Like professional research articles in their fields, dissertations are constructed objects, assembled from fairly predictable types of

components in certain ways, intended to tell particular kinds of convincing stories about your research and its meaning within a field of inquiry. Learning to bring significant questions and textual boundaries into focus within a much broader frame of reference is therefore a crucial stage in the development of academic writing ability—one that poses special challenges in the transition from student to scholar.

To make this distinction clearer, imagine that a naïve student is writing a research paper for a course taught by an experienced scholar who is writing research articles in the same subject area. Teachers often use such assignments with the belief that they are giving students a taste of real scholarly inquiry in their fields. In practice, however, writing about the subject has very different implications for the student and scholar. *Figure 1* illustrates the sharp contrasts between these two approaches to writing, seen in the relations between the focus, scope, and frame of reference for each.

FIGURE 1: FRAMES OF REFERENCE IN STUDENT AND PROFESSIONAL WRITING

Frame of Reference

Frame of Reference

?

?

STUDENT

SCHOLAR
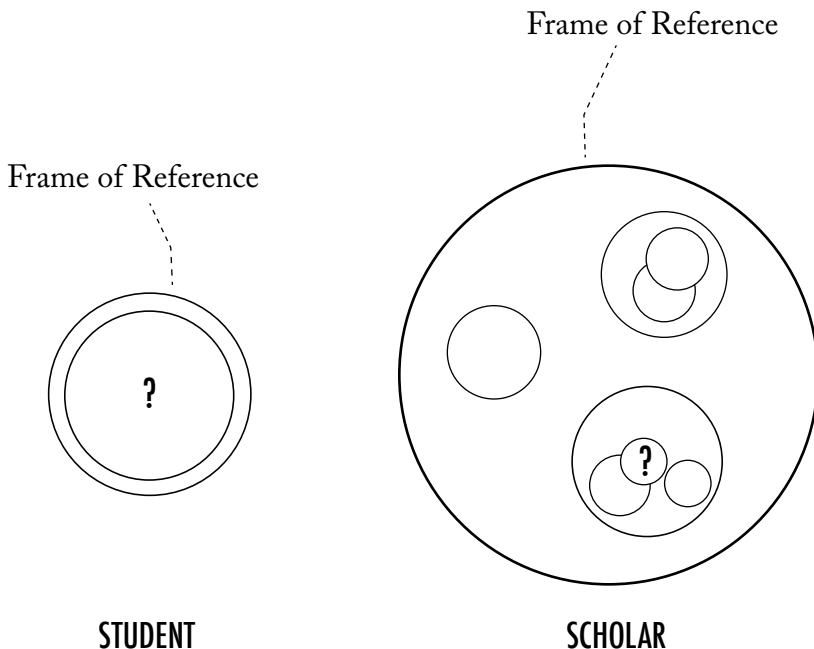
The Student Writer

For the student, the frame of reference for writing consists of knowledge he or she recently acquired from readings, lectures, and other course material or from references gathered for completing the paper. Because undergraduates usually try to use most of their knowledge and assembled references in a research paper, the frame of reference and the scope of the paper are nearly contiguous. Although there is a question mark representing a research question at the center of the diagram, teachers often complain that student writers don't really have a research question, position of their own, or reason for writing. The paper will simply have a "topic." The lack of a broader frame of reference largely accounts for these problems along with difficulties establishing an authorial voice, distinguishing the author's ideas and knowledge from those of other writers, or making references to sources.

For the same reasons, student writers have difficulty *introducing* their work to the reader. When the scope of a paper and its frame of reference are nearly the same, there are no broader perspectives from which a writer can take a position, construct an argument, identify a research question, or explain its significance in a field of inquiry. In contrast, the perspectives necessary for academic writing develop in the *distance* between the scope of the writing and its broader frame of reference. The novice student writer must patch together a new frame of reference *ad hoc* for each paper, using scraps of disciplinary knowledge, "common sense," and all-purpose templates for school writing. For the student, the main challenge of writing is to assemble almost everything he or she knows about the topic into a single, coherent document, used to demonstrate knowledge recently acquired to an audience that typically knows more.

The Experienced Scholar

Established scholars begin research and writing projects with very large and highly organized frames of reference they have assembled through years of reading, research, teaching, and other professional activity. They often have two or more related research projects underway, each of which will yield publications that answer different (though usually related) research questions. Principal Investigators of large research groups may have several related, co-authored research articles in different stages of production, in collaboration with graduate students or postdoctoral fellows, along with conference presentations, review articles, and other projects.

In each case, the scope of a research article or even a book will be much smaller than the writer's frame of reference. Because enormous amounts of information are potentially relevant to the topic, productive scholars usually bring significant research questions into focus early in the research process, often in the form of research grant proposals that resemble working drafts of research articles (including literature reviews, methods, and predictions of important results and conclusions). While research is underway, they may identify the most promising journals or publishers and begin to draft sections of the work, such as introductions and methods.
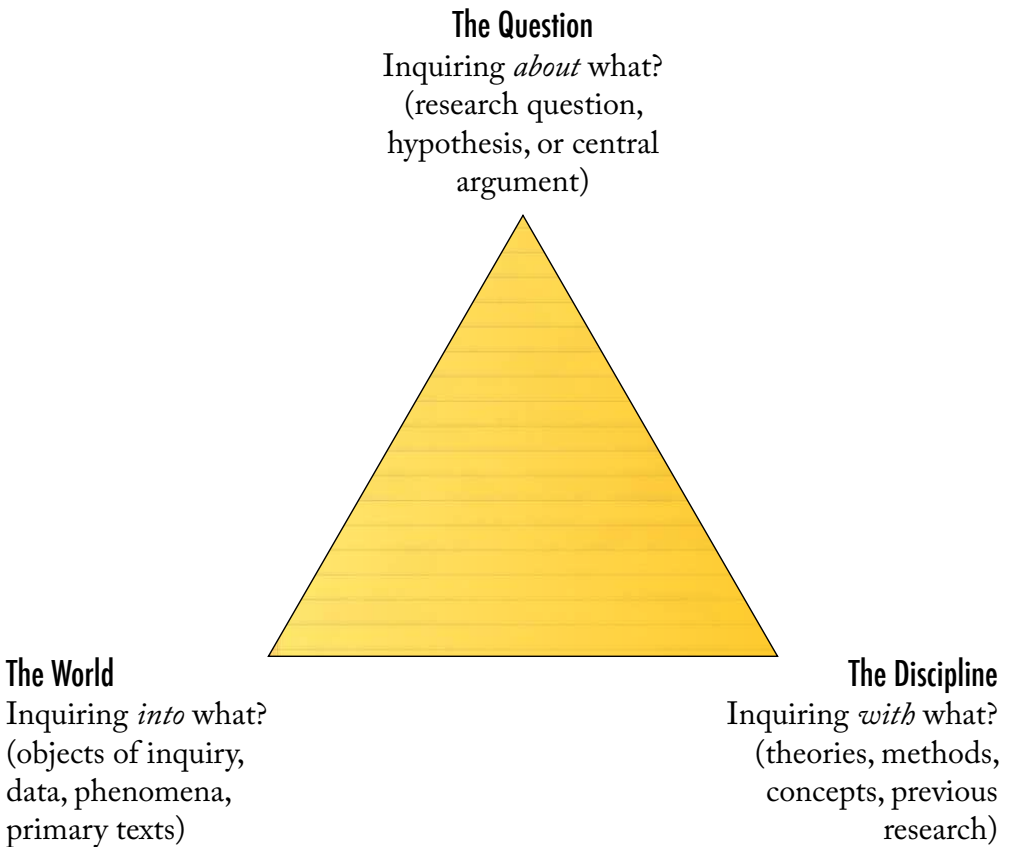
Professional academic writing, in conjunction with research, is therefore a process of identifying significant questions the scholar intends to answer within an established field of inquiry, typically as solutions to specific "knowledge gaps" in previous research. An academic book or article distills from the broad and messy dimensions of interconnected phenomena, scholarship, and thought a particular history of a particular problem. It presents this

history as an argument for the significance of the research at hand and for the methods, theories, and other intellectual tools used to solve this problem.

In her work with graduate students in Denmark, Lotte Rienecker observed that those who were having the most trouble completing theses had not yet brought viable research questions into focus within their disciplines. More specifically, Rienecker found that productive writing, and a sense that the project was "manageable," resulted from working out the balanced relations among three dimensions of academic inquiry juxtaposed as points of a triangle:

FIGURE 2: THE THREE DIMENSIONS OF ACADEMIC INQUIRY

The Question
Inquiring *about* what?
(research question,
hypothesis, or central
argument)

The World
Inquiring *into* what?
(objects of inquiry,
data, phenomena,
primary texts)

The Discipline
Inquiring *with* what?
(theories, methods,
concepts, previous
research)

In a sharply focused, cohesive study, the writer poses a clearly articulated *question* about specific *phenomena* (or other primary sources, such as primary texts) through the use of methods, theories, and concepts that define the significance of that question within a *discipline*. Each of these dimensions depends on clearly developed connections with the other two. For this reason, writers who feel lost or blocked in their projects usually have not brought one or more of these dimensions into balance with the others. For example:

• These writers may be excessively absorbed in the discipline, reading about other research and theory without refining their own research questions and data analysis.
• They may be absorbed in data collection and analysis with too many research questions or too little consideration of the way this research fits into their disciplines.
• Or they may be trying to answer early versions of research questions that need to be narrowed and refocused to correspond with the actual results of their research.

These three dimensions of a dissertation often become unbalanced in the process of research and writing, requiring deliberate adjustment and negotiation with advisors. Rather than addressing this imbalance by expanding and complicating your project, you should consider narrowing and simplifying your approach, along with other strategies.

Example:

A doctoral candidate in the social sciences was drafting chapters of a dissertation that answered a focused research question about a case study when his advisors observed that the theoretical dimension of his work was somewhat thin. After spending a few weeks reading theory and related cases, he realized that he could expand the implications of this case to broader research questions and comparative arguments. In relation to these expanded arguments, however, his empirical data was now thin, and to validate these arguments within a broader frame of reference he would need to complete additional field studies. Further research and writing would delay completion of his dissertation by several months.

The alternative strategy he chose was also closer to his advisors' intentions. Retaining his original research question and case study design, he added broader theoretical and comparative dimensions to the introduction and conclusion of this study, expanding its potential relevance to related research questions without complicating its basic structure. He could then pursue some of this additional research and writing after he received his PhD.

An undergraduate approach to writing may tell you that your dissertation should demonstrate all that you know about the subject. As your frame of reference expands, relevant research questions and the connections among them will multiply, making the project broader and more complex. Capable writers can then become mired in their dissertation work, not because they lack the knowledge or ability to complete it but because they are trying produce something that has become impossible to complete.

Instead, this is the stage when your frame of reference should become narrower—more sharply focused and manageable. The Cornell *Guide to Graduate Study* says that you are "ready to present a dissertation" once you have passed the A Exam because you are now authorized to write about a focused research question within a broader frame of reference you have *already* developed. You will no doubt continue to read relevant literature in your field, and your knowledge will continue to expand. But the A Exam certifies that you have moved beyond the level at which you must demonstrate the breadth of your general knowledge. You are now presumed to share that knowledge with other scholars in your field and are authorized to use writing to *contribute* to it.

The Essential Structure of Research-Based Writing

Now that you are authorized to write a dissertation, with a focused research question, what form should your dissertation take?

Although dissertations take a great variety of forms, we can make some generalizations about their conceptual structures and the ways they typically develop. We can start by defining "good writing" as a linear sequence of words and sentences that

- establishes a clear point of departure,
- turns the reader's attention in a certain direction, and
- sustains reading continuously to a destination.

In other words, readers should know clearly where they are starting, the direction in which the writing is taking them, and where they end up. All writing is a form of narrative: a story that moves us purposefully from one kind of understanding to another.

Research-based writing is a story about a particular kind of inquiry, intended to answer particular questions. The earliest research articles were literally narratives (often in the form of "letters") about the author's investigations. Like other good stories, these narratives of research are not just linear strings of words and information. They also have shapes and structures, deriving from levels of generality and connected sequences of sections with different functions that answer different questions about the research in a logical order. The most common narrative sequence for research reports answers these questions:

- What was I trying to understand and why? (Introduction)
- How? (Methods)
- What did I learn? (Results)
- What do these findings mean? (Discussion/Conclusions)

While this basic structure applies most directly to reports and articles in the sciences, its logical sequence can be adapted to research-based writing in most disciplines. Although "Methods" may not be literally relevant to dissertations in the humanities, the "How?" question does apply to the theoretical approaches that humanities

scholars use for analysis, interpretation, and argument. "Results" may constitute the entire body of the dissertation, presented in several chapters.

We can diagram (in *Figure 3*) the way this structure distills a logical order and significance from a broader frame of reference in a discipline, giving particular attention to the introduction. This is the structure that the linear narrative of your research runs *through*. It is a story about the process of answering a specific research question, posed within a broader fram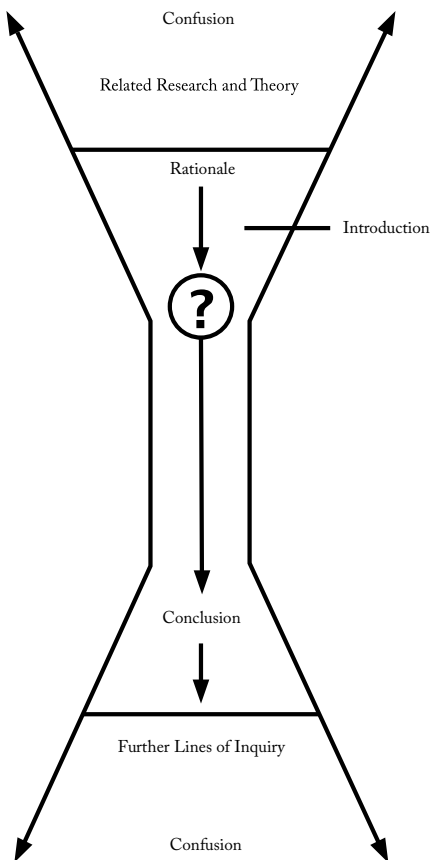e of reference that defines its significance, and leading (in the discussion/ conclusion) to further, unanswered research questions with expanding implications.

Note that the vectors at both ends of this diagram extend to infinity. At ascending and descending levels of generality, all lines of inquiry about phenomena in all fields ultimately intersect in increasingly labyrinthine (and confusing) networks of potential relevance. A specific research question about historical events in a certain period, for example, is potentially related not only to other research on that period and place in the field of history, but also to research in politics, cultural studies, literature, the sciences, and other fields concerning other periods and places. To write a story about your research within this structure, you do not need to make sense of all the broader connections, implications, research literatures, and alternative lines of inquiry above and beneath it. In fact, you cannot hope to do so, because ultimately they do not make sense in a way you (or anyone else) could explain in writing. After reading an entangled attempt to introduce all of the interconnections the writer had recognized in his dissertation research, one graduate advisor said, "It's foolish to try to explain the ineffable. Focus on what you can explain instead."

Such advice can have the liberating effect of making an impossibly complex dissertation project suddenly feasible: something in particular that you are building in a certain way from a chosen portion of the material already available to you, supplemented by other material you gather for this purpose. *You should feel that your dissertation is much smaller than you are:* a construction you are assembling within the larger context of your life and research interests, from certain parts of what you know, in certain amounts of your time.

If your dissertation project seems larger than you are, enormously complicated and beyond your grasp, you are probably confusing your dissertation with the broader frame of reference. This is analogous to gathering large amounts of construction

FIGURE 3: THE ESSENTIAL FORM OF RESEARCH BASED WRITING

Confusion

Related Research and Theory

Rationale

Introduction

?

Conclusion

Further Lines of Inquiry

Confusion

material before you have decided what you intend to build with it, in the hope that the material itself will tell you what to do. When writing seems impossible, you may conclude that you don't yet have enough material to make such decisions and will gather more, through further reading and other research.

As a consequence, doctoral candidates may postpone writing throughout months of reading and other efforts to become scholars worthy of such an endeavor. When they do begin to write, moments of doubt or confusion can also interrupt progress, and they resort to further background reading. In his book *Writing for Social Scientists,* the sociologist Howard Becker recalls the minefield of potential ambiguities and insecurities involved in beginning the introduction of his dissertation, "when I still wasn't sure what the thesis was about." Trying to avoid the hazards of referring to "schoolteacher culture," he explains:

I might substitute "shared beliefs" for "culture" and feel happier with that. But then I would see that I was talking about class and remember what a tangle of implications surrounds every one of the many ways sociologists talk about class. Whose version would I mean? W. Lloyd Warner's? Karl Marx's? I might decide to go back over the literature on class again before using such an expression.

When is reading or other background research instrumental to writing, and when does it distract from or even hinder writing? Looking again at Figure 3, we see that professional academic writing requires carefully drawing those horizontal lines that frame the story of the research and its meaning: determining the ideas, information, and references sufficiently relevant to your account of your own research focus and its significance. That horizontal line at the beginning of the Introduction defines the area of research in which your project is situated. What follows is an intellectual history of related research and theory within that domain, with narrowing and increasingly proximate relevance to the research question you intend to answer.

This is the function of "literature review": not to review all of the literature in your field, but to illuminate the significance of your research. You can construct this history only by placing your own research problem at the center of attention—as it *must* be, since this is what your dissertation is about. To assert yourself in this authorial position, imagine that the introduction represents a symposium held in honor of your work, and for the limited time available you must decide which scholars will be invited to speak, and in what order, about its significance. If you examine the developmental structures of introductions to research articles or books in your field, you will recognize the specific ways such stories are told, beginning with the general nature of the problem and leading to the specific unresolved question(s) the author intends to answer.

A Dissertation Is Not a Magnum Opus

Even in fields that prescribe explicit formats, with limited focus on specific research questions, capable writers sometimes attempt to produce ambitious or unfocused dissertations that are impossible to complete. Individual dissertation projects become unmanageable for a variety of reasons. In the humanities, where the author's goal is to provide interpretations or "readings" of particular texts, the possibilities for expanding the range of discussion to related texts or authors, other periods and contexts, or alternative approaches to interpretation can be endless. For writers who are insecure about the significance of their work, bigger may appear to mean better. In some cases, writers can make impossibly broad, complex dissertations manageable by simply deleting whole chapters from an outline. The hazards of overreaching can apply also to dissertations

in the social sciences and sciences. When a writer has not yet identified a central research question, all connections, cases, and implications of the research seem equally relevant. Without a center that determines priorities and sequences, the dissertation becomes a loosely assembled constellation of issues, findings, or lines of inquiry.

A PhD candidate's own career concerns sometimes motivate this tendency to broaden and complicate a dissertation project. If your dissertation will be the main representation of your interests and potential as a scholar, you may feel that it should include as many dimensions of your work as possible: all the related directions your research and teaching will *eventually* take. Candidates sometimes express concerns that they will be "pigeonholed" by a narrowly focused dissertation: perceived to be interested *only* in that kind of research question, subject, or method of analysis. The desire to make the dissertation represent all of your potential research interests can undermine the main credential for your career development: a completed dissertation and PhD.

The Roles of Advisors in Focusing Dissertations

Dissertation projects also can become unmanageable because of roles, relationships, and communications among advisors.

In principle, the chairs of your special committees should help you to develop focused research questions and plans that will make your project feasible and effective. This guidance also should resolve differing expectations among committee members about the focus and scope of your dissertation, or about theories, cases, research literatures, or forms of analysis your dissertation should include.

In practice, committee chairs do not always assume these roles or recognize potential problems that dissertation writers face. Some PhD candidates who struggle to complete unmanageable projects are trying to produce a dissertation that resolves differing interests, expectations, or ideologies among their advisors.

If your committee members explicitly ask you to perform such a feat, you may need to reorganize your committee around a project you can reasonably complete. In most cases, however, advisors are not fully aware of the problems that these real or perceived, explicit or implicit, expectations create. Such problems result from poor communication among advisors or with their advisee. Unreasonable goals may be based on an advisor's off-hand remarks or spontaneous suggestions that the candidate mistakenly interprets as a requirement for the dissertation. Advisors may also suggest lines of further inquiry for *future* research—with phrases such as "You should be sure to consider X"—without making clear that they are referring to your career, not to the content of your dissertation.

Example:

A PhD candidate in the physical sciences was struggling to complete a dissertation on research in her field that had very different applications in two other fields as well. Her committee chair and the minor members of her committee were therefore in three departments. Because these advisors were not colleagues, she met with them individually to discuss her dissertation work, and because their interests in her project diverged, they gave her differing advice about the directions her dissertation should take and the results she should emphasize. These expectations required additional time-consuming analyses of her data and corresponding literature reviews in three fields. In a casual meeting, her committee chair also had suggested some further lines of inquiry she had not yet pursued, and she assumed that he meant these should be part of her dissertation as well.

As a result of these diverse expectations, the candidate was essentially trying to write three dissertations in the form of one, and because the constituent analyses and applications were so different, she could not find a way to synthesize or even introduce them collectively. She had been entangled in this project for more than a year without making significant progress and had begun to avoid meeting with her advisors, in part because previous meetings had added to rather than reduced her stress and confusion.

When this student finally brought her problems to our attention, we recommended that she should immediately arrange a meeting with her committee chair and explain the situation as a request for help in making the scale and scope of her dissertation feasible. We also recommended that if he could not resolve these issues, she should ask him to convene a full committee meeting for that purpose.

During this meeting with her committee chair, she learned that he was unaware of her other advisors' expectations and of the resulting complications for her work. He apologized for this confusion and suggested a plan for writing that would focus on her research in his field and briefly explain the potential applications to other fields in the introduction and conclusion, without full analyses of the data for these applications. He also agreed to convey these revised, focused expectations to her other advisors.

With this revised plan, an impossible dissertation became fairly easy to write. She completed and successfully defended her dissertation in about three months. The interdisciplinary interests that created such difficulties in her dissertation work then became assets in her successful search for a tenure-track position.

Misunderstandings and disagreements about the focus and scope of a dissertation are not always so easy to resolve. If you cannot reach agreements with your committee members about plans for a feasible project, you should contact the Graduate School for confidential consultation about ways to resolve the problem. But as a general rule, if expectations for your dissertation conflict, or your project is becoming unfocused, you should ask your committee chair for help in establishing a clear focus and feasible plan. If the graduate student in this example had explained the problem to her committee chair when she *began* to recognize conflicting expectations, she would have prevented several months of delay and distress.

Sometimes students postpone asking their committee chairs for assistance because they think it might be viewed as a sign of weakness. But the perception that a capable graduate student should never need (or admit the need) for help from advisors is false. Fundamental, unresolved questions about the focus and scope of a dissertation *require* direct assistance from advisors, and especially from committee chairs. Dissertation writers who feel obliged to complete unfocused, unmanageable projects can rarely solve these problems on their own, and delay in asking for help complicates their difficulties.

"Paper Options" for the Dissertation

An increasing number of graduate fields—especially in the sciences, engineering, and social sciences—now offer an optional form of the dissertation: a collection of related research articles or "papers." This trend reflects changing job markets, in which employers now expect viable candidates to list publications and other professional activities on their resumes. Waiting to produce this work until the dissertation is finished can reduce prospects for jobs and postdoctoral fellowships. As a general rule, this optional form of the dissertation is most advantageous in fields where published research articles, rather than books, are the most important forms of accomplishment.

When they begin their dissertation research, many PhD candidates are unaware of these options in their departments.

Because the decision to produce a collection of research articles can significantly affect the design and breadth of your research, those of you who are interested in this dissertation form should ask your advisors or the Director of Graduate Studies about department policies as soon as possible.

All of the advice in previous sections about the form and focus of a dissertation applies equally to individual research articles within this composite form. Each article needs to have a focused research question posed with a reference frame and its own narrative account of the research, leading to conclusions. This optional form typically consists of three research articles that address related research questions, framed by a fairly brief and more general introduction and conclusion to the research as a whole. In many cases, one or more of the constituent articles has already been published or submitted for publication.

How can you determine whether this is the best option for you? Although related research articles may make completion of the dissertation more efficient, correspond more closely to central forms of scholarship in your field, and lead more directly to publications, these advantages apply only to research projects that you can reasonably present in separate articles that address distinct questions. Regardless of their disciplines, some research projects can't be subdivided easily in this way. Choosing a "three paper option" can therefore involve more work and time, not less, if you must identify new questions that require different research methods, additional literature reviews, and more data. Before you make this decision, consult with your advisors and consider the feasibility of presenting your work in separate articles.

Time Management and the Writing Process

Time factors probably represent the most dramatic differences between student writing and dissertation writing (and its professional counterparts). Senior thesis projects may have given you exposure to some of the challenges of orchestrating research and writing on a complex project over many months. Research grant proposals and professional articles also can introduce graduate students to "incremental writing": work that reaches completion through numerous stages over long periods. But the time bracketed for completing a dissertation—between the A and B Exams—is usually the longest period that doctoral candidates have spent working on any single project. While that great expanse of two years or more is a potentially luxurious opportunity, it also requires new forms of deliberate, strategic thinking about time management.

Although your lives, research projects, and responsibilities will differ over this period, the great majority of you will have sufficient time to complete dissertations. Many of you have children, teaching assistantships, and other important commitments that will limit and fragment your time to work on your dissertations. Complications in your research or data analysis also may consume more time than you expect. Such commitments and potential distractions pose much greater challenges, however, for scholars in faculty positions who prepare courses and teach, advise students, and serve on committees, along with conducting research. Yet most of these faculty members find time to complete articles, conference papers, books, and other writing projects. In fact, they must do so to maintain their careers.

How will you organize and use the time available? How will you complete your dissertation in the midst of all the other things that you must do, or might choose to do, in the same period?

Create and Preserve Blocks of Time for Writing

Productive scholars set aside regular blocks of time for work on their writing projects.

These blocks of time do not need to be

longer than two or three hours, though they may be. But they should be *free of interruption* and sufficiently *frequent* to maintain attention to work in progress. Otherwise you will spend the first half hour of a session trying to remember what you were previously doing.

Note that you have to make and preserve these blocks of time for writing, because they rarely occur "naturally." On a given day, you may have a few hours of time free from other responsibilities, but you cannot use that time productively for writing if it is fragmented and scattered into small segments. Blocks of time will open up, and remain open, when you deliberately reserve these blocks in your weekly schedule and then *preserve* them: giving them high priority over other activities and rejecting opportunities to do something else.

These scheduled times for writing solve most of the mysteries of faculty productivity in the midst of many other responsibilities. Because writing is usually a private activity, busy professors often seem to produce publications from smoke and mirrors. Referring to her advisor's mysterious productivity, behind closed doors, one PhD candidate said, "I want to see the writer behind the curtain. I want to meet the Wizard of Oz." But her advisor no doubt completes these projects precisely because no one can see or contact him at those times he has set aside for writing. Another extremely productive Cornell professor revealed that he usually spends three hours every morning on his writing projects, six days a week, before he comes to campus. When he arrives, he is free to focus on other responsibilities that require less sustained attention.

Schedule this time when you are most relaxed and efficient.

The times when individuals can work most efficiently vary, depending in part on when they are free from other commitments. As undergraduates, however, most of us were nocturnal writers. You may have retained habitual associations of writing with high-pressured, nocturnal efforts to get assignments done against impending deadlines. If so, you also may need to break those "binge writing" habits and consider when you can write most effectively in this different period of your life, on this different kind of project, *without* pressure to complete the task by the following morning.

Give this time and work priority over potential interruptions.

The fact that you *cannot* complete a dissertation, or even a chapter, in a single writing session also requires changes in your work habits, discipline, and expectations. In these large-scale projects, writers are especially vulnerable to interruptions, distractions, and related discouragement. Experienced musicians, for example, know that accomplished performance is an end to the means of practice and rehearsal. They don't expect, in a particular session, that they will play this piece (or even a part of it) beautifully, to their ultimate standards for performance. When they are accustomed to finishing writing projects in one session, or at least in one draft, writers have more trouble staying focused on incremental work. Or perhaps they have more trouble delaying gratification: the fact that the finished product remains so far in the future.

This delay partly explains our willingness to interrupt our writing with less-important activities that invite immediate attention and gratification, such as answering e-mail or text messages, phone calls, housekeeping tasks, reading, web searches, or work on smaller projects. ("When I'm working on a book," one scholar admitted, "is when I get my really deep cleaning done . . . like, behind the radiators.") Writing is most difficult and slow when our motivations are low and our standards are high *at the moment.* Completing your dissertation is no doubt a high-priority task for which you have high

long-term motivations. At any given moment on a particular day, however, your motivations to work on this project may be low, especially if you have high standards for the finished product. If you don't feel that you are quite up to the task at the moment, you may feel you can do something else that is easier to accomplish, with immediate (if small) gratification, and return to your dissertation work later. Perhaps then, you think, you will feel more focused and inspired: closer to meeting the standards you have set for yourself.

This is the underlying rationale of procrastinators. They are not postponing important projects to do nothing. They are always doing something else instead: something easier to accomplish, more satisfying or less daunting at the moment. Like other large-scale projects, however, dissertations only get done through successions of uninterrupted moments. During any given block of them, you may not get very much written, and what you do write may be extensively revised or abandoned in the finished product. But this sustained, patient, persistent attention is the only way that a product will come about.

Don't Postpone the "Write-Up" for the End of the Process

Doctoral candidates postpone actually writing their dissertations for reasons that vary across disciplines, along with the meanings of the term "writing" itself. To understand the causes and effects of these delays, we should first distinguish some basic features of the writing process.

In common usage, "writing" sometimes refers to the product *(Her writing is beautiful.)*. In others, "writing" refers to the process *(He is writing his dissertation.)*. And as a process, writing can refer to different activities, or "stages." Composition specialists often distinguish these activities

as **prewriting, composing, revising,** and **editing**; and completing the process is the point of **release**: when the product reaches its intended audience and finally becomes an act of communication.

Prewriting consists of all the research, reading, outlining, other planning, and thinking that you do for the purpose of *composing:* actually producing new sentences and passages. *Revising* refers to significant changes in the substance and order of writing you have already composed, usually leading to further prewriting, composing, and deletion. *Editing* means minor or cosmetic changes to wording or phrasing, including proofreading. Unlike speech, in which utterance and communication usually occur simultaneously, writing delays communication, potentially for months or even years.

The association of writing with products and performance, as a lingering effect of undergraduate experience, often explains why dissertation writers delay "the writing" in deference to further reading and other preparations for tackling a complex writing project. As one PhD candidate explained, "Reading doesn't leave tracks." While prolonging these preparations for writing, you can honestly say you are "working" on your dissertation without producing a potential object of critical reading. For the same reason, this candidate reverted to further reading and other "prewriting" when she began to compose chapters and perceived that her writing at the moment did not meet her standards—the imagined judgments of her advisors—for the finished product.

Dissertation research may seem to demand such delays, because the "prewriting" phase of research is so complex and seems logically to precede "writing up" the results of this research. This tendency can be especially strong in the sciences, where popular conceptions define the "write-up" as a secondary outcome and "report" on knowledge previously acquired in research

activity. Although doctoral candidates in the sciences are most likely to identify focused research questions early in their dissertation work, they also are inclined to underestimate the amounts of interpretation, revision, and time involved in writing a dissertation. On the other hand, in fields that view writing as the *construction* of knowledge, in texts and in the study of texts, candidates may delay writing because they do not yet feel prepared to do authorized interpretation.

In both cases, this delay seems necessary because dissertation research and writing are so different from the comparatively simple tasks that undergraduates complete. But the resulting loss of freedom and control in the writing process actually perpetuates undergraduate approaches to writing. Due to time constraints and the small scale of their projects, undergraduates try to avoid second thoughts and revisions, treating the writing process as a condensed sequence of separate stages (e.g., *plan, write, proofread, turn in*) and thus lose the opportunities to rethink and improve their work. The resulting experience of immediate performance can make the "writing" stage unnecessarily daunting. As a Cornell sophomore said, "Thus, I feel my writing should be coherent, intelligently composed, and interesting in order to reflect some of my nonexistent characteristics."

Through second thoughts and revisions, however, we become more "coherent," "intelligent," and "interesting" versions of ourselves. Mapping this transformation onto the writing process, one professor in the physical sciences observed, "A first draft allows you to recognize the nature of your own confusion. Revision allows you to recover from that confusion." Experienced professional writers working on long-term, incremental projects learn to use the freedom and flexibility of the writing process to their advantage, often through trial and error.

You will lose this advantage, however, if you try to make the first draft the last or

imagine the absent, critical reader too literally. Remind yourself that while you are writing, the intended reader is not yet reading—or judging—what you are saying. Until you release this work to the intended reader, you can say whatever you want, and change it in any way you like, without immediate consequence.

You can take advantage of this freedom most fully if you begin to compose drafts during research, not after. For the majority of scholars in all fields, research and writing are not separate stages but interwoven activities that move the project forward. Research notes, written plans, and rough drafts both record material for future use and help to refocus research activity. Used to refine research questions, methods, and interpretive frameworks, a confusing draft is not a failed attempt but a necessary lens through which you can discover better ways of moving forward.

Put Your Own Ideas and Authority at the Center of Your Work

When early drafts lead to growing confusion or impasse, in most cases the writers are not yet focusing and refocusing their own research questions, positions, or interpretations. Instead, they are still searching for viable positions in the work of other scholars, trying to build a broad frame of reference and exploring the labyrinthine complexities of alternative approaches. This is why we encouraged you, in Section 4, to develop focused research questions early in the process, even if further research and writing lead you to revise these questions and reframe them. Further reading and revision will then become focused activities as well, devoted to the refinement and illumination of *your* work and its significance.

In her essay "Between the Drafts," Nancy Sommers reconsidered the impasse she had reached in revising a professional talk

about the nature of revision itself, from authoritative references to the theorists she most admired:

Successive drafts of my own talk did not lead to a clearer vision because it simply was not my vision. I, like so many of my students, was reproducing acceptable truths, imitating the gestures and rituals of the academy, not having confidence enough in my own ideas, nor trusting the native language I had learned. I had surrendered my own authority to someone else, to those other authorial voices.

Writers can establish and lose their own voices and authority in their work at any stage, as writing tasks and rhetorical factors change. Students most likely to pursue doctoral studies often discover a real authorial voice (not just an imitation of one) in undergraduate papers. This experience changes the entire nature and purpose of writing in ways that often lead to advanced studies. In her essay "Writing Political Science: Asking a Question Then (Actually) Answering It," Cornell Government professor Mary Katzenstein recalls, "with still palpable pleasure, the first essay I ever wrote as an undergraduate that felt like it was truly my own. It was not, in fact, until my junior year."

What was she doing before that moment, as a good student, while producing essays that were not truly her own? "By freshman year of college," Katzenstein observes, "students are skilled replicators of authorized interpretations." While in the past this replication occurred through searches in card catalogues and encyclopedias, "now it is the urgent combing of the Web with its addictive, ever-enticing sense that with just a little more time, one more set of searches, the crucial clue to an often unspecified problem will be unearthed; in both cases the search is driven by the uneasy quest for assurance that someone who 'knows' can tell you what is worth saying."

Dissertation writers often become absorbed in similar quests for "what is worth saying" in the view of someone else who "knows." The larger frame of reference and higher level of authority that a dissertation seems to require can undermine confidence and divert writers from clarifying and communicating what *they* know: their own contributions to knowledge in their fields. Although your advisors and other scholars may possess more general knowledge of your field, *a dissertation should address these readers as colleagues and peers in a community of scholars who are interested in your contributions to a field of inquiry, not as teachers and higher authorities.* This shift of the writer's *persona* in relation to the audience is a central feature of the transition from student to scholar.

Loss of voice, focus, and confidence most often occurs when writers are doing background reading or working on introductions or literature review chapters: trying to understand and explain what other scholars have said. This work is necessary, because the "story" of your research is also a story about its significance *within* your field, in relation to the work of others. If you feel that you are *losing* focus on your own work, however, this literature review is probably leading you in the wrong direction. This is why we encouraged you, in Section 5, to think of a literature review or introduction as a symposium in honor of your research. What other scholars would you invite to speak at this symposium and in what order to lead up to your address? Whose work will best illuminate your own? Such an approach to introduction may seem self-centered, especially if you include luminary scholars in your field, but it is a necessary approach. If your dissertation isn't primarily about your research, what is it about?

Although it seems logical to begin by writing your introduction, you should set this aside if you are getting so entangled in

literature review that you are losing focus on your own research. When that happens, scholars often shift their attention to a central "body" chapter on their research findings or interpretations, where they can more easily establish their voices and perspectives. When their central findings and arguments are more clearly delineated, they usually find the introduction much easier to compose or revise, because they know more clearly what they are introducing.

Avoid Isolation

Loss of voice and focus can also occur when dissertation writers are cut off from peers, advisors, and other potential audiences for their work. Research on doctoral programs indicates more generally that isolation is a fundamental cause of difficulty and delay in the completion of PhDs.

These findings may appear to conflict with some of the advice we have previously offered, such as reserving blocks of time for writing without distraction. Sustained attention to writing and to some kinds of research requires privacy. Most scholars, including dissertation writers, prefer to have private offices or to work at home, where they can't be interrupted. Most doctoral candidates also prefer support from fellowships or other funding that does not require teaching or other distractions from their dissertation work. In some fields, the romantic ideal of pure scholarship defines the dissertation as a solitary vision quest fueled by contemplation and inspiration, not interaction.

But productive blocks of time devoted to research and writing should not exclude interactions and activities that surround and support this work. Even in fields that favor individual authorship, professional communication is a social endeavor, pursued with a lively sense of connection between your work and other scholars who are also your intended audiences. Therefore, you shouldn't

feel trapped alone inside a dissertation project until it is finished. Instead, this project should be limited and "nested" (as one graduate student said) in your personal and professional life: something you work on in the midst of other activities and in dialogue with other scholars.

Significantly higher completion rates and shorter completion times in the sciences, compared with the humanities and social sciences, support this premise. Collaborative research (and often writing) in the sciences situates this work within communities of scholars with mutual expectations, schedules, and support systems for the completion of projects, often funded by research grants with related deadlines. Doctoral candidates who are members of research teams can most easily find readers for work in progress and advice when they run into difficulty. This interdependence tends to keep them "on track" in their degree programs.

In somewhat different forms, patterns we observe in the sciences extend to other fields. In a survey of 816 former doctoral candidates across disciplines, Barbara Lovitts and Cary Nelson found "a high correlation between integration into a department's social and professional life (becoming part of a community) and successful completion of a PhD." One surprising finding was that "Of those students who completed the degree, fully 85 percent shared an office with other graduate students, while only 46 percent of those who left the program shared an office." One explanation for this finding is that academic departments expect cohorts of graduate students to progress at certain rates. Students who are active members of these communities are most likely to move along with their peers at the expected rate. Those who fall behind or "disappear" from these social networks lose the advantage of the support they provide.

Find incremental readers or audiences for your work.

The point of *release* in the writing process refers to communication with the intended audience, such as the advisors who will evaluate a dissertation or the journal in which you hope to publish a manuscript. In dissertation writing, as in publication, further revision usually follows this initial release to the intended audience, but at that point you have nonetheless exposed your work to their evaluations.

This observation places dissertation advisors in an ambiguous position. As the intended audiences for a dissertation you will defend in your B Exams, they are ultimate *judges* of its strengths and weaknesses. As advisors and mentors for the *process* of research and writing, they also function as *coaches* who should help you produce work that meets their expectations.

Graduate advisors and committees occupy these dual roles in a bewildering variety of ways, with differing implications for the candidates they advise. To help you negotiate these complex relations, the Cornell Graduate School is publishing a separate guide for graduate students: *Being Mentored in Graduate School: A Guide for Cornell Students.* Here we will add a few observations that apply specifically to writing.

Most graduate students can identify at least one committee member who can function as an effective "coach" throughout their research and writing. These advisors can serve as supportive readers of early plans and drafts of your dissertations, suspending judgments that would make exposing work in progress potentially hazardous. Even if you have this support, however, we encourage you to find other readers for your work among peers and friends, scholars in your field at other institutions, or Cornell faculty members who are not on your committees. Due to their own time commitments, even the most supportive advisors may provide limited or delayed feedback on drafts and plans, and their immediate suggestions may not provide the guidance you need to move ahead. Writers who ask for advice from advisors often feel obliged to *follow* that advice, even if it seems misguided. In any case, more feedback from different perspectives is usually better than less.

Incremental readers, whether faculty members or peers, assist in the *process* of writing; they do not view themselves as judges of the *product.* For this reason, dissertation writers often benefit from writing and reading groups among peers, in or across departments, who meet regularly and exchange work in progress. Some departments facilitate these writing groups. Other graduate students assemble them informally among friends and other contacts across fields, such as area studies.

Because writing groups require participants to spend time reading the work of others in exchange for feedback on their own, many dissertation writers question their value. For efficiency, some prefer to exchange work with a single "writing partner." In either case, the effectiveness of these exchanges usually depends on clear agreements about the responsibilities of readers and the purposes of feedback. All of the participants who enter these arrangements must take responsibility for thoughtful, timely reading and response. Other "rules" can reduce misunderstanding or resentment, such as these:

- Readers should respond to material with constructive advice on work in progress, not with judgments of the writer or of imagined products.
- Mindful of the rule above, readers are free to offer any suggestions or observations that may be useful to the writer.
- Writers are free to ignore or to amend advice that does not seem useful.
- Differences of opinion among readers are normal (consider those of peer reviewers). Writers and group members are not obliged to resolve those differences or reach consensus.

Find Professional Audiences for Work in Progress

Some negative effects of isolation can result from the feeling that no one is really interested in your work—that, like a very long student paper, it has no future. Publications, conference presentations, or departmental presentations on your research can give you a stronger, clearer sense of the audience and outcome for your writing and its significance in your field.

In some cases, departments and advisors discourage doctoral candidates from significant involvement in professional organizations, presentations, or publications before they complete their dissertations. They may be concerned, sometimes with good reason, that these activities will distract candidates from finishing dissertations that are increasingly crucial to academic careers. In moderation, however, such professional activities can provide additional motivation and focus that lead to faster completion of the PhD. Publications on dissertation work involve peer review and editorial advice that can clarify the writer's position. Conference presentations expose your work to interested scholars who can illuminate its significance, define a broader audience, and ask useful, informed questions.

Informal communications can have similar and less time-consuming effects. Scholars in your field at other institutions often welcome exchanges about your work and theirs, through e-mail or other media, and they may be able to recommend other contacts or references that would contribute to your project. More generally, such exchanges create a sense of connection and mutual endeavor that can motivate further work.

Edit before Release

Because the term "editing" has several meanings, we define it here as *narrowly focused attention to words and phrases within sentences you have already composed.* Individual writers edit their work at different stages of the writing process. Some edit continually while they compose sentences. Others postpone editing until they have composed large sections or complete drafts.

Writing specialists usually recommend that you postpone editing until you have completed working drafts of large sections or chapters that will not need general revision. One reason is that editorial attention to words and phrases while you are composing interrupts your sense for the flow of language and thought through larger structures and typically makes this stage of writing very slow. Furthermore, this early editing might become wasted time and effort; whole sentences and passages you have carefully edited may not remain in the finished product. Continual editing while you compose may be a lingering habit from student writing, representing an effort to avoid revision and make the first draft the last.

We should acknowledge, however, that experienced writers often edit while they compose drafts they intend to revise, but for a different reason: to establish clarity and precision that allows them to move forward. Rough or ambiguous sentences can impede this forward progress, like a bumpy runway from which further writing cannot take off. If you continually pause to tinker with sentences while you are composing, you should consider why you are doing so and whether this local revision of a first draft is really useful. *Are you trying to avoid revision or to facilitate further writing?*

In either case, sentence-level editing and proofreading are *eventually* necessary, especially before you release chapter drafts or submitted dissertations to their intended audiences. Some advisors are willing to read rough, unedited drafts to give you advice about the underlying ideas, but many others

will assume that anything you show them represents your best effort, leading them to premature conclusions about the quality of your work. As a rule, you should edit your writing before submitting it to advisors, even if you know that this version needs further guidance and revision.

Edit by Ear

When we edit or proofread drafts of our work, we typically *look* for errors, ambiguities, or awkward phrasing. When we notice problems, however, we usually *hear* them first, or hear and see them at once. We recognize incongruities between the inner vocalization of the language that Eudora Welty (in *One Writer's Beginnings*) called her "reader voice" and the writing we see. This is why we usually say that a sentence "sounds wrong," not that it "looks wrong." We notice problems, and sometimes correct them, with an auditory sense for the way the writing should sound. Possibly because our primary knowledge of language resides in speech, our ears for language are usually more accurate than our eyes. This principle applies equally to native and non-native speakers of English.

For this reason we recommend that you read drafts of your work aloud, looking and listening at once, and that you trust your "ear" for the way sentences and passages sound. If a sentence sounds wrong, it probably is wrong or would benefit from revision. If you can't read aloud for some reason, silently vocalize what you are reading and listen. In the chapter "Editing by Ear," in his book *Writing for Social Scientists,* Howard Becker explains this method in greater detail, with examples and patterns for which academic writers should listen.

You will more easily identify, understand, and revise problems you hear if you know how sentences work. Any college-level handbook of grammar and composition will review basic rules and patterns, along with fairly detailed systems of citation and documentation. To produce clearer and more elegant sentences and passages, however, the best resource is the book *Style: Ten Lessons in Clarity and Grace* by Joseph Williams. In great detail, Williams describes the most common errors and stylistic problems in academic writing and explains effective methods of revision.

The Walk-In Service: All members of the Cornell community, including graduate students, are welcome to use the Walk-In Service for consultation on work in progress. Undergraduate and graduate peer tutors, trained to provide advice on writing projects, are available at six locations on campus. Drop-in sessions are usually limited to 30 minutes, but you also can schedule hour-long sessions by appointment. To schedule appointments and find Walk-In Service hours and locations, go to www.arts.cornell.edu/writing.

The Walk-In Service offers consultation at any stage of the writing process but is not a proofreading service. For this reason, we encourage you to identify the help you want tutors to provide—problems of grammar or style at the sentence level or broader questions of organization and focus—and bring small portions of text that represent those issues. For drop-in sessions, this means four to six pages of a draft, outlines, or other plans. For hour-long appointments, you can bring somewhat longer portions of a draft.

Filing your Dissertation

Members of your special committee will determine whether your dissertation meets their standards for works of scholarship and writing in their fields. These standards may include features of organization, style, and reference. When you have completed your B Exam and file your dissertation, however, the manuscript you submit to the Graduate School must conform to formats and guidelines required by the Graduate

School at large, with approval from the Thesis Advisor. We strongly recommend that you read these requirements for submission before you produce the final manuscript you intend to file. You can find this information in the Thesis Advisor section of the Graduate School web site, at www.gradschool.cornell.edu/?p=13. This page includes links to the detailed PDF "Doctoral Dissertation and Master's Thesis Guide: Formatting, Production, and Submission Requirements," along with schedules for seminars, contact information for consulting with the Thesis Advisor, and other assistance.

Although required formats for figures, illustrations, and many other features of the dissertation are quite specific, the Graduate School does not require a particular system of documentation and reference for dissertations. Instead, you should *consistently* use the system your department requires or the one used most commonly in your field. The three most common documentation systems are those of the *American Psychological Association* (APA), the *Modern Language Association* (MLA), and the *Chicago Manual of Style.* Each of these systems offers a published guide as well as electronic services on their web sites. Other professional organizations (such as the *American Chemical Society*) publish their own style manuals, and your advisors may prefer that you use one of those. Because each of these systems is extremely detailed and varies substantially from others, you should acquire a complete version and follow it closely.

7 Advice for Non-Native Speakers of English

I f you use English as a foreign or second language, you may feel that you are at a disadvantage compared with dissertation writers who are native speakers of English. The extent to which difficulties actually result from a writer's background in a language other than English is not easy to determine and depends in part on one's level of fluency in written English.

If all native speakers of English produced polished, effective scholarly writing with ease, you could assume that problems you encounter result from your weaker grasp of English. We've observed, however, that dissertation writing is *normally* difficult and *unfamiliar* to the great majority of doctoral candidates. Specialized forms of scholarly discourse—with their complex terminologies, frames of reference, uses of evidence, forms of reasoning, and standards for validity—do not represent *anyone's* native dialect. Individual writers therefore struggle in a great variety of ways for many reasons. Measuring relative advantage or disadvantage is usually impossible or misleading, because there are so many factors involved. You may

mistakenly feel disadvantaged by difficulties you *share* with other doctoral candidates, including native speakers of English, and this misconception can become a real disadvantage in itself.

It will be more accurate and useful for you to think of Cornell as an international community representing an extraordinary variety of linguistic and cultural backgrounds. In this community, international scholars include faculty as well as students. Although the primary medium of writing and instruction in this community is academic English, all of us have strengths and weaknesses in using this language effectively. Although you need to assess and increase your level of fluency in English, many other factors will contribute to your performance, including the quality and significance of your research, your grasp of research literature in your field, and the organizational skills and methods you use to develop your dissertation.

All of the advice in previous sections therefore applies equally to native and non-native speakers of English. Much of this advice can help you compensate for

difficulties in using English as a second or foreign language. Writing a dissertation or research article is not a "test" of your fluency in English. Professional academic writing is a *process* through which initial plans and drafts gradually become professional communications and works of scholarship, through extensive revision and advice from readers. In this process, your goal is not to avoid all errors, ambiguities, or organizational problems in first drafts but to make these problems irrelevant to the finished work. And for this purpose, scholars typically rely on help from others.

Help with Editing

The specific kinds of help you may need as a non-native speaker of English will depend on your level of fluency and language background. Native speakers of East Asian languages, for example, typically have lingering difficulties with the use of articles (especially *the*), preposition usage, and diverse expressions of number in nouns, verb forms, and subject/verb agreement. Most non-native speakers of English, even at high levels of fluency, continue to make stylistic errors in the use of *idioms:* particular usage of words and phrases by native speakers. If these errors occur within sentences that are otherwise correct and express what the writer wants to say, however, they represent minor problems of editing. If your advisors are concerned about such errors in drafts, you should make these editorial changes before you show them work in progress, including the draft you submit for your B Exam, and you should be sure that your finished dissertation is carefully edited before you present it to the Graduate School. Advisors or friends may be able to help you with this kind of revision; but if they cannot, you may want to hire a professional editor. You can find a list of professional editors on the web page for the Thesis Advisor: www.gradschool.cornell.

edu/?p=13. Although the tutors in the Walk-In Service, described in the previous section, are not professional ESL instructors, they can help you to identify and correct common patterns of error.

8. Conclusions

Dissertations can be difficult to complete for the same reasons that academic books and research articles are difficult to complete. These are complex, long-term projects that must meet standards for scholarship in their fields. They require considerable knowledge of the subject, persuasive evidence of validity and significance, and extensive revision. This is not the kind of writing that anyone can expect to churn out in a single draft. A dissertation therefore functions both as evidence of and as training for your *potential* as a productive, professional scholar.

Dissertations should be somewhat easier to complete than comparable publications, because they do not have to pass the rigorous scrutiny of peer reviewers and editors in the later stages of the publication process. The factors that add to the difficulty of dissertation writing for many PhD candidates result from the *unfamiliarity* of completing writing projects of this length, complexity, and duration. In this transition between student writing and professional writing, doctoral candidates tend to underestimate

the rhetorical changes that redefine writing, requiring motivations and strategies similar to the ones that productive scholars have developed. Although the dissertation is a transitional text—no longer student writing but not yet (in most cases) a publication—*professional writing in your field, not student writing, is the reference point for dissertation work.*

Because this rhetorical transition toward professional writing is poorly marked, dissertation writers often continue to use writing strategies that worked for them as undergraduates but will not continue to work for professional writing projects. This guide has therefore emphasized the necessary changes in motivations and purposes, forms and reference frames, methods, time management strategies, and other dimensions of this transition.

While underestimating these changes, doctoral candidates often overestimate the necessary breadth and complexity of the dissertation. If your dissertation will be ten times the length of an undergraduate research paper, with comparably higher

standards and a year or more to complete it, you may conclude that the structure and content of this project should be ten times as complicated as well. To produce good dissertations and academic publications, however, much of the complexity (and frustration) of the process should be devoted to *simplifying* and *clarifying* the product by revising plans and drafts, not by complicating the product. As your knowledge and frame of reference expand, the focus and structure of your dissertation within that reference frame should proportionally narrow and become increasingly manageable. A dissertation is a particular object that you construct using this broader knowledge and perspective.

The basic structure of a good dissertation is therefore fairly simple, even if the process of completing one is complicated. To write a dissertation:

- You need a focused research question (or argument, or testable hypothesis) of significance in your field.
- You need to introduce this question within a limited reference frame that defines its significance, usually in reference to a "knowledge gap."
- And you need to tell a plausible, coherent story about your efforts to answer this question, leading to conclusions that suggest directions for further research.

Although the forms and styles of these stories vary considerably across disciplines, approved dissertations and publications in your field provide reliable examples for your own work.

To complete this project successfully, you do not need to become a more spontaneously eloquent or brilliant version of your former self. The expanded time frames and opportunities for revision tend to equalize differences in writing experience and language facility among writers. Patience, persistence, assistance from others, and time

management skills are more valuable than "natural" writing ability (whatever that may mean).

Serious struggles and delays in completing dissertations usually result from weaknesses in one or more of these essential components of the process, not from lack of ability. Struggling writers may be trying to produce a dissertation that remains unfocused, unstructured, or otherwise impossible to complete. They may be trying to make the first draft the last, with standards they cannot meet at the moment, for imagined audiences of harsh critics. They may be isolated from peers, advisors, and others who could provide assistance. Or they may not find—or may not *make*—blocks of time for steady, attentive work on their projects.

You can therefore complete your dissertation successfully without significant delay if you work steadily with reasonable standards at the moment on focused, feasible, and structured projects, with representative models for scholarship in your field, and with sufficient guidance and feedback on work in progress. In the process, you can expect to run into many problems you must solve, including plans and drafts that need extensive revision. But *all* scholars run into these problems, and solving them is part of becoming a scholar.

When you submit a complete draft of your dissertation for your B Exam, you will be nearly finished with your doctoral program, but you should continue to develop your writing skills and strategies. Doctoral candidates often anticipate that the B Exam will be a "defense," as it is sometimes called, of their accomplishment. If the draft they submit or their research has remaining weaknesses, known or unknown, they may enter the B Exam "on the defensive": ready to fend off criticism or penetrating questions from committee members. The B Exam will then feel like a trial in which they hope to get off as lightly as possible.

Although your B Exam may seem a long

way off, we encourage you to look forward to it as a productive meeting with your advisors about the further development of your work. Your advisors may suggest final revisions of your dissertation before you file it, with their approval, but they should also guide you in developing research articles or a book manuscript from your dissertation, along with giving further directions for research. In the B Exam, you should be receptive to suggestions, feel free to *ask* questions as well as to answer them, and take notes.

After passing their B Exams and filing their dissertations, newly minted PhDs often experience a certain malaise or quandary about further development of their work. *As* a dissertation, the dissertation is finished. Now what?

Although a dissertation should resemble publications in its field, it represents a complete working draft or platform for publications. Unless constituent articles have been published, the final and typically arduous stages of the publication process remain incomplete. In this respect, your development as a professional writer and scholar remains incomplete as well. If you intend to pursue a career in research and scholarship, you will need to refocus your time and attention around these further stages of the publication process. The B Exam often maps out these next steps.

If your dissertation most resembles a book manuscript, and if your field favors this form of publication, examine the books in your field closest to the form and focus of your work and identify their publishers. Consider the revisions that will appeal to these publishers and audiences and, if possible, contact acquisitions editors to explore the prospects and guidelines for submitting a manuscript. These prior contacts can pave the way for submissions that might otherwise languish in a pile or receive perfunctory rejections. Advisors and other scholars in your field often can direct you toward the most promising publishers and editors.

If your dissertation research and field favor research articles, investigate the most appropriate journals for publishing your research before you complete extensive revisions of your dissertation material. Look carefully at the structures and lengths of published articles closest to your research questions, and read the journal's guidelines for submissions. Always rewrite articles *for* a specific journal and its audience—an audience that will always differ somewhat from the audience for your dissertation.

These next steps for research-based publication represent a kind of further research. If you plan to enter an academic profession, the finished dissertation is not an end but a point of departure for further writing.

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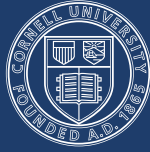
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Writing from A to B demystifies the dissertation process, providing clear and cogent insights to guide each phase of the project. Dr. Keith Hjortshoj has drawn upon his many years of experience with Cornell's renowned John S. Knight Institute for Writing in the Disciplines to craft this invaluable manual. Doctoral students will want to read through the volume and refer to it regularly to navigate their way through dissertation challenges from conceptualization to final revision.

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