

# Campus Resources for JP Writers

## Departmental Representatives for Undergraduates

Each department designates a faculty member to answer questions about the department's undergraduate requirements, including JPs. Don't hesitate to ask your departmental representative, or "dep rep," for general advice and assistance.

## General Reference Librarians and Subject Specialists

### Research Appointments:

<http://library.princeton.edu/help/appointment.php>

### Subject Specialists:

<http://library.princeton.edu/help/sub.php>

Librarians are available to help you make a research plan and find sources. Visit the Reference Desk in Firestone or any branch library, or make an appointment with a General Reference Librarian or Subject Specialist.

## The Writing Center—in South Baker Hall, Whitman College

### Appointments:

<http://www.princeton.edu/writing/appt>

Writing Center Fellows offer advice on every aspect of the JP, from getting started to formulating ideas and revising a draft. You can make 80-minute Writing Center appointments with a graduate student in your field or a related discipline.

## EndNote & RefWorks Help

### Workshop Schedule:

[http://www.princeton.edu/asap/endnote\\_refworks](http://www.princeton.edu/asap/endnote_refworks)

EndNote and RefWorks are software programs that enable researchers to automatically format references in any standard citation style. Save time later by learning how to use EndNote or RefWorks now.

## **Academic Support at Princeton (ASAP)**

### **Website:**

<http://www.princeton.edu/ASAP>

This website is a gateway to Princeton's academic support services, including the Library, the Writing Center, Data & Statistical Services, and the Productive Scholar, which offers workshops on Stata, LaTeX, MatLab, and other applications.

## **Deans and Directors of Studies**

### **Contact Information:**

[http://www.princeton.edu/asap/deans\\_and\\_directors\\_of\\_st](http://www.princeton.edu/asap/deans_and_directors_of_st)

If you're having serious trouble starting or finishing your JP, talk to your dean or director of studies. He or she can help you get the support you need.

## **Counseling and Psychological Services—in McCosh Health Center**

**Appointments: (609) 258-3285**

### **Information:**

[http://www.princeton.edu/uhs/ss\\_counseling.html](http://www.princeton.edu/uhs/ss_counseling.html)

If you're in a panic about the JP—or anything else—just pick up the phone and call. Counseling is available 24/7 during the academic year.

**Princeton University**

**Writing a JP:  
The Handbook**



Princeton Writing Program

**Writing a JP: The Handbook**

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Princeton Writing Program

[www.princeton.edu/writing](http://www.princeton.edu/writing)

Princeton University

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# Writing a JP

## 1. Preliminaries

### Good News and Bad News

The junior project may be the largest independent research project you will have undertaken at Princeton. If your JP is a paper, it may be the longest paper you have ever had to write. This can make it an intimidating project to face. The good news is that while writing a long paper usually takes more time than writing a shorter paper—and there is frequently more research to be done and more material to discuss—the real work of a JP is no different from the work of any scholarly writing. There is just more of it. This point might seem obvious, but students sometimes feel that there is something qualitatively different that goes into a long paper. This is one of the things that stands in the way of starting a JP and of hanging in there when it doesn't go well. Of course, the brute length of the paper involves some unique writing demands, but these are relatively minor compared to the basic work of discovering and developing your ideas. For this reason, much of the advice that follows is relevant to writing any paper, whatever the length.

The approaches to writing a JP discussed here are not meant to be taken dogmatically. The suggestions in this handbook are based on the collective writing experiences of Princeton undergraduate and graduate students, on many discussions and conversations with Writing Center Fellows who have worked with students on their JPs and theses, and with professors from various departments who have served as JP advisers. Some of the suggestions may be useful to you; others may not. Experiment with them and with other strategies and techniques that you come across until you find a way of writing that suits you.

The best way to use the methods discussed here is to begin thinking about your JP early in the semester and not a few weeks before the paper is due. You can't expect to write a good JP over a few days any more than you can expect to complete a marathon without any training. The ideas in this publication will help you think about how to train for the JP.

For some students the JP causes anxiety because it is hard work. In addition, the JP is regarded by the University community as a rite of passage; you won't find any undergraduates who don't think the JP is a big deal. There's not much you can do about these social dynamics, except to try writing *against* them; some students find that writing in the face of these pressures actually invigorates their writing. You can

also get help if you feel overwhelmed, and you shouldn't be reluctant to ask for it. If you think of the JP as the product of lots of writing, just as it is the product of lots of reading and thinking, writing it will become more comfortable.

### **Academic Departments and Programs**

Every department and program has its own requirements for the junior project, and it is crucial that you become familiar with your department's or program's requirements early. You may need to gather this information for yourself. You should also:

- attend your department's or program's meetings for students writing JPs;
- learn protocols and deadlines in your department or program for being assigned a JP adviser and for submitting written work;
- ask if your department or program has its own set of guidelines and/or a style sheet for junior papers. If it does, get a copy early and read it;
- talk with seniors in your department or program about the JP process.

### **Your JP Adviser's Role**

Meeting with your adviser is an important step in beginning your junior project. Bear in mind that professors—like students—work in different ways: some advisers will provide a great deal of help as you design your JP, and others won't; some will want to read a draft (or two) of every chapter, and others won't; some advisers will offer detailed evaluations of drafts you submit, and others won't. It is therefore wise to discuss at the outset what sort of role your adviser will play and what expectations your adviser has for you. Since this person is also your reader, it's a good idea to get as clear a picture as you can of what a JP should look like. Ask your adviser to let you read successful past JPs, if they exist on file.

Once you have found an adviser for your junior project, it is important for you both to establish regular meetings. Your adviser may save you early on from running down blind alleys, from undertaking a project that is too big, or from making other errors students commonly make when writing a JP. If you want help from your adviser, it is best to ask for it—rather than waiting to be asked—and to keep asking for it as you need it.

If your department or adviser doesn't give you a set of deadlines or a timetable, take the initiative to set deadlines with your adviser for your research, for proposing a thesis, and for submitting an abstract and drafts of chapters. Setting up a schedule will motivate you to get to work on your JP early. Moreover, professors are more likely to be responsive to your work if they have seen *your* interest and effort.

Each time you meet with your adviser, decide beforehand what you want to accomplish. Do you want to test out your hypotheses? to describe the tentative argument you are building? to ask for bibliographic leads or guidance with your fieldwork logistics? to discuss research methodology or the best ways to organize your paper into chapters? The more articulate you are about your project and the problems with which you are wrestling, the more likely you are to receive practical and specific direction from your JP adviser. It's also a good idea to bring a copy of your abstract—no matter how rough it is or how early in your JP work you are—to conferences with your adviser (see “Using Outlines and Abstracts,” Section 10). And, as a prelude to initial conferences with your adviser, you may find it useful to visit the Writing Center to talk over your project with a Fellow; in these meetings students often realize exactly what they need to discuss with their advisers.

## **Managing Your Time**

Producing a successful JP can't be done in two weekends. Developing a clear idea and viable research problem, carrying out responsible and substantial research, and developing and presenting your findings in the form of an argument take time. Even the logistical aspects of producing a JP take more time than most students anticipate: arranging conferences with your adviser and consultations with other faculty; planning wait-time for your adviser to read and comment on your drafts; revising your drafts (maybe more than once); typing up your JP in the acceptable format, including preparing accurate and complete endnote and bibliographic entries; and proofreading. You will be wise also to budget time for the unpredictable, though not unexpected: computer and printer glitches, illness, discovering a serious flaw in your argument late in the game, and the need to pursue unanticipated research leads.

Many problems that come with writing a long paper can only be solved by time. If you have fifty footnotes instead of five, it will take longer to deal with the mechanics (i.e., filling in bibliographic material, formatting, checking punctuation, etc.). Organizing this material with the help of EndNote or RefWorks (programs for managing bibliographic information) will help reduce this time, but it still pays to organize this material as you go rather than all at once. To get started arranging your references with one of these programs, go to: [http://www.princeton.edu/asap/endnote\\_refworks](http://www.princeton.edu/asap/endnote_refworks)

## 2. Generating Ideas

Every writer has had the experience of avoiding the blank page. There can be days or weeks when the TV, the gym, the couch—almost anything—will be a magnet that pulls you away from your writing. And every writer knows the frustration of sitting down with a tablet of paper and a pen, or at the computer, and feeling incapable of producing any words at all. A degree of procrastination and writer's block are frequently part of writing. You might find that the toughest problem of all is coming up with an idea to begin with.

If you have ever tried to meditate, you know that you are supposed to try to clear your mind of all the stray thoughts that are constantly passing through it. If you've tried to do this, you also know that it takes a lot of effort and a lot of practice to achieve. Writing is a bit like that. Getting an idea about something you read or something you hear about in a lecture is not a problem. It's next to impossible *not* to have ideas about those things. Most of the advice offered in this handbook is based on the view that writing a JP is essentially taking an idea of *whatever* quality and improving it by working on it through a process of rewriting. In this way, writing is like sculpting rather than like archery; you can begin with something crude and rough and end up with something great. Writing is a slow process that takes time and labor; it's *not* like attempting to hit the bull's eye with your first shot (see "Revision," Section 8).

## 3. Writing as Thinking

One of the best ways of thinking about something is to write about it. This may be a surprising bit of advice because many students assume that writing is what you do after you've done your thinking. They see writing as the way that thought is presented—a kind of packaging—rather than as a way of thinking. But consider the work you do by "talking through" an issue in your head or with someone else. Spoken language isn't the packaging of thought; it is one way of thinking. Writing can be like that, too.

Take seriously the things that puzzle you and the questions that occur to you in a lecture, in your reading, or merely in the course of your daydreaming. Often the questions will lead nowhere. But sometimes they will take you down interesting and surprising paths. It is unlikely that many people would spontaneously decide to explore the notion that surfaces differentially reflect different wavelengths of light, whatever the ambient illumination, but every child wonders why the grass is green. A compelling question as basic as *Why is the grass green?* can lead you to an interesting

and sophisticated topic, such as that surfaces differentially reflect different wavelengths of light, whatever the ambient illumination.

For many people, coming up with an idea to write about begins by wondering about something they have heard or read. You needn't have a clearly articulated claim in order to write. Great ideas are often those that come out of being puzzled or confused about something that no one else has noticed. If you've wondered about something in your field, try to formulate your thoughts as a question. Talk over the possibilities with a potential adviser (or with your departmental representative, who may be able to suggest a suitable adviser). Then think and write about that question. Trying to answer the question may lead you to an idea that will make a good JP topic.

### **Writing to Generate Ideas**

Sit down with a pencil and paper, or at the computer, and give yourself a short but specific amount of time (say, two minutes) to write. The "rule" of the game is that you have to keep writing throughout the time you've given yourself. Don't stop to mull over what you've written, to change the grammar or spelling, to wonder about word choice, to think about relations among sentences or phrases, or to worry if what you've written is any good. Just start writing and keep writing. If you keep at it, two minutes at a time with a break in between, eventually something *will* come to mind. Putting whatever comes to mind down on paper may break your "block" and allow you to start working toward expressing ideas that are relevant to your JP. This sort of "freewriting" allows you to express whatever thoughts you might have about your topic without letting anxiety about how good your ideas are interfere with your thinking. When you're working to get your ideas on paper, try to silence your internal editor. If you worry about your writing as you're working, it's much harder to get words on the page.

Freewriting helps ideas surface, often in a confused and disorganized way. That's fine. What matters is letting yourself explore the possibilities. After you've done some freewriting, see if you can say in a more precise and orderly way what has emerged from the freewriting. Then do some more freewriting and see what *that* produces. Some of what you write will have to be thrown away; some of it will lead to an idea that can be developed; some of it may even be usable as it is. Eventually, you may be able to develop a thesis and the beginning of an argument just by freewriting.

## Writing to Develop Ideas

As you seek to develop your ideas, try some form of writing as soon as you can. Write about the difficulties you encounter thinking about your ideas, about what interests you in your topic, about what research you think you ought to pursue. Take notes while talking with a classmate or professor about a problem you've come up against in your JP. Or think out loud into a tape recorder, and then take notes on what you hear yourself saying. Also, write down questions that you think may be worth trying to answer. The very act of trying to formulate a question will help you think about your topic. And remember: developing a question, like developing a thesis, may have to happen gradually. Once you've formulated an incisive question, the answer may be relatively easy to express. Writing will also spark ideas that hadn't occurred to you and help you to confront issues you might not see if you are just thinking about your topic. No matter how well formulated the paper is in your mind, no matter how detailed your outline, no matter how clear the logic of your argument, chances are that when you put your ideas into full sentences, you will see problems that were hidden. And the sooner you recognize those problems, the sooner and more effectively you can work on them—and the less likely it is that your paper will be torpedoed by faulty analysis or gaps in your argument.

Choosing the topic that most interests you can engender some complications. We tend to work on ideas that matter to us, which can mean that we have investments in them that can interfere with writing. To take an extreme case, if you choose to write about how euthanasia has been used as a political tool in American elections, it's not difficult to see how your involvement with that subject might make it more, rather than less, difficult to write about. If you're having trouble finding a satisfactory topic, consider picking a topic more or less at random. Agonizing about your subject can be a way of procrastinating; it is certainly better to be working on *some* topic than to be avoiding work by searching for the perfect topic. Pick a topic in a broad area of interest—perhaps in consultation with your adviser—that can be handled in a semester. It might be a topic about which there is an accessible and well-defined literature, a topic that hasn't been done to death, or one that your adviser thinks would make a good self-contained paper. Choosing a topic this way means that you're likely to find a project that will be less personally complicated and more tractable. And although it might be initially less interesting to you than other potential topics, it will probably get more interesting as you invest your time and energy thinking about it.

There is one other practical point worth mentioning. Many people try to pick a JP topic with an eye to what will make a good senior thesis. That's a sensible strategy, but it shouldn't inhibit you from writing on a topic that may not make a good first draft of a senior thesis. First of all, it's hard to predict what a JP will look like when

it's done. Topics that seem limited may lead you down paths that you can't anticipate. Conversely, topics that seem promising can sometimes turn out to be more restricted than you initially realize. More important, a topic that seems likely to lead to a senior thesis before you've started to work on it can turn out to be too big for a one-semester JP. Ideas are labyrinths; even the smallest can lead you in any number of directions. If you pick something that you can handle in a JP, chances are that it will open up other vistas to you as you go, and you may learn more about writing a long paper by getting the feel of writing on a topic of the right size than by writing only a part of some future paper. Starting small may give you the skills you need to deal more efficiently with your senior thesis next year.

## 4. Research, Reading, and Writing

Working on shorter research projects, you have likely discovered that Research is partly random and partly directed. By all means, work randomly for a while; you never know what you may find. But at the same time, get right down to saying something specific. That way, you'll be working *efficiently* by constantly trying to express your ideas. Trying to develop ideas will also give you a shopping list for what to search for and read when you head to the library.

Reading is a central part of most JP research. Obviously, you have to read what has been said on your topic in order to engage in the conversation and find out more about the material on which you are working. If you are uncertain about how to survey the relevant work on your topic, don't hesitate to ask the reference librarians for guidance. They can be enormously helpful, especially in the early stages of JP research (see "Campus Resources for JP Writers," inside of back cover).

But you can get too much of a good thing. For most of us, it's easier to read article after article, and book after book, than it is to sit down and face the blank page or screen. And, if you read passively, you're not evaluating and synthesizing the way you do when you write. Nor does reading require you to take a risk and expose *your* ideas. What makes writing so hard is that it's fundamentally a process of revealing a part of yourself for others to look at and judge. Doing that can be frightening as well as rewarding. As crucial and interesting as reading and research are, they can also become ways of putting off the moment when you have to start writing.

Try, then, to start writing as soon as you begin your JP research. Even if you feel you still have very few ideas about your topic, you can at least respond in writing to what you are reading. Write notes to yourself about ideas that your reading suggests to you. You might find it helpful to keep a notebook as you read—an intellectual dia-

ry—where you record and explore ideas that occur to you, no matter how half-baked they may seem. By forcing yourself to put your ideas into words, you will develop your critical thinking much more effectively than you can by reading alone. Starting to write straight off will give you more time to develop your thinking and may make the process of writing easier.

The same holds true for other sorts of JP researching and data-collecting. After a certain point, conducting another interview, running another lab test, or collecting another set of questionnaires can be a way of avoiding writing. Early on, and perhaps in consultation with your adviser, set parameters for the scope of your research and a timetable (see “Managing Your Time,” Section 1). Reading and researching for three months and “writing up” what you’ve learned in two weekends will not result in a strong JP. One more important note: if you are having difficulties taking useful notes on your research or turning your notes into a paper, you should discuss these problems with your adviser, another professor, or a preceptor in your field.

## 5. Crafting a Good Research Question or Problem

A JP, like any academic paper, is, above all, an exercise in exploring, developing, and defending an idea. The heart of a JP is a single idea (or perhaps a closely related set of ideas) that you want to investigate. Often, the central idea of a JP is the answer to a question you’re asking or one that has been asked by a scholar in your field. Answering that question will entail a process of reading, reflecting, writing, and reconsidering the question a number of times. This means that there are two central problems you have to solve in writing a JP. The first is finding and clearly articulating your idea. The second is *developing* this idea through continued examination and analysis of evidence. In writing a scholarly argument, you must express an idea to your reader, yet it can’t be just any idea. It must be both complex enough to warrant serious exploration—rather than simple, static, or obvious—and it should grow and develop in conversation with other texts. The expression or assertion of the idea is often called, in academia-speak, the *thesis*. The investigation of this idea through analysis of evidence (quotations from sources, data, statistics, etc.) and the ultimate claim you make about it is called the *argument*. Given this definition, the JP is no more than *a claim argued through the analysis of evidence*.

Unfortunately, there’s no recipe for asking an interesting or suggestive question or finding a claim with the right features; much of what you have to do is take a reasonable guess and then adjust your plans as you go along (more about that below).

## **Losing Confidence in Your Thesis**

It may happen that you commit yourself to a thesis and stick to it through much of your work, but at some point, perhaps late in your writing, you get the disturbing feeling that you no longer believe what you are arguing. In one way, this is an admirable thing to have happen because it means that you are considering an issue in impartial terms and are ready to make a judgment based on evidence and analysis. But, of course, in practice it's a nightmare. You've put a lot of work into your JP, and you may not have time to start over, even if you wanted to begin again.

There are a couple of strategies you might adopt in this situation. First of all, determine for certain whether you have actually changed your thinking about your topic or whether you have only lost track of what you were trying to say (see "Using Outlines and Abstracts," Section 10). You can do this by reviewing your own work or discussing it with your adviser or another objective reader. With luck, you'll discover that you need only refocus your argument. If you have indeed changed your ideas, you have the more difficult, but not impossible, task of shifting the thrust of your argument while still making use of your earlier work. Again, discussing this situation with your adviser or with a Writing Center Fellow will probably be useful.

## **Discovering a Similar Idea in Someone Else's Work**

A second unsettling experience that may occur as you write your JP is the discovery that someone else has already written something much like your paper. This can feel devastating because a big part of academic achievement is doing something *first*. This experience also entails the practical problem of substantially changing your JP in order to make an argument that has not already been made.

How serious this problem is depends on when you make your discovery. If you find early on in your work that your first idea has been developed by someone else, not much is lost. In fact, finding that someone else has published a paper or a book defending your thesis might even mean that you're on the right track and have more support for thinking as you do. This is why it's a good idea to have a look, no matter how briefly, at the central books or papers on your topic early in the JP process. If you know what's out there, you're less likely to reinvent the wheel. The risk of duplicating another scholar's work provides an additional reason to have an early meeting with your adviser; as an expert in the subject, he can tell you right away whether a thesis you're developing has already been dealt with or exhausted by someone else.

But what if you have the terrible luck to come across the relevant work toward the end of writing your JP? Even if this is the case, all is not lost. There's nothing "wrong"

with rediscovering something worthwhile (assuming you've made a responsible effort to find out what has been written on your topic and that you acknowledge earlier work on your topic when you discover it). Newton and Leibniz developed calculus independently, and we obviously don't think of either as a fool or a plagiarist. It will almost always be possible to find differences between your writing and earlier writing on your topic. Emphasize the differences while acknowledging the overlap between your ideas and the earlier work. You can also take material that has been dealt with by other authors and see where you can extend it. You may be able to use the older work as a jumping-off point for ideas that are genuinely original. What you must not do is ignore the earlier book or article and pretend you haven't read it. Your adviser or Fellows at the Writing Center may be able to help you see ways to integrate your research and writing with existing scholarly work on the subject.

## 6. Developing an Argument

Let's assume that you have done enough thinking and writing on your topic to have generated an idea that can serve as a working thesis. What you now have to do is find enough evidence to subject to analysis, and begin the process of writing and reflecting about this material to develop the thesis. "Reflecting" is essential here: you must consider your idea as fully as possible, which includes entertaining the many different ways of thinking about your topic, some of which you may ultimately reject. As you present your argument over the course of the JP, you want to draw your readers through the various twists and turns of your thinking on the subject, anticipating their potential disagreements and addressing any possible counterarguments. If you do a good job, you will have informed your reader about the complexity of your idea, and offered good reason for believing your claim about it.

This is, in a sense, the core of an academic paper. We have all had arguments with people who believe things we do not. When pressed to say *why* they believe these things, some people only respond by saying them louder. Saying what you believe without giving a fully formed and well-considered explanation for believing it prevents someone else from deciding whether it is worth believing or not. The gist of an academic paper, and really of all intellectual exchanges, is arguing for and considering an idea from as many reasonable vantage points as possible so that others can evaluate that idea for themselves. Of course, you can believe all sorts of things without having good reasons—we all do that—but engaging in intellectual debate means providing good reasons for someone else to believe what you do, and leading that person through the thought process that got you there. The analysis of and explanation for a

claim is called an *argument*. In effect, the argument of a JP is an answer to the question *Why is the central idea or thesis of this JP valid or plausible?*

One way to think about how to develop an argument for the claim you want to defend is to remember what made you believe or consider it in the first place. Since you thought it was a sufficiently reasonable or interesting claim, you probably had some reason for thinking so. If that reason was compelling enough for you, it might also be compelling for your reader. Of course, the reasons we have for believing things come and go faster than TV commercials; and upon reflection, they often turn out to be no more substantial. Still, whatever led you to an idea initially can also lead you to discover whether there are convincing reasons for holding that idea.

Once you have a general sense of a potential argument, you will have to go through a procedure similar to the one that produced the thesis. Think as precisely as you can about the various steps of the defense you are going to make. Perhaps the support for the thesis is complex and has to be developed in pieces. Here again, you may be unsure how to proceed, but the way to work is just the same as before: you have to think about what you've read and work up a tentative formulation of an argument. As you continue your research, you will discover material that will help you evaluate this argument. That reading may also suggest new arguments or refinements of the original one.

Another useful technique for developing an argument is to think of reasons why a thesis could be *invalid*, the possible counterarguments that would challenge your claim. That is, try to imagine why someone might not believe your thesis. Even an obvious or superficial objection to your argument may lead you to see new ways of defending it.

Once you have a thesis and a sketch of an argument, you've done what is by far the hardest and the most important work of a JP. All the rest is working out the details. The details are crucial, but it is generally easier to work them out than it is to find that central idea and create a rough argument for it. Once you have those, you have a framework for the whole paper.

### **Asking and Answering a Question**

A slightly different way of thinking about the process of developing an argument is in terms of questions and answers. One way of trying to generate potential arguments is by posing questions concerning the potential validity of the thesis. One can think of a JP, therefore, as an answer to a question or a solution to a puzzle

(the thesis) followed by an explanation of why that answer or solution is a good one (the argument). The formulation of a question, the answer to the question, and the explanation of why the answer is satisfactory, is the JP. In other words, your paper is constituted of three things: the question; the one or two sentences that answer the question (the thesis); and an extended analysis of evidence and explanation of why the brief answer is sensible or adequate (the argument).

Thinking about a JP in terms of asking and answering a question is not fundamentally different from the original formulation of positing, exploring, and arguing a claim. In both cases, you will have to produce a thesis—a claim to be defended or the brief answer to your question—and an argument—the analysis of evidence that explores and substantiates your claim. In both cases, you are taking a stand on an issue or point of interpretation and arguing why your position makes sense by looking at evidence and considering numerous points of view.

### **Exploring a Question or a Claim**

Another variation on this approach is to think of the thesis as the question itself. It has been said that great scientists are not people who make important discoveries but rather people who ask the right questions. Sometimes getting to the relevant question about a subject requires the most insight. Explaining why something is puzzling or why there is a question that no one has noticed can be the subject of a JP.

It is sometimes possible to raise a question or a claim and simply explore it without taking a stand on it. For example, you might be interested in exploring the ethical issues raised by new genetic technologies. You may have no particular view that you want to defend or convince someone of. You may only want to raise questions or speculate about possibilities. This can be a legitimate approach to a JP. You might, for instance, consider the question of what is going to happen now that genetic technology makes it possible to clone human beings. What moral questions does this raise? What social practices could this affect? What policy issues should we consider? You may not take a single position on any of these questions; your JP would contribute to the debate precisely by raising useful questions and developing possible answers to them.

A caveat is in order here. Thinking about a JP either as an extended development of a question or as an exploration of an idea or a question is a risky business. JPs that don't follow the format of producing and defending a claim or asking and then answering a question can wind up being shapeless, and the reader may finish the paper unsure about what you were trying to do. Although some topics are better handled in this way, be cautious about writing a JP using this format. If you think you would

like to write an exploratory paper, try the idea out on your adviser before you commit yourself to the project. Such a paper requires more subtle handling than most, so be sure that the chance you are taking is worth it—that the benefit of using this strategy outweighs the risk of the more difficult format.

### **Argument Structure**

Whatever format you decide to use, any JP has to consist largely of giving reasons for what you are saying. Even if you are developing or exploring a question, you have to do so by marshalling evidence for your claims. So, for example, if you think that genetic technology raises a problem about how we think about reproduction, you will have to explain *why* there is a problem. You will have to justify your suggestion and convince a reader that what you say is correct. For this reason, even if you don't take a stand on a central thesis, there is no way to avoid taking a stand *somewhere*. Remember that the central aspect of an academic paper is arguing a claim, and this holds true even if you don't end up defending a thesis in the traditional sense.

Outlines and abstracts serve to state your thesis, but, more importantly, they articulate the *structure* of your argument. The structure of an argument refers to the relations among its parts. The arrangement of the parts of an argument is its *structure*. Each of the parts of the argument has to be developed in the JP, and the parts have to be arranged coherently for the argument to be successful.

Having an outline or abstract—the bare bones of your argument—will bring out the different claims you are making, and the relations among them, in a clear way (see “Using Outlines and Abstracts,” Section 10). With this information, you can better see where there are omissions or extraneous parts in your paper and whether the parts fit together in the most effective way. If you have difficulty evaluating the effectiveness of your argument, review your outline and abstract with your adviser or a Writing Center Fellow.

## **7. Problems You May Encounter in Crafting a Thesis and an Argument**

Thus far, you've read a description of what's involved in generating the main parts of a JP: first find a thesis, then develop an argument. *In practice*, it can be difficult to produce a clear thesis—one that you can express in a sentence or two—and reasons

for believing it is valid. Often, all that you will have to work with as you begin your paper is an interest in a topic or a vague idea about something. Early on, you're likely *not* to know the claim you will ultimately make or the defense you would create even if you were able to articulate your final thesis.

*This vagueness or confusion shouldn't stop you from pursuing what you're interested in!* You should pick an area of inquiry in which you're interested (after all, you will have to live with your subject for a while) and then begin to find out about your topic. As you do, ask yourself what interests you about the topic, what puzzles you about it, and whether you have particular views about it or not. If nothing comes to mind, try some freewriting and continue reading around in your subject area. As you begin to formulate questions or views about your topic, attempt to identify a claim that satisfies the criteria mentioned earlier: it should be interesting or controversial enough that it's worth defending, but not so broad that you'll need the space of a book to develop a convincing argument to defend your claim. Similarly, begin to think about whether your claim is valid and worthwhile. As you read and write about your topic, your thesis and argument will become clearer and more refined.

The description of finding a thesis and an argument offered earlier (sections 5 and 6) is an *idealization* in the sense that you may not—probably will not—*start* with a clear and well-defined thesis and argument. You will develop those as you go. But the description above is not an idealization in the sense that you must have a clear thesis and argument by the time the JP is *finished*. In other words, a good JP has to have a thesis and an argument, but you don't have to have them right away.

You cannot, however, somehow work on your JP while leaving the thesis and argument until the night before the paper is due. Too much hard and sustained thinking is involved. More importantly, in order to carry out much of your JP research, you will need to have a working hypothesis and some ideas about whether that hypothesis can be defended. Having a thesis and an argument, then, is really a matter of degree. *The sooner you have an idea about the claim you want to defend and an idea about how you are going to defend it, the better.* As early as possible, it is worth trying to develop some version of a thesis and argument. Even a tentative thesis and argument will help you direct your work productively instead of just reading aimlessly.

Exploratory reading is necessary, of course, when you're beginning your research. Give yourself a chance to see what's out there before you decide too quickly on the argument you want to make. Along with your earliest reading, you should start trying to define what *you* want to say and how you will go about arguing your position. Your thesis and your argument will evolve as your work proceeds. There is a kind of symbiosis between your thesis, your argument, and your research: your research will

guide your thinking about the thesis and argument, and your thesis and argument will point you in the direction of what to read and what issues to think about. It can be uncomfortable to be undecided about your thesis for a while, but it is worth staying open to possibilities *at the same time as* you refine the central claim of your JP.

Developing a thesis and an argument both take time and work. Academic writers sometimes have “revelations.” A terrific idea suddenly occurs, and a compelling thesis and argument emerge at once. But this is rare. And even when such intellectual lightning strikes, it always takes work to put the idea down in words and flesh it out fully. Solving those problems is the day-to-day work of writing and thinking. For instance, we don’t value Newton only or primarily for his insight that there must be a force that attracts objects to one another. We value him for the work that he did to develop that idea precisely and in detail. An apple falling on Newton’s head makes for a good story, but what makes the story important is the work that came afterwards.

You don’t have to have a revelation before you start your JP. Start with whatever ideas you have, then develop and hone them. How well the JP turns out will be much more a matter of how well you articulate your ideas than of how striking the original idea was.

## 8. Revision

To conceive of writing as thinking and developing your ideas means that the JP—in late and early stages—is shaped by rewriting. At the very end of your JP writing, you will, of course, need to fix punctuation, do a spell-check, and read the paper one last time for other mechanical errors. While proofreading can (in principle) be left to the last minute, real revision cannot.

Revision involves developing ideas in more detail, pulling in more evidence, taking analysis one step further, reorganizing sentences within a paragraph and sections within a chapter, or reordering entire chapters. It involves shifting your focus, changing emphasis, adjusting the tone in your writing. Revision also entails deleting material that no longer appears germane to your argument and incorporating new material you’ve just stumbled across. Don’t be afraid to throw away a chunk of writing and rewrite it from scratch. This can be a painful thing to do when so much work and energy can go into writing even a single sentence. But a paragraph or section of a paper that isn’t working can be a sign that there is a gap in your argument or a lack of clarity in your thinking. Substantial revision can help you strengthen the writing by improving the thoughts.

Revision is crucial when writing a long or complex paper. By the time you write

the last section, you will probably have changed your mind about a number of things (either explicitly or without realizing you've done so). You may have subtly changed the emphasis of the thesis; you may have rearranged parts of the argument; you may have changed the terminology you use to express particular ideas. As a paper gets longer, it becomes difficult to keep it an organic, sustained piece of writing. As you change your mind about something, go back to the earlier parts of the JP and rewrite them accordingly. If you change the emphasis of your argument or the formulation of an idea, ask yourself (or a friend) which version is better. Then rewrite. To repeat: if you keep asking yourself where you're headed, what your thesis is, and what the main points of your argument are, and if you keep rewriting in light of your answers to these questions, eventually the paper will become more unified. To use another analogy, writing a JP is like kneading bread: If you keep working at it, it gains a uniform consistency. Your writing will become tighter and your ideas more lucid if you keep reworking them. This applies both to the problem of making your *argument* coherent—that is, making your ideas hang together—and to making your *writing* coherent—that is, having the paper read clearly.

Late-stage revision means polishing your prose to insure that you give your ideas clear, strong articulation. Writing Center Fellows won't proofread or copyedit your JP, but they will help you work on revising paragraphs or chapters.

Below are general strategies for revising your writing.

- Write and rewrite. If you do only one draft, tidy it up, and submit it, your JP won't be as lucid and compelling as it would be if you do many drafts with substantial revisions. Keep in mind that writing is like sculpting: as you rewrite, the contours of your ideas get clearer.
- Read your writing out loud. You are much more likely to notice awkward passages in your own writing when you read it out loud than when you read it silently. This holds true even with writing that you've just produced. Better yet, have someone else read what you have written out loud while you take notes for revision based on what you hear.
- Show your JP (or bothersome sections of it) to a few other people, and ask them to tell you what they don't understand. (These friendly readers don't have to do anything more complicated than that.) The sort of feedback you can get from a classmate is a very efficient way to identify unclear writing and thinking.

- Keep forcing yourself to refine your ideas. Writing is muddled or rambling most often when the writer isn't sure exactly what to say or how to say it. As you become clearer about what you want to say, you'll have an easier time finding comprehensible ways of presenting your ideas. As a general rule, the more effort you put into developing and clarifying, the stronger your JP will be.
- Try to write part or all of your JP and put it aside for a while. When you come back to what you've written, you will read it with a fresher, more objective and critical eye. When you're knee-deep in your JP, it's easy to be deceived into thinking that your writing is clear. It may be that your ideas are clear in your mind but haven't been well expressed in your writing—and you won't be able to recognize this situation without some distance. Reading your writing a few days after it's been written is more like reading someone else's writing, and it's easier, therefore, to spot the problems.
- Submit a draft, along with written questions or concerns you have about specific sections, to your adviser in time for the adviser to make comments. That way you gain the advantage of your adviser's feedback guided by your needs.

## 9. Audience

Academic writing, like any other form of writing, is an attempt to communicate an idea. Anything you can do to communicate more effectively is worth doing. Your ideas will be better understood, and your audience will be more receptive, if you don't make your readers work unnecessarily hard. This is not at all to say that you should avoid exploring complex or intricate ideas. You should strive, however, to express even difficult ideas in as clear and accessible a manner as possible. If the ideas are inaccessible, then your reader can't appreciate them. For this reason, it's a good idea to give your reader a map to your JP—an overview of your argument—as soon as you can. This will guide the reader who gets lost later on and also give reassurance that the reader knows what you're up to. Readers of scholarly papers will generally be grateful to know the point of your paper (the thesis and a sketch of the argument) as early in their reading as possible. Crafting a strong introduction to your JP will reduce the effort your reader has to make to figure out what you're saying as your paper unfolds.

Sometimes a JP is harder to read than it ought to be because the writer assumes that the reader knows enough to fill in various gaps in the argument. After all, the reader may be an expert. This is a dangerous way to write. First of all, you can never

be sure about what your reader may know or believe about your topic. It is fair enough to expect the reader to know that the War of 1812 started in 1812, but you may be wrong in assuming that the reader sees the causes and results of that war the way you do, and can therefore supply the missing pieces of your argument. Your challenge in scholarly writing is to present *your* analysis, findings, interpretations, and conclusions. When you fall back into assuming that your reader knows what you mean—or knows better than you what you mean—you are abdicating your role as a writer. And this generally makes for dull, unconvincing, or downright incoherent writing. You may also want people other than a specialist on your topic to read your draft; such readers won't be able to fill in the gaps to clarify your argument the way someone familiar with your topic could do.

In short, it is good to be as clear as possible in your writing. Of course, saying this is as uncontroversial as saying it's good to be nice or smart; the problem is how to do it. There is no royal road to clarity, but there are a few things you can do that will help.

- Imagine as your reader an intelligent person—e.g., a friend or relative—who is unfamiliar with your topic. Try also to imagine a reader who is *interested* in your work and looking for the best in it rather than someone whose sole purpose in reading your work is to find fault with it. Having this sort of person as an imaginary audience will prevent you from being distracted by what a more experienced scholar might think about what you're writing at that moment. It will help you to draw out your ideas more effectively, because it will enable you to avoid the temptation of not writing clearly about something on the assumption that your adviser is familiar with your material and can fill in gaps in your analysis for herself. Perhaps most important, writing to a sympathetic reader may help you to feel more confident and therefore to write more confidently.
- Give your readers signs as you go along to indicate where you are in your argument. These signs let your readers know what you've just been doing and what you're about to do, minimizing the chances of frustrating or losing them along the way.

## 10. Using Outlines and Abstracts

An outline is a point-by-point summary of the ideas of your JP. A good way to do an outline is to write down all of the essential ideas in your JP in the form of full

sentences. The sentences should be arranged in a way that shows the development of your argument and the relations among the different parts of the paper. Using full sentences is a useful way to start writing and expressing your ideas clearly. Merely writing headings is too vague if you're trying to clarify your thoughts because an outline isn't just a list of the things in your JP; it ought to reveal the *structure* of the JP. That is, it ought to show what the thesis is, what the argument for that thesis is, how one thought or line of reasoning leads to another, and how the parts of the argument work together to give the reader a reason for believing that the thesis has merit.

An abstract is a short paragraph that captures the bare bones of your thesis and argument. It should say everything of central importance in a way that will give the reader a clear overview of what's contained in the JP. An abstract should include the few things you would like your reader to remember long after the details of your JP may be forgotten.

You can give an outline or abstract to readers whose opinions you would like to have but who don't have time to read through all of your JP. Your adviser or a friend will quickly be able to get the gist of your paper by looking at a well-written outline or abstract. And since outlines and abstracts are brief, you can reasonably ask a reader to look at a number of drafts as your thinking and writing progress.

## **About Outlines**

Most of us have been taught that outlines are the things we use to organize our ideas *before* writing. An outline can indeed be used as a sort of blueprint before you begin to write. But it will also be clear from everything said here that you don't need to wait until your ideas are well developed before you begin to write.

Outlines have other uses that are compatible with doing lots of writing early on. You can use an outline as you are writing your JP in order to see the skeleton of the argument you're developing. An outline is a good way to see at a glance the structure of the paper. And, again, you needn't wait until the structure is already clear before using an outline. Since an outline will help you to be more objective about your thinking, attempting an outline early on will make it easier to see where you're missing something. Try making *lots* of outlines as you go. Doing so will allow you to confront the ideas you're developing and to see where they need work.

You can also use an outline *after* you've written a full draft of the JP to check that there are no holes in your discussion and to help you see whether a rearrangement of your ideas might make your argument clearer. In other words, make an outline after you do the JP and see whether the structure of the paper actually captures the structure of the argument that you want to make. If it doesn't, use the outline to

decide where the JP is problematic and which sections need to be reorganized; then go back to those parts and revise them. This process may lead you to discover that there are outline headings that don't correspond to anything in your paper, in which case you'll know what you have to write next. You may also find that there is material left over in your paper that doesn't fit anywhere in the outline, in which case you'll know what you have to throw out. Using an outline this way illustrates how your research and your writing evolve together. As you write your JP, the outline of your ideas will change, and you can, in turn, use those outlines to go back to your writing and improve it.

An outline can be a powerful tool to rearrange quickly and effectively a paper that's badly disorganized. If you think the structure of your JP is unclear or confused, try writing an outline of your ideas either based on what you've actually written or on the ideal shape you'd like your JP to have. If your outline is clear and coherent, the paper that will result from your adding, deleting, or moving parts to match the structure of your outline will also be coherent. This technique can be used to work on the JP as a whole or on individual sections.

### **About Abstracts**

An abstract is a paragraph that expresses the main claim and argument of a paper. (Science journals usually publish abstracts at the beginning of articles so that people who are too busy to read the article can get the gist of it quickly.) You can use an abstract to check that you have a clear grasp of what your thesis and argument are. If you can state them clearly in a few sentences—and in such a way that someone who doesn't know the subject will still be able to understand your main idea—then you know you've got a good sense of the ideas you're trying to express.

As in the case of outlines, you can use multiple abstracts as you work on the JP to see where your ideas are not fully formed. When you feel you've begun to get a handle on what you want to say, write an abstract. The abstract will help you decide whether you really are thinking clearly. As you continue to work on the JP, write abstracts and compare them to your drafts. You are likely to find that when you force yourself to say in a few words what your plan of argument is, that plan turns out to be different from what you've been writing and arguing. Sometimes the abstract version is better because it represents the essence of your ideas and their logical structure, which may be lost in the paper itself. If that's the case, go back and revise the JP. If you notice differences between the latest version of your abstract and your latest draft but are not sure how to reconcile the two, review your material with your adviser or with a Writing Center Fellow. Again, if you're writing regularly—abstracts, freewrites,

outlines, drafts—you won't find yourself in the position of discovering major gaps, shifts in focus, lack of clarity, and the like, right before the paper has to be submitted. It's also a good idea to produce a final abstract and outline before you submit your JP. If you have a clear and coherent abstract and outline, *and if the JP actually corresponds to them*, then you can be confident that your argument is clear and coherent as well.

One further useful function of an abstract is that it can help to solve the knotty problem of what to do in an introduction. Often, an abstract can make a good first paragraph, or a summary paragraph, in an introduction. Because it ought to tell your readers everything you really want them to know, putting it at the beginning of the JP will give them a good sense of what the JP is about.

## 11. Final Thoughts

Here are three last bits of advice to keep in mind as you work. First, real writers—professors and others who write for a living—don't write in isolation. (Check the acknowledgments pages of the books you use in your JP research.) Professors talk about their ideas and show their drafts to friends and colleagues as a matter of course. It is a good idea for you to follow their example.

Second, consider some words of advice a Princeton professor offers his students: “Real writers really do work at their writing. Don't think something is wrong because your first draft is painful and turgid. Most first drafts are turgid. As Dr. Johnson said, ‘What is written without effort is in general read without pleasure.’ Or as Sheridan put it: ‘Your easy writing is vile hard reading.’ Good writing is hard work.” Don't expect it to be easy.

And, finally, an anecdote from writer Anne Lamott about getting a handle on big research projects:

Thirty years ago my older brother, who was ten years old at the time, was trying to get a report on birds written that he'd had three months to write, which was due the next day.... He was at the kitchen table close to tears, surrounded by binder paper and pencils and unopened books on birds, immobilized by the hugeness of the task ahead. Then my father sat down beside him, put his arm around my brother's shoulder, and said, “Bird by bird, buddy. Just take it bird by bird.”<sup>1</sup>

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<sup>1</sup>Anne Lamott, *Bird by Bird: Some Instructions on Writing and Life* (New York: Pantheon, 1994), 18–19.

# Checklist and Timetable

## *Semester prior to undertaking your junior project*

- \_\_\_ Find out whether your department or program has guidelines and a style sheet for junior independent work. If it does, get a copy early and familiarize yourself with the information.
- \_\_\_ Find out when your department's or program's meetings are for juniors. Attend these meetings. Take notes, ask questions.
- \_\_\_ Find out your department's or program's schedule and procedures for assigning advisers.

## *Very early in the semester*

- \_\_\_ Meet with your JP adviser to discuss generally the nature and scope of your project and to begin formulating your research problem or question.
- \_\_\_ Create a working schedule for your research, writing, and adviser meetings with specific dates. Give a copy to your adviser for review. Revise as needed.

## *Early in the semester*

- \_\_\_ Broadly research your topic.
- \_\_\_ Formulate your research problem. Write out a working thesis and submit a copy to your adviser or follow your department's or program's procedures for same.
- \_\_\_ Begin first draft while focusing your research more narrowly.
- \_\_\_ Meet with a Writing Center Fellow as needed.
- \_\_\_ Schedule writing deadlines (for abstracts, chapters, sections, drafts, outlines—whatever you and your adviser determine is best for your project and working style). Give a copy to your adviser.

## *Mid-semester*

- \_\_\_ Finish and submit first draft with your questions or concerns about specific sections.
- \_\_\_ Review the schedule of writing deadlines for drafts and revisions with your adviser.