Hill Lab Handbook

A Guide to Success

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Acknowledgments

As is typical of Hill Lab, this guide has been a collaborative effort. Early on, I asked a few graduating students to provide some "words of wisdom" that I could pass along to future students. It was their thoughtful remarks that inspired me to develop this guide. Since then, all of my former graduate students have directly or indirectly helped to create this guide. At times, they directly contributed to the content by suggesting advice or resources. At other times, they indirectly contributed because it was through a conversation or experience with them that I recognized that some expectations were unclear or some etiquette was unknown. Thanks go out to Aaron Goetz of California State University, Fullerton – who provided much of the wisdom in these pages. I would also like to thank all of my current and former graduate students: Danielle DelPriore, Chris Rodeheffer, Max Butterfield, Marjorie Prokosch, Tom Blue, and Randi Proffitt-Leyva.

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Welcome and Introduction

Welcome to the Hill Evolutionary Social Psychology Lab. Be proud of yourself; only a tiny percentage (approximately 2%) of the applicants who apply are admitted into the lab. Every year, I have to make difficult decisions about who is admitted into the lab and who is turned away. During your time in the lab, keep in mind that your presence means another student's absence. Take full advantage of this opportunity. **You have 5 years to fill your vita with as many solid publications as possible. You do not want to waste a minute of this time.**

If you want to get a job in academia, you are going to have to train like an Olympic athlete. Obviously, your training will include fewer running drills and less sweat, but your training and workouts will be just as demanding and will require just as much focus and determination. Instead of sand sprints and renegade-row pushups, you'll read hundreds of books and articles. Instead of weighted box-jumps and pull-ups, you'll enter thousands of data points and conduct hundreds of statistical analyses. Instead of weight training until your body's so sore that you can't move, you'll think so much about a problem that it will disturb your sleep. You need to train your ass off if you hope to find a career in academia. In fact, it's arguably more difficult to land a tenure-track position than it is to get drafted by the NFL. If done correctly, graduate school should be one the most difficult things you've ever done. It'll also be one of the most rewarding things you've ever done. **It is easy to spend the next five years of your life coasting along and enjoying the freedom afforded by an almost infinitely flexible schedule and a lack of hard deadlines. If you do this, though, you will have wasted five years of your life and have nothing to show for it. YOU AND ONLY YOU ARE RESPONSIBLE FOR MAKING SURE THAT YOU ARE READY TO GO ON THE JOB MARKET AT THE BEGINNING OF YOUR FIFTH YEAR.** This means that you need to spend this time very wisely**.** The people who are most successful in this business are intrinsically motivated, disciplined, and work hard. For the most part, I will not be telling you what to do and when to do it. Instead, you are responsible for making sure that you are making steady progress toward developing a program of independent research and I will be happy to help you along the way.

If you are starting to freak out a little, take a deep breath. You shouldn't have to ruin your life to do well in graduate school and get a job at the end. You should not tradeoff sleep, quality meals, or social relationships for more hours in the lab. A healthy balance between work and play will prevent burn out and feelings of guilt when you're not working. Being a grad student (or an undergrad with his / her eye on graduate school) doesn't mean that you don't watch *any* TV or read *any* fiction, for example. It just means that you read and write about psychology a lot more than you watch TV or read fiction.

I've put together this handbook to take some of the guesswork out of what's expected of you as a student in my lab. This guide was primary written for graduate students, but it's almost just as applicable to undergraduates. Read this cover to cover, and if you're a grad student, consider reading it again six months later. And of course, refer back to it as necessary (there are some valuable resources within). This is a work in progress, so feedback is welcome.

Graduate Student Expectations and Etiquette

1. Read, Read, Read

Read books, articles, book reviews, and blogs. Subscribe to journal table of contents (ToC) alerts in several evolutionary, cognitive, social, behavioral ecology, and biology journals, and minimally, read the abstracts. If an abstract piques your interest, read the paper. Journals with high impact factors that you will want to pay close attention to are *Science, Nature,* ***Journal of Personality and Social Psychology****,* ***Psychological Science****, Evolution and Human Behavior, and Proceedings of the Royal Society of London: Biological Sciences.* Those that are bolded are especially important if you hope to land a career in a psychology department. If you are interested in consumer behavior, consider also reading articles published in *Journal of Consumer Research* and *Journal of Consumer Psychology*. If you are interested in health, you should stay on top of what is being published in *Health Psychology.* Regardless of what your specific passions are, follow academics on Facebook and Twitter. There's a great community of scholars online who have a lot to share, and I can help you identify good people to friend and follow. They won't mind because you'll make them feel important.

If you haven't already, you must read the following: *The Selfish Gene* (Dawkins, 1976), *Evolution of Desire* (Buss, 1994), and *How the Mind Works* (Pinker, 1997). I also recommend Alcock's textbook *Animal Behavior* and Kenricks' *Sex, Murder, and the Meaning of Life*. I have also included, as the last page of this manual, a list of must read lab papers. Read these papers. Read the papers they reference if you are interested in the t

It's very easy to do bad Evolutionary Psychology (EP). I won't let you conduct any bad EP research, but I can't always stop you from thinking incorrectly about EP. To do well, it is essential that you develop a solid understanding of evolution by natural selection and evolutionary psychology. If you do not understand it, read more, sit in on my undergraduate EP class, look at my lecture slides, talk to me, and ask questions. You should know the theory inside and out to make sure that you aren't operating from a flawed theoretical stance. Once you understand the theory, the keys to the universe are yours.

You should also read about writing. Technical, scientific writing isn't easy, so it's smart to consult some guides. *Elements of Style* is currently the most popular guide on writing style, but it is long and dated in parts. If you are so inclined, read it. Alternatively (or in addition to this), consider checking out this: http://video.mit.edu/watch/communicating-science-and-technology-in-the-21st-century-steven-pinker-12644/ or this http://www.aacc.org/publications/clin_chem/ccgsw/Pages/default.aspx. In addition to this stuff, learn about writing by paying attention to the writing you read. What makes a paper that you read good? Bad? Learn from these things and mimic the habits of good writers.

Also, listen to audiobooks and podcasts. Watch talks and lectures online (e.g., iTunes U, Coursera, You Tube, TED, Academic Earth, and You Tube EDU).

2. Learn Statistics and How to Put Together Data Sets

As a grad student, I probably took over half a dozen stats courses. Because I learned these techniques, I was able to ask more nuanced and complex research questions. Many researchers in the field have made entire careers based on being asked to co-author papers and grants because they know how to do fancy stats. This is a great position to be in. TCU has a strong stats program and you should take advantage of it. If you aren't picking up on stats as quickly as you'd like, search for online video tutorials. You wouldn't be the first. Rory Allen's "Exploratory Factor Analysis in SPSS" YouTube video has over 15,000 views.

Speaking of stats, before you come to me with questions about a particular analysis, you should have tried to answer the questions yourself. Actually, before even collecting data, you should make sure that you know how to properly analyze them. Of course, I'm always more than happy to help, but much of your stats training is in your hands. For the hopelessly lost: http://www.ats.ucla.edu/stat/sas/whatstat/ and http://www.statsoft.com/textbook/statistical-advisor/ (hat tip to Aaron Goetz at CSUF for finding these for us).

Learn how to make your data sets ready for me (or others) to look at and make sense of. To do this, you should seek the counsel of your older, wiser lab mates. They are all experts in what I expect when someone brings me a data set. You can also learn how to put together a beautiful data set by taking Dr. Cox's "interactive data analysis" class.

Lastly, although I would like you to try to figure out how to handle statistical issues on your own, first, don't be afraid to ask me questions. I would rather have to explain something to you ten times and have it done correctly than I would to tell you how to do something once and have it done incorrectly.

3. Attend Conferences, Colloquia, and Talks

Attending conferences, colloquia, and talks are all part of an academic life. At these events, you'll sharpen your empirical, theoretical, and methodological toolkit, but more importantly, you'll network. It's crucial that you become familiar with other scholars in your field and make them familiar with you and your research. Being able to chat with others in field at HBES or SPSP, for example, (or telling people in subsequent correspondence that you saw her talk at SPSP or HBES) communicates that you're a member of the tribe. Hang out with the grad students from other EP labs. It is always fun to talk shop with kindred spirits and these are your future reviewers.

Attending conferences can be expensive, but it's an investment. A PhD is expensive too, but it's an investment with a high return. You'll need to attend conferences to learn, network, and to present your research. If you don't have research to present after your first year, you might be doing something wrong. Here are some conferences to attend: HBES, C-WESS, SPSP, APS, and WPA. Also, conferences are loads of fun and highly motivating.

4. Choose Research Topics Wisely

You're in this lab because you have a general interest in EP, but I appreciate that you probably haven't yet developed your specific interests. If you are going to advance our understanding of human social behavior,

social cognition, etc, it will likely happen by specializing in a topic in such a way that enables you to identify the gaps in our current understanding, pose the right questions, and develop the right measures.

It is helpful to select a research topic that aligns with my interests and expertise (see #6 below for a sample of my current research interests). Selecting as a pet topic something that I know nothing about is a very risky strategy. If I am not jazzed about the topic, it will take me longer to look over any documents or materials you send me. If I am not an expert in the area, there is no way for me to help you determine whether your specific project will be a publishable contribution. In short: this is a fool's path. Chances are that you and I are on the same page in terms of our research interests (otherwise I probably wouldn't have accepted you to come work here); however, please keep this in mind if you suddenly find yourself envisioning a program of research on, say, stereotypes about cheerleaders and perceived subjugation of women.

Although it's beneficial to choose a research topic that I'm interested in, be sure that you're excited about it, too. If it's outside of your interests, any initiated project would be dead in the water. Without your deep interest, you won't read as much as you should, think as much as you should, and do as much as you should. **You should never start a project that you don't absolutely love.**

Pick a research topic that will *advance* our understanding of human behavior and cognition, not just *reinforce* it. In other words, think about **big picture** ideas that a) hook into the literature, b) move theory forward, and c) can be tested in a series of studies. Unless you develop a really clever and unique methodology, we do not need another a single study paper that demonstrates that women are more interested in a potential long-term partner's social status and earning capacity than are men. Replication is hugely important and worthwhile, but there are diminishing returns for replicating relationships and effects that have been documented and demonstrated dozens of times.

Pick a research topic that is attractive to prospective employers or postdoc advisors. **Do NOT, under any circumstances, choose as your pet topic something that is highly politically charged that is going to piss off some member of a faculty search committee.** It will make your job search very challenging. This is not to say that all of your research should be about, say, puppy dogs and rainbows, but you will want to save your pet ideas about things like rape and sexual coercion for sometime AFTER you have a job. Better yet? Wait until after tenure. Don't believe me? Ask me to tell you about people that I know who chose to study these things in graduate school. It didn't end well.

It is also important that you practice developing your research ideas **in writing** before approaching me with them. It will give you a chance to flesh out your thoughts, and I'll be in a better position to understand what you want to test. Of course, we'll do a lot of casual hypothesizing in lab and one-on-one meetings, but for serious research proposals, put it in writing. Please refer to the section about how to determine whether an idea is worthwhile near the end of the manual.

You should consider keeping a log or journal of research hypotheses and ideas about things. Soon, you'll start to generate hypotheses or just good research questions quite frequently, but you might not be able to flesh out the details or know the best way to test it. This log allows you document your ideas as they come to you, and turn back to them at a later date for development.

5. Publish

Although I hope you're more interested in conducting good science and discovering truth than you are in getting pubs, the unfortunate reality is that your love for psychological science is not enough. **You must focus on publishing.**

Publishing empirical research should be your focus, but keep in mind that, at your level, publishing will also involve things like book reviews, commentaries, posters, and presentations.

Although I agree with those who advise students to be strategic by converting much of what they write (e.g., course papers) into publishable papers, this strategy can be costly to your career and to the field. Here's evolutionary biologist Stephen Stearns on the balance between quality vs. quantity.

> The pressure to publish has corroded the quality of journals and the quality of intellectual life. It is far better to have published a few papers of high quality that are widely read than it is to have published a long string of minor articles that are quickly forgotten. You do have to be realistic. You will need publications to get a post-doc, and you will need more to get a faculty position and then tenure. However, to the extent that you can gather your work together in substantial packages of real quality, you will be doing both yourself and your field a favor.
>
> Most people publish only a few papers that make any difference. Most papers are cited little or not at all. About 10% of the articles published receive 90% of the citations. A paper that is not cited is time and effort wasted. Go for quality, not for quantity. This will take courage and stubbornness, but you won't regret it. If you are publishing one or two carefully considered, substantial papers in good, refereed journals each year, you're doing very well - and you've taken time to do the job right.

Smart guy, Stearns. So, let's heed his wisdom. Although you could publish your class paper reviewing the tenants of EP, should you? No. Dozens of evolutionary psychologists have already done this. A much better use of your time is working on a high-investment project while simultaneously working on low-investment projects should strike a nice balance between quality and quantity, making you attractive to PhD programs.

6. Know My Work

Don't read every single thing I've ever written, but be familiar with the work that I've done. First, it's important to be somewhat familiar with what I've done because those are my areas of expertise or interest, and most or all of your research projects will be related to these areas (see #4 above). Second, it's highly likely that other students will ask you about my research. You should be able to clearly explain to others my research interests. Being able to clearly communicate my interests impacts the lab's reputation and opens up opportunities to recruit future lab members with similar interests. Another reason to be familiar with my work is that you'll be able to help me out. If you come across research, information, or anecdotes that are relevant to my research interests, then please forward them along. What? You don't already know all of my dozen research interests? This lab is obviously not for you. Just kidding, of course. You'll learn all this stuff in due time. But FYI, I'm currently keeping an eye out for info related to:

Life History Theory (Broadly Construed)

The Impact of Immune Function on Mating Strategies, Life History Pathways, and Decision-Making
Consumer Behavior
Self-Regulation / Self-Control
Food Intake / Energy Regulation Processes
Envy
Intrasexual Competition / Status
Resource Scarcity
Mating Strategies, Mate Attraction, Mechanisms of Mate Choice
Social Cognition

Also, because lab members' interests are simultaneously my interests, you should be familiar with what other students in the lab are working on. As discussed below, science is highly collaborative, so you should be interested in helping our fellow lab members and seek out their help on your projects. **Research is a team sport and the more research you work on, the more you publish.** If you come across something related to another's project, let him / her know. Of course, I shouldn't have to emphasize how important it is to be discrete about sharing others' ideas. Unless told otherwise, assume that the ideas shared between lab members are privileged information.

7. Respect

We'll develop a great personal relationship, but you should always treat me with respect (as I will you). For example, if I ask you to complete some undesirable task (such as re-running your analyses), you should not scoff, eye-roll, or be discourteous in any way. Also, I'm not your note-taker, so bring a pen and paper to lab meetings, one-on-one meetings, thesis proposals, etc. and be sure to take detailed notes. **Although it is expected that you will sometimes forget something that was told to you in one of our meetings, I don't like having to repeat myself and / or remember what we talked about in our meeting because you failed to take notes.**

While we are on the topic of respect, it is **imperative** that you respond to my emails promptly and during business hours. If you are a night owl and do your best work at 3 AM, this is all well and good, but doesn't work very well in the real world. If you want a job in the real world, you should start acting like one of its citizens. What does this mean? At a bare minimum, you should make every effort to be available over email during business hours so that you can promptly handle any requests made of you by me, your lab mates, or undergraduate students who are in your care (i.e., students in the classes you TA and your undergraduate lab assistants). **Also, if I send you something via email – whether it is a file, a question, or whatever – I expect a response. A simple "Got it!" goes a long way with me. Do not make me wonder whether or not you received my email.**

By the way (and this is important, too), just because I want you to treat me with respect, doesn't mean that you cannot question or challenge me. I'll know that you're developing as an academic when you begin questioning some of my assumptions, conclusions, and positions. I look forward to this day.

Also, treat others with just as much respect.

8. Get Along with Others, Especially Other Lab-Mates and Faculty

Make an effort to get along with others. Science is highly collaborative, and therefore our lab is highly collaborative. If you are a jerk, you will not last long in my lab. You'll be working on projects with others, so you had better be cordial. Of course, this doesn't mean that all grad students will work on every project equally and all will earn a coauthorship. This is decided rather objectively (here, for example). Also, some of the recommendation forms that I'll have to complete for you will ask about your ability to work with others. It would be a red flag to others if I had to answer less than positively here. Finally, keep in mind that your lab mates could be future colleagues.

It is also important that you learn to get along with **my** colleagues. That's right: I want you to be nice and respectful to the other faculty in the department. Remember: if you are a jerk to my colleagues, it makes me look bad. It also hurts you. Who do you think you are going to hit up for those other letters of recommendation that you need for the job market? Exactly. Be respectful to my colleagues and pay attention in their classes. I can guarantee that I will hear about it if you don't.

9. How to Spend your Time & Avoid Being Lulled Into False Complacency.

When you're in graduate school, you are occasionally going to find yourself in the company of other students who have poor work habits. These are the students who come in late and leave early or spend their time in the lab surfing the web or texting their friends. Don't let these students' poor work habits lull you into a false sense of complacency: **These are not the people against whom you will be competing for jobs**. The competition is for jobs is fierce and you need to remember that you will be up against people in other labs who are pulling in ten hour days and don't spend their summers hanging out with friends at the pool. These people (many of whom are from the top programs in the country) – not the lazy-ass from Dr. so-and-so's lab – are the people that you should be thinking about when determining how hard you should be working. If you don't think that you have anything that you need to be doing, you must not have paid attention to anything that you have read so far. Re-read from the beginning and also see point 10 below.

As a side note, please understand that I am not saying that successful students never leave early and are never on their cell phones. It's okay to have a healthy work-life balance. You just need to watch yourself very carefully to make sure that you don't fall into the trap of working less hard than is actually necessary because you mistakenly believe that laziness is the norm. It is not, and if you need proof of this, look up the CVs of your contemporaries in other EP labs around the country.

10. Be a Self-Starter & Don't Rush.

When you're in graduate school, you are in complete control of your destiny. What does this mean? I'm glad you asked! It means a lot of things, and they are all important. First, it means that I am not going to be telling you what to do or how to spend your time. If you are not intrinsically motivated and don't do things unless you are told or asked, you could end up never having a paper published. It is not my job to come up with lines of research for you to work on to make sure that you are coming up with lines of research on your own. These things are totally up to you. Other things that are up to you? Setting deadlines (although I will

give them to you by request) and making sure that you are spending your time doing things that will move your career forward. **You need to take the bull by the horns and take charge of your own research career**. I am not your boss and you are not my employee. You (not I) need to determine what you need to and when you need to do it.

Put very simply, you must have initiative. Both with your career and in dealing with me. If you want to meet with me, set up a meeting. Don't expect me to chase you down to find out how things are going. I am very busy and there are a lot of things that I am responsible for keeping track of. I will not know – until it is too late – that you failing to get anything accomplished unless you tell me. Mentoring graduate students is something that I take very seriously and I am happy to do whatever I can to help ensure your success. You must tell me what you need, though.

After saying all of that, let me close by saying this: **Never worry about bothering me or being a nuisance if you need something from me or would like to meet. I am happy to help! Working with students like you is the best part of my job.** I will work hard for you if you work hard for you.

11. Character and Dress

Keep in mind that your actions often represent you, me, and the lab. Throughout your time in the lab, I'll be evaluating you. I have to write many letters of support and many letters of recommendation for you, so please leave me with only positive things to say. Everyone experiences bad days and blips of unconscientiousness, but don't let those rarities become common.

Consistently being unprepared in one of your classes, for example, is of most consequence to you, but it also reflects poorly on me and your lab mates. Your behavior at conferences and academic social events is also of direct consequence to me and the rest of the lab. If getting blackout drunk and staying out too late at conferences causes you to miss morning talks, you need to reprioritize.

Lastly, because we are academics, we have the freedom to wear pretty much whatever we want to. This is great (I, myself, am a huge fan of yoga pants on days when I am holed up in my office writing all day) and I generally don't spend much time thinking about what any of you are wearing. This being said, please be aware of how you dress on days that you have TA duties and / or are at a meeting or conference. Maybe there is a more appropriate venue for you to try out your new assless pants or "Go Fuck Yourself" T-shirt. Please don't wear these to TA my class or to any other professional meetings or event.

12. Scientific Integrity

I shouldn't even have to express how important it is that you always maintain scientific integrity and avoid all forms of scientific fraud and misconduct. We'll talk a lot about this during lab meetings, so I won't belabor the point here. I want to simply remind you that any fraudulent behavior that you engage in would reflect back on me and the lab, jeopardizing our reputations and our careers. Also, fraudulent behavior slows down the progress of science.

13. Degree Requirements and Deadlines

You need to keep track of MA thesis requirements and deadlines, because I won't. Same goes for things related to your qualifying exam and your dissertation. Ask other grad students who are in the know, and ask the Graduate Director about this stuff.

14. Apply for Awards, Grants, and Scholarships

Just as MA & PhD requirements and thesis / dissertation deadlines are your responsibility, so are many awards, grants, and scholarships. I strongly encourage you to apply to any and all awards, and I'm more than happy to provide letters of support, but I don't typically keep track of these. A visit to the office of sponsored projects will give you all the information you need on programs available to you.

There are also undergraduate SERC grants that you all can help out with if you need money for research supplies, payments on MTurk, etc. Although this mini-grant is for undergrads, most undergrads are not in a position to write a successful grant. An undergrad, a graduate student, and I will work together to propose and write a successful grant. With this grant, you can apply for up to $1500 for equipment, materials, software, etc. I'll let the lab know when I receive these notifications (one in the fall one in the spring). You should be willing to work with an undergraduate research assistant to write a SERC grant if you would like money for doing a project. It **is poor form to ask me to pay for equipment, MTurk payments, etc, for your research if you are not willing to help write grants that pay the bills.**

Student Travel Grants are also available: Ask your lab mates for details on these.

15. Come to Me with ANY Concerns

Feeling overwhelmed? Come talk to me. Reconsidering your future? Come talk to me. Someone in the lab is being inappropriate? Come talk to me. A lab member is violating a social contract? Come talk to me. You suspect someone is being less than 100% honest with their methods, data, or analyses? Definitely come talk to me. Whether a tiff or a crisis, please know that you can talk to me. I am happy to help however I can.

16. Priorities

You should prioritize lab responsibilities. Coursework will give you your GPA, but what you do in the lab is what will ultimately determine whether you get a job. As important as it is for you to complete your class readings, it's more important to complete lab readings. The best bet is do a great job at everything, but when something has to give, research trumps classwork, $p < .001$.

17. Minor Details

Give me (and committee members) ample time to read your thesis and dissertation proposals. While it obviously doesn't take someone two weeks to read a 30-page proposal, you have to appreciate that we have to fit it in to our schedule. We have full plates, with a dozen looming deadlines, and we don't have the luxury of dropping what we're doing to immediately turn to your proposal. Submit these documents to your committee two weeks before your meeting at the latest.

Don't rush detail work. If you scramble to put together a data set, a references section, etc and it is full of errors, you are treading down a fool's path. Never, ever rush detail work. This is especially true with data. Given how critical the integrity of our data is to the whole scientific process, it is CRITICAL that your data is coded correctly and contains no errors. Things that are supposed to be reverse-scored need to be reverse-scored, conditions need to be labeled correctly, and there cannot be any mistakes. If you have the misfortune of giving me a dataset to analyze and I notice that things are scored incorrectly, mislabeled, etc, this can be a kiss of death because it will be hard for me to trust you with data again. **Never, ever, EVER rush with data.** Don't rush the other stuff, either. I would much rather give you three –hundred deadline extensions than have to fix careless mistakes.

I should review all work that you intend to submit to conferences and committees. Give me time to review this work. Sending me things the night before they need to be submitted unwise and will make me angry.

Your file names (for your databases, manuscripts, thesis, etc.) should be informative. "Thesis.doc" might work for you, but it's an awful file name for me, given that I've supervised or served as a member on dozens of thesis committees. "Smith.thesis" is better. And even better than that would be "Smith.thesis.11-27-2014-jds" In other words, please include the date and your initials at the end of any docs or databases that you send to me.

Imagine this as a book dedication: "To my parents, Ayn Rand and God." Did you catch the absurdity? If so, this example serves as a reminder to continue to use the Oxford comma. If you didn't, google *Oxford comma*, and use it until the day you die.

Human females are called *women* and human males are called *men*. In other words, do not use male and female as nouns. Use male and female as adjectives (e.g., female-biased sex ratio, male warrior hypothesis).

Regarding "tracked changes" (an MS Word editing function), when I send a revised draft to you with my tracked changes, do NOT just click "Accept All." Review each change to see what I changed and why I changed it. This will improve your writing. You will learn NOTHING from accepting all of my changes without looking at them and understanding why I made them.

If three or more of us are working on the same project, copy me on interlab emails to keep me in the loop. Of course, you won't want or need to copy me on everything, but if I'm involved, copy me. For example, if you, another student, and I are working on a manuscript and you're emailing a draft to the other student for proofreading, copy me. I'll see that you've been working on the draft and that it's now in the hands of another.

We'll be exchanging emails on a daily basis, so you'll be tempted to write casually, but I want you to write semi-formal emails. They should include a greeting, body, and complimentary close followed by your name. The style should be semi-formal, as if you were writing to a potential employer. I'm asking you to do this to prepare you. You'll have to write thousands of formal emails and letters throughout your academic career, so you should get some practice. Even if you're trying to be efficient with your time, this requirement shouldn't dissuade you from emailing me. It's always a good idea to write concisely. If we're exchanging an email back and forth, however, we can abandon the formalities after our initial exchange.

Lastly, if you are detail oriented, pleasant to work with, and work hard, I will want to spend more time working with you. The opposite will be true if you are careless, difficult to work with, and lazy. If you want the plumb projects to work on, work on making yourself someone that I want to work with.

Appendix A.
Rules of thumb for a research idea: How to determine whether an idea is worth testing

FIRST HURDLE:

1) Is your research idea theoretically plausible? What's the theory behind your idea? Your idea needs to derived from an existing theory.
    a. If you theory is explained by evolutionary theory (say LHT), it need to NOT be explained by other theories. If all other theories (e.g., social role, etc.) can explain your prediction than you're dead in the water or you need to think of an interaction that would not be predicted by this alternate model.
    b. Are your predictions novel? Would they contribute something new to the literature?

SECOND HURDLE:

2) Obviousness Factor: Is your idea completely obvious? Your idea needs to NOT be completely obvious but just obvious enough when explained in the manuscript. It needs to be counterintuitive enough to be interesting, but not so counterintuitive that no one will buy it.
    a. You need a series of studies that take small steps to build your idea in a streamlined, coherent way. No red flags!

THIRD HURDLE (probably least crucial):

3) Who will the reviewers of your manuscript be? Are you targeting JPSP? Psych Science? Who? You will need to design your studies and write your paper for your reviewers.

Appendix B.
Social Area Procedures for Theses & Dissertations

In collaboration with the adviser, the student submits a proposal document with complete intro, method, and results to the committee two weeks in advance of the proposal meeting

Note: By letting the student submit a proposal document to the committee, the adviser attests that he/she considers that document suitable as a final dissertation intro, method, and results with no changes

After they reach consensus in the meeting on the precise procedures to be used and analyses to be run, the committee might request that the student revise the document

Note: At this point in the dissertation project, the student is deemed to have a project (i.e., dissertation procedure) approved by the committee (to qualify for 5th year funding)

If any changes to the proposal document are agreed upon by the committee, the student circulates revisions by e-mail until committee members agree that the intro, method, and results are acceptable

Note: The student should strive to reach a final version of the intro, method, and results within two weeks after the proposal meeting, and once that final version is agreed upon by the committee the intro, method, and results cannot be changed for the rest of the process

The student then collects the data, runs the agreed-upon analyses, inserts the observed results in place of the predicted results, and consults with the adviser on what to say in the General Discussion section

Note: Data collection can start prior to acceptance of the proposal final version document, because the committee has agreed at the end of the proposal meeting on the procedures to be used, and those procedures can be changed only by consent of the committee

Two weeks before the defense meeting, the student submits a final document with exactly, word-for-word, the same intro, method, and results (substituting the actual findings) as agreed upon by the committee for the proposal final version document, plus a General Discussion section that explains the actual findings in a way approved by the adviser

Note: As stated or implied above, the proposal final version document, which is also the dissertation final document, should have been approved soon after the proposal meeting, which would presumably be well in advance of scheduling a defense meeting

Although the intro, method, and results sections have already been approved at the time of the proposal and cannot be changed, the committee can ask the student questions about any aspect of the dissertation during the defense meeting

Note: With college and university deadlines in mind, the student should take into account in scheduling the defense meeting that it might take as much as two weeks after the defense meeting to get committee agreement on the General Discussion section (and thus on the final dissertation)

Appendix C.
Manuscript Review Guidelines
Robert B. Cialdini

Sequence

(1) Read the manuscript over initially in a non-evaluative mode to get an idea of the author's general purpose. Determine what question or issue the author is addressing and what s/he would like to say about it.

(2) Begin rereading, but this time more skeptically.

Introduction

The purpose of the Introduction section is to provide the reader with a context for the work. The primary form of this context should not, however, be a simple description of existing, related research. Rather, it should clearly demonstrate to the reader the need for or importance of the author's investigation. That is, the Introduction section should present the rationale for the research. Upon completion of the Introduction, we should expect to know why the author considered this work worthy of his/her time. If it is the case, we should be told that the research is designed to: answer a question raised by previous research on the topic; or correct a methodological fault of earlier work; or reconcile the conflicting data of other studies; or test the validity of a theoretical framework in a way not heretofore explored; or begin a novel line of research that has no prior experimental precedent, etc. It is goals of this sort that the author is obligated to inform us about in a proper Introduction section. It is not enough to present an unfocused compilation of the relevant literature. The reader must be shown how the present research fits with and makes a contribution to that literature.

Questions to ask and things to look for in the Introduction

(1) Is it clear what the author's purpose is? That is, do you understand what question is being asked or what issue is being raised?

(2) Is this question or issue important/interesting enough to warrant space in a professional journal?

> (a) Would the provision of an answer to the experimental question substantially advance our knowledge of the topic under consideration? Very often studies will adequately answer a question posed by the author, but the question is such that our understanding of the psychological processes involved is not furthered.
>
> (b) Has the experimental question been asked before in similar or different ways? If so, would another demonstration of the effect add considerably to our confidence in the reliability of the effect

(3) Does the author do a good job of citing previous work that is pertinent?

(a) Are there existing bodies of data that relate to the issue the author is addressing but which the author has not included in the literature review? Note: If the omission is an obvious one, this may indicate that something is "fishy." Ask yourself what this omitted body of work indicates and how it fits with the author's investigation. Take notice of fits that are very good or very bad.

(b) Does the author make such statements as, "The results of previous studies have shown this to be a reliable effect," without citing the appropriate references? This is not acceptable procedure. Require that the author adequately document such statements before lending credence to them.

(c) If you are familiar with the research area, determine whether the author is accurately representing the state of the data. Does the prior literature really say what the author is claiming it says? Look to any such discrepancies as indications of problems. That is, if the author is omitting or distorting some earlier results, this may be a tip-off for some embarrassing or difficult-to-explain aspect of his/her research.

(d) Be suspicious about quotes with a lot of dots (ellipses) in them. The ellipses are indicative of excluded words, and the resultant quote may be quite different in meaning from the original.

Predictions

This section may or may not be separate from the Introduction section. In any event, the intent of the Predictions section is to present the reader with the author's experimental hypotheses. The hypotheses can be presented in general terms ("It was expected that increasing a communicator's credibility would lead to increased persuasion.") or terms specific to the experiment ("A main effect for communicator credibility was predicted such that more persuasion would occur in the High Credibility cells than the Moderate or Low Credibility cells.") or both.

Questions to ask and things to look for in the Predictions section

(1) Do the experimental hypotheses follow from what the author has said in the Introduction? Often an author will present a theoretical formulation in the Introduction and then attempt to test it with hypotheses that do not derive logically from it. If a problem of this sort exists, it can suggest either of two difficulties. First, it is possible that the author did not think through the implications of the theory and mistakenly expected certain effects to occur that the theory does not logically predict. If so, and the purpose of the research was to test the theory, the paper is a good candidate for rejection since it doesn't do what it set out to do. Second, it is possible that the predictions were not predictions at all but postdictions that were constructed after the author saw the data. You should be leery of authors who try to "force" the data to confirm the theory in this manner. Such a practice suggests a stronger commitment to a set of ideas than to the ethic of science.

(2) Even when the hypotheses do flow logically from the theoretical treatment, try to decide how likely it is that the author really predicted the effects. There is a notorious tendency for researchers to start off with a

theory, get results other than expected, and then change the theory to accommodate the results. This sequence of action is legitimate provided the reader is informed of it. It is illegitimate when it goes unrevealed. The reader is led to believe that the author is confirming a theory rather than building one. A different set of statistical tests apply to these two forms of research (e.g., one-tail tests; post-hoc tests).

(3) Do the authors come up with hypotheses on issues not dealt with in the Introduction? Sometimes an author will present several hypotheses, only a percentage of which have their basis in anything the author has said previously in the paper. Usually, this is the case with more minor hypotheses, but even then, it is unacceptable procedure. The reader should be informed of the reasoning behind each prediction.

Method

This section is intended to provide the reader with a detailed account of how a study was conducted, that is, a step-by-step description of what the author did to obtain the data. It should include verbatim reproduction of crucial aspects of the experimental script or instructions along with description of any apparatus. This section ought to be sufficiently complete that, by reading the paper alone, one could conduct essentially the same experiment. (There is some disagreement among researchers on this last point.) Depending on the author's preference, the Method section is usually broken up into various subsections. One such format is as follows:

Design overview: Here the author briefly describes each of the treatment and control groups. How it was that the independent variables were manipulated and the dependent variable measured is discussed briefly also.

Participants: In this section, the author tells us who the study participants were. Information should be included that tells us participants' sex and other distinguishing characteristics, how they were recruited, and how many and on what basis participants were excluded from the study or the analysis.

Procedure: This is the subsection that contains the detailed, usually chronological, account of a participant's experience in the investigation.

Independent variables: Here the independent variables are described along with the number of levels each contains.

Dependent variables: The dependent measures are discussed and any prior evidence for their reliability and validity is presented. Often descriptions of the manipulation checks will appear here, too.

Questions to ask and things to look for in the Method

(1) Does the design include the necessary control groups for the author to adequately answer the experimental question?

(2) Does the manipulation of the independent variable represent a good operationalization of the concept discussed in the Introduction section? For example, suppose again that a study was concerned with determining the effect of a communicator's credibility on attitude change. Would a manipulation of the

number of years of education a given communicator had be a proper operationalization of the concept of credibility?

(a) One way to answer this question is to look to see if there is a manipulation check and, if so, what it says. If no manipulation check exists, so should doubts as to whether the author has indeed examined the influence of the factor of credibility (or whatever). If the manipulation check exists but doesn't show the expected separation of treatment groups, even greater doubt should be raised.

(b) Watch out for manipulation checks that don't reflect the theoretical concept at issue but, rather, the experimental procedures designed to vary that concept. For instance, in the above example a manipulation check question that asked the participants to indicate how many years of education the communicator had would not answer the question of whether the participants viewed the communicator as credible. Such a question would tell us whether participants in various groups were influenced by the procedures differentially but not whether this differential influence caused one group of participants to see the communicator as more or less credible than did another group of participants, This is essentially the difference between a manipulation check and a procedures check. Success of the latter is necessary but not sufficient for success of the former.

(3) Do the measures of the study seem appropriate indexes of the dependent variables under examination? For example, would a participant's verbal response to a question asked by the experimenter ("As a result of the communication, did you change your mind at all concerning the issue?") be an adequate index of attitude change? Evidence in this regard would be any information the author might provide concerning the reliability and validity of the measure.

(4) Is there anything that is varied along with the independent variable by the experimental manipulation? If so, start thinking about what it is that co-varies with the independent variable and how this may supply an alternative explanation for the predicted or obtained findings. For instance, manipulating the number of years of education a communicator has had might not only affect subjects' perceptions of the communicator's credibility (i.e., expertise and trustworthiness) but also perceptions of his/her intelligence. And it may be this intelligence difference that accounts for any attitude change effect rather than the credibility difference.

(5) Does the author take the proper precautions against the systematic influence of artifacts like experimenter bias, demand characteristics, evaluation apprehension, etc. If not, how likely are alternative explanations based on these artifacts ?

(6) How many participants were excluded from the experiment or discarded from the analysis? If these individuals represent a substantial proportion of the total (more than 10 percent), there is cause for concern. Look closely at why the participants were excluded. If a great many were suspicious of an experimental deception, it may be that the deception was a transparent one and those who were not discarded were suspicious as well but just didn't say so.

(a) Is there a much larger percentage of participant loss in certain cells than in others? If so, the participants upon whom the analysis was ultimately run may be dispositionally different across these cells.

Results

In this section the author should provide the reader with a clear picture of the influence (especially the differential influence) of the experimental procedures on the dependent measures. The nature and outcomes of the statistical analyses are to be reported here. Typically, this is the most difficult section for a reader to process. A good report writer works harder on the readability of the Results section than any other in the paper; and a good reviewer spends as much time on the Results section as any other. A clearly written, easy-to-understand Results section usually (but not always) indicates that the data are good. On the other hand, an obtuse, convoluted Results section often (but not always) signals a set of data that don't fit well with what the author has predicted or would like to claim about the findings. A lack of clarity here may be a tip-off for inconsistencies in the data.

Questions to ask and things to look for in the Results

(1) Are all the dependent variables of interest displayed in all the cells of the design? If not, watch out. The author who doesn't present completely the experimental data might well be trying to hide something.

(a) Look for instances of measures, which the Method section says were taken, being totally left out of the Results. This may mean that the data on those measures fail to support or run counter to those the author has chosen to report.

(b) Watch especially for the use of certain measures to support a given experimental prediction but not some other prediction for which they are equally relevant. That is, if a dependent measure is to be considered a valid source of information, then an author must tell us what it shows on each conceptual point to which the measure is germane, not just those on which the measure supports prediction.

(c) Are more tests than are warranted done on a single set of means? If so, the alpha level will be affected to enhance the chance of statistical significance.

(d) Take note of unusual or obscure statistical tests or treatments. Often they represent the only way that the data could be rendered conventionally significant.

(3) Try to get a sense of the pattern of the data rather than concentrating on how one or two important dependent measures came out. Do all the data hang together consistently in what they suggest is going on? A consistent such pattern, even when composed of some marginally significant effects, can be more compelling than strong effects on the major dependent variables that are not supported by other measures. If inconsistencies in the pattern of the data exist, try to think of alternative explanations to account for them.

Discussion

At this point the author is to provide us with an interpretation of the results. The author should give us his/her assessment of what the data mean in terms of the concepts covered in the Introduction. The author may often consider the merits of alternative explanations here and may provide evidence that make such interpretations seem more or less plausible. When applicable, the author may attempt to reorganize the existing literature on the basis of the experimental data. Practical implications of the experimental findings and suggestions for future studies are appropriate as well.

Questions to be asked and things to look for in the Discussion section

(1) Is what the author contends about the results warranted by the data?

> (a) Does the author claim strong support for an interpretation when the data in fact provide weaker or equivocal support?
>
> (b) Do internally consistent and descriptively powerful alternative accounts of the findings exist? If so, would they fall into the category of "possible" or the category of "plausible?" Obviously the latter type of alternative explanation is the more damaging. It is a question of some debate, however, whether a manuscript should be disqualified for publication because an alternative interpretation exists that, while not very likely, is still conceivable.

(2) Are certain aspects of the results ignored or underplayed in the discussion? How might these ignored data affect the interpretation favored by the author? This is another instance of when an omission may be an indication of what the author feels is a difficulty with the data.

(3) Does the discussion reflect the issues treated in the Introduction?

> (a) There should be a very close relationship between the questions raised in the Introduction section and the author's claims about the meaning of the data in the Discussion. If, for example, the author states in the Introduction that one purpose of the research was to clear up some inconsistency in the prior literature concerning a given point, then the Discussion should examine the extent to which that inconsistency has been resolved by the data. The same goes for every other thing the author initially contended the research would do; there should be an assessment in the Discussion of how well the research did.
>
> (b) In some papers, because an experiment did not fulfill its promise, questions much more minor than those posed in the Introduction will be handled in the Discussion. Often the author will present answers to these questions with much flair and bravado. Don't be fooled here. Make sure the scope of the Discussion matches with that of the Introduction. This is a good example of the value of a general style of assessment that views a paper's subsections as interdependent parts. The worth of any one subsection should always be decided after a consideration of its relation to other subsections.

Accept / Reject

All right, now take the scowl off your face and the snarl off your lips. Try to get an overview of the paper in terms of its merits and drawbacks. Weigh these positive and negative aspects according to their importance and decide whether the paper warrants publication. Don't make this decision according to whether the research did what the author set out to do. This can be a trap; authors often set out to do things that are essentially trivial. Also, don't make the decision according to whether the paper is as good as others already published in the area. This is another kind of trap; it is not appropriate to accept an uninformative paper because others on the topic are equally uninformative and some editor has made the mistake of letting them into the publication system. You should make your decision on the basis of your opinion (you should make sure that it is an informed opinion) that the report as a whole does or does not make an important contribution to our knowledge of the topic under investigation. When you write your review, defend your decision with this question as your major referent. Remember that all studies have flaws and most have creditable aspects. It's your job as a reviewer to argue either that the minuses disqualify or that the pluses certify the paper as an important contribution to knowledge.

Appendix D.
Must Read Lab Papers

Hill, S. E., **Prokosch, M. L.,** & **DelPriore, D. J.** (in press). The Impact of Disease Threat on Women's Desire for Novel Partners: Is Variety the Best Medicine? *Journal of Personality and Social Psychology.*

Hill S. E., **DelPriore, D. J., Rodeheffer, C.,** & **Butterfield, M.** (2014). The effect of ecological harshness on perceptions of the ideal female body size: An experimental life history approach. *Evolution and Human Behavior, 35, 148-154.*

DelPriore, D. J. & Hill, S. E. (2013). The Effects of Paternal Disengagement on Women's Sexual Decision-Making: An Experimental Approach. *Journal of Personality and Social Psychology, 105, 234-246.*

Hill S. E., & **DelPriore, D. J.** (2013). (Not) Bringing up baby: The effects of jealousy on the desire to have and invest in children. *Personality and Social Psychology Bulletin, 39, 78-90.*

Rodeheffer, C. D., Hill, S. E., & Lord, C. G. (2012). Does this recession make me look Black? The effect of resource scarcity on categorization of biracial faces. *Psychological Science, 23,1476-1478.*

Hill S. E., **Rodeheffer, C. D.,** Griskevicius, V., Durante, K. M., & White, A. (2012). Boosting beauty in an economic decline: Mating, spending, and the lipstick effect. *Journal of Personality and Social Psychology, 103*, 275-291.

Hill, S. E., **DelPriore, D. J.,** & Vaughan, P. W. (2011). The cognitive consequences of envy: Attention, memory, and self-regulatory depletion. *Journal of Personality and Social Psychology, 101, 653-666.*

Hill, S. E. & Durante, K. M. (2011). Courtship, Competition, and the Pursuit of Attractiveness: Mating Goals Facilitate Health-related Risk-Taking and Strategic Risk Suppression in Women. *Personality and Social Psychology Bulletin, 37, 383-394.*

Durante, K. M., Griskevicius, V., Hill, S. E., Perilloux, C., & Li, N. P. (2011). Ovulation, hormonal fluctuation, and product choice. *Journal of Consumer Research, 37, 921-934.*

Hill, S. E. & Buss, D. M. (2010). Risk and relative social rank: Context-dependent risky shifts in probabilistic decision-making, *Evolution and Human Behavior*, *31*, 219-226.

Hill, S. E. & Durante, K. M. (2009). Do women feel worse to look their best? Testing the Relationship between Self-Esteem and Fertility Status across the Menstrual Cycle. *Personality and Social Psychology Bulletin, 35*, 1592-1601.