WHITMAN COLLEGE

Psychology Majors' Handbook

2021

Last updated in August, 2021
by the Psychology Department faculty

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Introduction

Welcome to the Whitman College Psychology Department!

This handbook was designed to communicate a range of information that we hope will help you maximize your growth in our program. You will find information about our curriculum, writing and grading, senior theses, finding careers, and applying to graduate schools. It is an attempt to answer psychology students' most frequently asked questions about our requirements, goals, and procedures. We hope you find this information useful.

We periodically revise this handbook, taking into account the ideas, suggestions, and questions that arise from psychology majors. We welcome your feedback on this document. Just send any of us in the department a note or email at any time, and we'll take your comments into consideration in our next revision.

Current copies of the handbook can be found on the department's website.
Just google **"Whitman Psychology"** or go to
https://www.whitman.edu/academics/departments-and-programs/psychology

The Psychology Major: Structure and Learning Goals

The learning goals of the psychology major are as follows.

Upon graduation, a student will demonstrate competence in the following areas:

1. **Major-Specific Areas of Knowledge**
   Demonstrate familiarity with major concepts, theoretical perspectives, empirical findings, and historical trends in psychology. Develop insight into self and others' behavior and mental processes and apply effective strategies for self-management and self-improvement. Understand and apply psychological principles to personal, social, and organizational issues. Recognize, understand, and respect the complexity of sociocultural and international diversity.

2. **Accessing Academic Community/Resources**
   Demonstrate information competence and ability to use computers and other technology for many purposes.

3. **Communication**
   Communicate effectively in a variety of formats.

4. **Critical Thinking**
   Respect and use critical and creative thinking, skeptical inquiry, and, when possible, the scientific approach to solve problems related to behavior and mental processes.

5. **Quantitative Skills**
   Analyze data quantitatively.

6. **Research Experience**
   Understand and apply basic research methods in psychology, including research design, data analysis, and interpretation.

7. **After College**
   Emerge from the major with realistic ideas about how to implement his or her psychological knowledge, skills, and values in occupational pursuits in a variety of settings.

8. **Citizenship**
   Weigh evidence, tolerate ambiguity, act ethically, and reflect other values that are the underpinnings of psychology as a discipline.

The Department's major requirements attempt to provide a well-rounded education in Psychology, with the above goals specifically in mind. There are several ways students can fulfill the major requirements, thus allowing for students to tailor a plan to their specific interests. However, the requirements in place also ensure that each of the learning goals outlined above is part of the curriculum.

- ***Psychology 110*** (Introduction to Psychology)
  Students who (before coming to Whitman) received a score of 4 or 5 on the Advanced Placement exam or a score of 5 or higher on the International Baccalaureate exam in psychology may elect not to take *Psychology 110* and to substitute it with other coursework in psychology for the same amount of credits.
- ***Psychology 210*** (Psychological Statistics) and ***Psychology 210L*** (Psychological Statistics Lab).
  These courses must be completed by the end of the first semester junior year. They are a prerequisite for *Psychology 220.*
  - **Students planning to study abroad** for a semester in their junior year should take these courses during their sophomore year (or earlier).
- ***Psychology 220*** (Research Methods)
  This course must be completed by the end of the second semester junior year.
  - **Students planning to study abroad** for a semester in their junior year should plan to take *Psychology 210 & 210L* during their sophomore year (or earlier) and *Psychology 220* during their junior year (or earlier).
- ***One foundation course in Clinical/Personality*** (fulfilled by either *Psychology 260* or *270*).
- ***One foundation course in Cognitive/Learning/Physiological*** (fulfilled by either *Psychology 229, 360,* or *390*).
- ***One foundation course in Developmental/Social*** (fulfilled by either *Psychology 230* or *240*).
- ***One 3-credit or 4-credit seminar numbered 300-349*.**
  Advanced courses emphasize interactive discussion of theory, research findings, and methods. Note that 300-level courses numbered 350 and higher do not satisfy the seminar requirement.
- ***The capstone seminar, Psychology 420*** (Contemporary and Historical Issues in Psychology).
  As part of the course, students complete assignments in which they are required to explore and write about the fundamental unifying themes that tie the major together.
- **Thesis** *(Psychology 495 and 496/8)* in the senior year is required both semesters of students majoring in psychology. The course is open only to psychology majors, and psychology majors are guaranteed seats in the course. The thesis is usually an original empirical project (usually a single study that is often an experiment). Most students work as a member of a 2-3 person research team. Students work together to design, propose, and conduct the research project, to analyze the data, and to produce a complete research article in APA style. Students register for *Psychology 495* and *496;* they do not register for *PSYC-498* (Honors Thesis); the psychology department faculty will convert to *PSYC-498* the registration of those Thesis students who meet the departmental requirements for honors in the major.
- ***36 total credits in psychology*** (including requirements enumerated above).
  Additional courses allow students to explore the breadth of the field.
- ***2 credits each in biology and philosophy*.**
  The external requirements allow students to explore some of the academic disciplines that are most closely related to psychology, placing their major into a richer intellectual context.
- ***Psychology 358*** (Research Experience)
  This is an optional course for students who are volunteering as research assistants in psychology faculty members' laboratories. It allows students to earn course credit when their volunteer work results in learning new theory, methods, and skills. Enrollment is with instructor consent by the supervising faculty member.
  Psychology 407 & 408 (Independent Study)
  These are optional courses for students who wish to study in depth specialized topics in psychology. The student must secure instructor consent from a faculty member who will supervise the student's coursework. Typically, the student and faculty member agree on a set of readings and a written product to be completed by the student, and they meet regularly throughout the semester.

The Senior Thesis

In keeping with our emphasis on the scientific approach to psychology, the Psychology Department has adopted three types of thesis that senior majors may write: empirical, theoretical, and qualitative.

An **empirical thesis** can involve many different kinds of research design and statistical analyses, but central to this kind of thesis is testing a hypothesis derived from a theoretical or experimental source by observing and analyzing behavioral data using standard statistical techniques. An article published in, for example, the *Journal of Experimental Psychology* can serve as a model for an empirical thesis.

A **theoretical thesis** is also a possibility. A theoretical thesis states a hypothesis, problem, or position about a domain of psychology and attempts to resolve it or defend it based on some theory or body of research in psychology. However, it is not simply a review of the literature. Rather, it proposes a particular statement, arrived at by the student with the help of the thesis adviser, and then develops a defense of the statement based on theory or research. An article published in *American Psychologist* or *Psychological Bulletin* can be used as a model. See, e.g., Bem, D. J. (1995). Writing a review article for Psychological Bulletin. *Psychological Bulletin, 118,* 172-177.

A **qualitative thesis** is a thesis that involves data collection but whose findings and conclusions are not derived from statistical or other quantitative analysis procedures. Such theses can involve descriptive analyses of verbal transcripts from interviews or other spoken or written sources; they can also involve participant observation, case studies of a unique individual, and/or descriptive analyses of small-N studies. Sometimes empirical theses are converted to qualitative theses in midstream due to the difficulty in gathering data from a sufficient number of participants. See, e.g., Camic, Rhodes, and Yardley's 2003 text *Qualitative Research in Psychology: Expanding Perspectives in Methodology and Design* (Washington, DC: American Psychological Association) for details on how to conduct qualitative research.

All theses must be written in APA style.

The Psychology Department keeps records of completed theses from previous years. Ask a faculty member if you're interested in seeing previous theses. Take a look at what other students have done and get an idea of the scope and detail expected, as well as methods which have been successful. In addition, Penrose Library houses all the Honors Theses that have been written by psychology majors.

Guidelines for Writing the Senior Thesis

All theses are to be written in APA style, regardless of whether they are experimental, theoretical, or qualitative in nature. In addition, the following suggestions for writing the senior thesis may be helpful. They are based on the most recurrent problems that students have encountered when preparing their work; they are illustrative and by no means exhaustive.

1. The entire thesis needs to be construed as a logical argument. Your thesis needs to make clear how the hypotheses that were selected are related to, and logically follow from, the review of the literature on which they were based. In addition, the procedure should follow from the hypotheses and the conclusions from the data.
2. The discussion section can devote space to the exploration of plausible alternative explanations for the data that might not have been suggested by the original hypotheses.
3. Be mindful of verb tense, syntax, and sentence structure.
4. Data presented in the form of tables and figures usually require description, not only interpretation, in the text of the results section. Tables and figures do not speak for themselves. The additional description may be needed to inform the reader of how to read them.
5. The abstract provides an outline of the entire thesis, including a statement of the problem, method, major findings, and conclusions; be sure your adviser sees it before the final draft.
6. Pilot work is advisable and pilot data may be included or mentioned in the procedure or discussion section as appropriate.
7. Thesis completion is a decision made by the student and not by the adviser. However, premature judgments of completion may be reflected in the final grade.
8. Present the complete thesis to other members of the examining committee well ahead of the scheduled oral examination. The examining committee ordinarily consists of the thesis adviser, and design consultant.
9. The department arranges the date and time for the oral examination. The student provides each member of the committee with a final copy of the thesis at least one week prior to that examination date.

Senior Assessment in the Psychology Major

Whitman College requires that "Every candidate for a bachelor's degree must, in [the] senior year or subsequently, complete with a passing grade a senior assessment in the field of the major study" (college catalog). These exams may be entirely oral or part written and part oral. When passed, they are graded "passed" or "passed with distinction." A student who fails to pass the major examination the first time may take a second exam at least 2 weeks later, and if that is failed, must wait 3 months before retaking it. The Senior Assessment in Psychology is part written and part oral.

The requirements differ for students declaring the psychology major prior to the fall semester of 2018 or in the fall semester of 2018 or later.

> **Students declaring prior to the fall of 2018:** The written exam consists of the Major Field Test in psychology, and the oral exam consistent of either the thesis oral exam or a nonthesis oral.
> **Students declaring in or after the fall of 2018:** The written exam consists of the thesis document, and the oral exam consists of the thesis oral exam.

Major Field Test (students declaring the psychology major prior to the fall semester of 2018)

The Psychology Department requires that students pass the psychology Major Field Test (MFT) administered by ETS as the written exam for graduation. The cost of the test is $38*****, which is prepaid, and the exam is typically taken in January of the student's graduating year. The MFT is modeled on the development of the Graduate Record Examination (GRE) Subject Tests and is designed to assess the basic knowledge and understanding achieved by senior undergraduates. The test is a two-hour long multiple-choice test with 140 questions, administered at Whitman College. Student scores are reported on a scale of 120-200; sub-scores are reported on a scale of 20-100. Scores at or above the 70th percentile "pass," and scores at or above the 95th percentile meet the written requirement for Honors in Major Study (these cutoffs apply to the overall score, not the subscores).

***** Students with a financial need may speak with a faculty or staff member to help them apply for assistance (their academic or thesis advisor, the dept. chair, their Dean, the Chief Diversity Officer, etc.).

Students who do not pass the MFT may take a second in-house exam not less than two weeks later. Failure to pass the re-take may result in a third attempt not less than three months after the re-take.

Students can also take the Psychology GRE, but you must tell the department **before taking the tests** which one you would like counted towards graduation requirements. If you elect to take the Psychology GRE in lieu of the MFT exam, please arrange to have ETS send two official copies of your scores, one to the Registrar's office and one to the psychology department chair. For the GRE, passing is at or above the 25th percentile, and honors is at or above the 80th percentile.

It is important to prepare for the MFT to ensure that you score as high as you can. You can study for the MFT in the same manner as you would for the GRE psychology subject test, but keep in mind the tests are not exactly the same. Consider buying one of the review books for the GRE and develop a systematic plan that will enable you to brush up on your knowledge of the field of psychology. Also plan on rereading your introductory psychology textbook. Don't try to "cram" the week before the test — you will simply need more time if you are serious about doing well.

Your preparation should also include examining the ETS website on the Psychology MFT. There you will find a test description, sample questions, and a sample score report. Search the Internet for "ETS Psychology MFT" or go to **https://www.ets.org/mft/about/content/psychology**

Oral Exam

Oral Exam For Those Doing a Thesis:
For students who opt to do a thesis, the oral exam consists of a 1-hour discussion/defense of the thesis with the thesis advisor and design consultant in April. Each committee member should receive a final

draft of your thesis at least a week before the exam. This time period will give everyone a chance to read your thesis carefully and prepare thoughtful questions for you. The department will schedule your exam.

We use a discussion format for the oral exam, and the discussion will be recorded (audio only). Professors often start the exam by asking you how and why you got interested in your topic. From there they usually ask specific questions about your thesis. Be prepared to discuss why you ran particular statistical tests and why you interpreted the results the way you did. Be comfortable and familiar with your data, and be prepared to graph expected and actual results. Some students prepare posters for their orals, although this is not required (however, if you have a lot of complicated results and believe that predesigned graphs, tables, etc. will help you communicate better, by all means do prepare these). Also be prepared to discuss the strengths as well as the limitations of your study, which you should have discussed in your thesis.

You will be assessed on your responses to the committee's questions about your thesis and questions about your others ideas and concepts from other psych or non-psych classes relate. You will also be assessed based on your ability to be articulate, to think on your feet, and the extent to which you demonstrate that you have learned to think like a psychologist. More details about the assessment are provided in the spring thesis syllabus.

After your orals are finished, you will be asked to leave the room for a few minutes while the members of your orals committee confer. During this time, your orals committee will decide whether you have passed or not (a retake may be provided if the oral exam is not passed). Whether you pass with distinction will be determined at a later date, by all the faculty supervising thesis, on the basis of the audio recording. Those pursuing honors must pass the oral exam with distinction, those not going for honors can still receive distinction on the oral exam. Your committee will also make suggestions to your thesis advisor for a tentative grade on the final draft of the thesis. When the conference is finished you'll be invited back into the room and your advisor will communicate the oral exam result and the preliminary thesis grade to you.

More details on the structure and preparation are provided in the spring thesis syllabus and in other sections of this handbook.

Oral Exam For Those NOT Doing a Thesis:
For students who opt not to do a thesis, the oral exam consists of a 1-hour conversation with 2 members of the psychology faculty about the field of psychology, where your goal is to distinguish yourself as a psychology major (as opposed to any other field). Each student will be given a prompt before Winter Break to guide your thinking in preparation for the oral exam. The prompt will offer you some choice in terms of particular issues of interest, but will require you to demonstrate knowledge from a variety of subfields, perspectives or theories, including statistics and research methods.

Oral exams will take place in late February, and will be scheduled by the department. One week prior to the scheduled date of your oral exam, you will submit a one-page abstract to your orals committee briefly summarizing your response to the prompt, along with a list of psychology courses you have taken. Professors will start the exam by asking you to respond to the prompt, speaking for about 10-15 minutes. Professors will then follow up with more specific questions, including questions about research design, statistics, and links to other courses you have taken.

You will be assessed on the thoughtfulness of your prepared response, your ability to be articulate, to think on your feet, and the extent to which you demonstrate that you have learned to think like a psychologist. More details on assessment will be provided prior to the exam.

After your orals are finished, you will be asked to leave the room for a few minutes while the members of your orals committee confer. During this time, your committee will decide whether you have passed, passed with distinction, or did not pass the oral exam (a retake may be provided if the oral exam is not passed). When the conference is finished you'll be invited back into the room to learn immediately the oral exam result.

Honors in Psychology

Conducting an Honors Thesis is part of the requirements for acquiring Honors in Major Study at graduation. To attain honors at graduation, you must: (a) complete a thesis that is deemed to be outstanding by the department, (b) earn an A- or higher on the completed Honors Thesis, (c) present the work publicly, preferably at a professional or student conference, (d) pass the MFTs with honors, which typically is performance at the 95th percentile nationally (passing is 70th percentile)*, (e) pass the oral exam with distinction, (f) acquire a GPA of at least 3.300 GPA overall, and (g) acquire a GPA of at least 3.500 in all psychology courses. Note that the GPA requirements apply at the time of graduation, not at the beginning of your senior year, so even if your GPAs fall short of these levels in September, if you're "within range" you may still have the potential of earning honors by the time you graduate. The 3.500 requirement for psychology courses applies only to courses with a designation of PSYC on your transcript; it does not include the credits in biology and philosophy that are part of the major. The 3.500 requirement also does not include transfer credits. If you are thinking of going for honors, discuss it with your thesis adviser no later than the beginning of your senior year.

* The MFT will not be required of students declaring the psychology major in or after the fall semester of 2018.

A Brief History of Psychology at Whitman

Courses in psychology were offered at Whitman College as far back as 1882, only three years after Wilhelm Wundt established the first psychological laboratory in Leipzig, Germany. Psychology courses were initially taught by the early presidents of the college (A. J. Anderson and later, Stephen Penrose), and were regular fare within the Philosophy Department until 1920. Until that time, no more than two courses in psychology were available. For instance, the 1894-1895 college catalog lists "Psychology" and "Physiological Psychology" as the complete set of psychology courses that a student could take at Whitman.

Psychology merged with the Department of Education in the 1920-1921 academic year, and the two-person Department of Education and Psychology (Profs. Keezel and Penrose) offered courses designed primarily to lead to teacher certification. Keezel, however, was the first to teach psychology as its own discipline rather than as part of the field of education. When Penrose discontinued his teaching activities, William Hunter joined the college toward the end of the Great Depression in 1939. In Hunter, Whitman College now had its first professor trained specifically in psychology, and thus "real psychology" (according to Chester Maxey, in an interview conducted in the late 1970s) began at Whitman. Eleven different courses soon became available to students, including General Psychology, Applied Psychology, Mental Hygiene and Personality, Industrial Psychology, and Genetic Psychology. Psychology continued to gain popularity with the addition of psychologist Max Bown.

The 1950s were associated with two major changes to the Department of Education and Psychology. First, in 1952, psychology and education split into separate departments. Second, the number of professors in psychology increased from one and a half (one full-time and one part-time) to two and a half. By the end of the 1950s, Professors Jerry Fogarty, Richard Suinn, and Merle Meyer were regularly teaching courses in social, abnormal, physiological, and child psychology, with statistics and experimental courses rounding out the course offerings.

During the 1960s, resignations and subsequent vacancies that were left unfilled did not encourage growth in the Psychology Department. Nevertheless, a young professor named Jay Eacker joined the staff in 1965, soon assumed a leading role within the department, and became instrumental in hiring several new colleagues. Jack Metzger was hired in 1969, and Stephen Rubin joined the College in 1971. With the addition of Deborah DuNann Winter in 1974, the four-person department enjoyed an incredible 25 years of stability. During that time, the department moved out of the old Billings Hall that it had called home for several decades, resided briefly in Reynolds Hall (now Olin), then moved to the third floor of the newly-built Maxey Hall in 1977.

The Psychology Department underwent rapid change as the "fabulous four" retired and a new generation of psychologists came to the permanent faculty in our department. Matthew Prull, Walter Herbranson, and Melissa Clearfield joined us in 1999, 2000, and 2001. Brooke Vick and Deborah Wiese worked alongside us until they transitioned in their careers. Pavel Blagov and Erin Pahlke arrived in 2009 and 2012. Even with growth in the number of departmental faculty, the popularity of our courses often required that we hire visiting and adjunct professors. After we welcomed Tom Armstrong, Stephen Michael, Nancy Day, and Chanel Meyers in 2014, 2015, 2019, and 2020 we grew to nine permanent, full-time faculty members. A strong research orientation has emerged in the department with laboratories that focus on comparative, cognitive, personality, social, developmental, educational, cultural, and abnormal psychology and neuroscience.

Despite these changes, certain aspects of the major have remained consistent. Psychology continues to be taught from the same empirical perspective that early psychology faculty at Whitman adopted. The department also continues to require a senior thesis of its majors, a tradition that goes back for over 100 years. Students can still take Physiological Psychology, which was first offered by Stephen Penrose in the late 1800s.

These are exciting times in the Psychology Department, and we invite you to participate in our "making of history" in psychology at Whitman!

Whitman College Psychology Core Department Faculty

Thomas Armstrong, Associate Professor of Psychology
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I grew up in Southern Oregon and attended Lewis & Clark College, where I majored in psychology and studied emotion in the Behavioral, Health, and Social Psychology Laboratory. While at Lewis & Clark, I also completed advanced coursework in sociology and philosophy. In the spirit of liberal arts education, my senior project integrated philosophical and psychological perspectives on aesthetic pleasure, casting beauty as an emotion. Years later, this project led to my first publication, co-authored with my undergraduate advisor.

After college, I worked as a research coordinator at Cornell University and as a psychiatric rehabilitation counselor in Ithaca, New York. I knew I wanted to pursue a PhD in something, but I had a hard time deciding between the philosophy and sociology of science ("science studies"), experimental psychology, and clinical psychology. Ultimately, I decided that I liked *doing* science too much to pursue science studies, and I enjoyed clinical work too much to pursue experimental psychology. So I pursued a PhD in clinical psychology at Vanderbilt University, where I found a balance between doing science and treating mental illness.

However, part of me always longed for the interdisciplinary studies of my liberal arts education, and by the end of my PhD, I knew I wanted to return to my roots at a similar institution. I am thrilled to be a faculty member in Psychology at Whitman College, because I can finally "have it all." In the classroom, I can teach psychology from an interdisciplinary perspective; in my laboratory, I can conduct experimental psychopathology research; and in the Walla Walla community, I can practice psychotherapy.

At Whitman College, I teach courses on introductory psychology, emotion, abnormal psychology, clinical psychology, and interdisciplinary perspectives on mental illness. My research interests include the role of disgust in anxiety-related disorders and the effect of emotion on attention, which I study using eye tracking technology. When I'm off campus, I enjoy cooking, gardening, and bicycling around Walla Walla with my wife and daughter.

Pavel S. Blagov, Associate Professor of Psychology
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I grew up and attended a Russian language school and an American honors high school in Sofia, Bulgaria's green capital. My interests in biology and philosophy became a fascination with psychology, which took me to Connecticut College. There, I collaborated with my advisor on research linking personal memories to psychological adjustment. When I advise psychology majors, I often suggest that they take advantage of such faculty-student collaboration options here at Whitman. At Conn College, I embraced the values of liberal arts education and empirical science, majored in psychology and neuroscience/neurochemistry, and decided to become a psychologist. Additionally, I completed the career-skills training program that funded my summer internship. I often advise students to seek out Whitman's career-skills development resources.

My graduate school path in clinical psychology started at York University in Toronto, where I worked on psychotherapy research and fell in love with Canada. My interests, however, took me to Emory University in Atlanta, where I studied emotion-driven reasoning and the classification of personality pathology (including mild personality dysfunction, borderline personality, and psychopathy). I also trained in pedagogy and psychological assessment and therapy, and I completed my predoctoral internship at

Columbia University Medical Center in Manhattan. I came to Whitman because of its congenial atmosphere, balance between teaching and research, and tradition of student-faculty research. I like sharing advice about getting into grad school, making ends meet there, making most out of it, and about career paths that do not involve grad school.

My research addresses individual differences in personal memories, the classification of personality disorders, and the ability of maladaptive personality to predict life outcomes. I am interested in working on research projects with students who are curious about personality, mental illness, psychological adjustment, relational functioning, the effects of emotions and motivation on decision making, and sexual orientation and gender. My teaching interests include personality, abnormal psychology, and psychological assessment and intervention. I also teach research methods and the science of sexual orientation, and I have some knowledge of basic forensic psychology, neuroscience, and psychopharmacology.

Licensed to practice psychology in Washington, I have practiced psychological evaluation, assessment, and psychotherapy (not as part of my job at Whitman). My approach to assessment is neuropsychological, and my orientation as a therapist integrates cognitive-behavioral and modern psychodynamic theories. In the past, I have even been able to take on practicum students from Whitman to shadow my clinical work.

Melissa Clearfield, Professor of Psychology
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I was born and raised in New Jersey, and after high school, I escaped to Middlebury College in Vermont, where I learned that nature is more than just a tree in the middle of a parking lot. I also learned that psychology is cool, especially how babies learn about the world. After college, I started my journey west by going to graduate school at Indiana University in Bloomington. I earned my Ph.D. in developmental psychology (with minors in Behavioral Neuroscience and Kinesiology), and then came to Whitman in the summer of 2001.

My current research explores whether and how poverty impacts attention and cognition in very young infants. It is well known that school-aged children who grow up in poverty show deficits in executive function (EF), which is a combination of attention, cognitive flexibility and problem-solving. Research in my lab tracks infants across the first year of life to determine whether low SES infants show deficits in any of these areas. And my newest project is testing an intervention that I designed to boost attention and object exploration in infants from low-income homes.

I offer such courses as Developmental Psychology, Psychology of Poverty, Poverty and Child Development, The Development of Teen School Shooters, as well as the senior capstone course and a first year seminar on childhood.

Nancy Day, Assistant Professor of Psychology
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I loved my high-school science courses and, upon entering college, I was certain I would major in biology (I did). What I didn't expect was that I would find psychology equally fascinating and want to major in it as well. After completing a double major at Whitman, my newfound interests in the brain, mind, and behavior led me to the University of Minnesota in Minneapolis, where I earned a Ph.D. in neuroscience.

As an undergraduate, I became intrigued by how effortlessly babies learn language. I'd also studied how early-life and ongoing experiences shape brain circuitry (in bees). To merge these lines of inquiry, I joined a lab in graduate school to study how brain circuitry changes over time in young male zebra finches as they learn to imitate an adult song. Although zebra finch songbirds don't learn language, their ability to learn song relies on several factors (e.g., critical periods, brain circuitry, social interactions, auditory feedback) that are also necessary for humans to learn speech and language. My dissertation was an investigation of how groups of neurons in a song-dedicated brain area change their firing patterns over the course of song learning.

Following graduate school, I studied the genetic influences on song learning as a postdoc at UCLA. There, I studied the bird version of FOXP2, the first gene definitively linked to human speech and language deficits in humans. I manipulated FoxP2 in the songbird brain to determine whether it affects ongoing song learning in adults as it does during song learning in juveniles. Using such behavioral training paradigms as negative reinforcement, I've found that proper FoxP2 function is critical throughout the lifespan of an animal to learn and maintain learned vocalizations.

My research has also taken me to the slopes of Andes Mountains in Ecuador, where I collaborate with other neuroscientists to study the plain-tailed wren. In these birds, both males and females rapidly alternate singing to produce a song that sounds as if only one bird is singing. We are interested in how the brain in each bird responds to cues produced by the other bird to understand how cooperative social behaviors are coordinated across individuals.

At Whitman, I am excited to continue investigating how experiences and biological factors interact to influence behavior, particularly speech and language, in both in my research lab and in my courses. In addition to teaching Introductory Psychology and Cells to Brain to Mind (Behavioral Neuroscience), I am excited to lead an upper-level seminar (Brain and Language) to tackle big questions about language -- a behavior that only humans possess -- from an interdisciplinary perspective.

Outside of the classroom, I enjoy returning to my childhood stomping grounds in Colorado, finding time for friends and family near and far, hopping on my bike for a ride around town, and engaging in extended conversations with my very "talkative" Siamese cats.

Wally Herbranson, Professor of Psychology and Herbert and Pearl Ladley Endowed Chair of Cognitive Science

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Wally Herbranson grew up in the icy plains of the Northern Midwest. After earning a B.A. in Psychology and Cognitive Studies at Carleton College in Northfield, Minnesota, he immediately headed for the desert and earned master's and Ph.D. degrees from the University of Utah in Salt Lake City. Wally is a comparative psychologist, studying the behavior and cognitive abilities of animals in an evolutionary context. In addition to organizing a comparative cognition lab in Maxey Hall, Wally teaches several courses, including Psychology of Learning, Comparative and Evolutionary Psychology, and Psychological Statistics. Walla Walla and Whitman College have proven to be wonderful settings for his intellectual and recreational pursuits. Outside of the classroom, he enjoys sleeping, cooking, brewing beer, and watching baseball.

Chanel Meyers, Assistant Professor of Psychology
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Born and raised in Hawai'i, I became interested in how racial diversity impacts how we deal with race and identity. Moving to the "mainland" U.S., where I earned my B.S. in psychology at Western Oregon University, was culture-shock for me. As a multiracial individual, I began to question my own racial identity and how one's environment shapes experiences. I returned to Hawai'i to obtain my Ph.D. in social psychology at University of Hawai'i, where I began to investigate these questions. I completed my postdoctoral training at York University in Toronto, Canada, before arriving back to the Pacific Northwest, here at Whitman College.

My program of research examines how increasing diversity in society shapes intergroup processes across contexts and groups. Using a social-cognitive approach, I examine how contexts and social norms influence cognition, behaviors, and social interactions, with a focus on racial diversity, race-related norms, and social perception. My research highlights the experiences of underrepresented racial groups in psychology and builds theories within intergroup relations that are inclusive of these growing populations. I use a wide variety of methodologies in this research, including but not limited to: qualitative interviews, eye-tracking, mouse-tracking, implicit measures, longitudinal surveys, and self-report measures. I am interested in working with students and using our lived experiences to investigate important questions about how we navigate our social world. Outside of the lab and classroom, I enjoy cooking, bicycling, and playing board games with my husband, Rob, and our dog, Gungi.

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Location: Maxey 350

Generally speaking, my research examines the role that social and cognitive processes play in issues within the legal system. I became fascinated with these applications of psychology through undergraduate research at Elon University (North Carolina). My interests and experiences there led me to the University of Texas at El Paso where I earned my Ph.D. in Psychology with a concentration in Legal Psychology, and ultimately back to work in a liberal arts environment. I spent two years at Mercer University before joining the psychology department at Whitman.

A majority of my research focuses on the psychological processes that influence deception detection and investigative interviewing techniques. Early on I examined how successful humans are at detecting deception (not very), and the degree to which performance can be improved through training. However, more recently I have focused more on the role of the liar in these interactions. For example, I am studying the roles that cognitive load and language proficiency of the speaker play in perceptions of the statement (i.e., accuracy and bias). Another direction that I am excited to explore further involves the strategic decisions liars make (e.g., sources of memory, impression management). I will be examining the interaction between those choices and processes related to deception (e.g., cognitive load, emotions), and their influence on the liars' behavior and perceptions of the statement. While my primary interests lie in deception, I also dabble in jury decision-making and eyewitness memory research. Ultimately, I hope that a better understanding of the psychology underlying these issues can help inform practice and outcomes in the legal system.

Erin Pahlke, Associate Professor of Psychology

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I became passionate about psychology while a student at Wellesley College, which is a small liberal arts college much like Whitman. I did not think I wanted to be a psychologist, though, and so I signed on with Teach for America after graduating. I taught for two years in the DC Public Schools, in a 4th grade classroom at Webb Elementary. That experience reignited my interest in research and the role of psychology in understanding children's and adolescents' development. So, I went off to Austin to study educational and developmental psychology at the University of Texas.

In my research, I'm interested in answering three broad questions: (1) How do children and adolescents form their views of race and gender?, (2) What are the consequences of children's and adolescents' views of race and gender?, and (3) What is the impact of experiences with racial and gender diversity of academic and socio-emotional outcomes? In my teaching, I'm interested in working with students to explore key concepts related to development, social environments, and research.

My husband, Derek, and I have two children, Evie and Calla, and a big crazy dog, Harvey. We love exploring new things together as a family, with a particular focus on new places and new foods.

Matthew W. Prull, Professor of Psychology

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I grew up in San Jose, California, a sprawling world of computers, silicon, and entrepreneurship. I became fascinated with psychology from a course in high school and quickly decided that my career would involve psychology in some way. As an undergraduate at San Jose State University, I found the research side of psychology fascinating, particularly in the realm of cognitive psychology that involved clever experiments that revealed how memory, perception, and imagination worked. I earned my Ph.D. in cognitive psychology at Claremont Graduate University, then later specialized in cognitive neuroscience as a post-doctoral scholar at Stanford before arriving at Whitman in 1999.

My research interests focus on understanding adult age-related patterns of change and stability in mental abilities such as memory, language, and the use of general knowledge. Much of my research is guided by dual-process conceptualizations of memory that distinguish between automatic and consciously-controlled memory processes. In addition, I am interested in false memory phenomena and what they teach us about the workings of memory across adulthood. I teach courses in cognitive psychology, memory, and aging, as well as statistics, experimental psychology, and introductory psychology.

Department Policies

PDF Policy for Majors
Courses taken within the major cannot be PDFed. This policy includes all courses with a PSYC designation as well as the "external" required courses in biology and philosophy.

"Double-dipping"
Students may use the same course to satisfy a psychology major requirement as well as a requirement for a minor in an area other than psychology (e.g., the psychology faculty will not object should a student wish to use a biology course to count toward the psychology major and biology minor). The psychology faculty does not support most other forms of "double-dipping."

AP credit in statistics
AP credit in statistics does not satisfy the psychological statistics requirement for the psychology major.

General Recommendations from Whitman Psychology Majors

In preparing this handbook, we asked our Psychology Majors to give advice to new majors. Here's what they said:

- Browse the department's website.
- Get to know all professors in the department.
- When you declare, make a schedule of courses you would like to take each semester.
- Finish as many additional required courses before your senior year so you can focus on your thesis.
- Challenge yourself in new ways by taking courses like Physiology of Behavior and Applied Psychology and Cells to Brains to Mind. As stated by one senior psych major, "Branch out from the areas of psych that you think are easiest and challenge yourself some . . . take physio!"
- Take advantage of Independent Study: find an area that interests you and work out an arrangement with a professor for 1-3 credits.
- Talk with a professor about designing a research project and then apply for a Perry or Abshire Grant.
- Do your reading *before* class and you'll get 10 times more out of the lecture.
- Use your summers and breaks to gain additional experience and knowledge
    - If you are eligible for work-study, work out an arrangement with a professor to do research and get paid for it (NOTE that summer work study applications are due in March, so you need to plan ahead for summer work).
    - If you aren't eligible for work-study, volunteer over summer/winter vacations.
    - Use the Student Engagement Center to locate alumni in your field of interest, to polish your resume and cover letters, and to learn how to market yourself.
    - Research organizations in which you are interested over winter break.
    - Search the Internet for organizations that interest you.
    - Contact psych departments at local colleges and universities; contact local Department of Social and Health Services.
    - Arrange for interviews over Spring Break.
    - Consider job shadowing.
- Go abroad! You'll get a break and get a new perspective.
- Present your thesis results at conferences (Whitman pays for travel expenses) — graduate schools like this!
- Attend psychological conferences such as WPA (Western Psychological Association).
- Become a student affiliate of the APA (American Psychological Association) or APS (American Psychological Society) to help yourself stay current on issues in psychology. The membership dues are low for students—it's the best deal you'll ever see in professional dues.

Guidelines for Writing

> Writing is easy; all you do is sit staring in front of your keyboard or a blank sheet of paper until little drops of blood form on your forehead.
>
> — attributed to both Gene Fowler and Red Smith

> It's easier if you believe in God, but not impossible if you don't. If you believe, then this God of yours might be capable of relieving you of some of [your] perfectionism. Still, one of the most annoying things about God is that he never just touches you with his magic wand, like Glinda the Good, and gives you what you want. Like it would be so much skin off his nose. But he might give you the courage or the stamina to write lots and lots of terrible first drafts, and then you'd learn that good second drafts can spring from these, and you'd see that big sloppy imperfect messes have value.
>
> — Anne Lamont, *Bird by Bird*

The Whitman College Psychology Department is committed to teaching and expecting good writing. Writing is often hard work, but it is also richly rewarding and greatly empowering. Below are the Department's guidelines for defining good writing. In addition, each faculty member has particular goals and strategies for specific papers and assignments. Our Department guidelines apply to all courses in psychology, but we designed them so that professors can supplement them for particular assignments.

General Principles

1. Unless otherwise notified, use APA format in accordance with the *Publication Manual of the American Psychological Association* (6th Edition, Washington DC: American Psychological Association, 2010). APA style is explicitly taught in Research Methods courses and 420, but is also expected in other courses, especially the Senior Thesis.

2. Good writing is continuous with good thinking. Ideas are inseparable from the language used to express them. It is simply not true that your ideas are clear if your writing is not. As your thinking gets clearer, so will your writing.

3. Good writing is actually good re-writing. As John Updike said, "Writing and rewriting are a constant search for what it is one is saying." Very few people can put out a good first draft. Most of us have to get our ideas down and then cut, paste, restructure, elaborate, drop, reorganize, and rewrite several times before a draft is really strong.

Common Errors to Avoid

1. Do not use sexist (and other forms of discriminatory) language. See pp. 70-77 in the APA manual. Use [sic] to indicate the problem when quoting, as in "Man [sic] and Nature". In general, avoid sexist referents by switching to plural forms. For example, avoid "A scientist should be aware of his assumptions". Although "A scientist should be aware of his or her assumptions" is technically correct, a more elegant phrasing is "Scientists should be aware of their assumptions."

2. Watch agreement problems such as "<u>one</u> should argue <u>their</u> own ideas." By the way, "data" is the plural form of "datum". To say "the data is good" is an agreement problem.

3. Get the distinction between *it's* (a contraction of it and is) vs. *its* (possessive) and don't use an apostrophe for the possessive.

4. Get the distinction between *affect* and *effect*. As nouns, affect is a feeling, effect is the result of a cause. As verbs, to affect is to partially influence and to effect is to achieve or accomplish (e.g., *Gandhi effected change*).

5. Avoid weak beginnings to sentences that often begin with the word "it." Language such as "It is thought that. . ." (what's "it"? You? Someone else?) can be improved upon. Often phrases such as "it is thought that," "it is assumed," etc. can simply be deleted.

6. Be careful about semi-colons vs. colons: use colons to introduce an oncoming phrase; semi-colons to separate two complete thoughts.

7. Avoid non sequiturs, which we will often denote with "NS". A non sequitur occurs when a thought doesn't follow logically from another. An example would be "*Because psychology is becoming more diversified, it has always embraced science*." The thought about science doesn't follow logically from the thought about diversification.

8. Be careful about starting sentences with "This." Always identify to what "this" refers by adding a noun clause such as "This quality," or "This increasing trend" or "This new idea". Add clarity to your prose by either avoiding "this" altogether, or immediately clarifying what "this" refers to by adding a noun immediately after the referent.

9. In general, avoid using second person pronoun as in "Psychology makes *you* aware of complicated environments". Second person works well when giving instructions, as in this manual. If you want to make more general statements, a better construction is "Psychology makes one aware . . ." or "Psychology makes me aware . . ."

More Tips on Producing Lucid Prose

1. Use as few words as possible (as Mark Twain once said, "eschew surplusage"). Achieve lucidity by dropping unnecessary words from subsequent drafts.

2. Find transitional phrases and connecting thoughts between ideas. Your thinking ought to proceed logically from one idea to the next. Avoid lists. Avoid the phrases *another point*, and *also relevant* which make your thinking read like a grocery list, rather than a coherent discussion.

3. Avoid repeating words and phrases, especially in the same paragraph.

4. Don't tell the reader what you are going to tell the reader. Just say it!

5. Don't use the word *feel* when you mean *think*, *believe*, or *assume.* Incorrect use of the word *feel* is very common, and promotes confusion between thoughts and feelings.

6. In general, avoid paragraphs of less than two sentences and more than a page.

7. Proofread your paper several times before submitting it and always have someone else (preferably in the class) do so as well. Trading papers is a good way to improve your effectiveness as a writer because you get help on your paper, as well as become sensitized to the role of the reader.

Requests for Formatting

1. Always number your pages at the top right corner, and make sure you staple them in correct order.

2. Use ragged right margins (i.e., do not justify lines).

3. Always retain an electronic copy of whatever you turn in. Remember, we have many papers coming in at many times during the semester, and if a paper ever gets lost, your backup copy will be a real lifesaver.

4. Use good paper and make sure your printer has sufficient toner.

5. We welcome printing on recycled paper, using both sides of the sheet.

Recommended Reading

Bem, D. M. (2003). Writing the empirical journal article. In J. M. Darley, M. P. Zanna, & H. L. Roediger III (Eds.), *The complete academic: A career guide* (2nd ed.). Washington, DC: American Psychological Association.

Cronin, T. E. (1993). *The write stuff: Writing as a performing and political art* (2nd ed.) Englewood Cliffs, N.J.: Prentice Hall.

Lamott, A. (1994). *Bird by bird: Some instruction on writing and life*. New York: Bantam.

Parrott, L. (1999). *How to write psychology papers* (2nd ed.) New York: Longman.

Schuzman, L. T. (2013). *Writing with style: APA style made easy, 6th ed.* Boston, MA: Cengage.

Sternberg, R. J., & Sternberg, K. (2010). *The psychologist's companion: A guide to writing scientific papers for students and researchers* (5h ed.). Cambridge: Cambridge University Press.

Strunk, W., & White, E. B. (1979). *The elements of style.* New York: Macmillan.

Appendix: Suggestions from Other Departments on Writing

Prewriting and Revision:
The following is a writing and revision checklist assembled from various sources. These are simply suggestions, of course. In the process of learning to write, you need to develop your own writing "voice" and style of working.

Prewriting:
Think. Talk about the subject. Begin to formulate your thesis. Jot down notes, a few sentences here and there. Make an outline.

First Step: Start writing.
Use any technique (free writing, rough notes). Get the ideas on paper regardless of form. This is the time to explore, experiment, test ideas. Mechanical considerations are not important at this stage.

Second Step: Organize.
Outline. Shape. Cut and paste and restructure the first draft ideas in an order that makes sense. Keep strong ideas and drop dead ends and false starts. Rewrite so that the best evidence supports your thesis.

Third Step: Write.
Write the introduction and conclusion, if appropriate. Make final judgments on paragraph order. Proofread and edit. Think about tone, language, fairness, counter-arguments, and point of view. Now, outline what you've written. Can you? If so, you are ready to let someone else read it.

Subsequent Drafts: Refine the thematic and mechanical elements of your paper. Address points made in critiques. Reorganize and restructure if necessary. Clarify ambiguous points and wording.

Grading Guidelines

Our aim is to give you feedback that enables you to become a stronger, more effective writer. We have high expectations, and we offer help and support as you learn to meet them. Although it should go without saying, we expect all of your writing for classes to be your best quality. It is simply not acceptable to turn in sloppy prose, mechanical errors, poor organization of ideas, etc. unless your professor explicitly tells you not to worry about writing quality. As college students you are expected to be literate and serious about your work. Please don't embarrass yourself or insult us with anything less than your best.

Here are some *general* guidelines for grades:

A: Superior work in terms of both content and form
• Virtually no mechanical errors (spelling, typos, grammar, syntax)
• Ideas are clear and well organized
• Understanding of material is impressive
• Claims are backed up with references and quotations where appropriate
• Insightful and thoughtful; goes beyond the given assumptions
• Exceptional performance on all dimensions

B: Competent, acceptable work
• Weak on either form or content, or average on both
• Substantive, but not insightful
• Understanding of material is adequate
• Some, but not much thought beyond the given assumptions
• Some, but not much referencing of ideas

C: Weak, barely acceptable work
• Frequent mechanical problems
• Poorly written
• Ideas not clearly presented
• Understanding of material is minimal or inaccurate
• Sloppy organization

D: Poor, unacceptable work
• Poor writing, mechanics, or organization make ideas difficult to decipher
• Submitted work misses major expectations of assignment

F: Unacceptable work
• Submitted work does not reflect expectations of assignment
• No work submitted

Just as we expect your best, as your professors we do our best to help you reach your potential. We will spend enormous energy and time reading and commenting on your papers, and we expect you to seriously consider and address our comments in your subsequent papers. Our goal is to give you feedback that will help you improve your writing. If you do not understand what we are telling you, or feel harshly or unfairly treated, please come in and talk with us.

Good writing is specific to a discourse community. Writing that works well in the humanities may be problematic in psychology. Learning to write well is like learning to speak a foreign language. Applying certain rules will help, but like language and culture, writing involves many tacit understandings and experience. Consequently, it is not possible to provide you with a template for a "perfect" paper, although often we can suggest how to remedy particular problems as you develop in your writing ability. Please do not feel insulted or disempowered by our suggestions. Because individual feedback is crucial for the learning process, we work hard at grading papers in order to assist your growth as a scholar. Learning to write well, and learning to teach others to write well, is a long-term process, which we look forward to sharing with you.

How to Find Tests

Definition
"Test" here refers to any survey, questionnaire, inventory, procedure, instrument, or battery of stimuli that psychologists or psychology students might use to measure, evaluate, or assess the behavior, learning, or mental processes of any human or nonhuman organisms or groups of organisms for the purposes of carrying out research in psychology or for the purposes of learning how to practice or practicing professional psychology (including program evaluation and consultation).

How not to mess up: **Ethical use of tests**
The use of many tests is governed by the principles of psychological ethics, copyright laws, and the laws that regulate research with human participants and the professional practice of psychology. Avoid breaching applicable ethics principles or federal or state laws.

- **Do not conduct research, copy tests, or administer tests without appropriate supervision.** In general, you will be doing these things only if you are conducting research for academic purposes or completing a psychology practicum for academic credit. This means that the professor overseeing your research or teaching the course will supervise your use of tests. Go to your professor and discuss your plans before you copy or use any tests for your research or coursework. Your professor will instruct you on what use of the tests is acceptable.

How to find tests
If you are wondering how to obtain specific tests, know that the process of locating tests involves time and detective work. Sometimes you will find exactly what you need right away. At other times, you will search through journals, handbooks, and computer databases to find what you need. Here is some advice on finding tests and measures:

- **Meet with the professor supervising your research project and ask for help.** The professor may give you advice on how to approach the search for an appropriate test, may be in the possession of such a test, or may know of someone in the department who might be able to advise you or let you borrow a test.
- **Meet with a librarian, especially the librarian serving as the liaison for the social sciences.** A librarian can guide you to online databases or printed directories of established psychological tests. The librarian can also show you how to use these resources efficiently. The following resources may be especially useful:
  - **Mental Measurements Yearbook;**
  - **Directory of Unpublished Mental Measures (DUEMM);**
  - **ETS Test Collection.**
- **Search the psychological literature for tests reproduced in peer-reviewed journals.** Many questionnaires, particularly ones developed for research purposes, can be found in the scientific research articles that first introduced them to the community of research psychologists. In many cases, these measures are in the public domain and are free for use by researchers; in other cases, they are proprietary and require purchase from the publisher and/or special authorization for their use. Consult with the faculty member supervising your research about the appropriateness of copying published measures.

Paying for tests
The research projects for most courses may not quite pass the bar for using departmental funds for purchasing proprietary and commercially available tests. When this is the case, then work with the professor supervising your research to design your study in a way that does not require you to spend any of your own money. On the other hand, the purchase of tests for some research projects may be justified, particularly when such projects are part of thesis coursework and/or intended to result in scholarly publication. Discuss your plans with the professor supervising your research activities. It may be possible to ask the Psychology Department faculty to approve the purchase of the test materials with departmental funds. (The department is more likely to approve such requests if the materials will not be used up and will remain in the department's stores for future use by students.)

Presenting at Conferences and Publishing Your Research

One of the best ways to distinguish yourself as an undergraduate is to present your research at a conference. Psychology majors hoping to earn honors are required to present their thesis work at a conference, and everyone writing a thesis is strongly encouraged to do so. This matters not only for the prestige of our institution but also because presenting your work helps you develop some of the kinds of skills that your potential future employers, graduate school advisors, or business associates will favor. Many psychology majors add their conference presentations to their resumes or CVs.

The Western Psychological Association meets in April or early May with a proposal deadline in mid-November. The timing of this conference is especially well suited for seniors because by March you should have your data and be able to write a reasonable abstract. Ask your advisor to help you, and visit the WPA on the Internet at **www.westernpsych.org** for application forms and deadlines. Whitman students have had a very high success rate for getting papers accepted, and the Provost and Dean of Faculty's office will fund travel costs.

Our own **Whitman Undergraduate Conference** is yet another opportunity for you to present your research. It is conveniently located and allows you to share your research with your peers outside of psychology. This conference takes place in April. Students who are preparing to present at WPA might consider "practicing" their communication skills by first presenting their thesis at the Undergraduate Conference.

It is also possible to publish your work in a professional journal. Some journals specialize in undergraduate research (e.g., ***Psi Chi: Journal of Undergraduate Research***), but you need not limit yourself to such journals. Some of our psych majors have been first authors on papers that have been published in non-undergraduate, peer-reviewed scientific journals. You can do it too, although you will need to work closely with your advisor in this process.

Hints for a Successful Conference Experience

(modified from an APS paper; http://www.apa.org/science/about/psa/2013/01/conferences.aspx):

Present
You're all going to do this. But, think about how you're going to approach presenting. The stakes are relatively low at a poster session; in fact, you'll see some people who don't really stand by their poster, or who spend some of their presenting time talking to friends about their evening plans. Instead, focus on using that presenting time thoughtfully. Practice your skills of approaching someone who is looking at your poster and saying, "Can I walk you through the study?" Take every question as a chance to reflect on the study and your process. What could you have done differently? How could you add nuance to the discussion section? How could you clarify the results section? You may meet someone at your poster session who you end up collaborating with on another project. Take full advantage of the opportunity to grow as a scholar.

Go to talks and poster sessions
Listening to talks - and talking to folks about their posters - gives you a sense of the current state of the field in a way that no journal can. A project you hear about may be years away from publication, yet it may have implications for your own research. Learning of research while it is still being conducted gives you the opportunity to think about your own work and interests from different perspectives.

Conferences are also a great place to get exposure to material that is less accessible at Whitman. For instance, there's a session at WPA about power analyses with regressions. Attending that session will broaden your skill set. There are lots of other sessions - some focused on stats and some not - that will similarly expand your horizons. Go.

Some sessions will impress you. Others will strike you as not terribly strong. They're all helpful. No matter the content of the talk or workshop, conference sessions give you the chance to hone your scientific thinking. Take notes, ask questions, and get excited about the current research -- and/or where you think research should go next.

Act in social ways
Conferences are a time to celebrate the hard work that you have done and to congratulate others on their achievements. They are also a time to reinvigorate yourself with exciting and new research ideas. So, find conference buddies both in and outside of Whitman. When I talk to you on Sunday, I hope you'll tell me that you deepened your friendship with a fellow Whitman student. But, I also hope you'll tell me that you got to know someone from another institution. Introduce yourself to people. Ask questions. Put yourself out there.

Employment, Careers, and Graduate School Resources

The Psychology Department maintains **the PSYC-000 reserve in Penrose Library.** This reserve contains two kinds of resources.

1. Books that catalog graduate programs in psychology in the U.S. and Canada. These books provide specific information about individual programs. They are often the starting place for students seeking to build a list of graduate programs to which they might apply.

- *Graduate Study in Psychology* by the American Psychological Association
  - Now available as an online subscription at https://gradstudy.apa.org/
  - You can probably get what you need with the cheaper 3-month subscription
- *The Insider's Guide to Graduate Programs in Clinical and Counseling Psychology* by The Guilford press

2. Books about preparing for the GRE and the GRE in Psychology. These are general psychology textbooks and books specifically about GRE and GRE Psychology preparation, which may include practice tests.

- *GRE Graduate Record Examination Premier* by Kaplan Publishing;
- *Barron's GRE Psychology* by Barron's Educational Series;
- *Cracking the GRE Psychology Subject Test* by Princeton Review;
- Introductory psychology textbooks.

Through Penrose library, you may also obtain books about careers ideas and advice for psychology majors. Such books include:

- *Career Paths in Psychology: Where Your Degree Can Take You* by the APA;
- *The Psychology Major: Career Options and Strategies for Success* by Pearson;
- *Careers in Psychology: Opportunities in a Changing World* by Wadsworth Publishing;
- *Majoring in Psychology: Achieving Your Educational and Career Goals* by Wiley-Blackwell;
- *Great Jobs for Psychology Majors* by McGraw-Hill;
- *Careers in Mental Health: Opportunities in Psychology, Counseling, and Social Work* by Wiley-Blackwell;
- *Opportunities in Psychology Careers* by McGraw-Hill.

Also check out the following resources:

PsychResearchList – www.psychresearchlist.com
As of late 2020-early 2021, this site contained up-to-date information about some paid internships, advice on how to apply to graduate school, and other resources

http://psychjobsearch.wikidot.com/ has a "predoctoral" job postings section that (as of 2021) includes research assistant, head research assistant, and lab manager positions.

Careers in Psychology by the American Psychological Association
http://www.apa.org/careers/resources/guides/careers.aspx

Occupational Outlook Handbook by the U.S. Bureau of Labor Statistics
(search various occupations for "psychology")
http://www.apa.org/careers/resources/guides/careers.aspx

Graduate Study in Psychology: Find Your Psychology Graduate Program
https://gradstudy.apa.org

Psychology Grad School Wiki for Prospective Psych Grad Students
http://psychgradsearch.wikidot.com/

Getting into Graduate School: Preparation and Time Use

If you're thinking about graduate school in psychology, that means that you are serious about your studies and have begun to give serious thought to your future plans in psychology. That's great! However, you should know that admission to psychology graduate schools can be very competitive. Admission to these programs can be so competitive that, for example, whereas (at the time this is being written) University of Chicago accepts about 1 out of every 5 applicants for its excellent MBA program, and whereas Stanford accepts about 1 out of 10 applicants for its prestigious law school, top-ranked University of Oregon accepts less than 1 out of 35+ applicants for its Ph.D. program in clinical psychology (a 3% admittance rate). This is not an exception but rather the rule for many clinical psychology programs. Other areas of psychology (such as developmental or cognitive), and other degree programs (e.g., master's degrees) are less competitive, but still, the odds can be very stiff. These statistics are not meant to discourage you but rather to give you a very real understanding that you will have to work aggressively to gain admission to graduate school. At a minimum, getting into the program you want will require a lot of effort and determination. To balance the scales somewhat, it's only fair to mention that many students apply to several programs at once, which inflates the numbers of applicants. Because of this inflation, the numbers are not quite as much against you as a first glance might suggest.

The site **http://clinicalpsychgradschool.org/** includes resources from clinical psychology graduate program directors about applying to PhD programs in clinical psychology. It also includes information about non-PhD career paths related to clinical psychology (e.g., master's-level programs). At the time this document is being written, the site contains information about finding research opportunities, which are much needed for students interested in applying to clinical psychology programs. Also check out **https://www.psychresearchlist.com/.**

The first step in the grad-school preparation process should be to decide realistically what kind of career in psychology you would like to have. This is really very crucial. Lacking a career goal is like driving from Walla Walla to New York without a road map — if you get there, it would only be by sheer luck. It is much better to control where you are going than trust your future to capricious fate, so right now, start to decide what psychological work you would like to be doing. Consider your likes and dislikes, and your own personal strengths and weaknesses. Taken together, these produce the beginnings of your "road map" pointing toward a general long-term goal. For example, if you don't like the sight of blood, it wouldn't make sense to pursue a career as an emergency room physician. Each career area in psychology requires unique qualifications and aptitudes. As an example, if you aspire to do clinical and counseling work, you must have the patience (no pun intended) and stamina to deal with the frustrating and stubborn difficulties your future clients will present. Without these specific traits, you'll quickly tire of clinical work.

We suggest that you determine your generalized career goals as early as possible and then "test" how well that goal suits you. Test your goal by gaining actual experience in the type of work that you have decided may be your career. How do you do that? Volunteer! If you're considering delivering psychological services to geriatric or gerontological populations (a rapidly growing demographic segment), volunteer locally with the Adopt-a-Grandparent program on campus, or with Walla Walla Community Hospice. If counseling is your aim, work with the Student Engagement Center to identify relevant internships such as the Juvenile Justice Center in downtown Walla Walla. Or you could try working as a telephone counselor for a crisis hotline service. There may be additional volunteer opportunities in your home town during the summer months. If you find that the work is enjoyable and you seem good at it, you have not only confirmed the realistic nature of your career but have also improved your graduate school application because graduate programs like to see related experience.

Hopefully, as you have finished reading the above, you have begun to sketch out, at least generally, the kind of career path you would like to follow. Hopefully you will gain some experience in your selected path and will research what it takes to reach that career goal. Figure out what credentials are needed to do the work you have chosen. If you have decided to enter private or public clinical practice, you should be aware that it is not mandatory to have a Ph.D. in clinical psychology to administer psychological services in Washington or in most other states. For instance, a Master's degree can enable you to be a Marriage and Family Therapist or similar. To be a *licensed psychologist* in Washington state, however, you need to

earn a doctoral degree from an accredited institution (Ph.D. or Psy.D.), complete no fewer than 2 years of supervised experience (at least one of which is subsequent to the awarding of the doctorate degree), and pass the written and oral examinations that are given by the Washington State Examining Board of Psychology (information about the current Board requirements can be found online).

The PSYC-000 course reserve in Penrose Library is maintained by the Psychology Department and contains recent editions of *Graduate Study in Psychology* (but see https://gradstudy.apa.org/), *Insider's Guide to Graduate Programs in Clinical and Counseling Psychology,* and GRE preparation books. The single best resource on graduate programs themselves, their requirements, and characteristics, is the book *Graduate Study in Psychology.* This guide is published by the American Psychological Association (APA) and is updated annually. As noted above, we try to keep recent editions of the guide on reserve in the library, but if you are serious about applying to graduate programs it's best to purchase your own copy (available directly from APA for about $20). This handy guide offers vital statistics for every program in the USA and Canada. You can find out how many applications a certain program receives, the number of openings they anticipate, the average GPA and GRE scores of those applicants who were admitted, and a little information about the program itself (including financial support). Give special attention to the section that describes specific factors that each program uses to select applicants and the relative weight they give to each of these factors. Get additional information about faculty and their interests from the web. The information that you gather will help greatly in narrowing your program choices as well as program your curriculum in your final semesters at Whitman.

Another important decision to make is to decide whether you want to attend a university or a professional school. While university Ph.D. programs are very competitive and are typically research-focused, they will often provide financial support for your graduate years, and completing a university program can open up the possibility of an academic career. The many excellent professional schools are geared primarily for those interested in clinical practice rather than research, and typically differentiate their program's emphasis by awarding the Psy.D. degree (Doctor of Psychology) rather than the Ph.D. (Doctor of Philosophy). One example of a professional school is the California School of Professional Psychology (in various locations throughout California, see www.alliant.edu/cspp). Financial aid at professional schools is often limited but they are often fully accredited by the APA (this is important!) and admission is generally much less competitive. Again, which direction you take will depend on your career goals. Both types of program are detailed in *Graduate Study in Psychology*.[1]

The rest of this section is concerned primarily with university Ph.D. programs, although most of the points also pertain to the professional schools and Masters programs.

As noted earlier, a Masters program can lead to licensure as a Counselor or Therapist and can lead to other career directions, including a teaching career in the Washington community colleges. Most Ph.D. programs will accept those with Masters degrees although the M.A. or M.S. degree usually does not grant any edge to the applicant. A Masters program will allow you to sharpen your career goals, obtain more research experience (which helps a Ph.D. program application immensely), and prepare you more fully for the rigors of a Ph.D. program. One drawback, however, is that Masters programs usually do not provide financial aid. A general rule of thumb is that, if you are fairly sure about your career directions, if your grades and GREs are strong, and if your personal and emotional life is stable, then apply to the

[1] There are additional specialized compendia for graduate programs that may be relevant to your goals. These include the *Directory of Graduate Programs in Applied Sport Psychology,* which contains practical information about graduate programs in sport psychology throughout the USA and Canada (see www.aaasponline.org/publications for purchasing information); the guide *Graduate Training Programs in Industrial/Organizational Psychology and Related Fields*, which provides useful information about many doctoral-level programs in I/O psychology as well as graduate programs in human resource management, organizational behavior, and industrial and labor relations (available for free from www.siop.org/GTP); the *Insider's Guide to Graduate Programs in Clinical and Counseling Psychology* (about $20 through www.amazon.com; also on reserve at Penrose Library); and the guide *Summary Information on Master of Social Work Programs*, which gives information on more than 100 graduate programs in social work: Degrees, concentrations (clinical, gerontology, families, etc.), application deadlines, tuition costs, etc. (order through the Council on Social Work Education, www.cswe.org). You may also be able to access some of these directories through the library.

Ph.D. programs. That way you will have more options available to you. Many Ph.D. programs do grant Master's degrees en route to the Ph.D.

If your grades are not as good as they could be, if your GREs are weak, or if you're just not sure what aspects of psychology you'd like to focus on in your career, then a Master's program may be a good idea. It will give you the time to improve grades and GPA as well as offer you the time and experience to sharpen your career focus. Many students have followed this path into Ph.D. programs and on to very successful careers.

As you read and browse through program information, weed out those programs that seem incompatible with you or your goals. Be sure to look carefully at the faculty research interests (more on this later) and note that many schools lack specific programs. Harvard and Stanford, for instance, do not have clinical programs yet both still receive a sizeable number of applications for clinical admission (Stanford, however, does has a counseling program in the Department of Education).

Besides the APA guide, another valuable source of information, particularly for those considering an academic career, is the National Research Council rankings for Ph.D. graduate programs (online at www.socialpsychology.org/ranking.htm). This is important because your goal should be to get into the best program that you think you can handle. Of course, a Ph.D. from a top 20 school does not *guarantee* a good career, but it will allow you more flexibility and choice than what you would gain from a lower-ranked program. Although some caution should be exercised when using these rankings (in part because they may not updated regularly) the NRC rankings will give you some idea of the academic pecking order and a clearer perspective on the academic world.

We believe it is also important that you understand how schools go about selecting their future graduate students so that you can see how all of the parts of your application go together.

The Selection Process

This is the most confusing and difficult aspect of graduate admissions. It sure is confusing on your side of the table as an applicant, but it is equally so on the side of the admissions committees who have to make difficult choices among many very excellent applications. Many of us in the psychology department can relate our experiences going through this application process — in general, it doesn't feel good to know that you are at the mercies of a process with so many variants and aberrations. There is no guarantee that a program's selection procedures will conform to the system outlined below, but many do.

The number of available slots in a particular program is often dependent on how much financial support, physical space, and faculty time is available. Applications are usually received and reviewed by one or two people (often administrative assistants) who cull out the applications that do not meet certain minimum objective criteria (e.g., GPAs, GREs, etc.). The surviving applications are then reviewed by a faculty committee (which often includes some graduate students) or by individual faculty with research interests that match those interests expressed by the applicant. In some programs the applications are rated by several reviewers and in other programs, each segment of the application — from GREs to letters of recommendation — is assigned a numerical score. It is important to note that items like the GREs and GPA are "qualifiers," and as long as they're above some preset cutoff (like, say, 3.50), then a GPA of 3.65 rather than 3.70 will not make or break an application. However, note that if your scores on these criteria are far from those of the average candidate that the program accepts, then those aspects of your application that make you a special and interesting person (such as your personal statement) will never be reviewed. This is a rather harsh and discouraging reality, but when programs like UCLA, Minnesota, and Oregon receive literally hundreds of applications per year, these selection procedures become necessary. Nonetheless, other Whitman students have done it, and have been admitted into some of the world's finest psychology graduate programs. You can do it too! However, be realistic about where you apply if for no other reason that it can cost you about $50-60 per application. Fortunately, many schools will waive application fees if you can demonstrate financial need.

Individual faculty, with openings and adequate research or trainee funds to support students, usually determine which applicants are offered admission. Therefore, they will select those applicants who list research interests that most closely coincide with their own. This is an extremely important point to which we will return shortly.

The main selection factors include grades and courses, GREs, letters of recommendation, research experience, personal statements, and occasionally interviews. Let's consider each of these in depth.

Grades and Courses

Of course, you know that grades are very important, but what about the courses themselves? Each graduate program has its own distinctive flavor and its course requirements follow that inclination. For example, UCLA likes students with a strong background in physical science, Oregon prefers a strong background in math as well as science, while UC Berkeley prefers a more well rounded program. Almost universally, the schools like to see coursework in statistics (and it's a good idea to get all of the statistics you can — once you're in, you'll need that experience!), research methods, abnormal and physiological psychology (although again, not having taken one of the latter two courses will probably not break an application). Statistics and research methods are highly important *even for clinical and counseling programs*, so it's important to do well in these courses no matter what career direction you're considering. Both the APA guide and material from the schools themselves will outline each program's specific requirements. Those courses that are specifically required should at least be in progress, if not completed, by the time you submit your application.

If one of your liabilities is a weak GPA in your early years of college, this may not be a huge problem. Different programs consider different aspects of GPA. Some programs use only the last two years of undergraduate studies while others consider only the psychology GPA. Again, check the APA guide and the program materials for specific policies. Many programs, however, do consider grades *the* key indicator. If you have a weak GPA, it may be a good argument for considering Masters programs. A lackluster GPA can be offset by high GREs and a lot of research experience. A 3.40 is generally considered a minimum GPA for university Ph.D. programs, and GPAs higher than this are preferred.

The Graduate Record Exam (GREs)

The GRE general test is required by the vast majority of doctorate-level graduate psychology programs (the major exception being the professional schools). The general test includes verbal, quantitative, and analytical subsections. A few programs (about one-fourth) also require the GRE subject test in psychology, although the number of these programs seems to be diminishing over the years. The verbal and quantitative subsections of the general test are scored on a standardized numerical scale ranging from 200 to 800, while the analytical writing section is scored on a scale ranging from 0-6, in half-point increments. In addition to the standardized score, each subsection is assigned a percentile value. For example, a standardized score of 600 might be at, say, the 57th percentile for the verbal section and the 38th percentile for quantitative. The subject test is scored on a scale ranging from 200-990 and also includes subscale scores for experimental and social psychology. Please note, however, that some schools do not use the analytic writing portion of the general test in their admissions deliberations, and many do not require the subject test at all.

The general exam takes about three and a half hours to complete. There are six sections, two each of the verbal, quantitative, and analytical subsections, presented in a random order. The test can be administered by computer or by the traditional pencil-and-paper method. Unfortunately, the test is not administered at Whitman, so you will probably have to take the exam in a nearby city. Check out the GRE website (www.gre.org), and call Bridget Jacobson, Director of Testing (527-5158), to get more information about how and where to take the test. We recommend registering for the test online, then traveling to a designated computer testing center in Ellensburg or Spokane on your assigned test date to take the test. If you're taking the test during the summer (recommended), you may be residing elsewhere and need only travel a short distance to get to a computer testing center that administers the GRE general exam. Again, check the GRE website for details.

By all means, do prepare for this test. Preparation can raise your score considerably, so give yourself ample time to do it right. Break your preparation time into little daily segments (i.e., 15 min per day on word roots, etc.) and plan to take the general test as far from the date you take the subject test as you can. Don't take the general and subject tests on the same day, as this can be a real killer! Consider taking the necessary tests during the summer so that school pressures are not distractions to your preparation. Also, if you feel that you really screwed up taking a test, you can always cancel the test and it will not be scored.

A very helpful booklet that you can download is the *GRE Information Bulletin* (see http://www.ets.org/gre/general/about/bulletin/ for this and additional downloadable documents). The Information Bulletin contains a sample test (which is an actual previous test). The very first item in your prep program should be to sit down and take this test in one sitting. This will give you a good sense of where you are already competent and where you will need additional prep work. The results of this test will then be your guide in allocating preparation time and effort.

There are courses offered to help you prepare for the test but they are expensive. For the money, however, several additional previous tests (which you can order from Educational Testing Services) and a good guide like *Barron's* will be more valuable. As for the subject test, preparation should be quite detailed and can be best accomplished by planning your coursework so that you take as many classes in the key subject areas as close to the test date as possible. The key areas are *experimental/natural science* (which consists of questions about learning, cognition, sensation/perception, comparative, and physiological areas), and *social science* (which covers clinical, abnormal, personality, and social areas). About 80% of the questions come from these domains (equally divided between the experimental science and social science areas). The remainder of the test, known as *general* psychology, contains questions about history, applied psychology, measurement, research design, and statistics.

Such course planning is valuable because many of the test questions don't ask for specific detail but rather for a broad theoretical understanding of the area. However, you may not always have the opportunity to tailor your curriculum this way, due to study abroad or to limitations in course availability. If this is the case you can prepare by carefully reviewing a good introductory psychology book prior to taking the GRE subject test (good texts include those written by Gleitman, Myers, Atkinson, Zimbardo, Gray, and many others — the one you used in your Introductory class is perfectly suitable). Doing this review over the summer between your junior and senior year can even simultaneously prepare you for taking the Major Field Exam (MFTs), the required comprehensive written exam taken in January of the senior year.

Occasionally, programs require tests in addition to the GREs. For instance, a few programs require the Miller Analogies Test (MAT). Check the APA Guide for each program's requirements and contact Matthew Fox to work out testing arrangements if you need to complete these tests.

Letters of Recommendation

So far we have been discussing the objective and quantitative aspects of your application — GPAs, GREs, etc. Letters of recommendation, however, are an important exception. Admissions committees use these letters to learn about all the qualities that would make you an outstanding graduate student that are not revealed by objective data such as GPA. Letters of recommendation may therefore touch on the following qualitative aspects of potential interest to graduate admissions committees:

- How good are your research skills?
- Do you offer thoughtful contributions to class discussions?
- Do you have good interpersonal skills that enable you to get along with faculty and other students?
- Do you exhibit strong leadership skills?
- Have you contributed to the various extracurricular activities of the Department such as assisted in labs, proctored, helped with visiting scholars, etc.?

By mentioning subjects like these, letters of recommendation can provide the "big picture" of your overall promise and potential, something not necessarily revealed by test scores, but every bit as important for predicting success in a graduate program. Admissions committees know this, and they read letters carefully. A substantive and detailed letter from an informed letter-writer can be very persuasive to graduate admissions committees.

As always, preparation is important. The professors who you select to provide letters should, at the very least, have had you in one of their courses. The single most important element in a letter of recommendation is the depth of knowledge of you that it demonstrates. You can help your recommenders by providing each of them with the items listed below (neatness and organization is obviously very important — imagine what your letter writer will think of your organizational skills if these items are put together sloppily!). You can also help yourself by taking the time to let your professors get to know you. Here is the information your letter writers will need:

- A clear list of deadlines for each letter requested
- A description of your professional goals
- A transcript of your undergraduate work
- A list of the courses you took from that professor, including any skills, talents, accomplishments, etc., you demonstrated to him or her that you believe are relevant to your application
- *Details* about your senior thesis
- Your minor, if you have one
- The titles and abstracts of any conference presentations which you have authored or research papers to which you have contributed
- Honor societies to which you belong
- Awards that you have won
- Extracurricular activities in which you have participated (and any offices held)
- Work experience
- Service activities such as volunteer work
- A statement of why you believe *this* particular program will be a good match for your skills, interests, and experiences.
- Any other information which you believe can strengthen your case

You should know that virtually every applicant has good letters, so the real difference is in the depth. The deeper the apparent knowledge of the applicant that is portrayed in the letter, the more credibility the letter has. Give your selected professors plenty of notice (2 weeks minimum but more time is better — we are all willing to spend a great deal of time writing good letters for you but you must give us opportunities to find blocks of time to do so). Under almost every circumstance, you should waive your right to read these letters. If you do not do so, their value and credibility declines a great deal. Most schools will ask for three letters but it is not a bad idea to send four. Again, the real key is to help your recommenders know you well, and a very good way of accomplishing that is to assist them in their research. These letters are really very important, so be sure they're good!

Research Experience

This is a very crucial area. The more research experience you have, the better. There is simply no such thing as too much research. At a minimum, you should try to assist a professor on a research project. Not only will this training be of great help when you're in graduate school, but it will really help you get there. Plan on adding a sheet of paper to your application that details your research experience. This can include experiments that you have done in the required classes (such as Research Methods), in independent study projects, or in Research Experience (PSYC 358). You should also consider adding details about your thesis project, even if it's still in progress. Virtually all graduate programs — even the counseling ones — like to see how you've engaged in research.

Another strategy tip, if you have selected one program that especially interests you, would be to carefully read their faculty's research interests. Look up each faculty member's website, if they have one, and look

up their publications on PsycINFO (search by author rather than by key word). Read some of their publications and write or email them with questions or with a request for any in-press articles they may have. Don't be shy — faculty members are often quite happy to receive such inquiries (even flattered!) and are more than willing to answer questions. This not only makes you a known quantity but can also help a great deal in gaining admission to their program (remember, individual faculty members often determine who gets admitted). Thus, if the faculty member has an opening and he or she sees your application (and recognizes it as someone already interested and involved in his or her area of research), what would be more natural than for the faculty member to select you?

In addition to research, you can show a high level of interest in psychology by becoming a student affiliate of various regional and national professional organizations. These include Western Psychological Association (WPA), American Psychological Association (APA) and American Psychological Society (APS). The yearly fees to be a student affiliate with any of these organizations are often ridiculously low, and you get discounts on various publications and products. You can also present research at WPA's annual meeting and at our own Whitman Undergraduate Conference. Graduate programs look very favorably on such involvement.

Applications and Personal Statement

The applications are generally quite straightforward. Be sure to type and proofread your applications carefully. Plan to add an outline of your research (if it is substantial) and, if available, a sample of your writing such as a paper or, even better, a completed experimental report.

Your personal statement should be brief rather than long (remember that *many* statements are being read; 2-3 pages is sufficient), simple and direct rather than elaborate. Avoid platitudinous statements like "I'm really interested in psychology" or "I want to work with people" (would you be applying for graduate school if you didn't feel that way?). Your statement should also reflect the flavor of the program to which you are applying. If you are applying to Claremont, for example, you should indicate an interest in applied aspects of psychology to reflect that program's orientation. State your research interests clearly (and make sure that they coincide with at least two professors on the current faculty — mention these faculty members by name). Mention your senior thesis, if you have completed one — most undergraduates do not require a senior thesis so describing this aspect of your psychology experience at Whitman will help you stand out. If you're applying to clinical or counseling programs, describe your volunteer experiences as well as the work you did in Applied Psychology, if you have taken that class.[2]

Have several people proofread your statement (an English professor would be great). Do not take chances. Be neutral rather than wild and elaborate. Allude to your research experience and state your career goals explicitly and unequivocally. These programs are looking for people who know what they want to do, who see graduate school as a means to an end rather than as an end in itself. Keep in mind that most universities *do not* want to train practicing clinicians and that they consider an expressed desire to practice a negative. They are generally looking for future researchers and teachers. Use a clean font, and don't make the font size too small (10 point minimum).

It is helpful to gather all of the items that comprise the total application and send them together in one package. These include transcripts (unless the school wants them sent independently — many do not) which the Registrar's office will furnish to you in about two weeks in sealed envelopes so that they are official, letters of recommendation, photocopies of your GRE scores (as well as having ETS send official reports because the copies will help your file be considered more quickly as well as guard against any errors committed by ETS in getting the official reports out), writing samples, and your personal statement. Again, this gives you much more control than having to depend on three or four professors, ETS, and the Registrar's office to submit everything in a timely fashion. By following this approach, you can be sure that it is done right and completed in time.

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[2] For a more extensive discussion of ways to write a compelling personal statement, see http://www.kon.org/bottoms_nysse.html

You should apply to a range of schools. If you meet, exceed, or are within a reasonable range of the objective criteria for the program in which you are most interested, then apply but don't stop there! You need at least one fallback program. This is a program that you believe will most certainly accept you. For example, if you are interested in clinical programs, apply to personality and social programs as well as other clinical programs as backups. Apply to a range of programs in between your top choice and your fallback. If getting into a university program is important to you, apply to many programs (less with the professional schools since they are less competitive). Applying to five should be a minimum and don't ever think that you have anything locked up until the school has made a formal offer to you. Some years the quality of the applicant pool is better than others, making the situation more or less competitive. Surprises, both good and bad, happen all too often.

Interviews

Interviews are usually not required and those programs that do invite you out for an interview will usually provide an alternative, such as a telephone interview. In all cases, when you are interested in a program and they request that you come for an interview, go. It can be expensive (the school will often help you find a place to stay, most often with a graduate student, but that's usually it — you pay the rest), but it allows you to get to know the people, the program, and the surroundings. After all, you may be spending 4-6 years of your life at this place so it's a good investment in an informed decision. Many programs say it does not hurt your application if you can't interview, but the old cliché "out of sight, out of mind" really applies here. So GO, if you can![3]

Preparing for your interview or visit is important. Here are a few tips to help you get ready.

- Ask for the names of current graduate students and call them. Ask them to "level" with you about specific programs, courses, and professors. Graduate students are a great source of advice because they've been in your shoes before and know how it feels.

- Research the program thoroughly by studying their printed and online materials. Talk with faculty members who studied at that program (or contact faculty members at Walla Walla University, WSU, University of Washington, etc. who may have studied there). Do read at least one publication authored by key professors with whom you want to work. Do look up each professor's website or his or her entry in the *Directory of the American Psychological Association*. This will tell you which schools they attended, their special interests, etc.

- Get to the location a day early, if you can. Walk around the campus and absorb the flavor of the program and university (probably best to do so incognito). This will also help in overcoming jet lag if the program is far away.

- Do prepare some intelligent and informed questions about the program and the interests of each faculty member you'll meet. This shows interest and effort. Then, enjoy the interviews — remember, you're evaluating them as well.

A final caution. When you talk with first-year students, you may find them tired and discouraged. Remember, you are talking with them in the middle of their first year, a difficult and grueling time! Don't let this discourage you. When you talk with third and fourth year students, you'll find them much more relaxed.

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[3] You may want to take the time to look up the article "Applying to Graduate School: The Interview Process" by Barbara A. Oudekerk and Bette L. Bottoms, published in the *APS Observer* in 2007. It is available online: http://www.psychologicalscience.org/index.php/publications/observer/2007/june-july-07/applying-to-graduate-school-the-interview-process.html

Summing Up

That pretty much covers the application process and, by now, you probably know that most programs have deadlines in January and begin the weeding process in early February. It is not uncommon to hear from schools in early March. If you have not heard from a program by March 15th or are really nervous about your status, call the department administrative assistants and inquire about your application status. It can't hurt and they may be able to offer you substantive information.

If you have applied to several schools and have received an offer, you have until April 15th to formally accept it. If you accept an offer over the phone, follow up with a written note. You can rescind an acceptance if you do so before April 15th but again, be sure to do so in writing. After that date, it becomes much more difficult to rescind (check the APA Guide on this matter). Most programs will make their offers over the phone and then will establish a list of alternates. If any student turns down an initial offer, the opening will then be offered to an alternate. This actually happens quite frequently so if you are an alternate, there is still a chance that you will receive an offer. This is the primary reason why you should turn down a less attractive offer quickly, if you receive more than one. Your thoughtfulness will benefit both the programs in their selection process and the alternates who may be holding their breath.

One final but important suggestion would be to approach this process with as much organization as possible. Make a chart of each program showing all the categories of "to do" items and dates by which those items need to be accomplished. Place the information about each program and copies of your application materials in a folder and keep all your materials in one place. Doing so will really help you manage the entire process.

Lastly, let's review the steps in the process and their sequence:

1. Determine at least a generalized career direction

2. Research and identify those programs that will get you to those goals

3. Look up all programs that look interesting and get their information and materials

4. Review program information and get involved in research

5. Prepare for and take GREs in the summer between junior and senior year

6. Contact professors for letters (September-October)

7. Request transcripts and order GRE reports from ETS (October-November).

8. Personal statement completed, reviewed, and final selection of programs

9. Applications completed and sent (November-December)

10. Visits, interviews, and waiting (January-March)

That's it — the whole, frustrating, exhausting ordeal. If you've gained admission to a program, CONGRATULATIONS. You have qualified for 4-6 years of hard work! Here again, a little planning can help smooth out any bumps that you might experience during the adjustment.

Preparation for Graduate School

After graduation, take a good long vacation — you have most certainly deserved it! Then begin to get ready for your graduate program. In most university programs the first year consists of an intense statistics and research methods sequence, and can be as hellish as being on a diet and being locked overnight in a Godiva chocolate shop. To offset the future struggle somewhat, review these areas if you

feel relatively weak in them. Continue reading articles written by your future faculty (at this level most professors teach their own specialized research areas, not just generalized courses). You may even be able to contact your new professors and get first year syllabi early. Try to get a couple of weeks ahead of the program and you'll sail through. It also helps to get to your new location early so you can move into your new residence, get your car registered, figure out where the grocery store is, etc. rather than having to cope with these while you're fighting the good fight in graduate school.

Finally, just before courses start, try to give yourself 1-2 weeks to relax. If you're in a new location, get to know it and enjoy it while the weather is still warm. This short vacation will also pay dividends.

Applying Now or Applying Later

Many students think that they should apply to graduate school immediately after they finish their undergraduate work. If you think you will lose steam after taking a year or two off, then consider applying now. However, from the admissions point of view, it's not crucial that you apply immediately. If you take a year or two off to work, to get some experience in psychology in order to build funds for graduate school, that could look good in the eyes of the graduate program. They like motivated, determined people, and if you have been involved in psychology in your work experience, that could actually help your application. But if you amble about with no rhyme or reason, or don't work at all, that might convey to a graduate admissions committee that you're unmotivated and lack self-direction. The bottom line is that if you do choose to take "time off" from academics and work for a while, go for it, but try as much as possible to get work or volunteer experience that relates to psychology in some way.

Older students who have been working a number of years or have been raising a family may think they are in a disadvantaged position. Again, this is not necessarily true. If there is evidence that you are a conscientious and motivated person, then that works to your advantage. In fact, some counseling and clinical psychology programs prefer older students because they believe such students are more mature, responsible, and have more "life experience" than younger students who have just graduated from college. Many counseling psychology programs are, in fact, specifically designed for older people who may be working full time and/or have families.

Final Words

You have a great resource in the Whitman psychology faculty. Use them to help you clarify your goals and your process of attaining those goals. If you're a junior or a sophomore, start working on this now. If you're a senior, start working yesterday. You can accomplish what you wish, but only if you're willing to do the work. Only you can make it happen.

One more thing. For all of us in the psychology department, graduate school represented a period of great excitement, personal growth, challenge, and accomplishment. We'd do it all again if given the chance. Graduate school was worth all the work and frustration because the rewards were to be immersed in a subject of great interest, to have an opportunity to contribute to a vibrant, exciting field, and to learn and grow in good company. There is really no pleasure in life quite like that. GOOD LUCK![4]

[4] There are several great books on the market that describe the application process, offer tips and strategies, and outline other degree possibilities, in much more detail. The two best ones are the *Complete Guide to Graduate School Admission: Psychology, Counseling, and Related Professions* (by Patricia Keith-Spiegel and Michael W. Wiederman, 2000; available through Amazon for about $25), and *Getting In: A Step-By-Step Plan for Gaining Admission to Graduate School in Psychology* (available from APA or from Amazon for about $12). The department has copies of these books (just ask), but if you're serious about graduate school you should get your own copies.

Specialties in Psychology

The psychology major provides its students with both a liberal arts education and the opportunity to explore specific areas of psychology. Graduate education is a process of further refinement during which students become increasingly more proficient and knowledgeable in an area of psychological specialization. Following are descriptions of 10 specialty areas in psychology that require graduate education. (See also APA's Careers in Psychology.) Remember that there are now 53 divisions of the APA, so this is a small sampling of a sprawling and multifaceted field.

Unless otherwise noted, training for these specialty areas is generally obtained in Psychology Departments in Schools of Arts and Sciences.

Biopsychology/Behavioral Neuroscience: For the student more interested in biological research, investigating the workings of the brain and hormonal systems, and the influence of the brain on behavior, programs in biopsychology and neuroscience may be appropriate. Research areas include learning, psychopharmacology, memory, emotion, and motivation.

Clinical Psychology: Clinical psychologists assess and treat people with psychological problems. They may act as therapists for people experiencing normal psychological crises (e.g., grief) or for individuals suffering from chronic psychiatric disorders. Some clinical psychologists are generalists who work with a wide variety of populations, while others work with specific groups like children, the elderly, or those with specific disorders (e.g., schizophrenia). They are trained in universities or professional schools of psychology (free-standing clinical training units, independent of university departments of psychology that may award the Ph.D. or Psy.D.). In a Psy.D. (Doctor of Psychology) Program, emphasis is placed on the skills necessary for the delivery of psychological services. A Masters thesis is not required, nor is a research oriented dissertation, although a written, doctoral-level report of professional quality is usually required for the Psy.D. Clinical psychologists may be found working in academic settings, hospitals, community health centers, or private practice. (See also Counseling Psychology.)

Clinical Social Work: A Masters degree in social work (M.S.W.) is a popular clinical alternative. Several advantages of this option are a higher rate of admission to M.S.W. programs, lack of GREs as a requirement for admission, fewer research requirements, an emphasis on professional training, and completion of degree in less than half the time necessary to obtain a psychology Ph.D. With legal regulation in all 50 states and third-party vendor status (insurance reimbursement) in 35 states, social workers are increasingly achieving autonomy and respect, including increased opportunities for independent practice. The major disadvantages lie in the less comprehensive nature of the training, which is reflected in a lower pay scale as compared to clinical psychologists. Not becoming a "doctor" and not being able to conduct psychological testing also prove troublesome for some.

Cognitive Psychology: Cognitive psychology concentrates on the identification and characterization of human thought processes. Major areas include language, memory, perception, attention, problem solving, and judgment/decision-making. Most cognitive psychologists are employed in academic settings, although people with a more applied perspective can acquire interesting and productive careers in industry (tech companies such as Microsoft, Google, consulting firms, and aerospace companies such as NASA all employ cognitive psychologists). Recent trends in cognitive psychology include computational modeling of thought processes and identifying biological correlates of cognition.

Community Psychology: Community Psychology applies psychological principles to the understanding of individual and social problems, the prevention of behavioral dysfunction, and the creation of lasting social change. Community Psychologists believe that human behavior develops out of interactions between people and all aspects of their environment--physical, social, political, and economic. This idea requires that efforts to alleviate individual and social problems must entail changes in both the environmental settings and individual competencies.

Counseling Psychology: Counseling psychologists do many of the same things that clinical psychologists do. However, counseling psychologists tend to focus more on persons with adjustment

problems rather than on persons suffering from severe psychological disorders. They may be trained in Psychology Departments or in Schools of Education. Counseling psychologists are employed in academic settings, community mental health centers, and private practice. (See also Clinical Psychology).

Developmental Psychology: Developmental psychologists study how we develop intellectually, behaviorally, and emotionally over the lifespan. Some focus on just one period of life (e.g., childhood or adolescence). Developmental psychologists usually do research and teach in academic settings, but many act as consultants to daycare centers, schools, or social service agencies. Research on aging, identity, and problem-solving abilities are popular areas within developmental psychology. Geropsychology, or the psychology of aging, has become a popular specialty in this area, as the increasing elderly population in this country presents special needs that currently are insufficiently addressed.

Educational Psychology: Educational psychologists are concerned with the study of human learning. They attempt to understand the basic aspects of learning and then develop materials and strategies for enhancing the learning process. For example, an educational psychologist might study reading and then develop a new technique to teach reading. They are typically trained in Schools of Education and employed in academic settings. (See also School Psychology.)

Experimental Psychology: This area includes a diverse group of psychologists who do research in the most basic areas of psychology (e.g., learning, memory, cognition, perception, motivation, and language). Their research may be conducted with animals instead of humans. Most of these psychologists work in academic settings.

Health Psychology: Health psychologists are concerned with psychology's contributions to the promotion and maintenance of good health and the prevention and treatment of illness. They may design and conduct programs to help individuals stop smoking, lose weight, manage stress, and stay physically fit. They are employed in hospitals, medical schools, rehabilitation centers, public health agencies, academic settings, and private practice.

Industrial/Organizational Psychology: Industrial/organizational ("I/O") psychologists are primarily concerned with the relationships between people and their work environments. They may develop new ways to increase productivity or be involved in personnel selection. They are employed in business, government agencies, and academic settings. A Ph.D. in this area often leads to a job in industry or self-employment as a consultant. Industrial/organizational psychologists earn among the highest median salaries compared to other areas of psychology. The Society for Industrial and Organizational Psychology produces a useful book entitled *Graduate Training Programs in Industrial/Organizational Psychology and Related Fields*, which describes most of the "I/O" programs in the United States.

Marriage And Family Therapy: Marriage and family therapists work with individuals and couples, as well as children and families. The specialty of marriage and family therapy then, is less about whether we treat individuals, or families and groups than it is about a way of thinking about treatment and treatment styles. The field of family therapy itself is comprised of many different theoretical perspectives. The different perspectives within the field of family therapy have in common, however, a way of thinking about the individual interacting in a dynamic system. Thus, marriage and family therapy is described as a "systemic" approach to therapy.

Physiological Psychology: Physiological psychologists study the physiological correlates of behavior. They study both very basic processes (e.g., how brain cells function) and more readily observable phenomena (e.g., behavioral changes as a function of drug use or the biological/genetic roots of psychiatric disorders). Most are employed in academic settings.

School Psychology: School psychologists are involved in enhancing the development of children in educational settings. They assess children's psychoeducational abilities and recommend actions to facilitate student learning. They are typically trained in Schools of Education and work in public school systems, acting as consultants to parents, teachers, and administrators to optimize the learning

environments of specific students. (See also Educational Psychology). Admission into the few Boulder model programs with a child clinical specialty is particularly competitive. A doctorate in school psychology is much more accessible, with two or three times the acceptance rate of clinical psychology programs. The APA (1994) has accredited 43 of these programs, which provide doctoral-level training in clinical work with children in school settings.

Social Psychology: Social psychologists study how other persons affect our beliefs, feelings, and behaviors. Some topics of interest are attitude formation and change, aggression, prejudice, and interpersonal attraction. Most social psychologists work in academic settings, but some work in federal agencies and businesses doing applied research.