Background Statement

I had already determined my future before I enrolled at Elon in the fall of 2006: I would major in journalism and political science, obtain a B.A. and start writing for a national news publication right out of college. I was mature enough at that point to understand how unrealistic my plans were, but resolved to pursue them anyhow.

The August immediately preceding my first semester, however, I read “Mountains Beyond Mountains,” Tracy Kidder’s fascinating portrayal of Dr. Paul Farmer and his contributions to medical practice and research in the third world. My thoughts gravitated toward the pursuit of medical school. One week after completing the book, I emailed my academic advisor and inquired about switching into courses in biology and chemistry.

But I didn’t enroll in those new science courses, nor did I stick to my new medical school aspirations. Instead, throughout my first semester at Elon, I moved back and forth between various potential majors, among them political science, journalism, biology, anthropology, and psychology. I failed to stick to any one subject, but each time I did, I fervently pursued experiences that would bring me to some imagined end goal associated with each. I researched medical schools before taking my first pre-medical science course. I began searching for applications for internships in Washington, D.C. just days after deciding to return to political science.

My blind pursuit of an end goal, what I called ambition at one time, ultimately served to distract me from learning about the world around me. I was comfortable having a distinct future in mind, particularly one in which personal success was involved, but my understanding of my own passions suffered as a result.

It took a summer away from an academic environment to change my views. During the summer of 2007, I initially planned to intern at a biochemistry laboratory in my hometown, and gain research experience to add to a medical school application (I had since returned to dreams of emulating Dr. Farmer). Private funding for the lab took a major hit in April of that year, and interns were first to be
clipped from the budget. When I was officially notified of the termination of my would-be job in May, I had just enough time to take an office position at a small newspaper in my hometown.

That summer returned me to baseline thinking. Free of the rigors of the school year, I took time to explore my own passions, to read, to observe, to think. I devoted entire evenings to weighing my current career options, only to find that I was, at most, ambivalent toward dedication to any of them. I soon realized that I would not resolve the issue on my own; it would take time, and a willingness to let my experiences shape my passions, to find out what lay ahead. By August I realized that I missed school – not because I missed biology or politics or psychology, but because I missed learning. Just before the beginning of the fall semester of 2008, I withdrew from pre-medical courses and switched to a multidisciplinary semester.

Since then, I’ve allowed my classes and professors to help shape my academic interests. Courses in research psychology and biological psychology, as well as my current empirical research and psychology of learning courses, have affirmed my fascination with the human mind and the manner in which it controls human behavior and learning. Honors courses, particularly the two interdisciplinary courses in which I’ve participated, have stimulated my love of literature, writing, and human rights.

And although academics have been a primary influence, some of my most significant learning experiences have occurred outside of a classroom setting. In January of 2007 and 2008, I had the privilege to take two trips to Bay St. Louis to do relief work for Hurricane Katrina victims, serving as the trip leader on the latter trip. In the days following both trips, I marveled at how much I learned – about myself, about the human condition, about the individual’s incredible power to adapt in the face of adversity. At Elon, I’ve pursued my love of service through work with Habitat for Humanity, coaching soccer through Burlington youth recreation, and helping new students adjust to Elon during orientation. In each of these instances, I grew not because of my bond with a given cause or effort, but merely by opening myself up to concepts and opinions of others. I’ve entered many a service project with the desire to serve, and left equally many feeling as though I was the primary beneficiary.
Collectively, my experiences have taught me that learning is not restricted to a time or place; it is continuous, not measured or limited; it is often unexpected, and always beneficial. And in my remaining years at Elon, I want to take full advantage of the learning opportunities around me.

First, I will continue concentrated coursework in psychology, as well as secondary coursework in mathematics, political science, and international studies. In doing so I will feed my passion for understanding human thought while expanding my knowledge base through several different disciplines. I will also conduct research in cognitive psychology, analyzing human learning processes through laboratory trials conducted at Elon. Research will not only allow me to delve deeper into the area of psychology in which I am most interested, but also provide an opportunity to engage in a new level of academic learning. I will have the opportunity to ask fresh, unanswered questions, explore different methods of research and analysis, and contribute to the field. And in the fall of 2008, I will study abroad to St. Andrews, Scotland, living and learning at the historic university for four months. The learning opportunities abroad seem limitless; from coursework to exposure to a new culture, people, and academic system, the opportunities for personal and intellectual growth are immeasurable.

Most importantly, I will continue to open my mind in my day-to-day interactions with others. Whether I am conducting research, listening in class, working on a Habitat site, or simply having a conversation with a fellow student, I will continue to support my passion for learning by paying attention to the experiences that will shape my future interests and pursuits. Not only will these experiences prepare me for graduate study and postgraduate research in psychology, but they will also help direct me on a career path. For now, I’m committed to my interest in human thought and cognition, as well to enrollment in graduate school, and I am willing to let my graduate studies and experiences guide me in pursuing a position in research or applied psychology.

Regardless of my ultimate career, I plan to nurture my love of learning throughout my remaining years at Elon and long after I’ve completed undergraduate studies. A diverse set of learning experiences in the next two years will further my understanding of my academic passions and personal goals, and set me up for a life committed to awareness of and appreciation for the world around me.
Proposal Narrative

Focus

My central focus for the next two years is to develop empirical research in cognitive psychology that will contribute significantly to the basic as well as the applied knowledge base of the discipline. My initial goal will be to gain a more thorough understanding of the content and literature base of cognitive psychology, as well as of the empirical research methodology that will help me execute my experiment. My primary interests within psychology are implicit memory and learning processes, and an initial literature review will help my narrow my focus to a specific research question associated with these interests. Other experiences in which I will engage over the next two years, as explained below, will further develop my understanding of the psychological literature and research process, as well as give me the opportunity to explore psychological concepts in an applied setting. In my remaining years at Elon, I will ask new, critical questions of both myself and my chosen field, so that I might better understand my own passions and abilities while making a significant contribution to an academic discipline that piques my interest.

Proposed Experiences

My primary intellectual experience during my junior and senior years, as described in brief above, will be to conduct laboratory research in cognitive psychology. My research, conducted with Dr. Tom Green, will focus on the relationship between implicit and explicit instruction and individuals’ recognition and retention of patterns in a probabilistic task. In previous studies, participants have been asked to participate in a basic cognitive task that involves recognition of a probability relationship, such as responding to certain images in certain areas of a computer screen with corresponding keystrokes. Prior to participating in such a task, participants are either: A) told specifically which probabilistic patterns are critical to the task, B) told that a probabilistic pattern does exist, but not what that pattern entails, or (C) given no instruction regarding probabilistic patterns. Though past research has examined differences in cognitive performance with regard to each of these three types of instruction, the potential impact of external stimuli or distractions on participants in the task, as well as the role of temporal
differences in presentation of instructions, have yet to be examined in detail. Accordingly, though I am not yet set on a research question, I will pursue exploration of these two unique variations on the experiment. Both appeal to my fascination with implicit memory and learning, and will give me an opportunity to expand on existing research and make a legitimate contribution to the discipline.

With my overall goals and focus in mind, over the next two years I will engage in several significant academic and non-academic experiences to facilitate building my background knowledge and establishing my research, as well as to further my development as a student in general. Below, I discuss how these experiences relate to my project, and dictate my proposed plans for my remaining years at Elon in chronological order.

In the spring of 2008, I will begin my primary literature review of psychological articles and publications relevant to my research topic. Before the end of the semester, I will have expanded my knowledge of the literature such that I better am equipped to pursue a specific variation of the probabilistic task experiment, if not yet a particular research question.

During the summer of 2008, I will participate in one of three potential research experiences. One option is the Student Undergraduate Research Experience (SURE) at Elon, which would give me the opportunity to further my exploration of implicit learning through collaborative research with Dr. Green. Activities over the summer would include conducting a broad background literature review of my general topic as well as an exploration of potential research methodologies. Additionally, work with Dr. Green through the program would allow me to build my knowledge of imperatives of the research process, including informed consent and Institutional Research Board proposals. Furthermore, I would have the opportunity to experiment with a new stimulus-simulation software package, which would be integral to conducting a controlled, relevant research experiment. Neither Dr. Green nor I have experience with the program at this point, though ten weeks of research in the program would yield significant understanding, as well as increase the likelihood of my being capable of successfully incorporating the software into my own experiment.
Two other research experiences, both categorized as “Research Experiences for Undergraduates” (REUs), would allow me to conduct one-on-one, faculty mentored research in psychology, though not research directly relevant to my thesis project. One such program, the Summer Institute for Mind and Brain at Colorado State University, gives participants the opportunity to conduct research in cognitive and perceptual neuroscience, while participating in seminars focused on comparable areas of neuroscience and psychology. The other program, The Center for Cognitive Sciences at the University of Minnesota, involves faculty-mentored research in cognitive psychology and cognitive neuroscience, as well as interdisciplinary seminars focused on faculty members’ respective areas of expertise.

Each experience offers significant benefit to my intellectual development, as well as my personal psychological research. All three will allow me to conduct faculty mentored research within cognitive psychology, and thereby give me experience that will increase my ability to conduct further research efficiently and accurately. Participating in one of three will give me an excellent head start on my research as I attempt to compile and refine it entering my junior and senior years.

Following the summer, I will travel to St. Andrews, Scotland for a semester of study from September of 2008 to January of 2009. While several of Elon’s semester abroad programs piqued my interest during my initial exploration of study abroad options, I was particularly drawn to St. Andrews’s top-notch academics and rich history. Founded in the 15th century, academic and research programs at St. Andrews are among the most productive and rigorous in the UK. The school of psychology in particular has achieved the highest possible ranking in the UK research assessment, a distinction it shares with only three other programs in the UK. A semester at the university will not only challenge and test my overall academic abilities, but also expose me to a significant pool of research produced and compiled by a prestigious international university.

I plan to enroll in courses in perceptual and/or cognitive psychology, as well as international relations, during my tenure at St. Andrews. The vast majority of upper-level psychology courses at the university are taught seminar-style, supplemented by students’ independent reading of scholarly journals and articles. This course style will give me further experience with published research, as well give me
the autonomy to determine the degree to which I understand the topics at hand; much like my own research project, my success in these courses will be directly proportional to my ability to consult and synthesize published studies and concepts. I will also be able to explore St. Andrews’s wealth of research articles independent of course obligations, and in doing so further expand my knowledge of current research methods and techniques used by published researchers. I truly believe that my global understanding, cultural awareness, as well as my academic and research abilities will be vastly improved by studying at St. Andrews.

When I return to Elon in the spring of 2009, I will be able to use perspectives gained from my summer research experience as well as study abroad to further my academic and research pursuits. During the spring semester, I will refine the parameters and methods of my cognitive research study, preparing for data collection beginning fall 2009. I will also submit my formal proposal for my project to the honors thesis committee at the beginning of the semester. Acceptance of the proposal, and subsequent enrollment in eight hours of HNR 498 independent research during my remaining junior and senior semesters, will confirm my personal and academic commitment to the project.

After spring semester of 2009 at Elon, my collective experience with mentored research and the psychological literature will have given me a solid foundation for subsequent refinement of my project. Moreover, I will have a distinct idea of research avenues I might pursue in graduate school. However, I will have had limited experience with applied psychology. Therefore, to gain further insight into the real-life aspects of my field of study, as well as explore potential careers in applied psychology, I will participate in an internship during the summer of 2009 involving applied psychological concepts. More specifically, I will apply for an internship with the FBI through the FBI Honors Internship Program. The program allows rising college seniors to participate in aspects of the bureau associated with their chosen major. In the past, psychology majors have conducted research and analysis of crime data and criminal profiles. Ideally, I will be able to incorporate my interests in probability relationships and implicit learning into crime analysis, namely in examining how the FBI builds criminal profiles and predicts criminal behavior.
If I am not accepted to this particular program, I will participate in a comparable internship that offers experience in applied psychology, ideally one that also incorporates civil or community service. Regardless of the specific experience in which I take part, my goal for the summer of 2009 is to gain insight into how psychology is applied in real-life situations, and to explore applied avenues of my own research. Understanding the applications of my research will give me a greater understanding of and appreciation for the data I obtain. Moreover, work in an applied field will shed light on potential careers in psychology that I might pursue following graduate school.

When I return to Elon for the fall semester of 2009, I will commence data collection, and continue collection through the beginning of January 2010. Concurrently, I will begin preparation for submission of my research to the Southeastern Psychological Association Annual Conference as well as the National Conference on Undergraduate Research. I intend to present my findings at both conferences, as described in detail in the “proposed products” section below.

**Proposed Products**

The products of my remaining years at Elon will emerge as a result of the completion of my research in cognitive psychology. In addition to presenting my research at Elon’s Student Undergraduate Research Forum, I will apply to the Southeastern Psychological Association’s annual conference as well as the National Conference on Undergraduate Research. The former, a regional conference accepting research from all sub-disciplines of psychology, requires all participants to give a presentation regarding the data and findings associated with their research. The latter provides a similar opportunity, though it is conducted at the national level and accepts research from a multitude of academic disciplines.

Additionally, I plan to submit my research findings for journal publication. Dr. Green and I will co-edit the final manuscript and submit it for publication under joint authorship.

**Feasibility Statement**

The proposed project is feasible both with regard to the amount of time allotted to conduct the research as well as the materials required. As for the latter, the vast majority of required experimental resources, including adequate computers, software, and research participants, are already readily available
at Elon. Depending on the specific type of motor task in which subjects in my research participate, I will need to purchase some peripheral experimental materials, which could be estimated at roughly $500. Incentives for research subjects will cost an additional $500. The remaining amount of the Lumen award would be spent on funding the travel and surcharge costs associated with my study abroad in fall of 2008 (roughly $6,500), as well as on funding my tuition costs.

To assure that the proposed project is completed on time, preliminary literature research has already begun, and will continue throughout the remaining portion of the semester and the summer. The final research question will be determined during spring semester 2009, and methodology will be confirmed by the end of that semester. Data collection will commence in fall of 2009, along with preparation for submission to the aforementioned professional conferences. Data analysis will begin in January of 2009, and composition of the research manuscript will commence in February. Presentation at professional conferences, completion of the final manuscript, as well as submission for publication will take place in spring of 2010.