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This summer I was fortunate enough to have an opportunity to work with Dr. Karen Yu here in Sewanee's Psychology Department. Before I came back to Sewanee this summer, Dr. Yu and I began planning our experiment, exchanging emails, papers, and useful information about the specific cognitive phenomenon we were looking into. Although I had very little experience studying cognitive phenomena, the journals she sent me were easy to understand and we were hopeful that, despite Sewanee's small size and extremely tightly-knit community, we would obtain useful and pertinent results that would lend some insight into our specific area of study.

The cognitive phenomenon we were studying is called Delay Discounting, and refers to an individual's tendency to discount rewards which can only be received after waiting a given amount of time. Delay discounting can be summarized thus: individuals tend to value rewards that they have to wait for less than those rewards that they may receive immediately. This study was correlated with a study from Yale (Rutherford, Crowley, Moser, Mitchell, McCrory, & Mayes (2010)) that looked into delay discounting only generally. Our research, which was essentially a continuation of their research, sought to determine if there was a difference between the behaviors of parents and non-parents in regards to our delay discounting tests.

Our research used a program designed by researchers at Yale University that administers 138 questions per trial that are delivered in the form "Would you prefer X dollars now, or Y dollars after Z amount of time?" Participants were asked to complete these sets of questions three times: once for themselves, once for their child, and once for a child that they do

not know. Participants were recruited via email and flyers put up around the Sewanee and Monteagle communities and were restricted to the following groups: parents aged 25-50 with a child between the ages of 4 and 8 and non-parents aged 25-50 that know the child of one of the parents in the study. We recruited mostly through mothers, asking them to enlist the help of the spouse as well as a male and female adult in the same age range without children of their own. Unfortunately, this method of recruitment was ineffective. Our potential participants were reluctant to enlist others in the study and in several cases withdrew from the study when they became aware that they were to recruit other adults. Even after ensuring these potential participants that all data would be written and published in aggregate form, that their names would not be associated in any way with our research, and that the photograph of their child would never leave our laboratory. Although our test trials on students ran well, we were unable to run a single adult participant through our battery of tests because of their reluctance or inability to recruit the requisite control participants. After some deliberation, Dr. Yu and I decided that it would be best to begin work on another topic, and to put the delay discounting study until this fall.

So, with three or four weeks gone from my summer, I began work on another Yale-correlated study, this time on a group of tests designed to test cognitive functioning levels for a project called the Axon Sports Test. The software we used, called the CogState Battery, administers four brief cognitive measures to assess cognitive functioning levels in the brain. This software is also particularly adept at detecting concussion, gross neurological damage, and brain deformity. Students were recruited via email to come into the Cognition Lab (Woods 325) to learn a bit about the testing and to sign our consent forms. After obtaining consent, participants were placed into one of two groups: the Home-First group and the Clinic-First group. We recruited fifteen participants of each gender and assigned them to one of the two groups, being sure to alternate conditions within gender. If the participants were in the Clinic-First condition, they were asked to complete our cognitive battery immediately after they had

signed our consent forms. If the participants were Home-First, they received a packet detailing how to take the test online and what conditions they must satisfy before taking the test. After the participants had completed their original condition, they waited one day and then took the complementary half of study. Participants received a \$5 Stirling's gift card upon completion. This second study was double-blinded, so while I was given all the requisite information to run the tests, I did not know what phenomenon or behavior we were specifically investigating.

Currently we are waiting to hear back from our contacts at the CogState company to hear whether they would like us to run one final participant to bring our total to an even thirty, or whether we will cap the study at twenty-nine, as our collaborators at Yale also had difficulty in running one final participant. Regardless, once we share and process our data alongside the results that Yale found, there are a number of relationships we will consider and extrapolate from our data.

My day-to-day duties for the Axon Sports Test study included keeping our lab stocked with the requisite forms, administering the actual tests, and communicating with students about the study in general. Most days I was in the lab for four to five hours and would spend another one to two hours outside the lab contacting participants and keeping Dr. Yu informed of our progress. These duties allowed me to interact with participants and helped me develop my relationship as a researcher, distancing myself from participants whom I already knew well, and warming up to those participants I did not know to provide a standard of interaction that helped minimize confounds in our study. I began to realize that the minutiae of our methods were actually very important, and that even the smallest interruption or distraction while the participants were actively being tested can skew even the best data.

Perhaps the most important lesson I learned working with Dr. Yu this summer is that oftentimes research doesn't quite play out like you'd expect it to. Dr. Yu and I had meticulously planned out our research design for the delay discounting study, assessed potential confounds and problems, and even talked several times to our counterparts at Yale to clear up potential

issues and learn the minutiae of actually running the experiments. However, after all the time and effort we put into it, we came away with very few tangible results, although we are hopeful that the study will continue this semester.

Even though I was unable to complete the research I originally intended to investigate this summer, I learned some extremely valuable skills and lessons. For instance, I now have a much better grasp on what exactly must be done when one is designing a study, from submitting a proposal to the IRB, to contacting participants, to knowing when to call it quits. This summer I was also able to narrow my overall research goals and intended career path. While I find cognitive psychology fascinating and believe that it is a quickly growing important path, I know that it is not what I ultimately want to do. I was able to talk with other student researchers throughout the summer and hear about the projects they were working on, and now I know that I would prefer to do research in the field of behavioral neuroscience and eventually psychopharmacology or clinical neuropsychology. Dr. Yu was a fantastic researcher to work with. She was always very considerate of my schedule and allowed me to essentially take the reins in both of these studies, for better or worse. She has also been very lenient and accepting about which researchers I plan to work with in the future here, and had no qualms about letting me work with her this summer even though my post-graduate plans do not include studying in her particular area of specialty. Researchers in other science departments were very strict and particular about their students working with other professors, but Dr. Yu encouraged me to seek out the other professors in the Psych department that share my interests, namely Drs. Bardi and Siegel.

I cannot imagine a better way to spend my summers than to do Psychology research here at Sewanee. The professors are passionate and finally have enough time to truly focus in on mentoring a student in their field. I came to value greatly the relationship that Dr. Yu and I cultivated, and consider her now to be one of my strongest allies in the department. Even though the research I had originally planned to undertake this summer had to be postponed, I

still gained an immense amount of practical knowledge of how to design and carry out a successful research study and how to interact appropriately with participants. I look forward to continuing my research at Sewanee both under the guidance of Dr. Yu and others and thank Sewanee and the FITL for making this internship possible.