Gerard: I became interested in psychology during the first semester of my freshman year here. I elected to take a class entitled Theories of Personality and Psychotherapy that was taught by Christopher Niemie. The material in the class drew me into psychology. A graduate student offered research assistant positions to the class, and (although I was a freshman) I applied by emailing him a resume and going through a formal interview with the graduate student. I had prior research experience at Stanford University with a Professor of Medicine named Professor Marilyn Winkleby. I think some of that experience helped me get the position to work with the graduate student.

junr: What projects are you currently working on?

Gerard: I'm currently working on a number of projects. As third author, I’m working on a project with a graduate student named James Masciale who works with Professor Richard Ryan. The project seeks to apply self-determination theory constructs, which aims to explain the deleterious effects of visible support. James and I will be presenting that research in January of 2011, at a professional conference in San Antonio, Texas. I’m also working as a research assistant at the University of Rochester Medical Center. I’m working with professors of psychiatry and psychology Thomas O’Connor and Emma Robertson-Blackmore. Their research focuses on the implications that prenatal stress and anxiety have on child immune function and temperament as well as cognitive ability. Currently they are having me design my own scale to measure agency in child temperament studies. And lastly, I’m also doing my own research at the medical center that focuses on the relationship between perceived availability of support and stress by measuring salivary cortisol levels, and assessing whether it is moderated by social interactions, psychosocial effects - what we desire and what motivates us as humans - really isn’t that useful anymore, and the reason for this is that humans change over time and rather quickly. What used to be true about what motivates humans 60 years ago isn’t true today because society changes and therefore humans change.

junr: How would you describe the research process of a psychology experiment compared to a natural sciences experiment?

Gerard: It’s complex because you’re trying to study humans; your research has the possibility of falling victim to everything that the human mind can throw at you, such as self-report biases, placebo effects, sampling biases, and unconscious experimenter bias. It truly is hard studying one of the most sophisticated organisms on Earth and in that respect it differs from some of the natural sciences. In physics there are laws; in chemistry there are structures and theories. But a lot of the research that was done 50 years ago about human social interactions, psychosocial effects - what we desire and what motivates us as humans - really isn’t that useful anymore, and the reason for this is that humans change over time and rather quickly. What used to be true about what motivates humans 60 years ago isn’t true today because society changes and therefore humans change.

junr: Your just to clarify, do you mean humans changing throughout their lives or humans at different time periods?

Gerard: When we were talking about psychological experiments, we are talking about humans overall, although a lot of the research and theories we have are focused towards certain groups of people. All psychologists understand the fact that, although we would love to make conclusions about the entire population of human beings, there is absolutely no way we will be able to. That means that for our research we have to take reliable samples of the population. Even then we still can’t make really accurate conclusions of all of humanity due to the fact that people live in different cultures and in different societies. So if you would want to make a conclusion about a population elsewhere you would have to go to that environment and do the same study.

junr: Even within societies and subpopulations there can be many differences, correct?

Gerard: Right, and what we call that in psychology is the variable control problem. If you’re doing an experiment to find the boiling point of water, you can literally count the number of variables that you would have to control for in order to find the boiling point. But, let’s say we’re trying to find out what makes humans mad, or what makes a certain person mad. The variables that you would have to control for are countless. You would have to control for the environment that they grew up in, how they were raised, what motivates them, what do they want as opposed to what they don’t want, past experiences and so forth. And so, that’s one of the big hurdles in psychology. It’s the variable control problem. There are so many variables that need to be controlled for us to come to reliable conclusions and productive relationships. I probably co-authored five or six (maybe) more pieces with him. And from an early time, I think I was in second year, he helped fund me to go to the various Labor Economics conferences where I would present the work. And I hated it. I hated getting up in front of people. When you’re a student, who’s not very confident about what you’re doing, it’s a challenge. During my entire grad school career, he basically encouraged me to do that.

junr: And it’s sometimes inevitable to control everything.

Gerard: And that’s exactly why psychology is not a soft science!

junr: What do you plan to do for the future? Do you have other interests in psychology?

Gerard: I plan on going to graduate school for a PhD in clinical psychology, after which I plan on either teaching and doing research at the collegiate level or having my own practice, somewhere in California where it’s sunny. My other interest in psychology includes forensic psychology, and area of study that I am almost sure will captivate my mind the more I learn. Some of my other academic interests lie in the study of organizational behavior. Since second semester freshman year I have become interested in learning more about human behavior in the workplace. This area fascinates me so much that I have even entertained the idea of applying to business school in a program for organizational behavior.

junr: What advice would you give fellow undergraduates or freshmen who want to do research but don’t know where to start?

Gerard: Those who want to be involved in research should search online for opportunities. One of the best and easiest ways to get involved is to simply ask a professor. Our university prides itself on the idea that it provides countless opportunities for undergraduates to get involved in research. Had it not been for this I probably wouldn’t have done research my first semester freshman year. Our career center is also another wonderful place to search for opportunities because it’s really easy to set up an appointment to meet with someone about seeking opportunities. Also, one of the really important things to mention is that students should not limit themselves only to professors that are on River Campus. Many students tend to think that the professors that are available to do research are only on River Campus. There are a plethora of professors and researchers that do research at the medical center and need as much help as the professors on River Campus. So if you can’t find research opportunities on River Campus, then the next step is to think of doing research with someone at the medical center.

junr: In closing, what are some of the myths about research that you can clear up for people?

Gerard: A lot of people think that you need to know a lot about a specific topic in order to get a research position, and in most cases, this isn’t true. Researchers know that every time in research has to have a starting point, and from my experiences, professors don’t mind that working in their lab is your first introductory experience. Another thing that I would like to note is that just because you might not be interested in the topic that a professor is researching doesn’t mean that you won’t like it once you get involved - that’s really a big myth. Most people think that if you don’t like the topic then you probably shouldn’t try researching it. I have many friends around the country that started out researching topics they weren’t interested in. Now, they research those same topics in graduate school. You should try to keep an open mind and understand that we, undergraduates, have the tendency to draw conclusions about experiences that we haven’t had yet. So we probably shouldn’t be narrow-minded when it comes to what we want to research. There is also the myth that research takes a lot of time away from college life.

Gerard Markham, 2013