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As many people know, mathematics is a subject that requires stability and sequentiality—exactly the circumstances I lacked growing up. My parents' divorce and subsequent remarriages saw me and my twin sister journeying back and forth from Wisconsin to California, attending four different schools before high school graduation. College proved more of the same--three colleges in nine years with a two year stop-out.

My grandparents and their farm remained in all this motion a haven of stability. I remember how my grandpa, convinced that mathematics would open doors for us, introduced my twin and me to flash cards and made sure we practiced. I remember that as if it were yesterday: we sat at a table in the dining room and he managed the big, oversized cards, holding them up until one of us answered. Usually it was me. Never the best math student, I nonetheless always tried to do as well as I could. In high school, where I remained for the full four-year sequence, I went from a below average student to an above average one, despite skipping pre algebra and going straight into algebra.

Attending college was never a question: it was always a must. My parents and grandparents encouraged me to move forward. And at Olympic Community College in Introductory Calculus I met Professor Karen Hulsebosch. An instructor with a reputation as demanding, she recognized my potential for math and made sure I knew it. In her class all the projects related to the real world. "Firebreaks," one of the first, focused on the optimal number of firebreaks to set up in a forest to protect it during a conflagration—an ever-present concern in Washington. During that solution I came to love math for the first time. It only grew from that point on. Subsequent projects continued to be rewarding, and by the course's end I declared mathematics my major.

To complete a baccalaureate degree in math I transferred back to Wisconsin to UW-Eau Claire, where I learned of the McNair Achievement Program and its emphasis on collaborative research. I was fortunate to secure a nomination for McNair from Professor Mohamed Elgindi, a specialist in numerical analysis, and in summer 2008 we initiated a research project on a very real world topic—to improve prior mathematical models of blood alcohol concentration. The former take ten variables into consideration, including aspects of absorption, metabolism, and excretion. Our model adds an eleventh factor, specifically the amount of food consumed while drinking. A special seminar, Applications of

Analysis in Mathematical Biology, was offered at UW-Eau Claire during the time that we laid the groundwork for our project; Dr. Elgindi and I plan to extend our collaboration into the fall to incorporate the seminar's focus on compartmental analysis into the model.

An internship in 2007 with the Student Conservations Association (SCA) preceded the project with Dr. Elgindi. A volunteer on the Exotic Plant Management Team under the direction of Dr. Ken Hyde at Sleeping Bear Dunes National Lakeshore in Empire, Michigan, I extracted invasive plants (principally baby's breath) that threatened the delicate dune environment. In a second project on water quality, I took part in regular water sampling at a series of test sites, and performed lab tests that registered the samples' *e coli* count.

Though my experiences constitute a "non-linear model," I bring determination and perseverance to the pursuit of graduate studies. I want to assist the research of faculty members, especially those undertaking models that assist AIDS research, and I bring to that task facility with MATLAB, Scientific Notebook, and Maple 9,10, and 11. In the upcoming year I will also add a biostatistics program to this list. Once I finish graduate school, having finally obtained my PhD., I would like to work in the field of Biostatistics and other mathematical biology research. I think Johann Von Neumann's summary of a model provides an effective analogy of my life: "The sciences do not try to explain, they hardly even try to interpret, they mainly make models . . . a mathematical construct which, with the addition of certain verbal interpretations, describes observed phenomena. The justification of such a mathematical construct is solely and precisely that it is expected to work."