This study addressed the question of what factors impact mathematically talented college women's choice of academic major. Twelve participants engaged in a 12 -week on-line bulletin board discussion group, and the data were collected and analyzed using the qualitative method of constant comparative analysis. This study found that four central factors influenced choice of major among these participants: environment, behavior, talent, and value. Value had the highest relative influence, as these women were deeply concerned about the positive social impact of their future careers. Many participants had conflicts with the perceived values of the mathematics departments at their colleges and universities, and those conflicts were often cited as the central reason (and occasionally the only reason) that a participant was not majoring in mathematics. This paper also discusses how university mathematics departments can use these findings to address the problem of female underrepresentation in undergraduate mathematics programs. (Received August 24, 2007)

