



**CALIFORNIA STATE SCIENCE FAIR  
2012 PROJECT SUMMARY**

<b>Name(s)</b> <b>Tristan J. Barca-Hall</b>	<b>Project Number</b> <b>J0401</b>
<b>Project Title</b> <b>Touché or Not Touché</b>	
<b>Objectives/Goals</b> My goal was to determine whether a fencer's location on the fencing strip effected how many touches they score. I believe that a fencer will score more touches when pushing there opponent past the center line, rather than wehen they are being pushed past the center line, because the act of being pushed lays a physical and mental pressure on their opponent.	
<b>Abstract</b> <b>Methods/Materials</b> One science notebook, two writing utensils, and one computer were all the necessary materials for my project. I then watched fifty five touch bouts, each bout consisting of two people. Normally I would have tested one-hundred people but some people repeated so I only tested about eighty. I observed who scored touches and where they scored them, either past the center line or behind the center line.	
<b>Results</b> My hypothesis was correct, fencers scored 266 touches when they pushed their opponent past the center line, but scored only ninety-three touches when they were pushed past the center line. I also found the push factor, or the difference of of the fencer's touches scored when pushing or being pushed. For advanced fencers, the average push factor when they won was 3.762. When they lost, advanced fencers had an average push factor of 1.909. When intermediate fencers won they had an average push factor of 1.000. When they lost, intermediate fencers had an average push factor of 0.789 which is still close to even. When beginner fencers won they had an average push factor of 2.692. When they lost, beginner fencers had an average push factor of 0.350 which means they scored slightly more touches when pushing than when they were pushed When boys won their average push factor was 2.143. This means that they scored significantly greater when pushing than when being pushed. When boys lost there average push factor was 1.206, which means that they scored almost equal amounts of touches when pushing as the did when being pushed. When girls won their average push factor was 3.667 which means that a large amount of their touches were scored when pushing. When girls lost, their push factor was 0.125, which means that they scored only a small amount of touches while pushing. In total, all fencers had an average push factor of 2.600 when they won, and 0.860 when they lost.	
<b>Conclusions/Discussion</b> Next year I am going to do a continuation of this project. I am going to see if girls are more aggressive against boys or girls. I think it is boys.	
<b>Summary Statement</b> The point of my project is to determine if gender, experience, or location effect how a fencer's performance, and to determine if this information can help a fencer succeed.	
<b>Help Received</b> Fencing coaches Dan and Ania Tibbets let me use their fencing club to observe bouts.	