



# CALIFORNIA STATE SCIENCE FAIR 2016 PROJECT SUMMARY

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| <b>Name(s)</b><br><b>Hannah G. Phillips</b>  | <b>Project Number</b><br><b>J0722</b> |
| <b>Project Title</b><br><b>Determining How a Person's Intuition Affects Their Ability to Thin-slice</b>  |                                       |
| <p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b><br/>This experiment was orchestrated to answer the following question: How does a person's intuition affect their ability to thin-slice? Thin-slicing is defined as the ability to use knowledge the brain can gather about a situation and come to a conclusion in a few seconds of time.</p> <p><b>Methods/Materials</b><br/>In this experiment, the measurements collected were from two different tests. The First, the REI-40, is a test that calculated whether the subject was more intuitive or rational. The second, the IGT, calculated how fast a subject could thin-slice, by counting the number of cards it took the participant to understand the game. The scientist instructed the participant to complete the REI-40 survey and the Iowa Gambling Task (IGT). The REI was used to test rational versus intuitive ability, and the IGT was used to test the person's ability to thin-slice.</p> <p><b>Results</b><br/>The scientist accepted the null hypothesis. There was not a strong correlation between a person's intuition and their ability to thin-slice as tested through the REI-40 and the IGT. Also, highly rational or highly intuitive people were much slower at being able to figure out what was going on in the gambling game than those who equally utilize intuition and rationalization. Thus meaning, that those who are more balanced rational and intuitive, thin-slice at a higher level.</p> <p><b>Conclusions/Discussion</b><br/>The scientist discovered a few additional things in the process of the experiment. The first discovery was that the majority of male participants would continue choosing from the less advantageous decks even after discovering the advantageous strategy. The scientist believes that this might be because males' prefrontal cortexes, which is the part of the brain that is used for decision making, doesn't develop fully until age 25 when females' develop much faster. There was also a strong correlation between highly rational or highly intuitive people and higher scores on the IGT. This proves that highly rational or intuitive people were much slower at being able to figure out what was going on in the game. This newfound data can be applied to many different jobs and real life situations that require split-second judgment. According to this data, we now know that people with equal parts intuitive and rational type brains are most fit to make these split-second decisions.</p> |                                       |
| <b>Summary Statement</b><br>As a result of this experiment, I was able to conclude that those individuals who are more balanced in their rational and intuitive thought are able to thin-slice at a higher level.  |                                       |
| <b>Help Received</b><br>Dr. Jeneen Graham, Academic Dean at St. Margaret's Episcopal School (Project Mentor) helped me refine my hypothesis. Kevin Phillips, Director of Organizational Effectiveness & Learning at UC Irvine Health System helped me understand correlation analysis.   |                                       |