Team Number: SJCHS167

School Name: San Juan College High School

Area of Science: Psychology

Project Title: Intelligence versus Cognition

Problem Definition:

Often, people with high intelligence are thought to have high cognition, and vice versa. Much psychological research says otherwise. Dr. Winston Sieck states that "…whatever it is that intelligence tests actually get at, they do not measure the extent of a person's cognitive bias or rationality" (Sieck, 2017). Will having a high amount of cognition but a low amount of intelligence allow a test subject to survive a confrontation longer than a person with high intelligence but low cognition?

Problem Solution:

We will use a simulation with a simple AI system to solve our problem. Using different amounts of cognition and intelligence in definite amounts, we will create a person and put them in a confrontation. We will be using disorders to name these ratios to make our project clearer (i.e. Asperger's, pure Autism, etc…). Using these specific disorders will make the code more simple and easier to read. Those with Asperger's are able to think critically, but will have more difficulty with the environment as they have "severe sensory issues" (Rudy, 2017). Different amounts of cognition and intelligence will make the AI respond in certain ways, therefore causing either death or survival.

Progress to Date:

The code is nearly up and working. As this is my first time coding, there was a delay in starting as I learned the necessary code in order to complete this project, but all is now well and working.

We are using Net Logo for this project. We chose this because Net Logo is easy to operate and has a simple User Interface. We are using sliders to control the amounts of cognition and intelligence for our AI test subject.   We are also using sliders to control the amount of processing and communication our AI is allowed to have. We have about 15 sources so far, though we are in the process of getting more.

Expected Results:

Once the project is done and we have our results, we will be able to see if certain "disorders" make a person more likely to survive a confrontation. It is hypothesized that those with a high cognition and low intelligence will do the best. This is due to the fact that they are able to check their surroundings and take them in and respond on their natural instinct depending on that situation. If they were to just have intelligence, they would see their surroundings but not take them in on the same degree. They would then formulate a plan, but might miss important details in the surrounding environment that could cost them their lives.

Group Members: Brianne Morrow, Alexander Hamilton

Sponsers: Dena Burgert

References

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    asperger's disorder.

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Frederick, S. (2009, November). *Why a high IQ doesn't mean you're smart.*

Rudy, L. J. (2017, October). *'High Functioning Autism' Is Hard to Define*

Sieck, W. (2017, February). *Does High Intelligence Mean Low Cognitive Bias?*