

CS/PSYCH L271 – Intro to Cognitive Science – Fall 2009

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Assignment #1

Posted on September 23 – due by October 6, 4pm

Question 1:

Imagine that an international drug company contacts you, a world-famous researcher, and tells you that they developed a drug that allows people to react faster to visual input. Such a drug would obviously be beneficial for car drivers, helping them to avoid accidents.

They further tell you that they need scientific evidence for the effectiveness of their drug before they can start selling it. They offer you \$1,000,000 if you can demonstrate experimentally with a probability of 95% that their drug is effective.

As a typical scientist, you are desperate for research funding and accept the offer. Now please describe how you would conduct this experiment (design, subjects, visual stimuli, recording of responses, task, trials, sessions, data analysis, etc.). Please describe everything in enough detail so that your research assistant could run the experiment based on these instructions while you spend a few weeks playing golf.

Question 2:

Compare the human eye to the compound eye of a fly (we did not discuss compound eyes, so please use your Internet skills to find out about them). What are the differences, similarities, advantages, and disadvantages? Why do you think that humans and flies evolved with different types of eyes? Please answer these questions on at least one double-spaced page of text.