PSY433_Assignment_M7

Module 7 Assignment

First, review the materials in your textbook on "Psychophysics" including the concepts of absolute and difference thresholds, and the "Psychophysical Methods" referred to as the method of constant stimuli, method of limits, and method of adjustment.

Then, be sure to reread the section on "Tactile Sensitivity and Acuity" with special focus on the section on the two-point threshold.

You'll need to enlist the help of a friend to avoid response bias on your part while conducting this brief experiment. (To recall why this would be important, you might want to recall the discussion, also in the first module, of response bias and signal detection theory.)
You will also need something that will allow you to apply two points of pressure such as a compass (the kind used to draw circles), or a bent paper clip, or even two toothpicks could work. You'll need a ruler to measure the distance between the two points of pressure as well.

Your basic task in this assignment is to determine your own personal two-point threshold for several parts of your body, and report and discuss the results. The parts of your body will be: the fingertip of your index finger, the palm of your hand, the inside of your wrist, the inside of your lower arm (halfway between your wrist and your elbow), your forehead, your cheek, and your lips.

You'll be asked to use the method of constant stimuli in which your partner will (gently but firmly) apply the two points of pressure to the given location in semi-random sequence until he or she determines the distance between the two stimuli that you detect as feeling like two separate points of pressure approximately half the time. He or she should then measure that distance and record it as your two-point threshold for that particular body part. Do this for each body part and report your results.

To keep you honest, and therefore help avoid response bias, your partner should occasionally just apply one point of pressure without telling you when they have done so.
Of course, you'll need to be wearing a blindfold, or have your eyes closed (no peeking!!!) all during this time so that your visual sensations don't influence your tactile (touch) perceptions.

After you have completed the experiment using the method of constant stimuli, explain how you would have conducted this experiment differently **had you been using** the method of limits and had you been using the method of adjustment.

Finally, write a short commentary (100-200 words) describing whether your results basically matched the typical results or not. Be specific about how they matched or where they did not match. Then, explain how your sense of touch has been set up (on the skin and in the brain) to allow different levels of sensitivity for your fingertips versus your lower arm. Be sure to mention and describe the sensory homunculus in your answer.

Therefore, you'll need to report:

1. The two-point threshold distance for each body part listed.
2. How the procedure would change had you used the method of limits and if you had used the method of adjustment.
3. A 100 to 200-word written commentary comparing your results to typical results, and explaining how the tactile system is set up to allow these differences in sensitivity.