Opposition: Invent Yourself. Skin conductance

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Problem 13: Skin Conductance

Conductance of **human** skin is often dependent on **psychological condition** and **emotional stimulation**. Suggest an interesting problem requiring **experimental measurements** of respective parameters.

Theory

1. Precise explanation of the phonomenon conductance

1. Didn’t give a clear definitions about the emotions;
2. Did not give a theoretical explanation for the obtained results
3. Did not explain how the resistance is made, why sweating affects it

Experiment

1. Similar conditions for all experiments
2. Visualising obtained data with graphs
3. Possible sources of error were mentioned

1. Didn’t vary age and gender in the experiment
2. Subjective prediction about the similarity of the weather conditions
3. The measurements were not in %.
4. No qualitative measurements about the amount of sweat produced
5. Did not explain the phenomenon on the graphs thoroughly (why was it caused, what emotions)
6. The conclusions about the emotional stage were made due to predictions but not due to the measurements
7. No error analysis (missing bars on graphs).

Questions:

1. How do you define the emotions investigated?
2. How does water intake affect the result?
3. How wide were your electrodes? (how big was the contact surface?)
4. How does skin temperature affect the result?
5. Did you compare the speed of normalizing the emotional state to the speed of occurence of excitation using your method?
6. How were the subjects (people) you used for the experiment different?
7. What is a high conductance?
8. Do you think that the environmental conditions may have an effect on your results?

Questions:

1. How strongly do you think your experiment is trustworthy?
2. Did you try to attach GSR electrodes on different parts of your body at the same time?
3. How are you sure that the sensors are on the same position in each test?
4. Can you determine the type of the emotion using the sensor (happiness, sadness etc.) ?

Thank you!

What is the startle reflex?

The startle reflex is a characteristic spike in the electrodermal response that usually occurs 1-3 seconds after the onset of a startleprobe or a novel stimulus. Typically, a startle probe refers to a loudnoise, bright light, or puff of air designed to “startle” or suddenly divert the attention of the subject. A similar spike in conductance can be generated when a subject "orients" to a new stimulus -- a person suddenly standing next to you, for example.