L09 - EDA & Polygraph (4.0.0 Sep 14 2011) File name: John-L09 Wed Sep 21 2011 14:04:17

First segment (starts at event labeled 'Count and touch'): Subject quietly answers questions, counts backwards from 10, counts backwards from 30 by subtracting increasing odd numbers and then is touched on face.

Second segment (starts at event labeled 'Colored squares'): Viewing a series of colored squares.

Third segment (starts at event labeled 'Yes-No questions'): Answering a series of 'Yes' or 'No' questions.

L09 DATA REPORT

Student's Name: Michael Lenehan

Lab Section: 16

Date: 26/02/2019

Subject Profile Name: John Height: Unknown Age: Unknown Gender: Unknown Weight: Unknown

Note: This Data Report assumes that all lesson recordings were performed, which may not be the case for your lab. Please disregard any references to excluded recordings.

I. Data and Calculations

A. Complete Table 9.1 with "Count and Touch" data

Mark I for increase, D for decrease, and NC for no change relative to baseline. (Paste measurements to "Meas" cells on right)

Table 1: (Table 9.1) "Count and Touch" Data

Procedure	Heart Rate		Resp. Rate		EDA	
	Mark	Meas	Mark	Meas	Mark	Meas
Resting (baseline)	NC	64.51612	NC	12.90322	NC	-0.25939
Quietly say name	D	62.50000	I	12.79317	I	0.83618
Count from 10	I	66.66666	D	9.88467	I	1.23901
Count from 30	D	61.22448	D	6.98486	I	1.21460
Face touched	D	53.57142	D	10.29159	I	2.24914

B. Complete Table 9.2 with "Colored Squares" data.

Mark I for increase, D for decrease, and NC for no change relative to baseline.
(Paste measurements to "Meas" cells on right)

Table 2: (Table 9.2) "Colored Squares" Data

Square Color	Heart Rate		Resp. Rate		EDA	
	Mark	Meas	Mark	Meas	Mark	Meas
White	D	58.25242	I	14.31980	I	0.20751
Black	D	59.40594	I	15.30612	I	-0.12512
Red	D	58.25242	D	11.67315	I	0.45471
Blue	D	61.22448	D	11.38519	I	-0.08544
Green	D	63.15789	D	12.09677	I	-0.09469
Yellow	D	61.22448	D	12.24489	I	-0.03662
Orange	D	61.22448	I	13.45291	I	0.21362
Brown	D	58.25242	I	24.48979	I	0.07019
Pink	D	60.60606	I	19.93355	I	0.30517

C. Complete Table 9.3 with "Yes/No Questions" data.

Mark I for increase, D for decrease, and NC for no change relative to baseline.
(Paste measurements to "Meas" cells on right)

Table 3: (Table 9.3) "Yes/No Questions" Data

Question	Answer	Truth	Heart Rate		Resp. Rate		EDA	
			Mark	Meas	Mark	Meas	Mark	Meas
Student?	Y N	Y N	I	75.94936	I	16.94915	I	0.07934
Blue eyes?	Y N	Y N	I	67.41573	I	13.69863	I	0.57373
Brothers?	Y N	Y N	D	63.82978	I	15.95744	I	0.11901
Earn "A"?	Y N	Y N	D	61.85567	I	17.44186	I	0.06713
Motorcycle?	Y N	Y N	D	57.14285	I	20.06688	I	-0.07629
Less than 25?	Y N	Y N	D	60.60606	I	15.66579	I	-0.14953
Another planet?	Y N	Y N	D	56.60377	I	17.80415	I	0.07629
Aliens visit?	Y N	Y N	D	58.82352	I	17.85714	I	1.12304
"Survivor"?	Y N	Y N	D	57.69230	I	14.11764	I	0.16174
Truthful?	Y N	Y N	D	58.25242	I	14.70588	I	-0.14038

II. Questions

D. Of what practical value is the EDA information obtained from the color experiment?

The EDA values measured during the colour experiment describe the subjects emotional respone, as a change in emotional respose will cause a change in autonomic tone.

E. What major physiological changes account for the electrodermal activity?

Changes in autonomic tone, which alters sweating and cutaneous blood flow, change electrodermal activity. An increase in sweating can lower electrical resistance, which is the inverse of conductance, which EDA is measured in.

F. Give three reasons why polygraph testing of a person's sincerity and honesty may yield inconclusive results.

1. A persons nerves may affect readings, giving false positives for lies.
2. Polygraph tests may be cheated by applying a physical stimulus, for example a pin prick, during control questions. This will produce a response similar to those produced when the subject is lying, thus giving inconclusive results.
3. Electrical measurements made are subject to error in analysis.

End of Lesson 9 Data Report

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