

**07/04 - "Prestimulus Response in the Sympathetic/Parasympathetic Nervous System" - only abstract available**

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**Abstract:** The objective of this study was twofold: (1) to observe prestimulus response effects using heart rate as in indicator of the autonomic nervous system and (2) to ascertain which of two potential models of the functioning best fit the data. Are the data indicative of a precognitive response to a future stimuli or an experimenter effect via Decision Augmentation Theory (DAT). Using a 3-point electrode system, we monitored heart rate continuously for approximately 45 minutes. At random intervals of  $30 \pm 10$  s, we consulted a predefined list of counter balanced stimuli of either 1 s of 95 dB white noise or a silent data marker as a control. The prestimulus region was defined as -4.7 to -1.2 s prior to stimulus onset and the heart rate data for each stimulus was referenced to that at -4.7s (i.e., clamped at that point). The dependent variable was the area between the average heart rate prior a future acoustic stimulus and a future control. A statistical assessment for this area was determined using a traditional non-parametric permutation technique. A DAT test required either 8 (condition A) or 24 (condition B) stimuli, respectively. Combining the two conditions we found essentially no effect ( $z = -0.29$ ,  $p = 0.6$ ,  $ES = -0.01$ ,  $n = 518$  stimuli). So also there appeared to be no observable effect in either of the two conditions: Condition A ( $z = -0.46$ ,  $p = 0.68$ ,  $ES = -0.043$ ,  $n = 121$  stimuli) and Condition B ( $z = -0.12$ ,  $p = 0.54$ ,  $ES = -0.006$ ,  $n = 397$  stimuli). It is difficult to ascribe a meaning to a null result; however, we do consider a number of potential explanations. (1) Heart rate may not be subject to prestimulus response effects. (2) This study was plagued with difficulties. The result was that we had to restart the study a number of times. This had two important side effects. The first is that it sharply reduced the available participant pool from which we could draw, and secondly and most importantly it had a demoralizing effect on the researchers. This last point requires further discussion. It is a well established effect that set and setting play an important role in experimental psychology and perhaps a determining role in parapsychological experiments. One of the strongest effects in the PSI literature is the so-called sheep/goat effect which may be a strong manifestation of this effect.

**Keywords:** prestimulus response, decision augmentation theory, heart rate, autonomic nervous system