Questions for Movement and Response Generation Section

(Walter et al., 1964; Coles, 1989; Nieuwenhuis et al., 2001)

1. Describe the basic paradigm that leads to the generation of a CNV. Name two factors that influence CNV amplitude or distribution across the scalp indicating the nature of the effect. What might these changes indicate about what neural process(es) the CNV reflect(s). When might you expect to see a difference in the CNV interval examined via a stimulus-locked and a response-locked average (start by defining each).

2. What did Walter et al. mean by the statement: "dependence of the CNV on the contingency of the association between the two stimuli is shown most clearly when their relation is made equivocal"? Name one reason it is inaccurate to state that the CNV is nothing but the sum of the response to a warning stimulus and an RP?

3. Describe how the lateralized readiness potential (LRP) is derived. What is the relationship between the magnitude of the LRP and response initiation? What do LRP data say about the point of no return?

4. What do results using the LRP measure suggest about the communication of partial information from sensory to motor systems? Support your answer.

5. What are the Ne and Pe and according to Nieuwenhuis et al. what is a critical difference between them? Describe the basic anti-saccade task and explain why it seems like a good paradigm for examining the relation between awareness and electrophysiological indices of error-related processing.