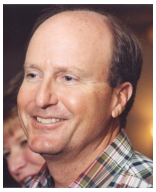

ASSESSMENT CONTRACT

Curriculum 2001

PSY 707 & PSY 726

Student's Name: **Joe Ferguson** Fielding Student ID: **61405**
Faculty Reader: **Anthony Greene**
Course topics: **Biological Bases of Behavior & Advanced Topics**
Knowledge Areas: **PSY 707 & PSY 726**
Credit Hours: **8**
The grade I seek is an **A**
I would like to use this assessment to meet the requirements of the **Violence Track**
I plan to complete this assessment by **November, 2003**
My email address is **Fergi@Cox.net**
My faculty advisor is: **Nolan Penn**

I am presently completing the remaining prerequisites for my PIE, after which I will be establishing my internship and working on the literature review and methodology sections of my dissertation proposal in preparation for their approval at summer session. During the fourth calendar quarter I would like to invite you to read my individual assessment in Biological Bases of Behavior in combination with an advanced component focusing on biological etiologies of intimate partner violence.

I will answer the following eighteen questions in a clear, scholarly, creative, spellchecked, thoughtful, grammatically correct, and occasionally provocative manner:

1. Imagine the human brain as a high-rise executive office complex, and I am a prospective investor who is considering buying the whole complex, including the current tenants. Give me a detailed tour of the main divisions of the office tower (hint: forebrain, midbrain, hindbrain), and the names and functions of each of the subdivisions.
2. Describe the parts of a typical vertebrate neuron, the process of synaptic transmission of an action potential (structurally and chemically, including presynaptic and postsynaptic mechanisms), and the various types and functions of glial cells.
3. Compare and contrast neural and hormonal communication systems in the human body. Include discussion of their similarities and differences, as well as advantages/disadvantages of each system.
4. What is the function of the sensory system? How do the sensory receptors work? Describe the sensory pathways, including cortical fields and inputs, primary receptor circuits, and specialized receptors. What is the relation of "attention" to the sensory system? What part of the brain is thought to govern it?
5. How are tactile sensations determined by skin receptors and joint receptors? How are pain signals transmitted? How do we localize specific tactile stimulation on a certain body part?

6. Describe the structures and known functions of the pyramidal and extrapyramidal systems.
7. Temperature regulation and fluid volume control are important survival skills for all organisms. How are these functions controlled in humans?
8. Describe the typical human sleep-wake cycle. What are the characteristics of each part of the cycle, and how do these characteristics change over the lifespan? What brain structures and neurotransmitters are thought to be involved?
9. Learning and memory storage have been demonstrated to result in anatomical and chemical changes in the brain. What are the changes, and how were they found?
10. Describe the probable effects of a left-hemisphere closed head injury. If the lesion is anterior, what type of impairment would be expected? If it is more posterior? Under what circumstances might we find an exception to the above?
11. Compared to other animals, the frontal lobes of humans are quite large. What are the effects of injury to this region of the brain? What are the effects of injury to the parietal region?
12. Neurospecificity of neural pathways and synapses according to an innate genetic map is widely accepted by some, contested by others. What is some of the evidence for and against neurospecificity, and what are some other determinants of nervous system development?
13. What is a fixed-action (or modal-action) pattern? How do they differ from a reflex? Describe one of each. What is the difference between a closed-loop and open-loop control circuit?
14. Facial expressions of particular emotions are similarly presented and recognized by many different human societies. Some emotional behaviors are also similarly expressed for humans and animals. What are some of the implications for the biogenetic bases of emotions?
15. What are the physiological effects of stress? What is the role of the limbic system in emotion? What are thought to be the biochemical markers of aggression, and why?
16. Some drugs modulate the formation of memory. Name one drug that usually impairs memory, and one that improves memory. Explain how the drug is thought to achieve its action, and any conditions that must be met in order to obtain the stated effect.
17. What are hormones, where are they produced, what is their function, and how do they work? How do peptide, amine, and steroid hormones differ? How are secretion rates monitored and controlled?
18. What are the major classes of psychoactive drugs, and what are their most common applications?

In addition, I will prepare a 2 hour oral presentation examining the role of biological factors in the etiology of intimate partner violence. I will deliver this presentation to you either at the Fall Research session in Pittsburgh, or at one of your cluster meetings shortly thereafter.

I hope that you will accept this invitation to read my assessment in Biological Bases of Behavior & Advanced Topics. I promise you an interesting exchange!

Faculty Reader

If the Assessment reaches me by the agreed upon date, I will forward the grade and evaluation comments to the student and the Santa Barbara Office eventually.

Faculty Reader's signature:_____Date:_____

Student's signature:_____Date:_____