**Written Assignment Unit 3**

University of the People

PSYC 1504-01: Introduction to Psychology-AY2025-T2

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5 December 2024

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**Part I: Expanding Beyond the Five Senses**

1. Senses Beyond the Traditional Five: Yes, I believe there are senses that don't just receive information from the external environment, but also from within us. For example:
   * Hunger: This sensation is triggered by internal cues such as hormonal signals, stomach contractions, and glucose levels. The body uses these internal changes to signal the brain that food is needed, which could be considered a form of "internal sensing" that informs us about the state of our body.
   * Breathing: When you hold your breath, proprioceptors (sensory receptors that detect internal body states) sense the buildup of carbon dioxide in your blood, signaling the body to instinctively resume breathing. This is a form of interoception, the sense that helps us monitor internal body conditions, such as hunger, thirst, and the need for air.
   * Need for Belonging: The need for social connection may stem from deep biological systems that trigger feelings like anxiety, loneliness, or a sense of reward when we interact with others. These could be seen as emotional senses that help us navigate social contexts and adapt our behavior for survival and well-being.
2. Why Scientific Communities May Not Consider More Than Five Senses: The traditional five senses-sight, hearing, touch, taste, and smell-are defined by external receptors, making them more easily measurable and observable. These senses have been studied for centuries and became foundational to understanding human perception. However, the scientific community has started to recognize additional senses, like proprioception, equilibrioception (sense of balance), and interoception (internal sensory feedback), though they are often not included in the standard "five-senses" model due to their more abstract, less tangible nature.

The reluctance to expand the senses may stem from the following:

* Historical Boundaries: The five senses model has been so ingrained in educational systems and scientific traditions that new concepts may struggle to break through without significant evidence or a shift in paradigm.
* Measurement Challenges: Many internal senses are harder to measure or quantify, which complicates their study compared to external senses that provide clear, direct stimuli.
* Cognitive and Emotional Overlap: Some "senses" may overlap with cognitive and emotional processing, blurring the lines between sensory input and psychological interpretation, making them more difficult to categories.

1. Defining Sensation and its Impact on Our Understanding: The definition of sensation helps to categories and clarify how we experience the world. However, it can also hinder our exploration of broader sensory experiences. By defining sensation too narrowly, we limit our understanding of its complexity. If we only focus on the five classic senses, we risk ignoring other forms of sensory input, such as emotional or internal body signals, which could offer a fuller picture of human experience.

A definition that excludes broader forms of sensation could stifle the exploration of new fields in psychology, neurology, or even philosophy. Expanding the definition could lead to the discovery of new ways we perceive and interact with our world.

* + Does Sensation Need to Be Expanded? Yes, I believe it does. Our understanding of sensation needs to encompass not only traditional external senses but also the internal processes that inform us about our bodily states, emotions, and cognitive awareness. This broader view could enhance fields like neuroscience, psychology, and health, particularly in understanding conditions like anxiety, chronic pain, or mental health disorders, which often involve complex interoceptive or emotional "sensations."

**Part II: Operant Conditioning and Reading Skills**

1. Operant Conditioning and Reading Skills: Operant conditioning plays a significant role in the development of reading skills. By reinforcing correct reading behaviors (such as decoding words, recognizing letter patterns, or understanding context), children are more likely to continue these behaviors. Positive reinforcement-such as praise, rewards, or encouragement-encourages them to read more, which in turn strengthens their skills. For example, when a child reads aloud and is praised for correctly identifying a word, this reinforcement makes it more likely that the child will remember the word and be able to identify it in the future.

As reading becomes more automatic, it's because repeated reinforcement leads to the formation of stronger neural pathways. These pathways make the reading process more efficient and less effortful over time.

1. How Skills Become Automatic: Skills like reading become more automatic through practice and reinforcement. The more a child reads, the more they reinforce neural pathways that allow for quicker and easier word recognition. This automaticity occurs because the brain learns to make connections between letters, sounds, and meanings in a way that requires less conscious effort. Essentially, operant conditioning supports the process of transforming a learned behavior from a conscious, effortful task into an automatic response.
2. Do Many Skills Follow the Same Path of Development? Yes, many skills follow a similar path of development in terms of how they become automatic. The process typically involves:
   * Initial Learning (with a lot of effort, often accompanied by mistakes).
   * Reinforcement (through practice and positive feedback).
   * Consolidation (where the skill becomes easier and more fluid).

Skills like writing, math, or even social interactions develop in much the same way, as they involve a combination of learning, reinforcement, and eventually, automaticity.

In conclusion, expanding our view of sensory experiences and recognizing the role of operant conditioning in skill development can deepen our understanding of both human perception and learning.

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