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Assignment 3

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1. What are Phantom Vibration syndrome and Phantom Ringing examples of? What might be the underlying reasons that explain the occurence of these phenomena? Is phantom vibration syndrome an isolated type of experience or an instance of a larger set of phenomena? What does this imply about our contemporary technological situation?

A: Phantom Vibration syndrome, or the Phantom Ringing syndrome is the perception that the person's mobile phone is vibrating or ringing in their pockets when it is actually not. These are examples of tactile hallucination, as the brain is perceiving things that are not actually there (BMJ 2010). There is a Learned Association between a slight noise and expectation of vibration.

An underlying reason that might explain the occurence of this phenomenon is the top-down model of perceptual processing. Our prior knowledge (of phones ringing / vibrating in our pockets, often for something important we cannot miss) leads us to expect the same if any movement is felt in our pockets, or a vaguely similar tune to the ringtone plays. (Deb A, 2014)

Phantom Vibration and Phantom Ringing syndrome are in themselves a new phenomenon, a change that some claim has affected how the human neurochemistry works (Hu 2013). However, "phantom sensation" is not

in itself an entirely new phenomenon, "phantom limb pain" is a sensation that affects several amputees, where they feel pain in the limbs they no longer have (Woodhouse 2005).

What this might imply for our contemporary technological situation is our perception of modern technology, especially cellular phones, as essential parts of our daily existence, almost as much as our hands and feet (albeit not as extreme).

2. Pick any perceptual disorder. Provide a brief description of it. What is impaired? What are potential underlying causes? Is it related to abnormalities in brain structure or function? How is it diagnosed? If it is treatable, what are the available treatments?

A: A perceptual disorder: Auditory Processing disorder (APD). It is an umbrella term for a variety

of disorders that affect how the brain processes auditory information. The structure and function of the ear and its components work, but the information is not processed correctly, leading to difficulties in recognizing and interpreting sounds, especially speech.[1]

There are a number of potential or underlying causes:

1. Acquired APD, often caused by damage to the central nervous system (CNS).

2. Genetic: APD, may be related to conditions of autosomal dominant inheritance. (Stephens, 2000)

3. Developmental: In the majority of Audio Processing disorder cases, the underlying cause is unknown. Generally it has to do with disruption to the Central Auditory System (which develops for at least the first decade).

It is related to abnormalities in the central Nervous System.

Diagnosis can be done by questionnaires. A common listening problem is speech recognition in

1. en.wikipedia.org/wiki/Auditory_processing_disorder

the presence of background noise (JF 2006). Common symptoms include:

- Difficulty hearing in noise
- Auditory Attention Problems
- Better Understanding in one-on-one situations
- Difficulties localizing noise

There is no complete treatment, but some treatment attempts have been made that show minor improvement. All of the evaluations conducted were not well-conducted evaluations, with a lack of checking for control and placebo. The treatments focus on mostly:

1. Changing the learning env.
2. Developing higher order skills to compensate
3. remediate the auditory deficit itself.

References

BMJ 2010 : Phantom vibration syndrome among medical staff : a cross sectional survey

Deb A , 2014 : Phantom vibration and phantom ringing among mobile phone users : A systematic review of literature.

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Woodhouse 2005 : Phantom Limb Sensation

Stephens , 2000 : The Role of Family history in King Kopetzky syndrome

JF 2000 : Report of the Consensus Conference on the Diagnosis of Auditory-Processing Disorders in School-Aged Children.