Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

NetID: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Discussion Section: \_\_\_\_\_\_\_\_\_\_\_\_\_

**Week 9: Williams Syndrome & Specific Language Impairment, Exam 2 Review**

**Make-Up Assignment**

1. **Williams Syndrome and Specific Language Impairment form a double dissociation between intelligence and language ability. Describe what this means, and describe (don’t just list) at least two (2) pieces of evidence for the double dissociation.**
2. **What are the known causes of Williams Syndrome and SLI? How do the causes differ and how are they similar?**
3. **A young child (5;6) with a severe hearing deficit is showing a number of general symptoms of a language impairment: production delay in first words, restricted vocabulary, and comprehension difficulty. If we were to run a standardized language test on the child and they scored in the lowest 10% for age, could we diagnose them with SLI? Why or why not?**
4. **Below is a list of descriptors that either belong to individuals with Williams Syndrome or Specific Language Impairment. Place them in the correct box.**

Descriptors:

* Affects general intelligence
* Affects language
* Caused by a deletion of about 20 genes on chromosome 7
* Leads to characteristic changes to facial features
* Comprehension difficulty with complex sentences and/or rapid speech
* Causes elastin deficiency
* Has comprehension difficulty with complex sentences and/or rapid speech
* May have short term memory deficits
* Leads to a thickening of the cortex of the right hemisphere
* Leads to increased folding (fissurization) of the brain (cortical complexity)
* Likely caused by genetics, but genetic cause has not been identified yet
* Tend to have trouble with visual-spatial processing
* No physiological effects

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| --- | --- |
| **Williams Syndrome** | **Specific Language Impairment** |
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1. **Match the words on the left with the correct definition on the left.**

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| --- | --- |
| negative evidence  | the fact that children must somehow decide what words mean |
| positive evidence  | evidence about which items are absent in the infinite set |
| nativism | knowledge that is used by one cognitive ability |
| domain-general knowledge | the idea that knowledge can be specified by biology (innate knowledge) |
| domain-specific knowledge | communication systems with relatively simple grammars with high variability between speakers |
| empiricism  | knowledge that is used by multiple cognitive abilities |
| transformation | full-fledged languages with complex grammars and little variation between speakers |
| word learning problem | a syntactic rule that takes the output of the phrase structure rules, and rearranges (or transforms) that output into a new output |
| pidgins | evidence about which items are present in the infinite set |
| creoles | the idea that knowledge comes from input/experience (not biology) |
|  |  |

**6. True or False? If false, explain why.**

1. Humans have access to their innate language learning mechanisms for their entire lives.
2. Structure-dependent transformations pose a learning problem for children.
3. Morphological rule learning follows a u-shaped curve, suggesting a phase of memorization, followed by generalization, followed by overgeneralization, followed by the learning of exceptions (memorization).
4. Children respond well to negative evidence.
5. Children appear to be born with the ability to discriminate only the sounds found in their native language.