**Genes for language**

GIVEN:

*There are genes of human cognition.*

*If language is an "outgrowth" of our intelligence, which is genetic, then genetic anomalies are evident in language.*

*There is no dramatic dissociation between linguistic and general cognition.*

*There is no gene just for language because each language event consists of tasks coordinated with general cognition.*

*GENETIC ANOMALY*

*…is manifested in selected cognitive functions that are reduced rather than in all cognitive functions*

*PROBLEMS of diagnosis:*

*Down’s children hugely underperform their age in language uses, and this cognitive weakness shows, e.g., in doing math and understanding spatial relations;*

*In Williams’ syndrome adults, superficial language usage (word complexity and sociability) may seem extraordinary (but compared to whom?!) but this typically only masks weak syntax.*

QUESTIONS:

Why can’t language function well if general intelligence is impaired – doing math, logic, spatial orientation, deduction, cause – effect, counting money, breaking into pieces and regrouping, etc.?

What insights about language functioning in the brain are gained from studying genetic disorders and of what general cognitive functions do we become aware in Down’s or Williams’?

What aspects of non-linguistic cognition are genetically damaged in **Williams’ and Down’s** syndromes, respectively?

In what ways are they evident in language usage?

What’s implied by the fact that the syndromes are domain-general rather than domain-specific when it comes to how they affect language and behavior?

Why is it critical to correlate “normal” language usage with age in **Williams’ and Down’s** syndrome patients?

To what should one pay attention in evaluating language skills that appear normal superficially?

What sort of language usage suggests “double dissociation”?

What’s implied by the fact that brain functions evident in (1) word recall, (2) understanding while reading or seeing, etc., don’t match with brain tissues and neural pathways in a transparent way?

How would you define a genetic disorder?

*p. 60 TESTS: comparing age in relation to skills of Down’s or Williams’ syndrome patients*

**Specific language impairment and dyslexia** (vs. genetic anomalies)

       …are related to general cognitive skills and manifested in impaired language.

Is there a gene responsible for reading? Why or why not?

What is specific about the specific language impairment? Whom does it affect?

Why do adults continue to cope with SLI if not diagnosed early in life?

What’s peculiar about cognitive and syntactic processing of events by speakers with SLI (the picture of a cow and donkey kicking, in Sedivy)?

What are some of the abnormalities in language usage associated with the specific language impairment and in what aspects of usage are they typically manifested?

In what ways is dyslexia like specific language impairment?

What are some of the language functions turned on when one reads, i.e., in what particular ways is our cognition activated?

Can dyslexia be treated?

***Figure 3.2 Testing syntactic skills of SLI-diagnosed speakers***

***Web activity 3.1*** [***http://sites.sinauer.com/languageinmind/***](http://sites.sinauer.com/languageinmind/)

**The Divided Brain*, Ian McGilchrist*, *TED Talk***