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Dopamine, Schizophrenia, and Decision Making

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Schizophrenia

Hallucinations, hearing voices: “positive” symptoms

Schizophrenia: *Negative Symptoms* most Difficult

- Apathy
- Withdrawal
- Anhedonia (no pleasure)
- Lethargy
- Impaired Attention
- Reductions in speech
- Absent, blunted.. emotions

These are many of the same symptoms as major depressive disorder

Motivational disturbance is a central challenge for people with Schizophrenia.
Computational neuroscience of motivation, dopamine, and decision making

Two Competing Pathways
Dopamine bursts reinforce Go!

Dopamine dips reinforce No Go!
Go vs. NoGo in the Basal Ganglia

Basal Ganglia & Dopamine Altered in Schizophrenia
Measuring Motivation in People with Schizophrenia

Motivation in Schizophrenia: Reduced Attention
Computer Models Connect the Dots...
Thanks!

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