

Universal Design for Learning Series

# From Bach to Lady Gaga

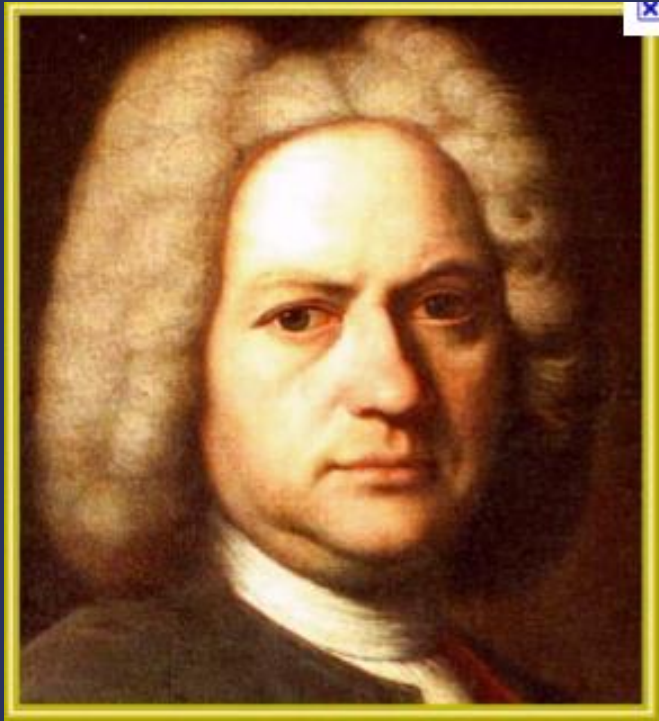
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Office of Special Education Programs (OSEP)

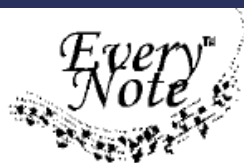
Project Directors Meeting, 2011



# From Bach To Lady Gaga



# I) Looking for Universals



# SYMPHONY No. 3 in E Flat Major

*Eroica*

Op. 55

*Concert Piano Arrangement by F. Liszt*

**Allegro con brio** (♩ = 60 )

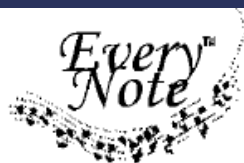
L. van Beethoven

The musical score is presented in two systems. The first system begins with a piano introduction marked *f* (forte) and *ped.* (pedal). It includes a section marked *Instr. à cord.* (instrumental accompaniment for strings) and a *p* (piano) section. The second system continues the piano introduction with a *f* (forte) section, a *p* (piano) section, and a *cresc.* (crescendo) section. The score includes various musical notations such as notes, rests, and dynamic markings.



Leipzig, 1805





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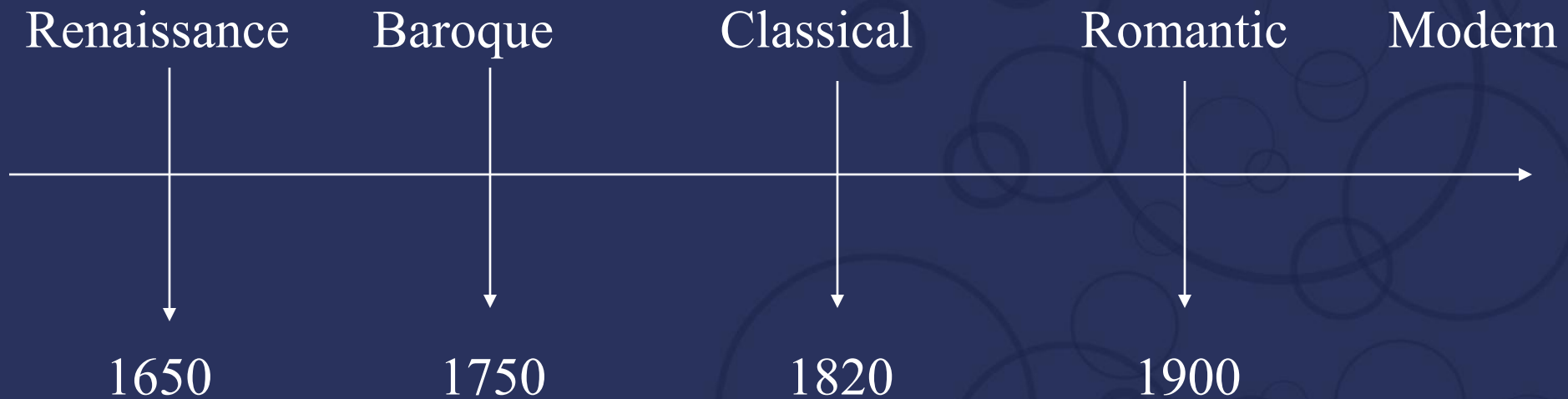
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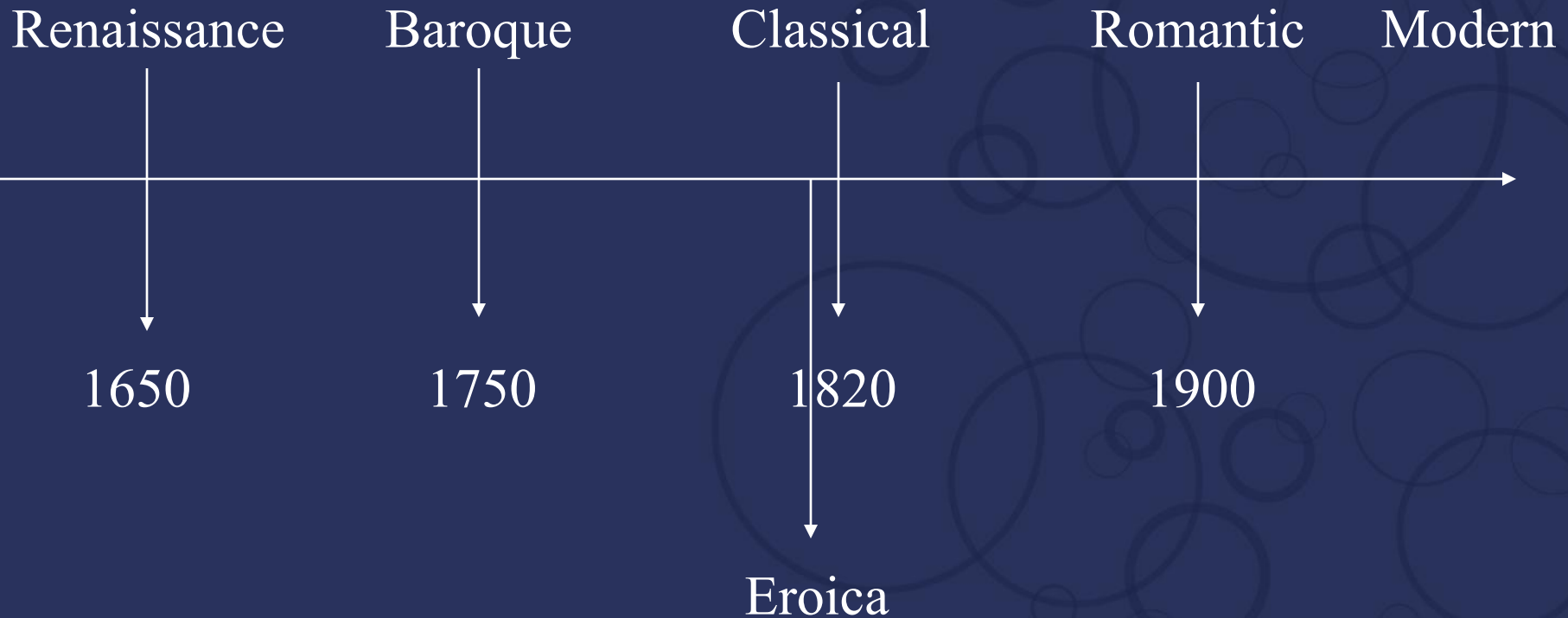
“I'll give another Kreutzer  
if it will just stop.”



# Stages of Music



# Stages of Music



# Universals in Child Development - Cognitive Stages

- Assimilation
- Accommodation
- Perturbation

Romantic or not, Beethoven's music was the **most powerful disruptive force in the history of music** – it opened the gateway to a whole new kind of music.

Grout's History of Music

## II) What is *really* Universal - Variability

# David vs Ruth





# David vs Ruth



Perfect Pitch

# David vs Ruth



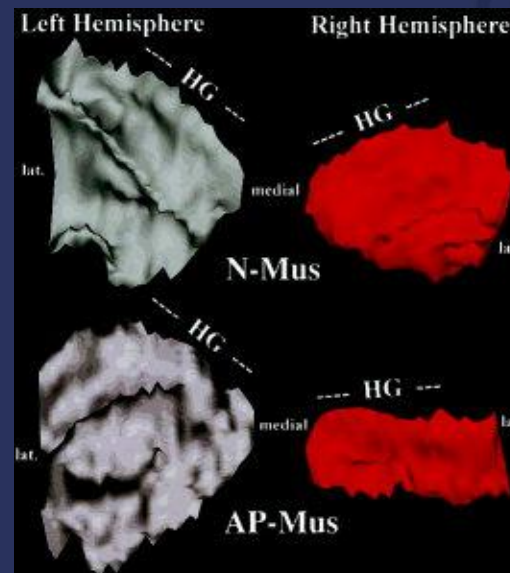
Not so much



Perfect Pitch



# The Neurology of Ruth: “hyperconnected” “asymetric planum temporale”



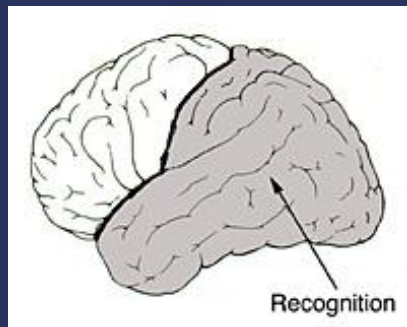
# Who has a disability?



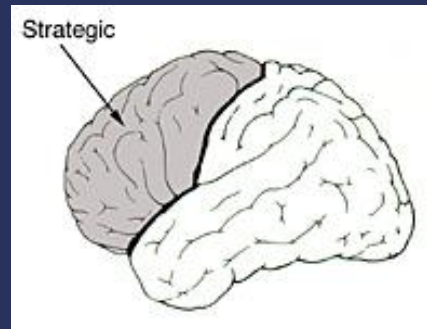
# Stop and Reflect

Think of an example of how a learning context creates the illusion of disability in learners.

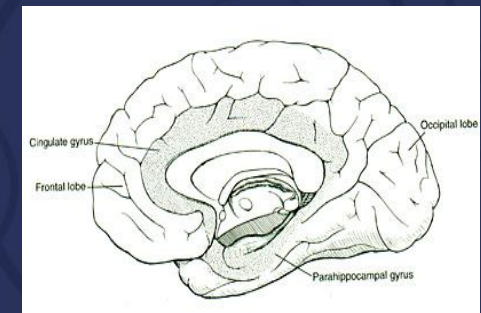




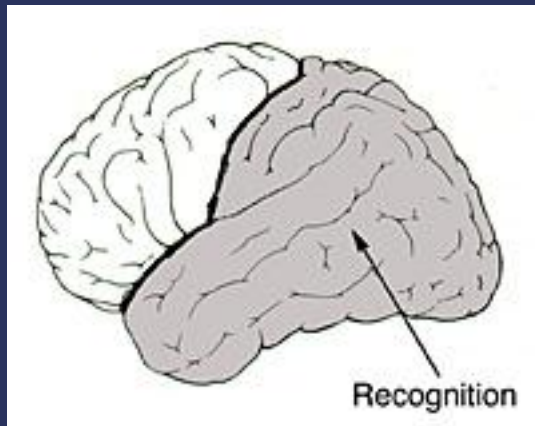
Recognition  
networks



Strategic  
networks

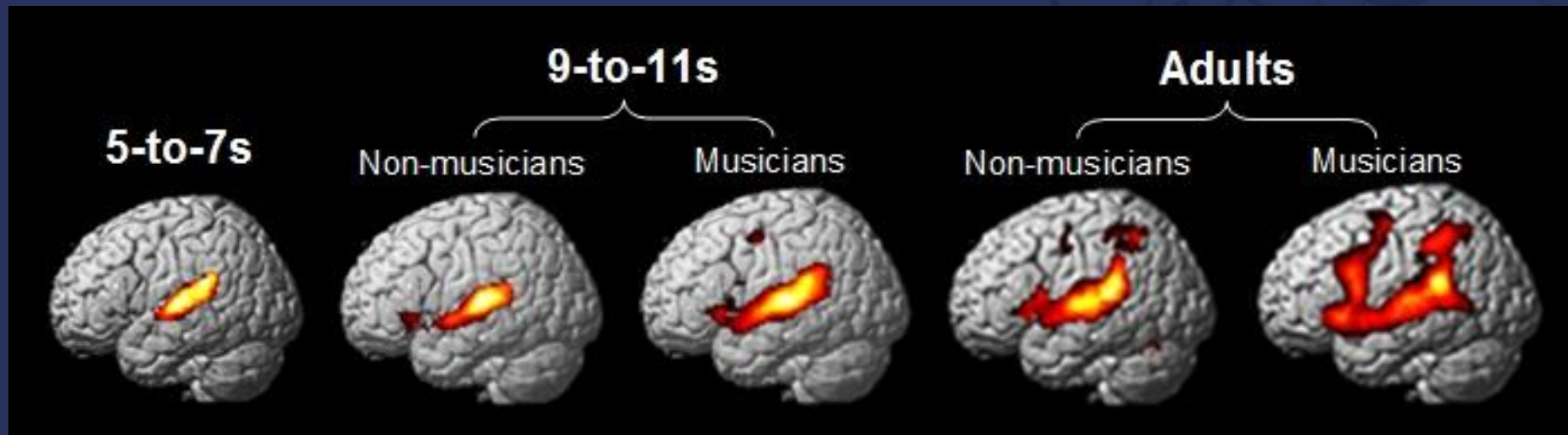


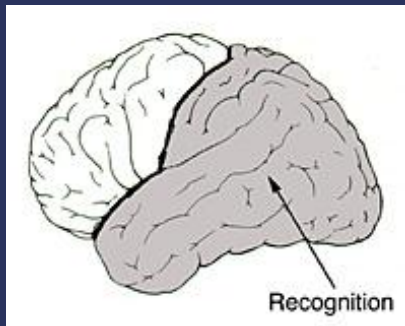
Affective  
networks



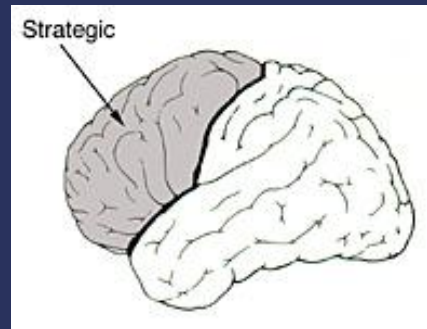
## Recognition networks

Pitch  
Timbre  
Duration  
Loudness  
Contour  
Direction

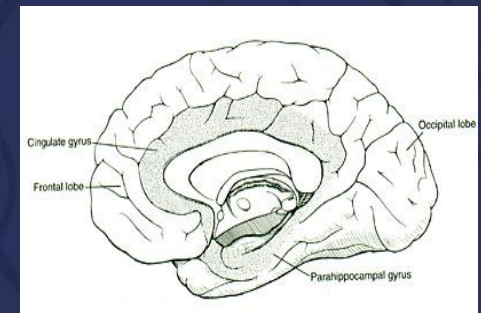




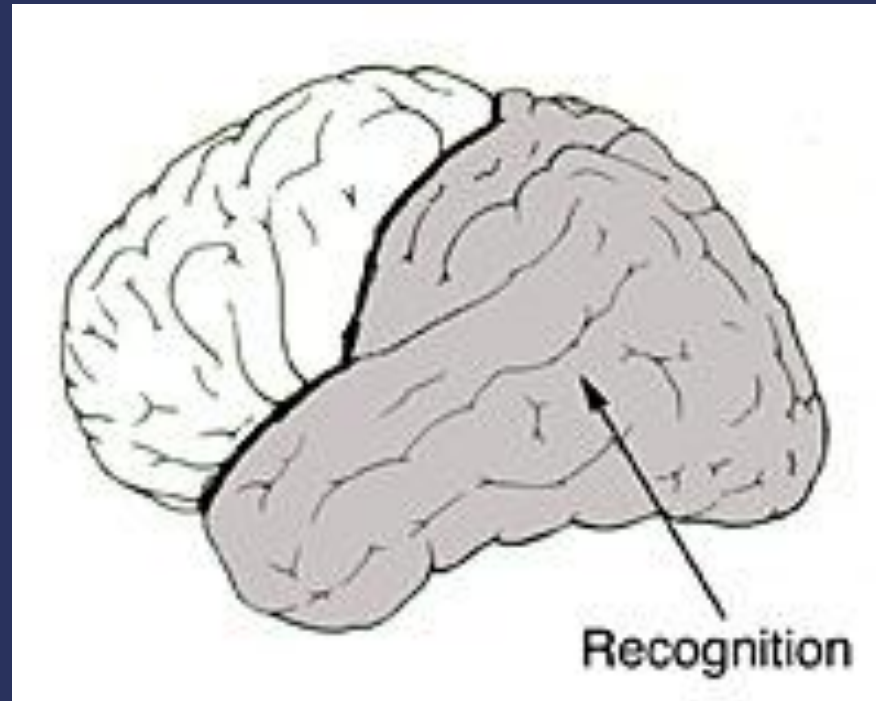
Recognition  
networks



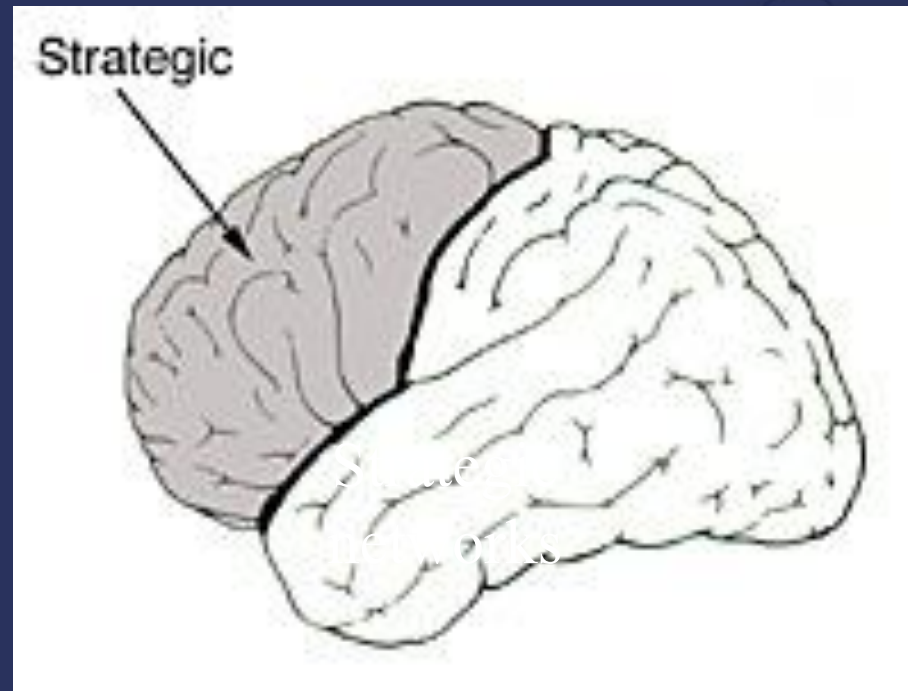
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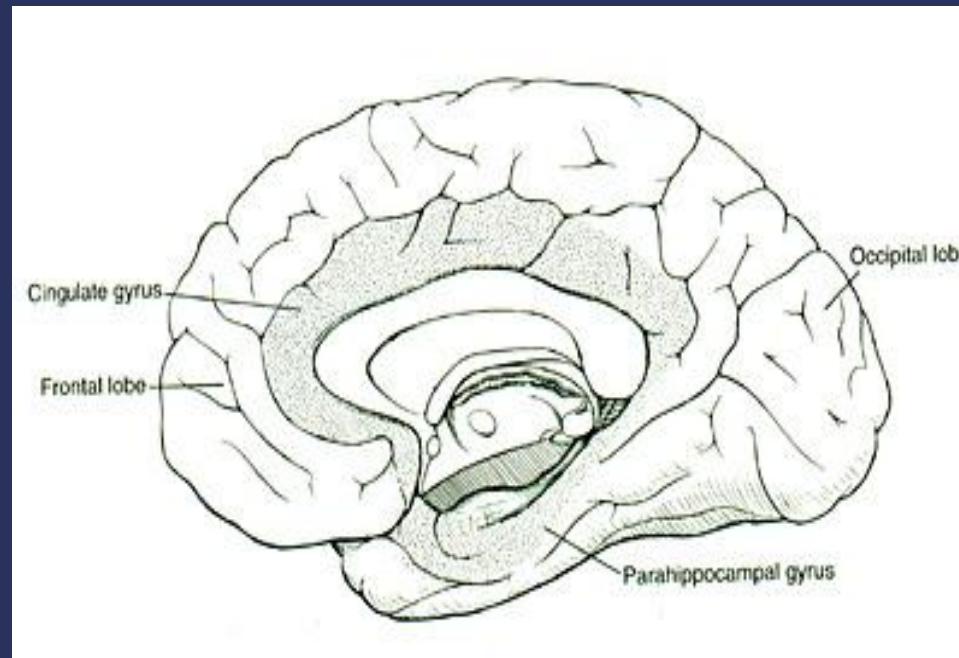


## Recognition networks



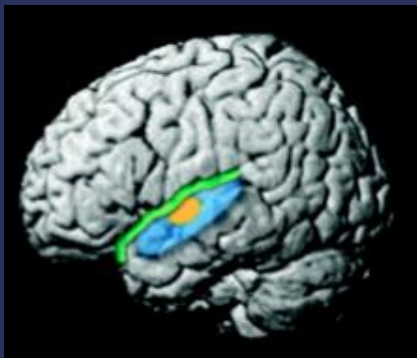
Strategic  
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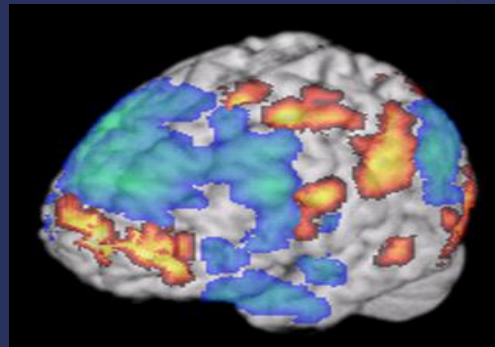


## Affective networks

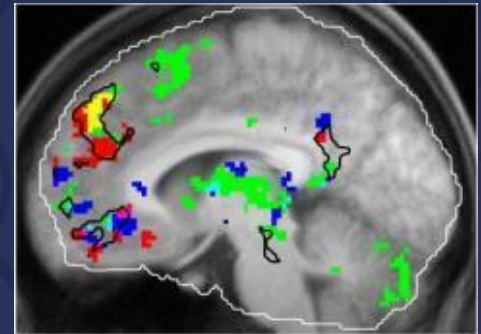
# Music and Variability



Recognition  
networks

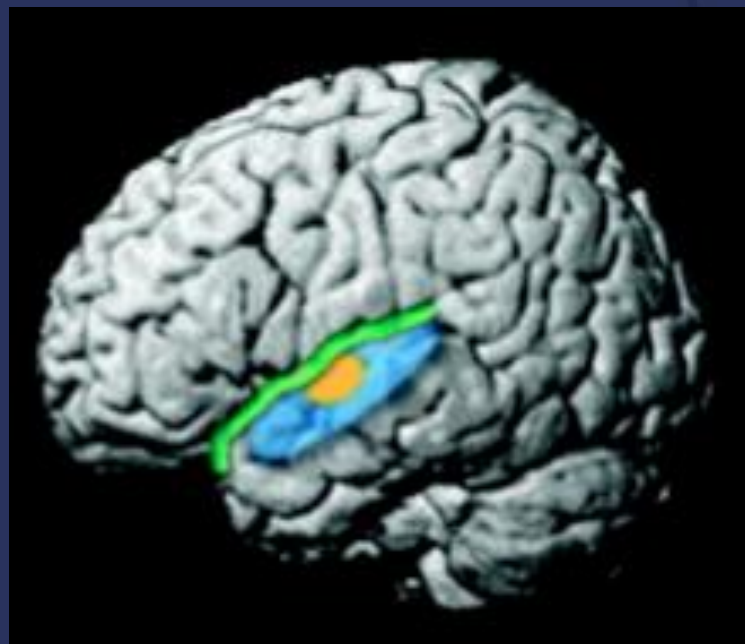


Strategic  
networks



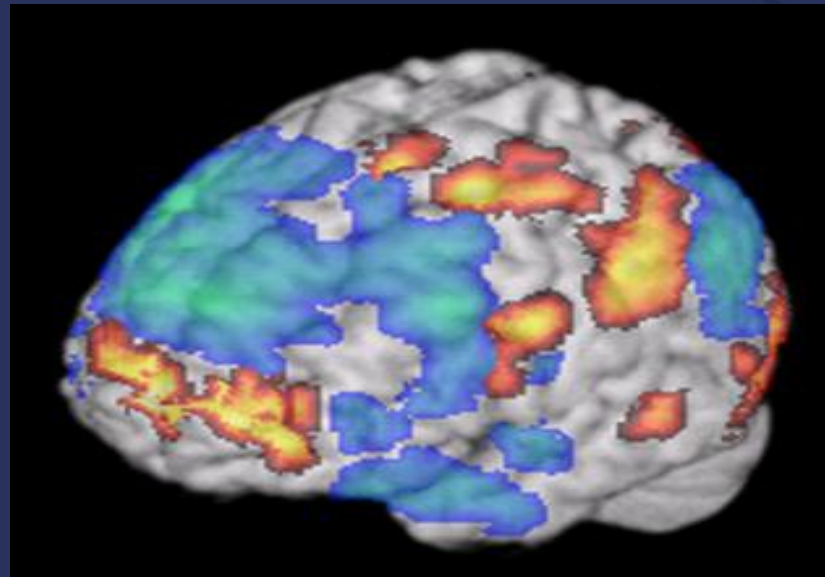
Affective  
networks

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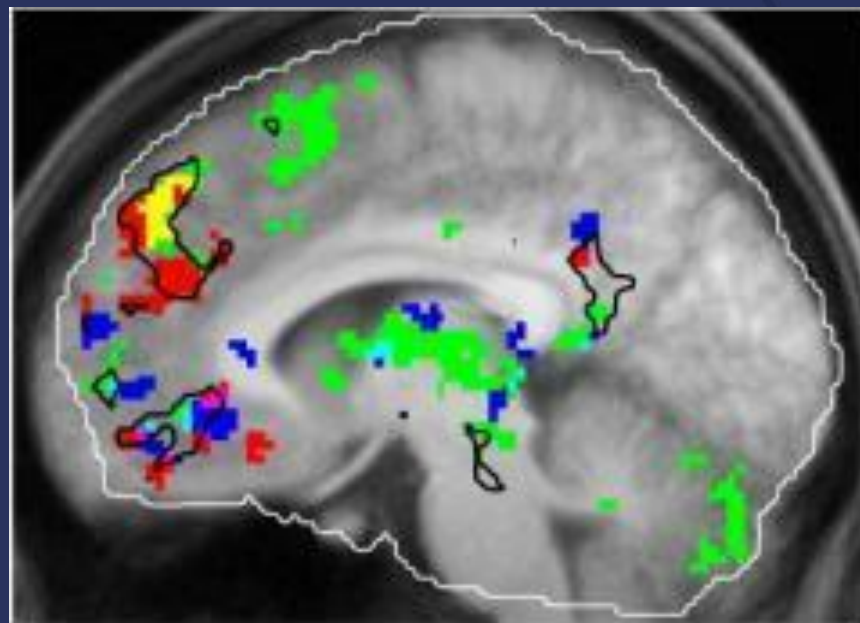
Recognition  
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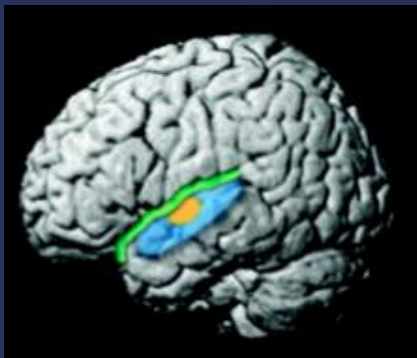
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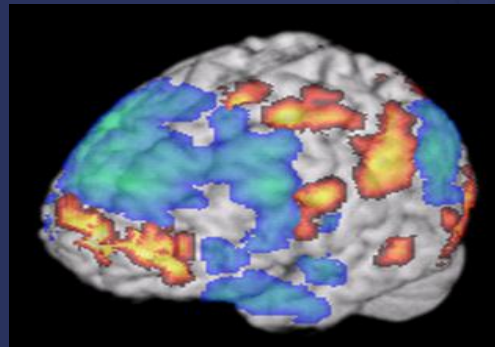


Affective  
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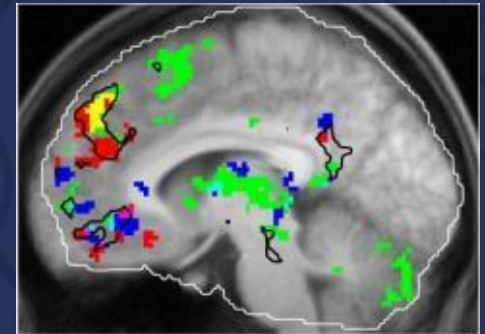
# Music and Variability



Recognition  
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Affective  
networks



# III) Meeting the universal challenge of variability

Universal Design for Learning

J.S. Bach

# Toccata and Fugue in D-Minor

## I. Provide Multiple Means of Representation

### 1: Provide options for perception

- 1.1 Offer ways of customizing the display of information
- 1.2 Offer alternatives for auditory information
- 1.3 Offer alternatives for visual information

### 2: Provide options for language, mathematical expressions, and symbols

- 2.1 Clarify vocabulary and symbols
- 2.2 Clarify syntax and structure
- 2.3 Support decoding of text, mathematical notation, and symbols
- 2.4 Promote understanding across languages
- 2.5 Illustrate through multiple media

### 3: Provide options for comprehension

- 3.1 Activate or supply background knowledge
- 3.2 Highlight patterns, critical features, big ideas, and relationships
- 3.3 Guide information processing, visualization, and manipulation
- 3.4 Maximize transfer and generalization

**Resourceful, knowledgeable learners**

## II. Provide Multiple Means of Action and Expression

### 4: Provide options for physical action

- 4.1 Vary the methods for response and navigation
- 4.2 Optimize access to tools and assistive technologies

### 5: Provide options for expression and communication

- 5.1 Use multiple media for communication
- 5.2 Use multiple tools for construction and composition
- 5.3 Build fluencies with graduated levels of support for practice and performance

### 6: Provide options for executive functions

- 6.1 Guide appropriate goal-setting
- 6.2 Support planning and strategy development
- 6.3 Facilitate managing information and resources
- 6.4 Enhance capacity for monitoring progress

**Strategic, goal-directed learners**

## III. Provide Multiple Means of Engagement

### 7: Provide options for recruiting interest

- 7.1 Optimize individual choice and autonomy
- 7.2 Optimize relevance, value, and authenticity
- 7.3 Minimize threats and distractions

### 8: Provide options for sustaining effort and persistence

- 8.1 Heighten salience of goals and objectives
- 8.2 Vary demands and resources to optimize challenge
- 8.3 Foster collaboration and community
- 8.4 Increase mastery-oriented feedback

### 9: Provide options for self-regulation

- 9.1 Promote expectations and beliefs that optimize motivation
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**Purposeful, motivated learners**

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- *Fugue*: a composition built on a theme that is introduced at the beginning, repeated in different voices and contexts, and recurs frequently in the course of the composition.



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A background image of a row of red school lockers with silver handles and vents.

# Test your glee n.a.

Are you a Jock? A Nerd? A Diva? A Slacker?  
**Play now and find out!**





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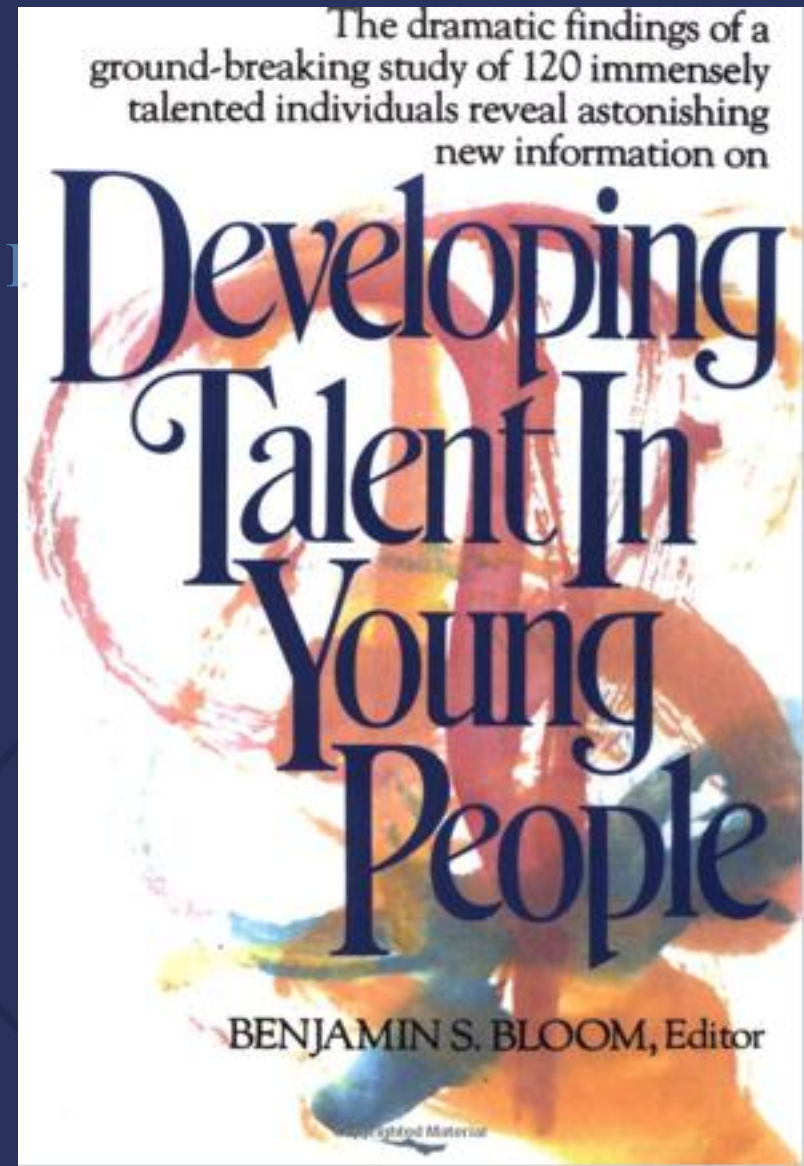
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**Purposeful, motivated learners**



Music mimics the dynamics of  
emotion itself.

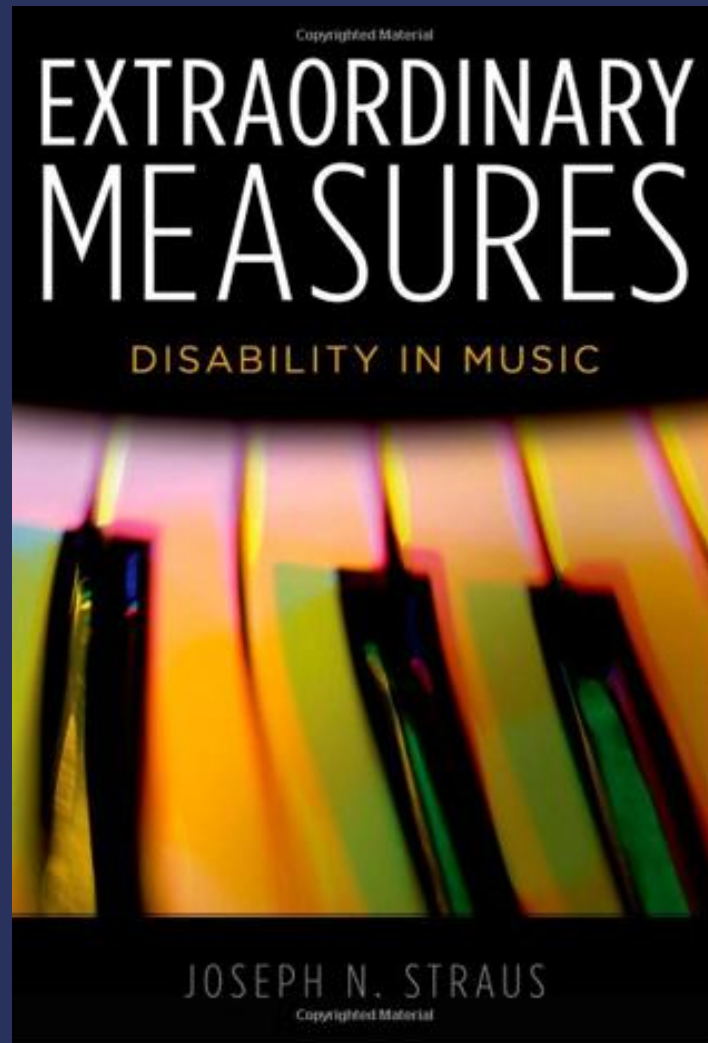
Susanne Langer

Music sounds the way emotions feel.

Carroll Pratt









## Musical Narratives of Composers with Disabilities

Beethoven

Bach

Shoenberg

Webern

Stravinsky

Bartok

Copeland

## Two Remarkable Concluding Chapters

7: Performing Music and Performing Disability

8: Prodigious Hearing, Normal Hearing, and Disablist Hearing

Glennie:

Because I had to concentrate with every fibre of my body and brain, I experienced music with a profundity that I felt was God-given and precious. I didn't want to lose that special gift.

## Dame Evelyn Glennie



**Welcome to the official website of Dame Evelyn Glennie**

Musician, Motivational Speaker, Composer, Educationalist  
and Jewellery Designer

Glennie's deafness has shaped the way she makes sense of music and produces music, causing her to attend to the tactile and visual aspects of sound: she feels and sees the music.

By attending in her performances to the sights and feelings of the sounds she hears and produces—she performs barefoot and with extraordinary visual intensity—she makes her deafness visible to the audience, **simultaneously performing her music and her deafness.**

....disablist hearing is part of a larger effort within Disability Studies toward empowerment, in which an oppressed and silenced group begins to assert the power of self-representation. Instead of trying to normalize people with disabilities, we listen to what they have to say; instead of turning them into normal hearers, we learn to hear in ways that challenge normal hearing.



My essential point is that the range of human hearing is wider than generally recognized—the boundary between normal and abnormal hearing is a construction, a fiction. We cannot begin to dismantle that wall until we can define better what lies on either side of it.

False claims of universality are the least attractive feature of the literature on music cognition, which moves too easily from showing that something is widespread to asserting that it is therefore normal, natural, and hardwired into the human brain.

In fact, there are many kinds of bodies, many kinds of brains, and many kinds of musical hearing. In our theorizing, and in our pedagogy, I think we would do well to acknowledge the limitations of normal hearing.

## IV) Making music more universal will make it better



Recognizing the limits of “normal”  
education,

Overcoming those limits will make  
education better - more “musical” -  
for everyone.

# Big Ideas

- Learner variability is universal.
- The context within typical learning settings is ‘limiting’ and ‘disabling.’
- Universal Design for Learning helps educators meet the challenge of variability.
- Learners who are disabled by typical learning contexts will show us how to make education that will work for everyone.



# Learn More

- Download materials from the **Additional Resources** section
- Explore more resources on the **National Center on UDL** ([www.udlcenter.org](http://www.udlcenter.org))
- Ask Dr. Rose a question or share a comment with others by participating in the discussion forum on **UDL Connect** community entitled ***From Bach to Lady Gaga*** ([www.community.udlcenter.org](http://www.community.udlcenter.org))