

UC SANTA BARBARA

Department of Music

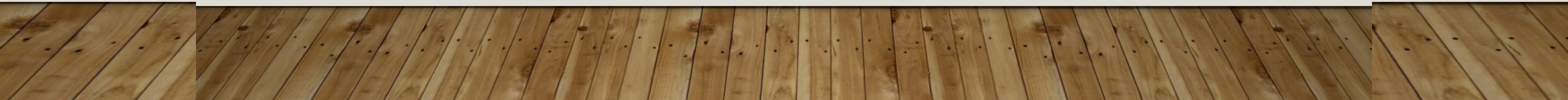


# HARNESSING THE POWER OF MIRROR NEURONS

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# MIRROR ME

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# MOTOR VS. MIRROR NEURONS

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# WHAT IS A MOTOR NEURON?

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A NERVE CELL  
FORMING PART OF A  
PATHWAY ALONG  
WHICH IMPULSES  
PASS FROM THE  
BRAIN OR SPINAL  
CORD TO A MUSCLE  
OR GLAND

# WHAT IS A MIRROR NEURON?

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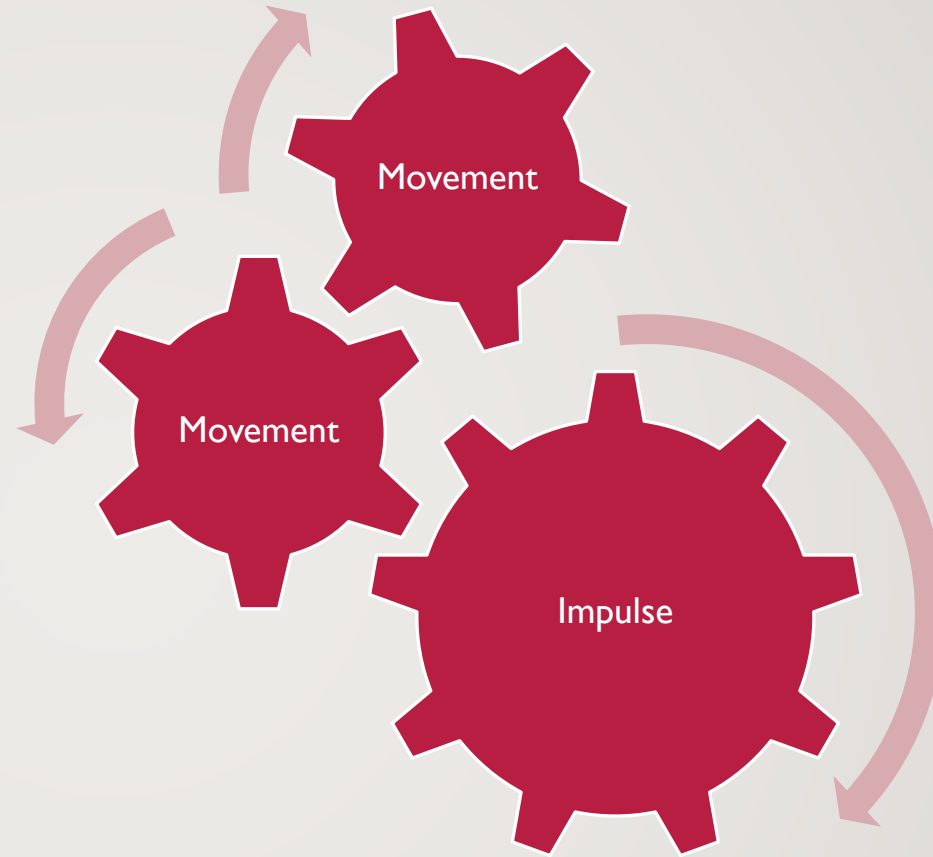
A BRAIN CELL THAT  
REACTS BOTH WHEN  
A PARTICULAR  
ACTION IS  
PERFORMED AND  
WHEN IT IS ONLY  
OBSERVED.



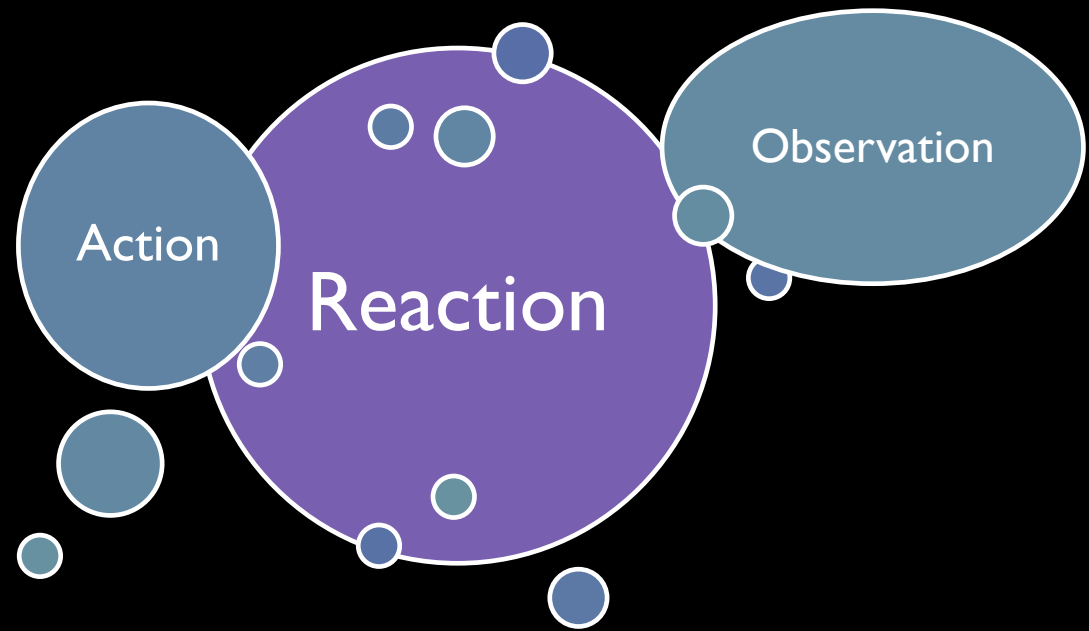
**LET'S COMPARE...**



# MOTOR NEURON



# MIRROR NEURON



# WHY ARE MIRROR NEURONS IMPORTANT?

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# WE REACT TO MOVEMENT

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WE ARE SUBCONSCIOUSLY CONNECTED  
TO HUMAN MOVEMENT AND GESTURE  
AROUND US.





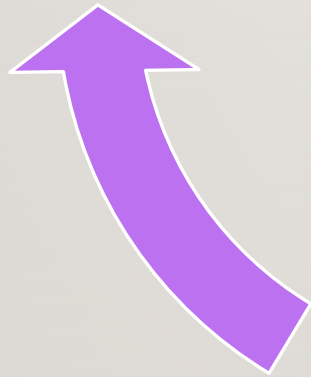
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- Understanding the actions - learning new skills by imitation
  - Simulation in the brain
  - Language learning
  - Understand the actions and intentions
  - Human capacity for emotions such as empathy

WHY ARE MIRROR  
NEURONS  
IMPORTANT IN  
REHEARSAL?

Leader



Conductor



Teacher



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MOVE, ACT  
AND  
COMMUNICATE  
WITH  
INTENTION



# STRETCH YOUR AWARENESS (INTENSIO)

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Eye contact

Body language

Modeling



# TEACHING WITH MIRROR NEURONS



CONNECTION  
WITH  
EMPATHY

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Positive energy

Breathe together

Eye contact

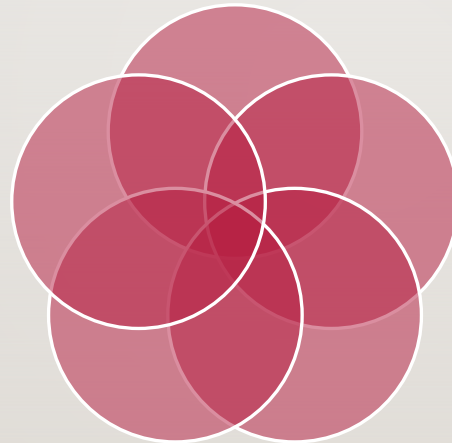
Touch contact

# ENERGY!

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clapping

point with  
positive  
energy



snapping

[u] for  
attention

cheering

SHARED  
PULSE

pulse

- On the  
body

rhythm

- In your  
face

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# SHARED PULSE



Echo chant/sing over a pulse on legs, sternum or walking



Tapping (human contact)



Two beats after



Trading 4's in spoken rhythm over shared pulse



Solfege scales while walking



Tennis balls

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# RHYTHM

Subdivisions

Ostinati by sections

Butterfly (pulse vs.  
rhythm)



# SOLFEGE

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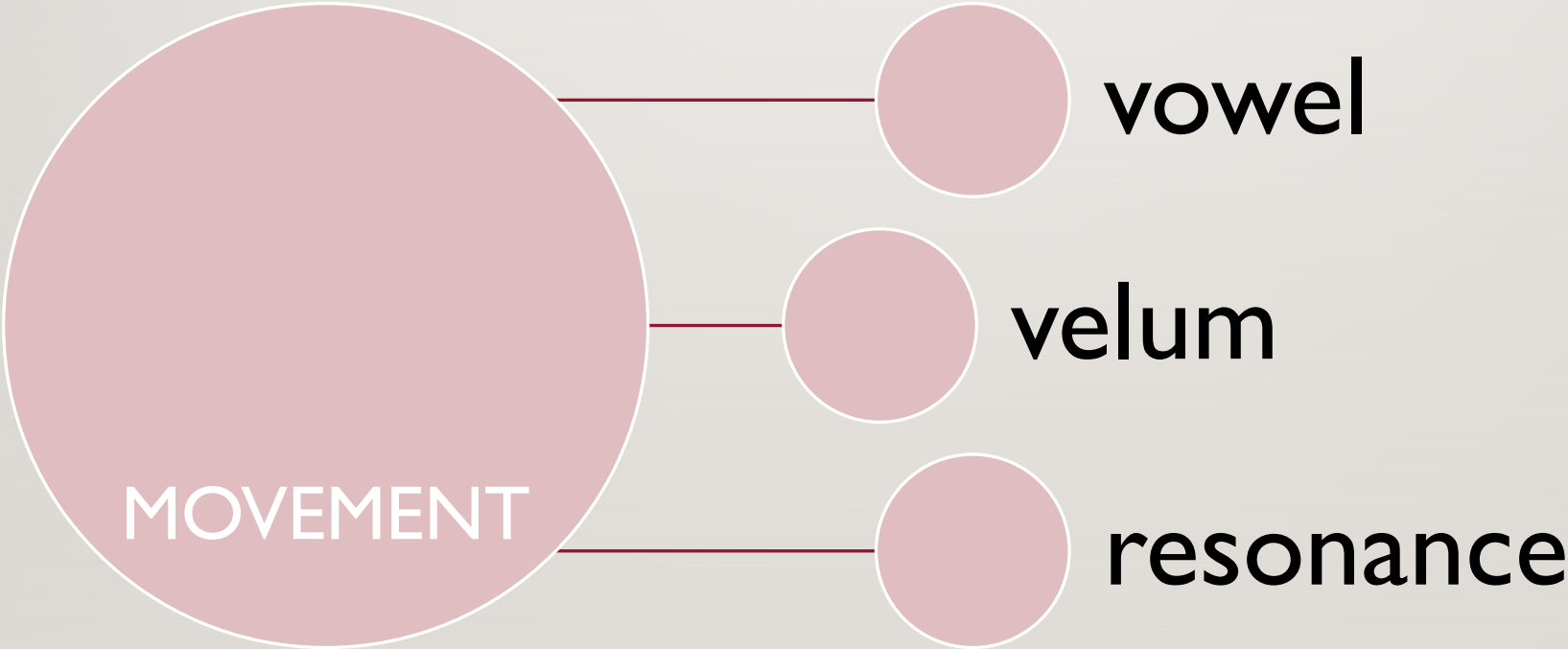
Handsign  
learning – height,  
then accuracy

Echo games for  
inner ear

I beat after

# TONE AND VOWELS

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# REHEARSAL WITH MIRROR NEURONS

A close-up, low-angle shot of the intricate mechanical gears and components of a watch movement. The image is heavily shadowed and has a dark, blue-tinted color palette, creating a sense of depth and precision. The gears are of various sizes and are interconnected, with some showing fine teeth and others being larger, more solid components. The lighting highlights the metallic surfaces and the complex arrangement of the parts.

## START & STOP

- Elongating time and space to gather and focus energy
- Hold a moment after breath together
- Hold time and space with release

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# PHRASING/ DYNAMICS



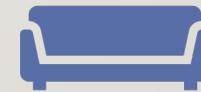
Mirror my gesture or  
student leader with  
movement



Press hands



Walk faster for louder



Sit back in chair

# ENLIVENING FACES

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Mirrors, if you have them! Smile 10 seconds at self, then other, then in pairs facing.



Throwing Faces

Sixes

Jump 234

Solfege rounds

Rhythm  
subdivisions

Dance moves

Stretches/Solfege

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**STUDENT LEADERSHIP**



# PERFORMANCE PREPARATIONS



# PROFESSIONALISM

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**Body  
activation:  
Find your feet**

**Open body,  
open mind,  
open voice**

# FOCUS PRACTICE

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Focus practice – 10-20-30 seconds:  
close eyes, eyes on wall, open eyes  
at me, partner



Mirror Faces: from leader, while  
singing in partners or small group  
with leader

Silent rehearsals, but breathing  
and mouthing words



Close eyes with silent rehearsal



Visualizing the perfect  
performance, silent or listening

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**VISUALIZATION AND IMAGINATION**



QUESTIONS?

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# THANK YOU!

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