



# Movement is Medicine

Alissa Garcia-Sanchez PT, DPT  
Senior Physical Therapist  
UCSF Medical Center at Mount Zion



**First:**

Pomona College, B.A. in Neuroscience & Dance

**Then:**

UCSF/SFSU Doctorate in Physical Therapy

**Now:**

UCSF Physical Therapy at Mount Zion

What is physical therapy?

“Transforming society by  
optimizing *movement* to improve  
the human experience”

(American Physical Therapy Association, 2013)

## How do we optimize movement?

- Evaluate the movement system
- Implement movement-related interventions
- Maximize your ability to engage with your environment to improve your quality of life

(American Physical Therapy Association, August 2015)

**What is the movement system?**

**integration of body**

**systems that generate and maintain movement**

(American Physical Therapy Association, n.d.)

## Body Systems that Impact Movement

Cardiovascular

Pulmonary

Musculoskeletal

Neurological/Nervous

Integumentary

## The Movement Screen

- Head movement
- Changing and maintaining body position
  - Rolling
  - Lying <-> sitting
  - Sitting <-> standing
  - Squatting
- Mobility
  - Crawling, walking, running, wheelchair
  - Step up/down
- Hand and arm use
  - Reaching
  - Grasping
  - manipulating

(American Physical Therapy Association, June 8, 2020.)

# The Movement Screen

Quality of Movement to Observe	Description
Speed of Movement	Time to complete the task.
Amount of Movement	Amplitude, excursion, ROM of movement required to complete the activity.
Symmetry of Movement	There may be natural asymmetries in a task.
Control	Smoothness, coordination, stability, sequencing, timing initiation.
Symptom Alteration	Guarded, shortness of breath, pain alteration.

(American Physical Therapy Association, June 8, 2020.)

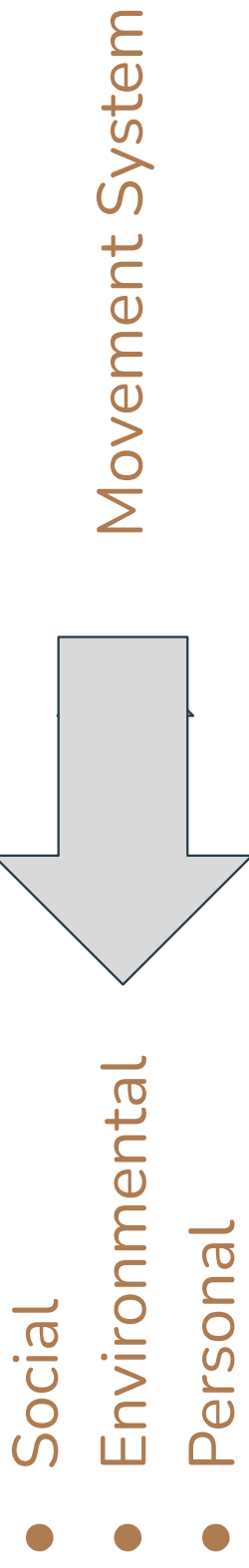


# What is the movement system?

influenced by social, environmental, and personal factors.”

(American Physical Therapy Association, n.d.)

## Influence of Psychosocial Factors



# What is the movement system?

Human movement is a complex behavior within a specific context,

(American Physical Therapy Association, n.d.)

## Movement: not just for Function

- Non-verbal communication
- Conveys intention and emotion
- A form of creative expression

# Evaluating Movement as Expression



<https://youtu.be/iw9Y19oN>  
HOW

# Laban Movement Analysis

A system developed by Rudolf Laban for describing movement expression



Image:  
[https://labaninstitute.org/wp-content/uploads/2014/03/rudolph\\_laban.jpg](https://labaninstitute.org/wp-content/uploads/2014/03/rudolph_laban.jpg)

(Bernardet, et al 2019)

## The Four Components

Movement = a pattern of change that occurs in four components:

**BODY**

**SPACE**

**EFFORT**

**SHAPE**

(Bernardet, et al 2019)

## “What is Moving” - Body

- describes the body parts and their actions responsible for the movement, including:
- Initiation of movement
- Connection of bodies
- Sequencing of movement
- Patterns

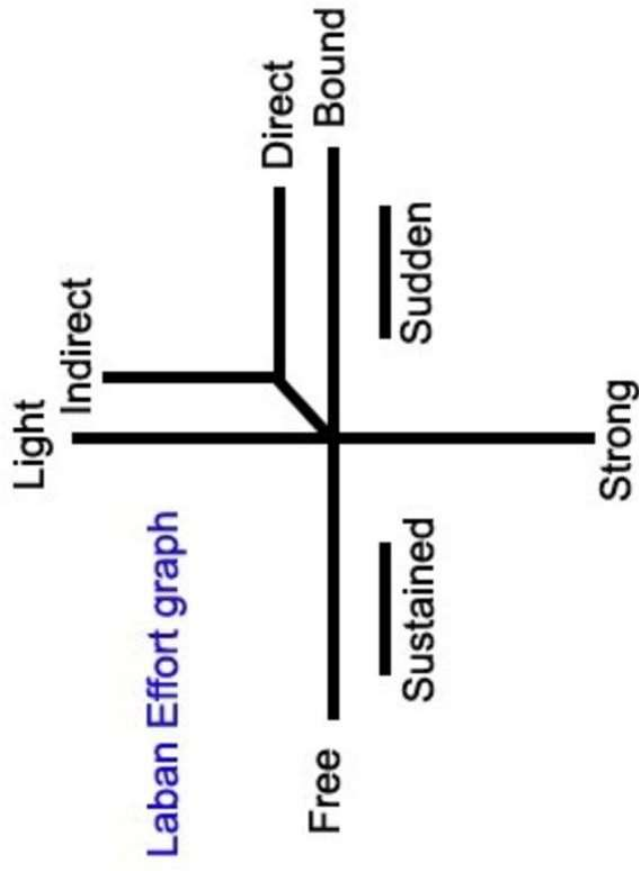


## “How is it Moving” - Effort

### Four Factors:

1. WEIGHT: impact on the world
2. SPACE: attention to the environment
3. TIME: sense of urgency
4. FLOW: bodily control

# The Effort Continuum



(Bernardet, et al 2019)

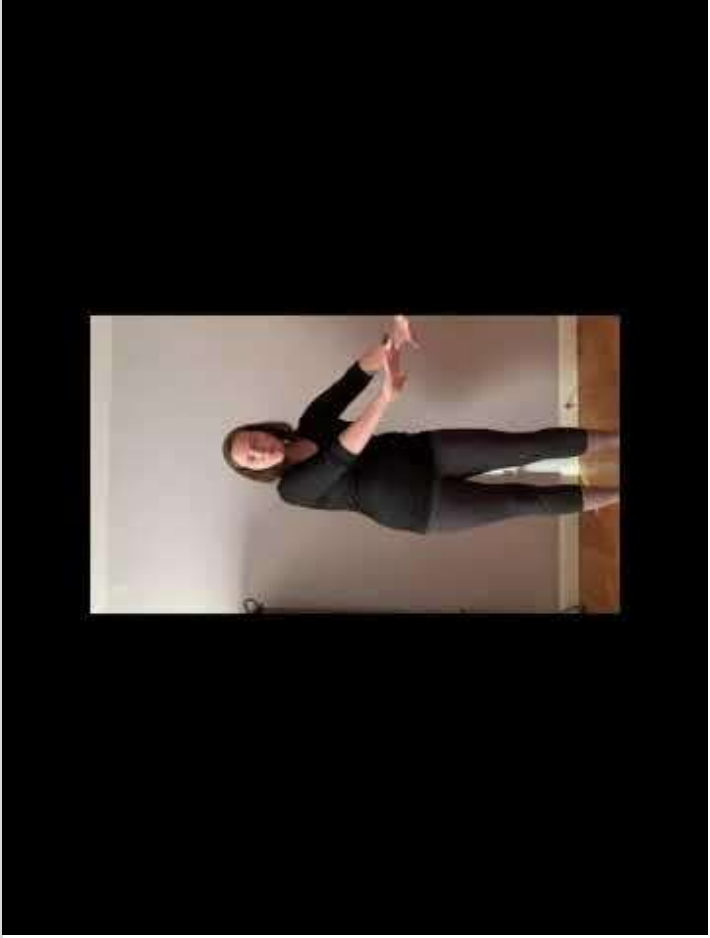
## Effort is...Complicated

- Combo of 2 Factors = States
- Combo of 3 Factors = Drives
- Combo of all 4 Factors = rare?

<b>Laban Effort</b>	<b>Time</b>	<b>Space</b>	<b>Weight</b>
<b>Gliding</b>	Sustained	Direct	Light
<b>Pressing</b>	Sustained	Direct	Strong
<b>Floating</b>	Sustained	Indirect	Light
<b>Wringing</b>	Sustained	Indirect	Strong
<b>Dabbing</b>	Quick	Direct	Light
<b>Punching</b>	Quick	Direct	Strong
<b>Flicking</b>	Quick	Indirect	Light
<b>Slashing</b>	Quick	Indirect	Strong

<https://www.researchgate.net/profile/Jorge-Dias-10/publication/228670198/figure/tbl1/AS:668681205997579@15366437431850/Basic-effort-action-drives.png>

# The Action Drive



<https://youtu.be/FjxYyOz-kSw>

# The Action Drive - IT'S YOUR TURN

<b>Laban Effort</b>	<b>Time</b>	<b>Space</b>	<b>Weight</b>
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## “Where is it Moving” - Space

- Motion in connection with the environment
- Kinesphere
  - Far, mid, or near-reach
- Direction
  - Up/down, fwd/back, side
- Planes
  - Vertical, horizontal

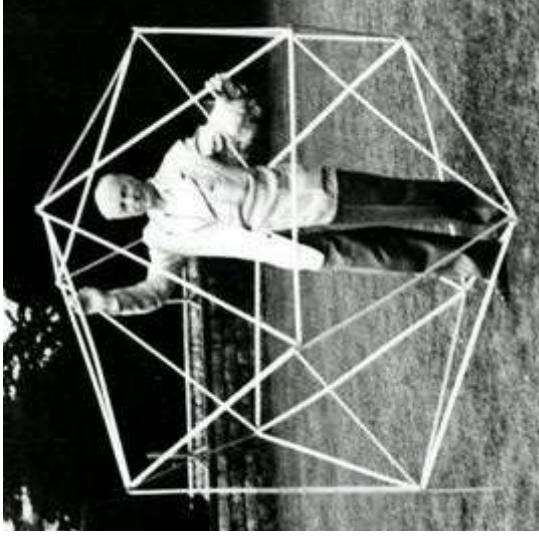


Image: [https://www.emoveinstitute.com/wp-content/uploads/2018/12/1207\\_.jpg](https://www.emoveinstitute.com/wp-content/uploads/2018/12/1207_.jpg) (Bernardet, et al 2019)

## “Why is it Moving” - Shape

- Forms = postures
- Modes = ways of relating to the environment
- Qualities = how the body changes towards a point in space
  - Closing or opening
  - Occur in all three planes



# Shape Qualities



<https://youtu.be/J6tn5IZXJtg>

## Tying it All Together

“The purpose of life, as I understand it, is a care for the human as opposed to the robot; a call to save mankind from dying out in hideous confusion; an image of a festival of the future, a mass of life in which all the celebrants in communion of thought, feeling and action, seek the way to a clear goal, namely to enhance their own inner light.”

(Madden and Gantz 1989)

# Improving the Human Experience



<https://youtu.be/RqD3WvPX1X8>

# Improving the Human Experience



<https://youtu.be/lq98xREites>

# Improving the Human Experience



<https://youtu.be/XJKv26RKS3U>

# Thanks and Questions

