



Fina

WATER IS OUR WORLD

Optimizing Talent Management

- A lot of what we do reflects what was done to us
- We coach based on our outlook on things
- We coach the swimmers in front of us and to the goals that motivate us



- Coaching in America is multipolar
- Upper levels of development are closely tied to scholastic schedules, achievement and life
- There is no one size fits all orthodox at the highest levels (or is there?)



Overview

Training
Aspects

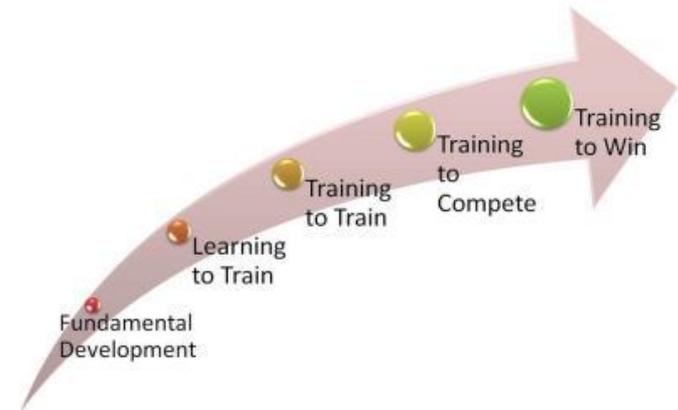
Developing
Talent

Conclusion

- Helping other coaches develop their swimmers
 - Being responsible as a leader but still thinking
- Bring coaches to sign up to goals, choose ideas, and have those ideas supported
- Results? More ideas, experiences, and methodological questions for me
- LTAD: Long-Term Athlete Development



- Take the process from cradle to adult performer
- Contemplation of the process makes physiology, dry land and periodization just parts of a bigger development continuum



Examples:

- European style physiology
- HRV
- Perception awareness and breathing



Overview

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- This leads me to the ideas of swimming as a complex system and the idea that we can do this better
- General learning
 - Carol Dweck- Mindset (2001)
 - Daniel Kahneman- Thinking fast and slow (2011)
 - Charles Duhigg- Power of Habit (2012)
- Perception and reaction to perception
 - Norman Doidge – The brain that changes itself (2007)
 - Marian Diamond
 - Steven Pinker’s work on physical learning



Overview

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- Do something different and answer some development questions
- Move teaching and training together forward
- Lead swimmers to better experience the water and their bodies
- Get past all the linear expectations of biomechanics and some physiology to try and push talent faster

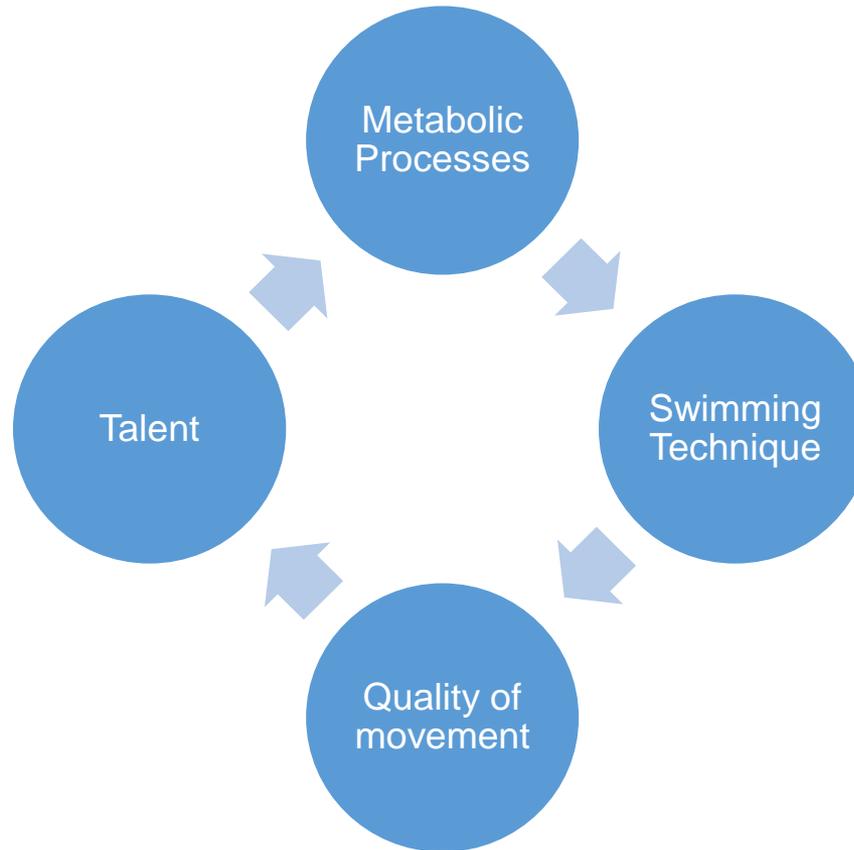
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Four Training Aspects



Overview

Training Aspects

Developing Talent

Conclusion



FINA
WATER IS OUR WORLD

Training Aspects: Technique

- Consider how the body actually works
- Body angles are rubbish
- Rules of the stroke
- Maximizing: Consider arm, leg, torso ratios
 - Better movement within the rules is best

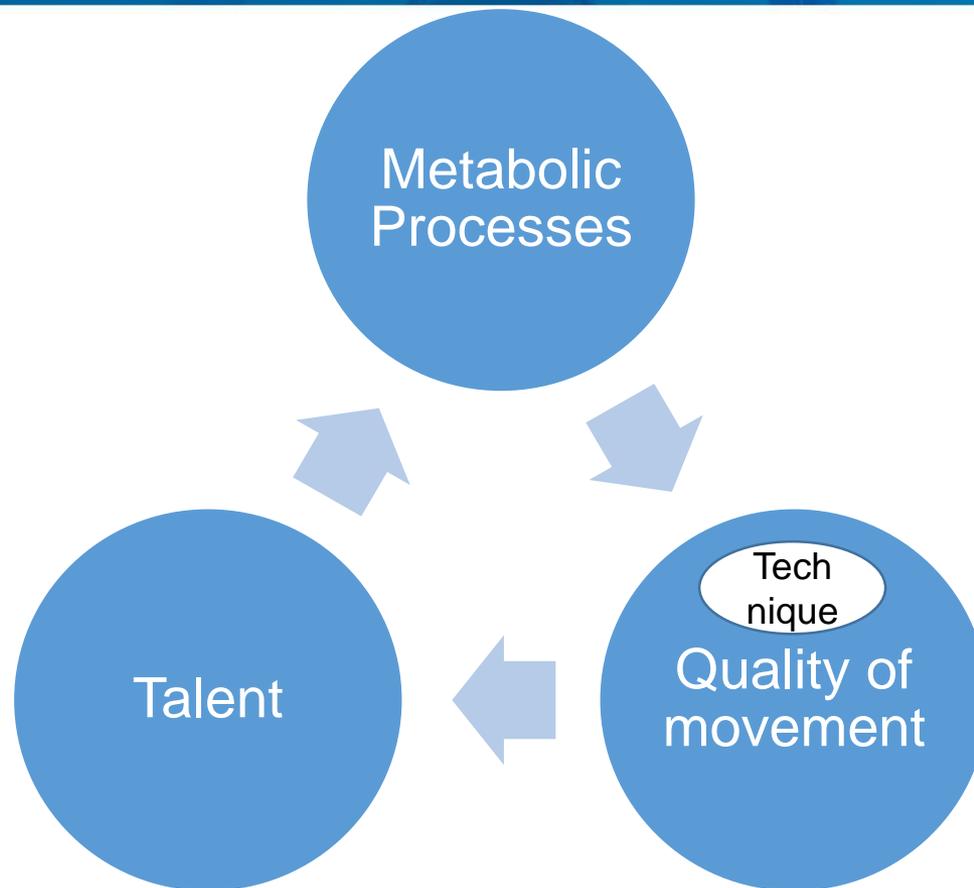
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A Combining of Two



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Talented swimmers do 2 things:

1. Wave like patterns in the body when they move
2. High perceptions about the water and your body



Training Aspects: Metabolic Processes



Training Aspects: Metabolic Processes

- All energy systems have a capacity aspect and a strength aspect
- Capacity of a mechanism is the total amount of energy
- Strength means the ability to provide energy within a specific unit of time

Italian coach



- Horses, humans, pronghorn antelopes, sled dogs, ostrich, camels
- Overtraining seems to result from too much high aerobic strength
 - Thresh intensity volume + VO_{2max}
 - Causes too much consumption of muscle glycogen and reserves



Talent is basically high perception of water and body. Now I feel that it is the most important quality to train.



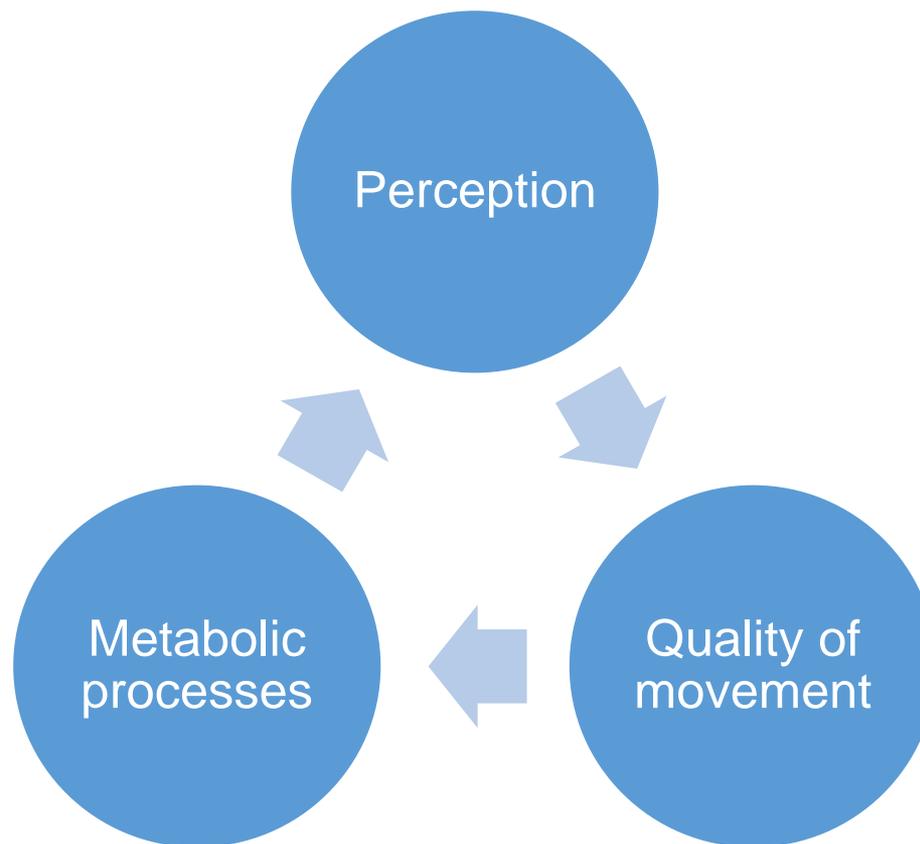
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Training Aspects



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**CORDS
On Land**



**LOOPS
In Water**



**NELMSING
For the Brain
Imagery**

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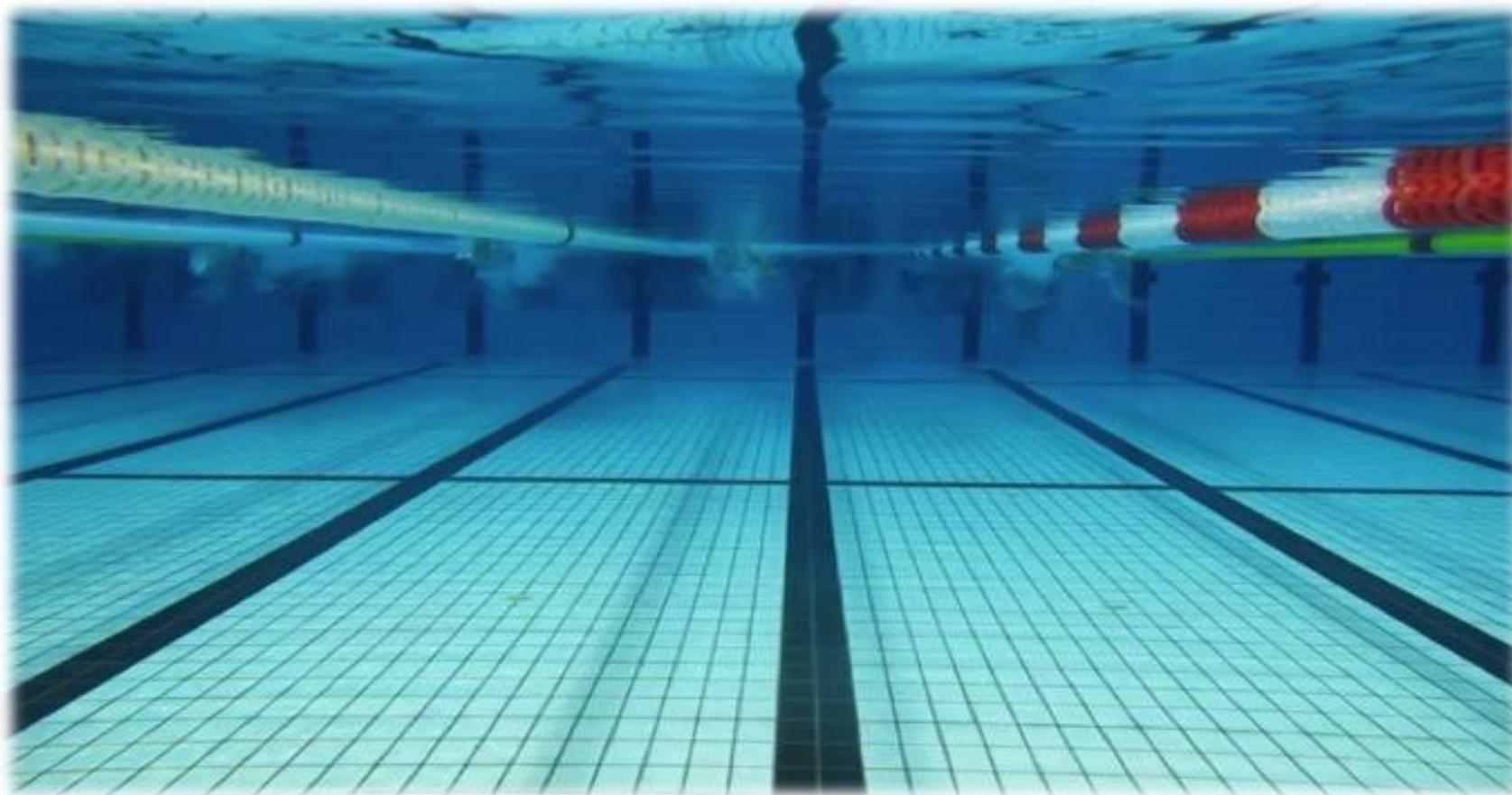
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Skills and
Energy
Systems

Sample
Workouts

Conclusion

Loops in Water



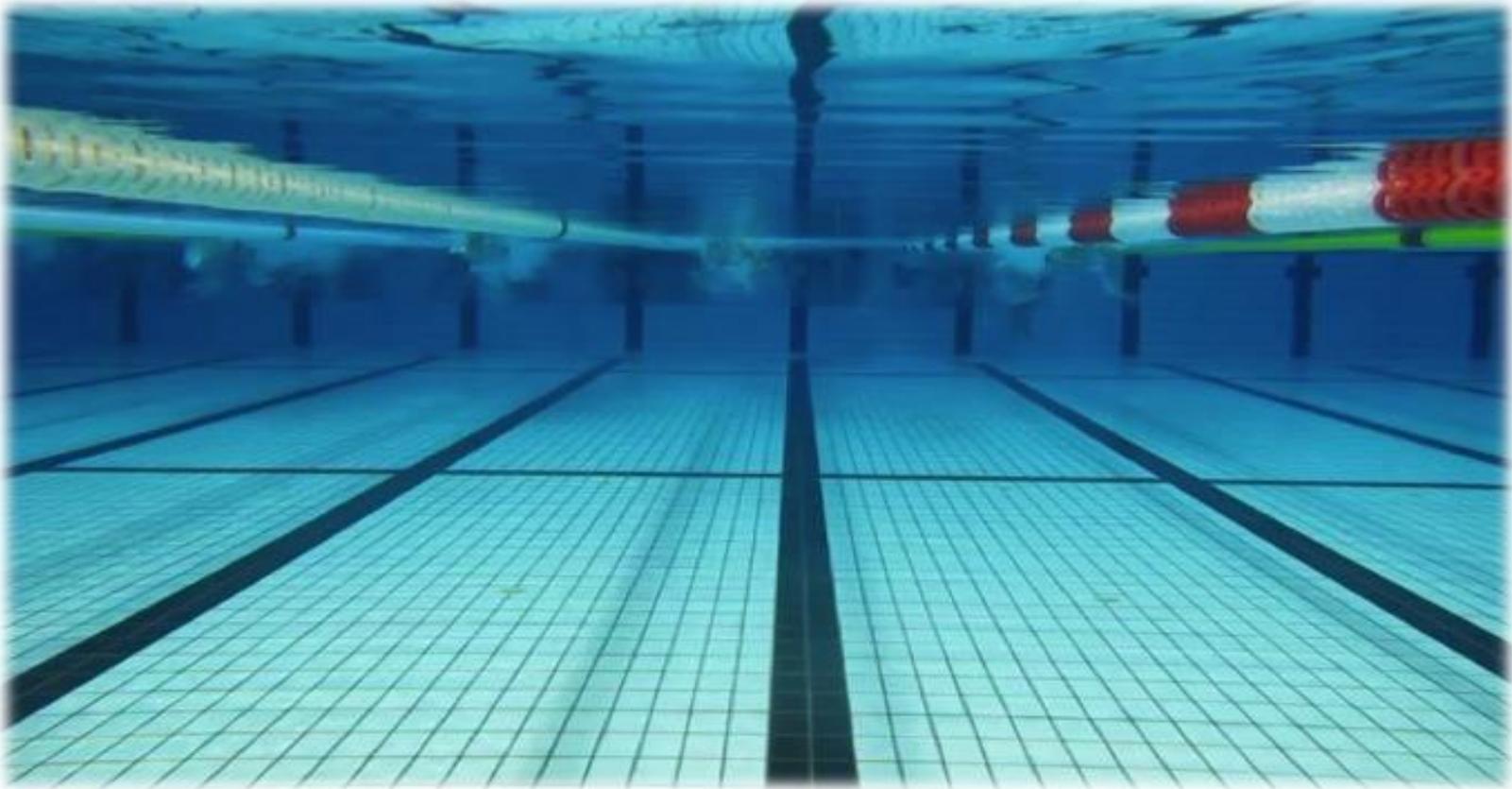
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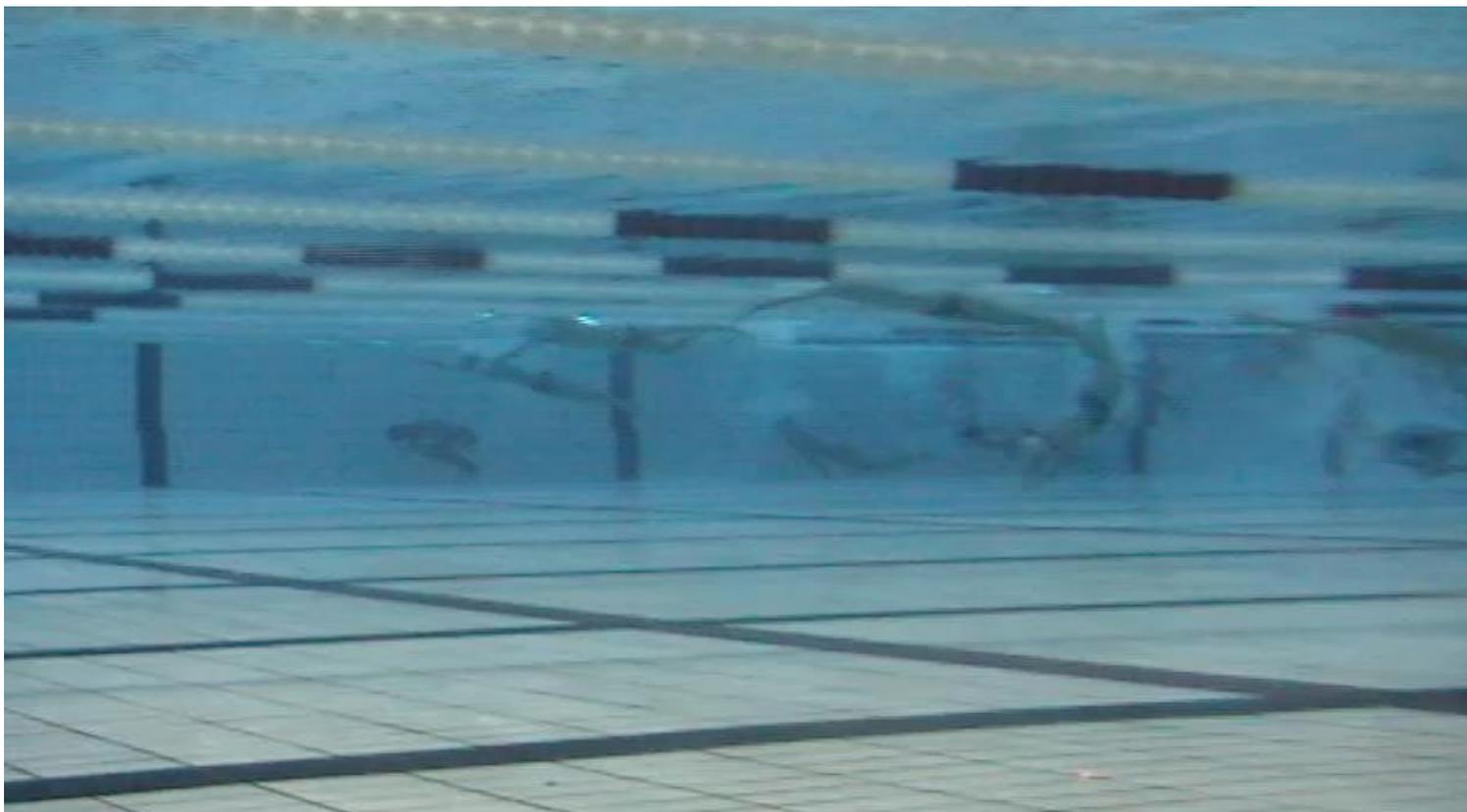
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- Emphasis on Brain Imagery

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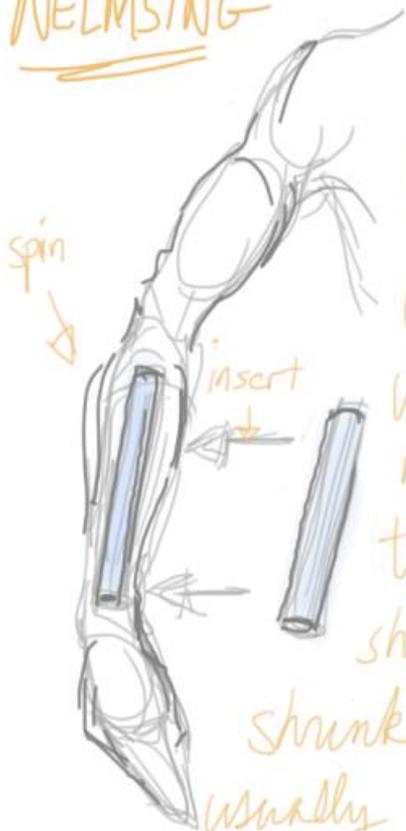
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Nelmsing

NELMSING



a vividly imaged geometric form that rotates, shifts, spirals, shrinks, or expands—usually within an approximately similar form inside the body

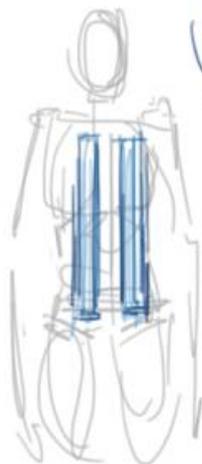
ARMS & LEGS



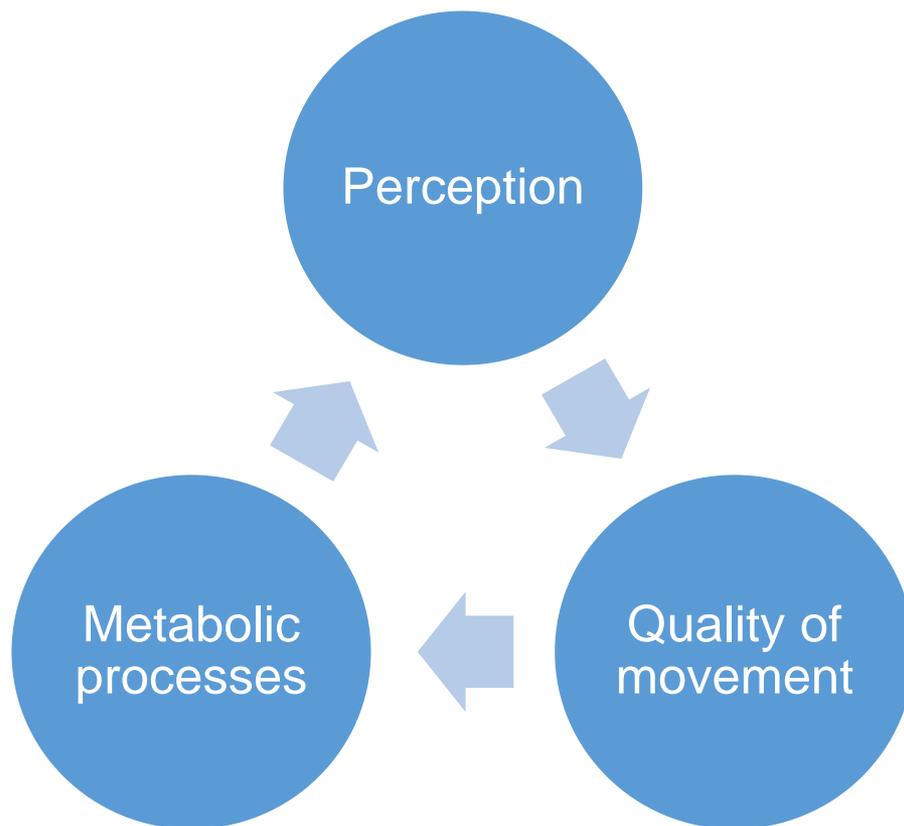
NELMSING BASIC LAYOUT



VERTICAL TORSO



Looking Ahead



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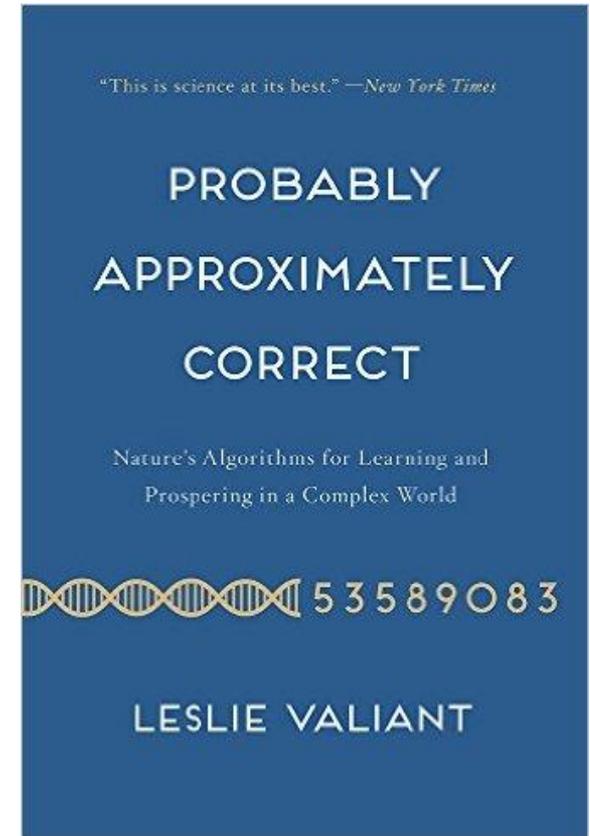
Conclusion

Organizing a Season

1. Teach movement quality on the way to stroke movements
2. Teaching and training (recognizing premovement failure and extending)
3. Training and movement quality (extending time to failure under pressure)
4. Training (engaging the developmental process in **ALL** qualities simultaneously using synergies)
5. Race prep (becomes inevitable and part of training process)



- Probably approximately correct: Nature's algorithms
 - Dr. Leslie Valiant
- A constraint led perspective to understanding skill acquisition and game play: A basis for integration of motor learning theory and physical education
 - Ian Renshaw, Jia Yi Chow, Keith David, John Hammond
 - Phy. Ed. & Sport Pedagogy (January, 2010)
- An ecological dynamics approach to skill acquisition: Implications for development of talent in sport
 - Keith Davids, Duarte Araujo, Luis Vilar, Ian Renshaw, Ross Pinder
 - Talent Development & Excellence (January, 2013)



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