Skill Progression and Theory Workshop

Overview

This workshop is an in-depth look at the most effective way to train to meet your goals, and understanding the theory of Cyr Wheel and how skills relate to each other.
My goal with this workshop is to create an understanding of how certain skills translate and progress to others, and how to train the prerequisites to certain skills to reduce frustration and set-backs when attempting more advanced moves. A basic example of this is the understanding of *Montreal Waltz* before attempting skills such as *Develope* or *Fouette* or their progressions such as *Flag/Drapeau.* An advanced example of this is the understanding of *Handwaltzing* before attempting *Dark Coin* or it's progressions.

What is skill progression?

It is having a solid foundation of basic skills from which to learn advanced skills, moreover it is training efficiently to progress from one skill tier to the next.
It is necessary to understand a movement from a technical perspective and identify what elements are present and critical to the safe and correct execution of the movement.
Once the technical elements are identified, similar less-difficult or already mastered skills can be trained to create a foundation for a previously unlearned skill. This accelerates the learning process and minimizes the risk of injury. Understanding skill progression and it's application is valuable for both athletes and coaches to maximize training effectiveness, reduce costs and prevent injury.

Vocabulary

Basic Anatomical Positions

Pronation and Supination

"Pronation describes a rotational movement of the forearm that results in the palm facing posteriorly (when in the anatomic position). Supination describes the motion of turning the palm anteriorly" - Paul Jackson Mansfield DPT, BS, MS, Donald A. Neumann PhD, PT, FAPTA, in Essentials of Kinesiology for the Physical Therapist Assistant (Third Edition), 2019

Cubital (Eagle Grip)

Cubital describes the rotational movement of the forearm that results in the palm facing away from the body, with the thumbs pointing anteriorly

5 Families of Movement

1. Manipulation (+Acrobatic) - describes the manipulation of the wheel without riding, including throws, body rolls, sweeps, saturns. The possibilities are infinite in this category. There is a subcategory of manipulation where the wheel is used to assist in various acrobatic moves (Pullover, handspring.etc)

2. Spin - describes riding the wheel with one contact point on the floor. Spin movements don't generate their own momentum and must rely on gathered momentum until they are exhausted. They include Superman, Elbow Hang, Arabesque, and Mantle

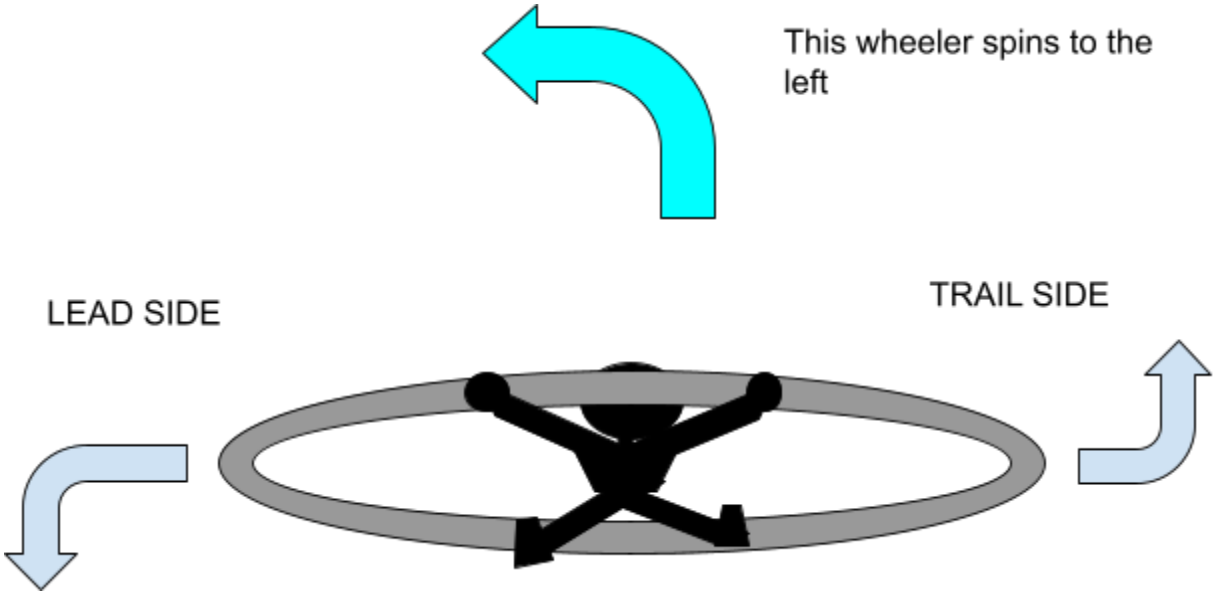
3. Spiral - describes riding the wheel rolling along the outside rim, and includes Cartwheels, Candlesticks, Champagnes, Rockers and more.

4. Coin - describes riding the wheel along the outside rim within the given circumference of the wheel itself. Coin Spin, Dark Coin, Rodeo, Spider Coin, Scorpion Kick are all examples

5. Waltz - describes riding the wheel transferring weight between 2 or more alternating contact points on the floor. The most intrinsic and complicated category, Waltz must be broken down into 2 main subcategories:
    a. Grand Waltz: a pattern of waltzing where the trajectory is larger then the circumference of the cyr wheel and travels in space (Can be omnidirectional)
    b. Local Waltz (Montreal Waltz): a pattern of waltzing where the trajectory is equal or smaller than the circumference of the wheel and remains stationary in space.

Leading / Trailing

As a cyr wheel spins in space, one side will arrive before the other. This is called the leading side. The side of the wheel that follows is called the trailing side. This distinction is important as it allows for the identification of movements and skills. This diagram shows the orientation of lead and trail sides for a wheeler that spins anti-clockwise. The orientation is reversed for a clockwise spinner.



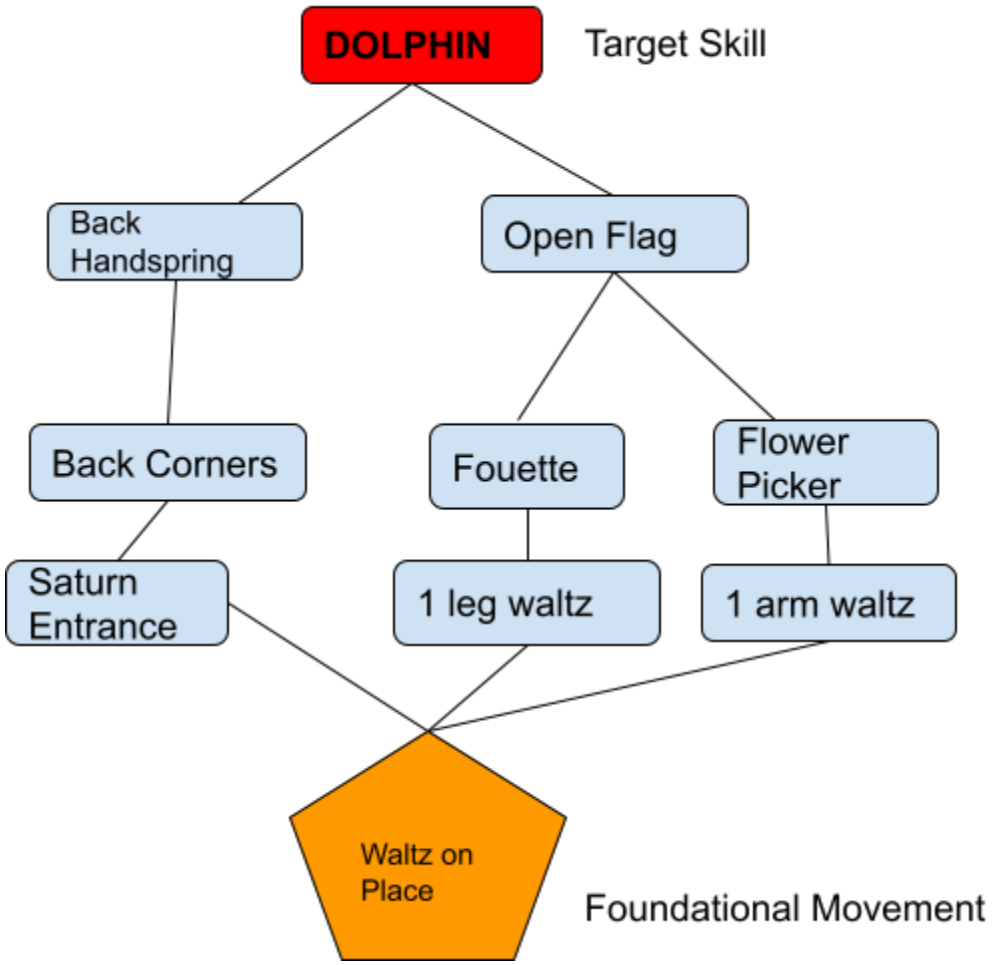
Additional Movement Vocabulary

X stance: The standard stance. Arms and Feet equal distance apart.
Y Stance: Legs together, ankles and knees touching. Standard arms.
Wide Stance: Legs wider and straight, elevated center of gravity.
Profile: Hips perpendicular to the centerline of the wheel, one arm is pronated and the other is supinated
Spindle: Hips facing the opposite way of the shoulders (anteriorly), Shoulders standard
Fouette: whipping a leg or arm in a circular motion to create momentum
Develope: adding and removing drag during a spin to create momentum

The Pyramid Method

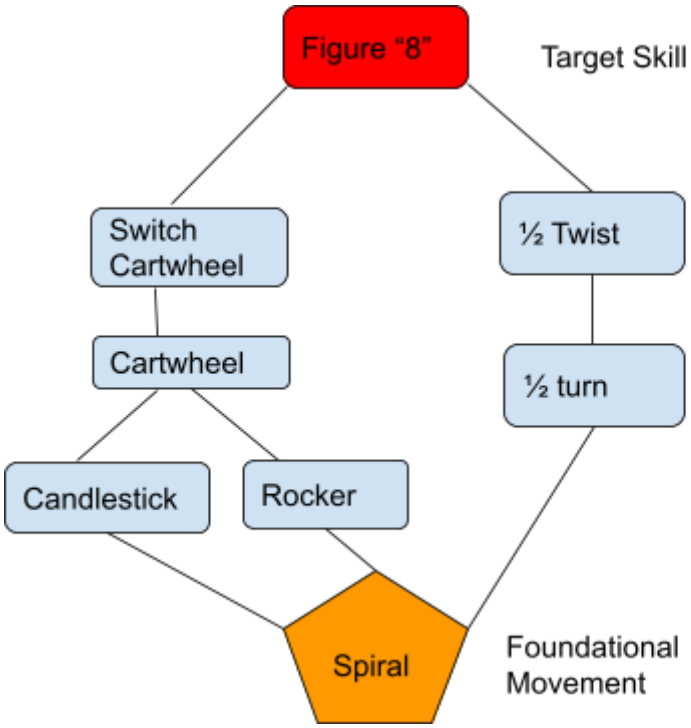
The Pyramid Method is a tool for skill acquisition that outlines the goal skill and works backwards. My thinking is that looking forward, the possibilities are infinite but looking backwards there is a clear set of movements and skills that are already defined.
It works thusly;

A target skill is chosen and placed at the top of the pyramid diagram. In this example we will use the skill "*Dolphin*". The skill is then examined from an anatomical and technical perspective to identify what skill comes before it in the system of progression.



The skill *Dolphin* follows a momentum and timing similar to a *Back Handspring*. There is one arm free and momentum is in part directed with the head and shoulder similar to an *Open Flag.* Thus, these two skills are identified as prerequisite skills and are added to the chart. Each of those skills are then examined and subsequent prerequisite skills identified and so on until the Foundational Movement is reached. This is one of the 5 Families of Movement. Once the diagram is complete, not only is it useful as a skill progression chart with a clear path to the goal skill, it serves as an effective warm-up program for the target skill.

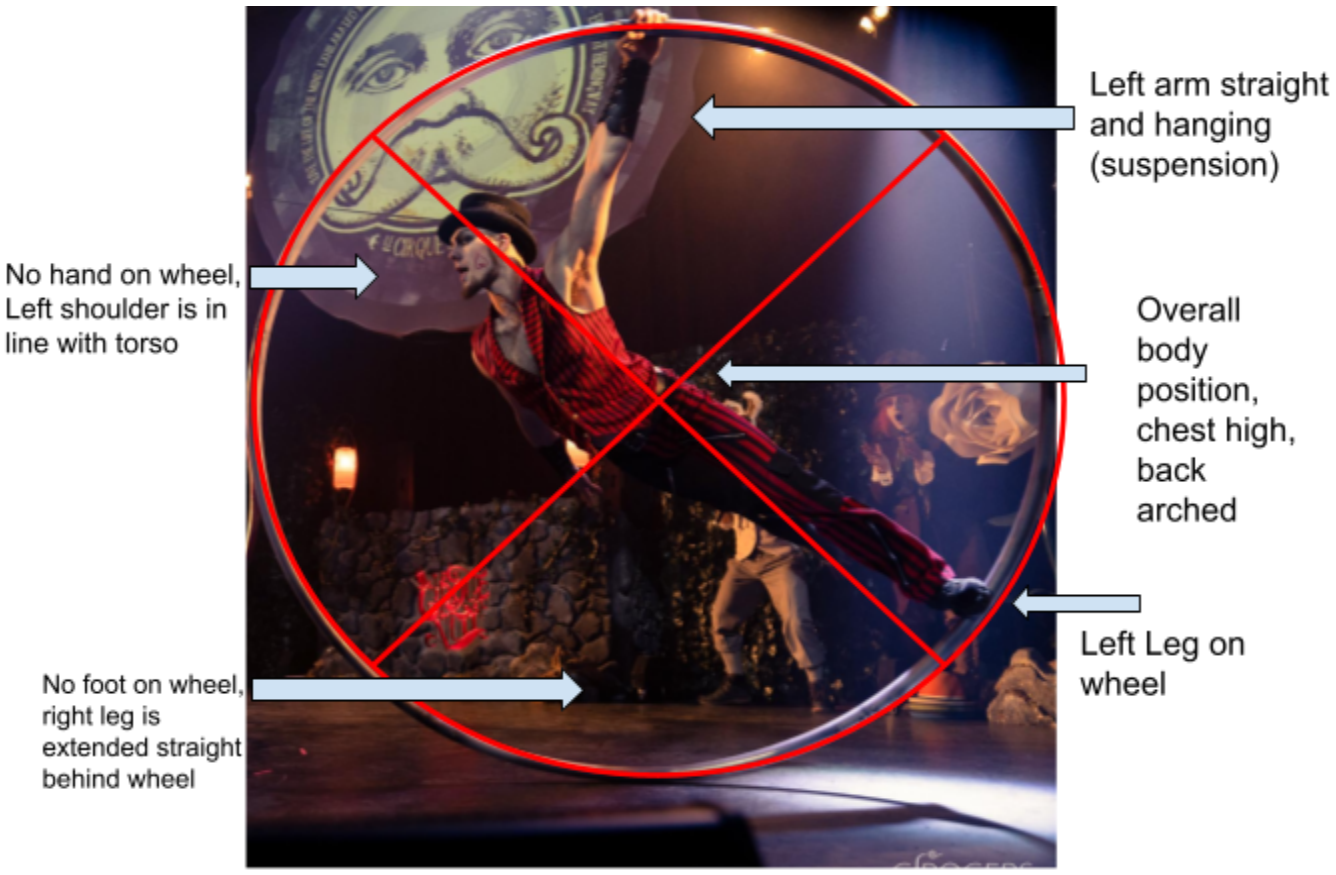
Here we examine another skill progression, this time in Spiral



Identifying a skill's components: The Quadratic Method

This is a method to determine what body actions are involved in a target skill, and if there are preceding skills from which to practice the concepts. Start with body position during the target skill. If the skill has several consecutive positions (takeoff / landing etc.) then start with the first in sequence and complete this method for each major shift in position. Most Waltz category skills will have at least 2 positions to examine, as waltz skills transfer weight between at least 2 positions to create momentum.

Divide the cyr wheel into four quadrants. Examining each quadrant will provide information on the fundamental skills preceding the target skill. After examining each quadrant and identifying the biomechanical structures at play (is there an arm? A grip switch, etc) it is then time to examine the entire body position as a whole.
In this example we see the extended position for Leading Flag. Assuming that we have already identified this skill as a Waltz skill, the following observations can be made:



From just this image we can determine that the prerequisite skills should involve the following:
Skills using the Lead Arm only (1 arm lead waltz)
Skills using the Lead Leg only (1 leg lead waltz)
Develop-ing the trail leg (Trail Leg Develope)
Superman: Keeping a body shape with the lifted chest and hollow back is important to this skill.

Summary

This method is not a gospel of training, but rather a tool to identify the root skills necessary to perform higher difficulty elements in Cyr Wheel and how to warm up those skills to prevent injury. Cyr wheel is also a young discipline with many separate communities discovering and adding to the collective vocabulary; thus the terms for a skill may vary from region to region, or from language to language. This method is useful in that it uses existing vocabulary to work from, and any new elements or skills that are discovered can be reverse engineered using this method. Train safe, and train hard!