Chapter

Teeterboard

Teeterboard

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Part 1/GENERAL POINTS

The fundamentals of this module on safety and the learning process are:

1/ The learning process

The Korean teeterboard and the Hungarian teeterboard are very similar and sometimes complementary specialties. The teeterboard could be described as a type-one lever providing optimum transfer strength through the rocking action of the apparatus Schools offering an introduction to, or starting preparatory training for, this discipline should not allow just any teacher or student on this apparatus. The student must have an adequate level of acrobatic skills and potential, and the teacher must have basic training and be able to ensure that work can proceed in a completely safe environment (mat, safety line, concentration, appropriate clothing, communication, session preparation and management).

It is best to start on a relatively flexible Korean teeterboard before moving to a Hungarian teeterboard as it allows for a gradual introduction to the equipment and provides a useful preparation for the Hungarian apparatus. There are fewer factors to deal with (movement, natural bend and push similar to trampoline work). This approach makes it possible to gradually cope with landing and pushing off the board, allowing the student to grow progressively accustomed to the equipment and to working in the pusher flyer duo. It is important to use equipment with a reasonable fulcrum height and board length ratio for moderate propulsion.

Fundamentals that must be acquired first are:

* Understanding the apparatus, the physics and mechanical transfer of this type of propulsion mechanism. A great deal of time will be taken up by work on developing a rapport and understanding between the pusher and the flyer in relation to the apparatus. This must be done because managing the push is the most important factor. The right quality, timing, depth and positioning of body parts must be sought first. Concern with acrobatic precision, performance and final result should come after.
* Use the trampoline as a complementary workshop. Staying low on the bed, focus on developing how it feels to work as two rather than on perfecting the figure (alternating straight jumps, learning how it feels to work as two on the bed.)
* Before going for outright pushing, the flyer must correctly perform the bend push movement (understanding depth, position, alignment of feet, pelvis and shoulders, timing and launch angle. Spotting with the hands should be used initially because, aside from making the flyer feel safe, it allows the teacher to provide an excellent sensory guide.
* For the Hungarian teeterboard, pushing must be mastered running at first before moving to the pedestal. Pushers must be prepared in tutorials for running and jumping off a plinth and landing on a mat.
* Be particularly vigilant and mindful of young female acrobats who will be more fearful and fragile but, on the other hand, more receptive than boys to getting a feel for and understanding the work. Young men may have an annoying tendency to want to 'force' things and prove that 'they can do it'.

2/ Safety

Proper management of physical preparation will reduce the risk of illness and injury. Specific physical preparation must focus on increasing speed and strength of all muscle chains. To achieve this, use short series with gradually increasing weights. Proprioception through isometric muscle contractions during physical preparation and warm up appears to have a preventive effect. Session-end stretching will be beneficial and help acrobats to achieve longevity. A special chapter on physical preparation is included at the end of the section on the Hungarian teeterboard.

Student safety was continuously under consideration focussing on the importance of requiring concentration, respect for communication codes, use of appropriate equipment and specific tutorials. The role of spotters and the use of protection mats adapted to this type of work are very important.

The need for a specific trampoline module was raised as it allows for a worthwhile acquisition of acrobatic skills and a large number of tutorials can be taught on it. It

makes it possible to perfect work on the board. The same could be said for all the propulsion mechanisms (Russian barre, Russian swing, flying trapeze etc...) The Trampoline provides an indispensable complementary workshop for such disciplines. It allows for acquiring basic acrobatic skills and then more complex figures based on back-flips and twists. They can then be transferred to other propulsion mechanisms. It also allows for repeating movements over and over again on an individual basis without having to work with a whole group. It is more straightforward to transfer skills learned in this module to the Korean teeterboard than to the Hungarian teeterboard. The higher the level of mastery achieved on the trampoline, the easier and more secure will progress on the teeterboard be when you start work on the apparatus.
There seems to be a unanimous preference for teaching by stages. This can be done through tutorials on the mat, with a safety line or again, on the trampoline.

3/ Equipment

Parameters for the building and mechanics of a teeterboard are:
- Board length: between 2m50 and 4m
- Fulcrum height: between 30cm and 70 cm

The lower the fulcrum, the more rigid the plank. Conversely, the higher the fulcrum, the more flexible the plank.
- Its flexibility
- Its weight
- Symmetry or asymmetry of the lever arms.
- The base
- Materials used
- Protective material (pads, mat)

To some extent we are held prisoner by history and there remain many prejudices and uncertainties, which stop this propulsion mechanism from modern development that can be transmitted to all the schools. There exist not one, but many realities linked to the backgrounds of teachers, students and the means and objectives of schools.

3.1. Traditional build

Ash wood without knots is used for making the boards. Coating them with linseed oil will give them good flexibility and durability. The most conventional way to build one would be to use several boards (3 to 5) side by side (or not) and superimposed in decreasing lengths, with the longest on top.

3.2. Use of a single board

Use of a single board together with fibreglass in the middle and the extremities seems to be a good choice for both types of teeterboard, as this considerably reduces dead weight. This method is like building a ski board, a hard, very heavy core (the ash wood here) with a fibreglass laminate. This type of assembly is better adapted to the Korean teeterboard.

3.3. Use of fibreglass poles

A teeterboard can be built with glue-laminated wood. Some were made with pole vaults covered with fibreglass. No holes are made in the poles. They are held in the middle between two metal plates. At the extremities, each pole is fitted with a pipe coupling and they are either braced together by a back plate, or bound together with resin. Though it is hard to establish the parameters of this type of assembly, it will perform well and be consistent. This technique is better suited to the Hungarian teeterboard.

Attempts have been made at using metal (they failed because the dead weight becomes huge), aluminium is still to be tried.
It must be noted that the energy input of the board as it bends is not fully recreated at propulsion.
A flexible board forgives timing errors and it is recommended that beginners bear this in mind.
The weight of the base affects the stability of the apparatus. If the teeterboard has a large dead weight then weight of the base must be increased.

PART 2 - BASIC TECHNIQUES FOR THE KOREAN TEETERBOARD

1/ General points

This acrobatic technique makes it possible to do figures that don't change position and return to the same launch pad, that cross (from one pad to the other) and that change flyers on the board. As with the Hungarian apparatus, jumps from catchers in a column or on a mat can also be performed. This board is best for small jumps that land on banquine or on catchers.

The Korean teeterboard is characterised by a low fulcrum and the pads are lower than the Hungarian to allow for vertical launch. It must also be less flexible than a Hungarian. This makes for more dynamic launch and starts rotation more quickly because on the Korean apparatus, rotation must be produced by the lower body, as it is impossible to create an angle. However, being more rigid it reduces the range of vaults that can be done on the Hungarian.

To avoid injury it is better to reduce the rigidity of the board for beginners. Then make a more rigid board by using as little wood as possible to reduce dead weight for better performance. It is advisable to block or wedge the apparatus in place with mats, to make the load-bearing surface of the base heavier or bigger in order to stabilise the whole apparatus. Parts of the board can be made more rigid by using fibreglass coated with resin. Substituting wood with resin makes for a lighter board. There are two types of resin and glass fibres materials with different properties.

- Glass mat is a fibreglass material that will become completely rigid.
- Rowing 300 is a fibre that will remain relatively flexible.
- Epoxy resin will not become very flexible.
- Polyester resin will remain relatively flexible.
-

Dimensions of Korean teeterboard:

*** Centre National des Arts du Cirque (Châlons-en-Champagne, France):**

Small Board: length = 2m75 fulcrum height =om31
Large Board: length = 3,60 m fulcrum height = 0,43 m

*** National Circus School (Montreal, Canada)**

Length = 2,75 m fulcrum height = 0, 44 m

*** École Nationale des Arts du Cirque de Rosny-sous-Bois (France)**

Length = 3 m 50 fulcrum height = 0,51m

Board underneath fulcrum

* École Supérieure des Arts du Cirque (Brussels, Belgium)

Small board: length = 2,40 m fulcrum height
Large board: length = 2,70 m fulcrum height = 0,48 m

2/ Protection and spotter mats, safety Line

2.1. Mats around the teeterboard

Allow for optimal safety especially when 2 practitioners work without spotters. The mats should go underneath the board and extend 2 metres behind it. This way the flyer avoids landing on an empty teeterboard with no one on the opposite end to act as a counter-weight and is also protected against excessive backward projection. A made-to-measure, horseshoe shaped mat fitted to the extremities of the board would be ideal.

PHOTO

Mats must be sufficiently wide to avoid injuries caused by ill-timed landing with one foot off the board. These are 20cm thick mats with more compact foam on top.

2.2. Covering

The board is covered by a thin, compact mat that is as light as possible to avoid increasing dead weight and interfering with the bending action of the board whilst providing optimal shock absorption to the flyer in the case of a fall on it (like a tumbling mat).

2.3. Throw Mat

Thrown onto or under the board by the teacher during a tutorial or in case of danger. It should be 2m by 1m and otherwise identical to the throw mat used for the trampoline but with more compact foam. An outline can also be made with gaffer tape that represents the landing surface of the board.

Throw mat thrown on the plank

Part 2 / Basic Techniques for the korean Teeterboard

2.4. Landing Mat

It can be made to measure: thickness, foam compactness, two landing surfaces depending on the weight of flyers, the height and type of landing (on the feet or tutorials on the back) Width varies from 30 to 60 cm.

Landing mat

2.5. Safety Line

Though it is difficult, it is possible to use a safety line with a Korean teeterboard., Those with a background in trampoline will not use it, unlike traditional teachers. What is most important is to respect the learning curve and not throw students into doing figures that they are not technically prepared for. If the safety line is not being used then the use of a spotter mat is recommended.

3/ Physical Preparation and Workload

The chapter on 'physical preparation' should be a module all by itself. However, we can identify some specific aspects related to the practice of the teeterboard. Physical preparation will be essential throughout learning and professional practice of this apparatus. It is necessary to create awareness and a responsible attitude towards what it means to work on the Korean teeterboard.

We are not referring here to general physical preparation for qualities such as endurance, strength, speed and flexibility, which would have been developed overall as a prerequisite to working on the teeterboard.
To increase explosive power, work with a weight of about 20 to 70% of maximum resistance in short series (4 to 8 repetitions) for 8 to 10 series with relatively long recovery periods (4 to 5 minutes).
To increase speed work with lighter weights of 20 to 60% in longer series (8 to 12 reps) for about 4 to 6 series, still with recovery time of 4 to 5 minutes. Here speed rather than explosive power is developed.

3.1. Prevention

Ankle Proprioception:
- Balancing board (physiotherapy rehabilitation): stationary exercises then add external elements like a ball.
- Dynamic walking and jumping exercises to warm up and maintain the full reactive ability of the ankle.
- Exercises with a pulley or elastic band.

Knee:
- Isometric work (without segmented movement) on the plank
- Squats on a ball
- Work on landing jumps

Pelvic girdle (spine):
- Alignment work with straps or on a plinth
- Agonist/antagonist muscle work
- Stabilisation work on all fours (see physio)

Neck, cervical:
- During alignment work on the plinth, one can also look at the head as an extension of the spine and gradually get rid of neck level compensations in alignment work.
- Appearance of chronic periostitis among young people working on the teeterboard.

3.2. Stretching and Flexibility work

Ankle Flexion: Clearly Teeterboard can cause serious injury if the ankle is rigid. We should therefore focus on exercises that lengthen posterior leg muscles. (soleus, gastrocnemius). Hamstrings stretch.

3.3. Specific physical preparation for flyers

Work with resistance to build strength.
Work on plyometrics, explosiveness and spring for speed.

3.4. Do not forget:

To work the antagonist muscles (hamstrings in strengthening) to balance out the lower body.
To also work the upper body for better overall balance.

3.5. Workload

Twice an hour and a half to 2 hours, split between the trampoline and the teeterboard and if possible over the morning and afternoon. The trampoline session should precede the teeterboard.
It is also best to avoid as much as possible stopping for longer than a week during the year to guarantee the development of good reflexes which will be then be acquired instinctively and remain no matter how long breaks from practice are.

3.6. Complementary trampoline workshops

They are indispensable and obligatory because they contribute to technical progress and safety management.
- Straight jumps
- Arm placement on the bed
- Arm placement in the air
- Focus
- On the spot slightly reversed back flips
- Travelling straight jumps
- Moving back flips.
- Pit landings
- Supervised trampoline work

4/ Specific Instructions

4.1. Communication Codes

Everyone must know what happens on the board and there must be good communication between the various participants. For best use of sessions, organise and summarise feedback (corrections) after each jump. Group together as much information as possible on the various elements in use (push, vault, landing etc.) Information from artists about their work is necessary or at least useful to help the teacher, based on his overview, give brief feedback that is as objective and comprehensive as possible. The teacher must properly manage speaking time and sometimes it is best to say nothing.
It is advisable to use commonly understood language with brief, clear and precise terms.
Use the four words below to reduce the risk of non-compliance with instructions, codes or protocols:

Part 2 / Basic Techniques for the korean Teeterboard

- "NEXT"
Said by the flyer, when he is up for a figure and when he is down for a change. This word guarantees a good push by the pusher for the flyer and helps the spotters get ready if necessary. Only the flyer can say this.
- "NO"
Anyone can say this (flyer, pusher, spotters or teacher). Example: if the flyer is not steady before jumping he can say "NO"
- "OUT"
Means that there is no one on the other side of the board so the flyer can prepare to break rather than push on the ground. Anyone can say this.
- "STOP"
To bring the action to a halt. Anyone can say this.
Don't hesitate to anticipate when communicating because if the word comes too late, reaction time will be too short.

4.2. Concentration
To be able to concentrate it is best to work in a calm and secluded room. Participants should be centred at the start of a session. There are always a large number of actions and movements to correct during work but it is advisable to limit corrections and instructions so that the flyer can gradually assimilate them. Be organised and precise with feedback. Too much correction drowns the correction!
The pedagogical quality of corrections depends largely on the chosen order of instructions to bring about improvement.

4.3. Clothing
Boxing boot type shoes that support the heel and have an insole are recommended. They may slightly limit tibio-tarsal flexion but are very effective in preventing sprains. Like for all acrobatics, clothing should not restrict movement or get in the way of spotter's hands. Jewellery and especially piercings are not recommended.

4.4. Health of Participants
This may seem obvious, but working with concealed or unhealed injuries can compromise both the professional future of a student, and his and the group's present safety.

5/ Spotters
Spotters must be properly trained, whether they are flyer spotters or just ordinary spotters. A good spotter must be able to anticipate.

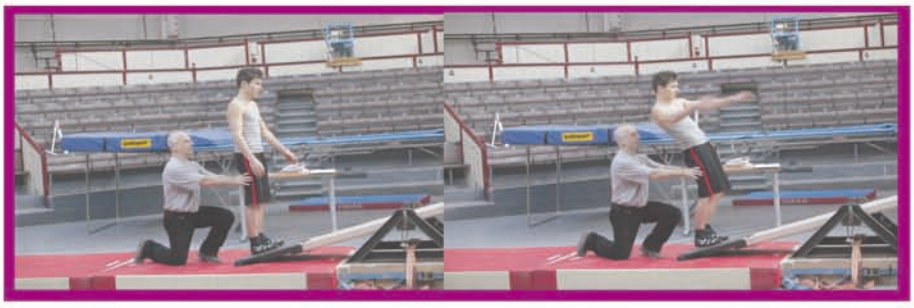
5.1. Numbers
Even though 2 can practice the Korean teeterboard without spotters, no changing can take place and the risk level increases, for the virtuosity and safety of the act, it is better to have 4 or 5. This makes for fluid changes and allows each flyer to have a spotter near his pad. 1 or 2 spotters stand behind to guarantee safety, reposition the flyer if he's off balance and replace him in a crossing.

5.2. Position and mobility of spotters

If there is only one spotter on either side, they should stand behind the board in a lunge in order to maintain anterior-posterior mobility. He stands back to allow the feet of the flyer to go past when opening and then he moves forward ready for contact if the flyer goes sideways or loses balance.

Good Spotters position

Spotter catches too high.



Spotter catches too low.

If there are 4 spotters, 2 should be on either side to increase lateral and anterior-posterior mobility.

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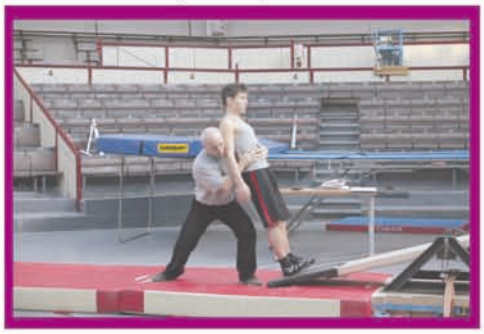
5.3. Catching technique

Catch the flyer from behind at the waist to restore posterior or lateral imbalance. Place the flyer straight down on the board. The right position for the back spotter is an arm's length away.

Lateral Imbalance

Posterior imbalance

If the imbalance is too much to correct then the spotter holds the flyer from the back enabling him to keep his feet and a small amount of weight on the board without getting thrown off by the push.



Catching when there is too much posterior imbalance

In the event of an outright fall off the board, the spotter has two alternatives: Either to help the flyer who is in danger and ignore the empty plank and in that case also say NO Or, if he thinks the flyer can take the fall, to put his weight on the plank to protect the person about to land on an empty plank.
Lateral imbalance is easier to control when there are 4 spotters.
With or without external assistance, the flyer must master falls before starting to work on the Korean plank. For example: if off balance or falling forward, he must roll to the side in a judo fall rather than fall on to his hands (to prevent wrist fracture, elbow dislocation or breaking the collarbone).

6/ Acrobatic Technique

6.1. Visual bearings

The flyer must develop global vision to gain a very specific understanding of his working environment. He should look at his partner and at the landing pad. Give priority to figures that allow for visual bearings on the ground. A full-in full-out is more technically difficult but safer than a double back somersault in which you lose your bearings.

6.2. Flyer launch, gaining momentum

The lift-push couple exists in all the propulsion disciplines. The flyer starts his lift a fraction of a second before the pusher presses down on the plank. Be careful not to lean the torso forward in order to remain vertical during the jump. It is possible to have a fast start with two pushers running in, like on the Hungarian apparatus and only one of them remains on the board to continue the series.
During the momentum gain, the second straight jump is more difficult to get right.

6.3. Timing

Two techniques for the pusher: attacking the board with straight legs the way it is done on the Hungarian apparatus. This is less noisy, dangerous and more elegant, but requires a relatively flexible board that is not too low. In general, because the Korean teeterboard is lower and less flexible, the flyer starts with the knees bent slightly before contact, using a pushing technique similar to that used on the trampoline.

6.4. Depth and intensity

The higher the apparatus, the less knee bend is possible for the 2 protagonists, and the more the flyer can delay his jump to load the board in relation to the pusher's action. The bend should not be too deep to avoid the flyer pushing too late. Encourage rapid leg action and shallow bend for more effective control of timing and vertical lift into flight.

6.5. Correct Position

The shoulders of the jumper should stay over the pelvis to limit closure and facilitate vertical lift. Forward or lateral arm action should be perfectly synchronised with leg action for optimum lift. He must push right through to the board to avoid his feet being swept forward but should also avoid pressing them backwards. The idea is to push the plank till the tips of the toes. The aerial phase must be vertical or with the body slightly held in (mainly using the anterior muscle chain).

Correct vertical jump

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Series of photos on the "straight jump"

Correct straight jump series

The correct bend and push

6.6. Typical error

The best indicator of the quality of the flyers take off is how the pusher feels.
* If the board is empty the flyer has jumped too soon. Push transfer leads more to rotation than to a vertical lift.
Arms should not go behind the body as this accentuates a tendency to drop the torso.

Too much trunk flexion, the flyer leans too far forward

* If the board is heavy, the flyer is either late or not dynamic enough. Another error occurs as a result of a too deep knee bend leading to a late jump. Proportional knee flexion is important (in balance with the movement of arms and legs). The principle of action/reaction of the bend push without dead time is indispensable. Arms must come down laterally during a descent from a back flip or a straight jump. If they go too far forward or backward this might completely destabilise the flyer or cause other reactions.
* Sometimes the flyer realises that his knee bend is too early and he remains in flexion waiting for the right moment to push. The result is a bad undynamic push. The push action-reaction mechanics are lost.
* Ill-timed arm movements in the air are a sign of instability. Sometimes involuntary arm movements cause imbalance. It is important to eliminate these unnecessary movements by requiring better posture, clear direction and intention in the movement and perfectly synchronised arm and leg action. Calm and well-placed arms will help give a sense of lightness to the jump for both the flyer and the spectator. It is important to keep practicing the straight jump until the flyer is stable both in the air and on the board. This basic work should continue, regardless of the level of proficiency: height, stability and regularity can always improve.
* If the flyer loses balance and goes partly off the board, he must, at all costs, try to keep a minimum amount of weight on the plank. This could be dangerous especially if there is lateral imbalance. Work on simulated back and lateral falls on the board during tutorials.

7/ Figures

It is awkward to ask for even simple corrections to figures as the return to the board takes up all the flyer's attention during the learning process. Errors in landing, launching into rotation and opening can become automatic before the acrobat has sufficient psychomotor skills to correct them on the apparatus.

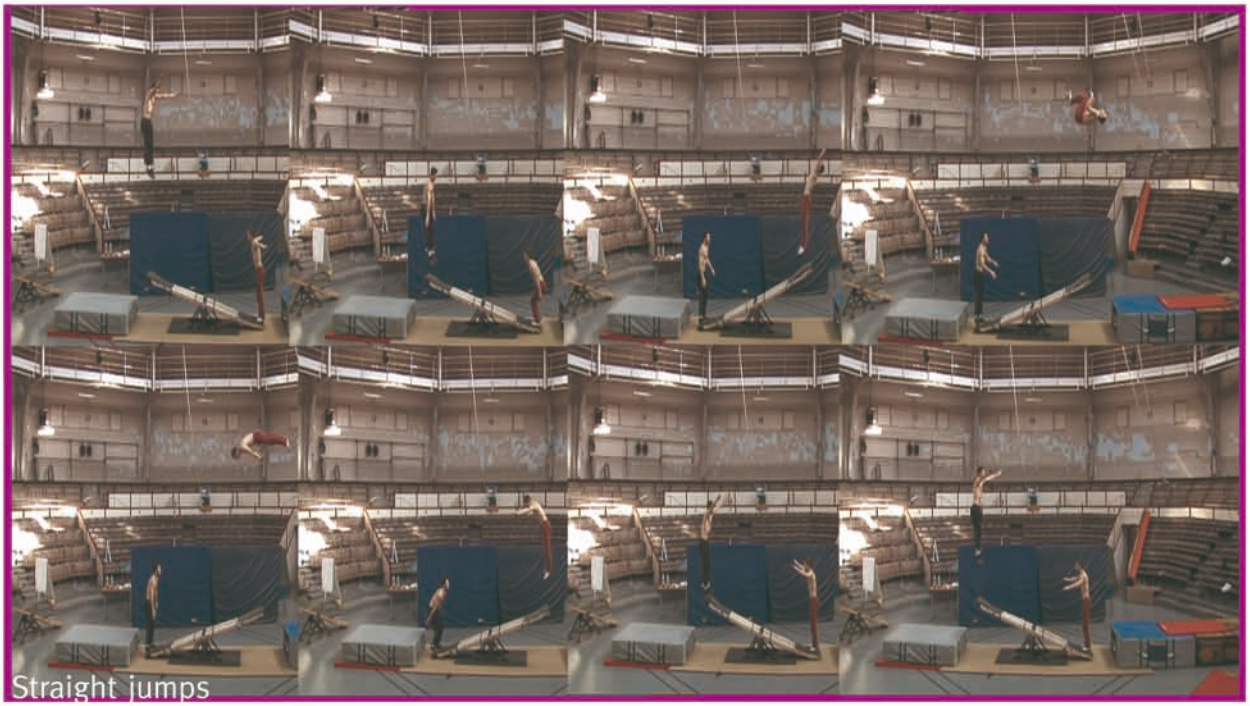
Work on technical precision on the trampoline: take-off quality from the bed with the body in extension and considerable control of rotation, opening into tucked and piked rotation at the top of the jump to slow speed and make eye contact.

Part 2 / Basic Techniques for the korean Teeterboard

Opening at the top of the bounce to block rotation

Learning the puck position on the trampoline is indispensable for double rotations with twists.
Get the feel of rotations being initiated by the lower members and progress logically from simple to complex figures also being vigilant as to the number of figures per flyer per series.

7.1. Figures on the plank, (coming back) *returning to the same pad*

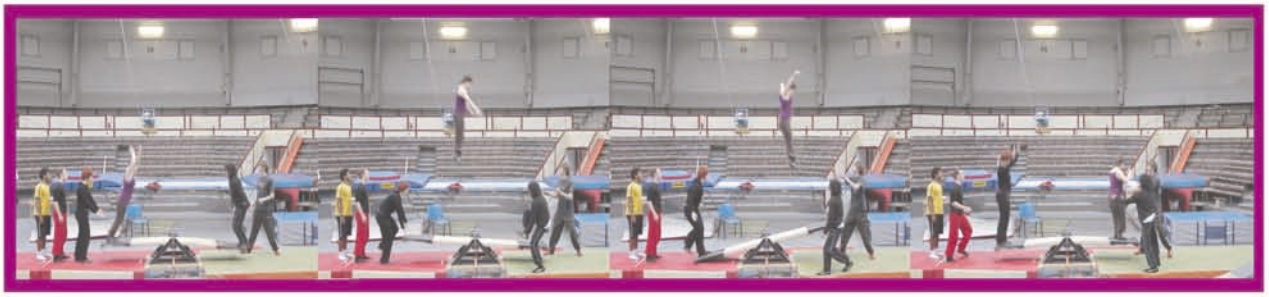


Straight jumps

Tucked, piked or extended back somersault

Extended back somersault
- Double back
- Twist and double back twist
- Back in full out (double back flip with a twist during the second turn)
- Full in full out (double back flip with a twist on each turn rotation)
- Miller (double back flip with 3 twists)

7.2. Simple Figures crossing from one pad to the other changing flyer



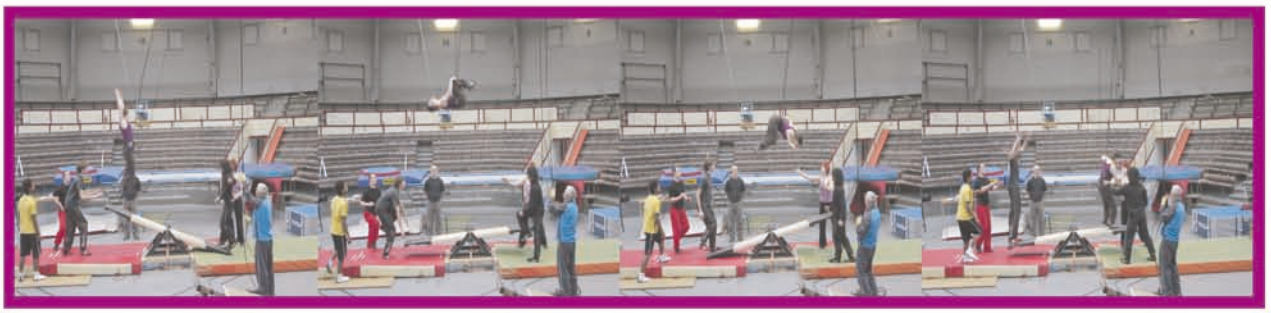
waterfalls or fountains
- Travelling Straight jumps with or without half turn

Tutorial on lateral jump to mat

- Advancing back flip
- Barany (forward flip with a half twist)

7.3.Complex Figures crossing from one pad to the other changing flyer on the launch pad

- Forward flip (difficult because vision is limited)



- Tucked Flifiss Barany out (double forward flip with half twist on second turn)
- Full in Barany out (double forward rotation with a twist on the first and half twist on the second.)

7.4. Figures that take off from the mat or a Hungarian type column

(See the section on the Hungarian teeterboard)

All landings on the Hungarian apparatus can conclude a series. The acrobat can turn around after a push for a forward take off. Korean teeterboard jumps are almost identical to those on the Hungarian apparatus. The fact that there is less height means there is less push and therefore less virtuosity.

Part 2 / Basic Techniques for the korean Teeterboard

7.5. Crossing and changes on the board

When there is a change on the board, the descending flyer must step to the side and keep one foot on the board. The one taking his place must get on from the back. Changes must always be made on the same side. The foot placement of outgoing and incoming acrobats must keep the same timing and speed of movement.
It is advisable to protect the middle metallic part of the board whilst learning the crossings. The forward angle must be taken for the crossing and the legs should be brought back into alignment for landing on the board. Proper body alignment moving into the angle is indispensable. A typical mistake is to lean forward with the pelvis behind. Aim at a high point, and give a clear direction to the movement (forwards and upwards). A flyer takes the place of the one crossing, by lowering the board before getting on. After the crossing push, the flyer turns to continue the jumps or gives his place to his partner getting on the board facing forwards.

Take time to finish the push before turning around or getting off the board.

- Crossings Tutorial
Practice landing laterally on a mat. Then move to throwing a throw mat onto the board. It is useful to start with a safety line to learn crossing back flips then move to a mat on the board. At the start, focus on height during the crossing. This preparation paves the way to spectacular series of changes when working with a large group. The names used depend on the various schools of fountains and waterfalls.
o Control of the board by pushers after the push
For both the Korean and the Hungarian apparatus the board should remain low after landing and the pusher should lift it with the foot.

PART 3 / BASIC HUNGARIAN TEETERBOARD TECHNIQUE

1/ Equipment

1.1. Teeterboard
Building a Hungarian teeterboard is more routine as we have more historic experience. Every teeterboard however, requires specific attention. The type of work we intend to perform (running pushes or pushes from the pedestal) determines height and length. Fibreglass or off-centre teeterboards will be for work on the 5 back flips and landing on columns of 4 or 5. The best technique for building the Hungarian apparatus is the most traditional which involves superimposing several boards of varying length and thickness. A great deal of research is necessary when poles are used but they provide a clear advantage for propulsion.
Dimensions of the Hungarian teeterboard.
Centre National des Arts du Cirque (Châlons-en-Champagne, France) :
Length = 3m fulcrum height = 0.63 m

École Nationale des Arts du Cirque, Rosny-sous-Bois (France)
Length = 3 m fulcrum height = 0.52 m

Plank above the fulcrum.

1.2. Pedestal

Like the teeterboard, the height of the pedestal depends on the work that will be done. Average height is between 1,50 m et 2,50 m.

1.3. Landing Mat

When performing very difficult jumps, double sided mats provide for the most suitable landing. One side is hard for landing on the feet and the other, with a lower foam density, is for tutorials on landing on the back. For figures that land on a mat carried by two catchers, it must not be lifted too high to ensure better mobility and stabilisation when the flyer lands on the mat. The mat can be lifted high if urgent problems occur and safety takes precedence over stability. A catcher should stand behind the mat in case the flyer over-rotates.

2/ Safety

2.1. Safety Line

There was no discussion on the need for the safety line on the Hungarian apparatus. After initially getting to know the apparatus and hand assisted simulations of pushing or small pushes, the safety line is necessary throughout the learning process, alternating with tutorials on landing mats

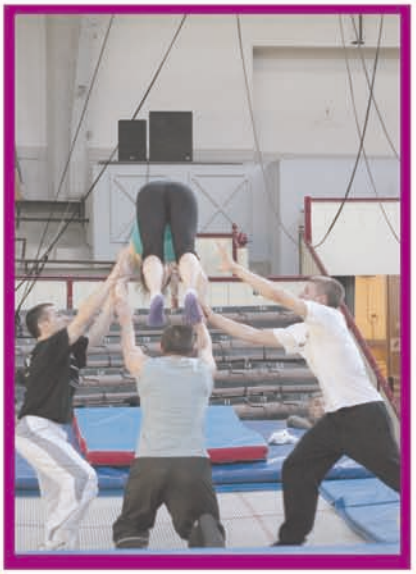
As the push gets stronger and manual spotting in tutorials and on basic jumps (straight jump, flat back) is no longer adequate, use of the safety line becomes indispensable. When learning new figures it makes sense to alternate between the use of the safety line and tutorials such as those on the trampoline landing on the back. Place the safety line away from the board to come down exactly where landing should take place. There was a discussion about allowing groups of students to be responsible for attaching their own safety lines. Views differed widely based on training objectives (leisure or professional) and school rules.

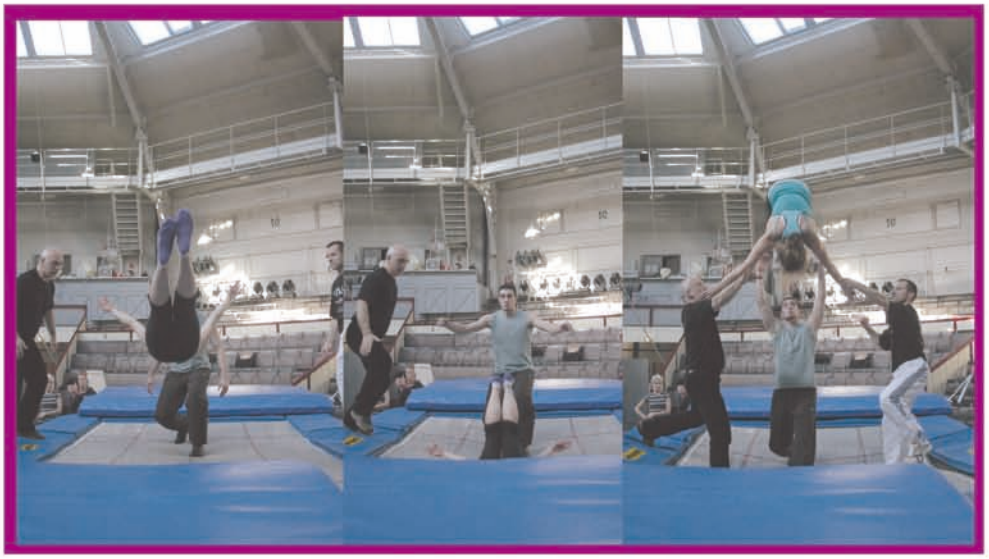
Part 3 / Basic hungarian Teeterboard Technique

2.2. Trampoline Tutorials

For learning the basics of the acrobatic figures refer to the section on the Korean teeterboard.

Like with the Korean apparatus, the trampoline will be useful for initial shoulder landing in preparation for columns.

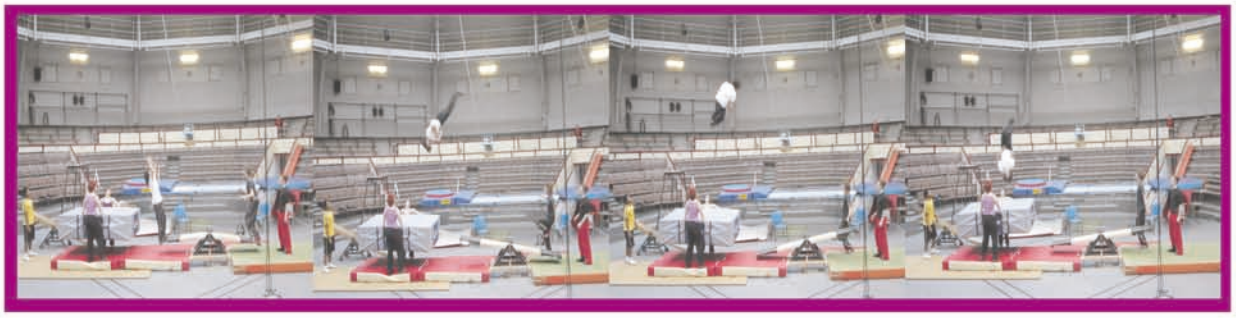




Trampoline Tutorial on shoulder landing

2.3. Mat Tutorials

Before doing the full movement and landing on the feet, the learning process must be broken down in mat tutorials for landing on the back.



Mat Landing on the back

2.4. Landing Mat

Refer to the section on the Korean teeterboard. For the Hungarian teeterboard the mat should be moved around and if possible whilst learning there should be a spotter behind.

The flyer waits with the moving spotter mat, the pushers are repositioning the plank

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2.5. Communication codes
Communication codes must be clearly defined beforehand. They can be visual (tapping thebody, head movement, using the breath as a reference point, placing the second foot on the plank) or auditive (go!) or put in as part of choreography. Obviously this group work requires a great deal of concentration and each session should be prepared in order to manage workload and cope with the varying ability of individuals to participate and assimilate using a step by step and logical approach.

2.6. Pit landing work
Aside from providing a wealth of learning opportunities for acrobatic figures, when it ispossible to do pit work it allows beginners to improve the quality of pushing and jumping at an angle as the flyer is less preoccupied with the figure and landing.

2.7. Controlling the plank after the push
After pushing, pushers must lift the board. They must not look at the flyer because if theflyer moves on to the board when it is high it is difficult for the catchers to place the mat on top of the board. The main risk is that the mat goes under the board and the flyer has a hard landing. It is therefore best for pushers to lift the plank with their feet.

3/ Pushing
A running push or a push from a pedestal must be adapted to the specific figure and theindividual flyer. When starting to learn emphasis should not be placed on the push or the figure but on pusher/flyer coordination, correct timing, quality of knee bend and push and correct jump angles. The push should gradually increase in power in keeping with the level of knowledge of the apparatus, partners and acrobatic skill. If logical educational steps are not respected, the flyer will pick up many bad habits that will be hard to correct. When running the pushers take off on the tilt of the board and use their horizontal speed to go vertical (up high). The inside foot pushes from the tilt of the board. They must be careful not to step on each other and keep their stability after the push, to avoid falling and also to ensure that they lift the board after their push.

3.1. Position
Pushers must control their push and their balance. For maximum effectiveness the push should tend towards being perpendicular to the board. Pushers should land on the board with straight legs and only then bend the knees. If the push is carried out with bent knees it will be a half push. It is easier to remain perpendicular during a running jump than when jumping from a pedestal. The horizontal movement when running enables the body to adjust to the changing position of the board.

3.2. Depth of the knee bend
As in all bend/push action, the bend should be just enough and not too much for maximum efficiency in the transfer to push.

3.3. Tutorial

When learning running jumps one must:
- Do initial pushing from a box beam and land on a mat.
- Run without jumping, finishing after each push on a lateral mat.

- Run without jumping and without a flyer, using a mat under the board of the push side in order to absorb the shock.
- Run without jumping with a single pusher. The flyer marks the movement and goes off balance and a spotter catches him from the back.
- Same as above but making a slight change to help the flyer get a feel of the action. Then the same with 2 pushers.

3.4. Incorrect running push

If the two pushers are unsynchronised as they land on the board, the flyer will take off based on the first to arrive on the board and the transfer will be wrong.

3.5. Add on

Additional lateral push (or bonus) by one or two people. The additional pushers come in laterally during the push. They push with the outside foot. They must be in synch with running pushers or those jumping from a pedestal.
This type of push together with the running push is easier to put into choreography than a push from a pedestal.

Two add-ons

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From a pedestal the push is bigger and makes it possible to execute very difficult figuresor column landings without add-ons.

3.6. Tutorials and the Learning Process

Pushers must sense each other when they push. They are side by side holding each other around the waist. Before doing the first jumps from a pedestal, pushers must jump from a low box beam to coordinate their bend push action, timing, depth and direction. They can time their action with breath, and use a visual or auditive reference point. Before jumping they must land one foot after the other on a mat, which has an outline of the position of the plank. The distance between the tower and the board varies depending on the height of the tower though this is a maximum of 1 metre.

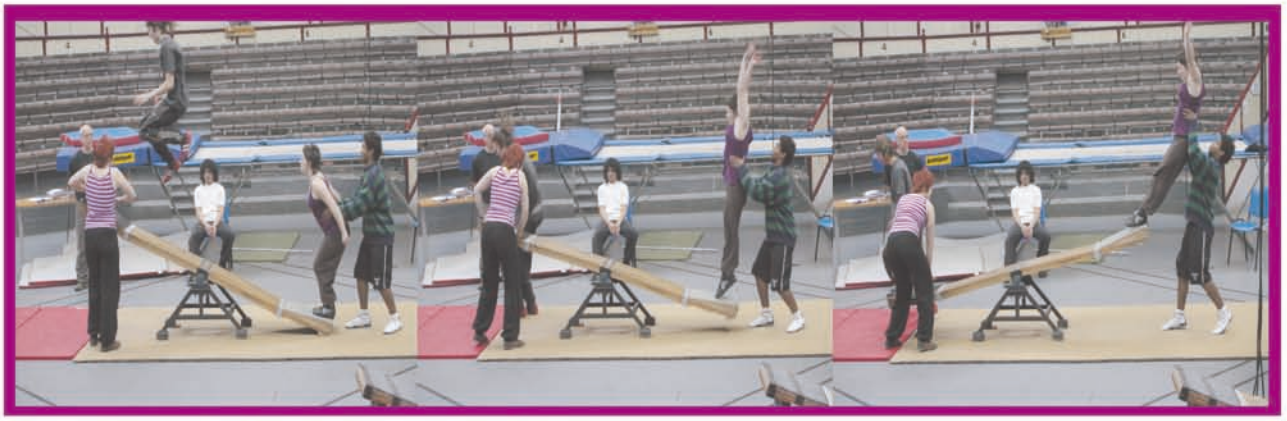
3.7. Good and bad push from a pedestal

Beginners should start with running pushes. The main mistake is to land on the plank leaning too far forward as beginners are afraid of falling backwards after the push. As always on the Hungarian apparatus, pushers must arrive with straight legs on the board before doing their bend-push.

4. Jumps

4.1. Backward jumps

Initial tutorials should involve just marking the movement. Then, gradually there should be a visual or sensed idea of the push always with manual assistance. The flyer marks his bend-push action at an angle and is caught flat on the back by one or two spotters or simply lands on his back on the mat.



Manually assisted Initial jumps by a flyer

The first real pushes should be done with a safety line with straight legs and without marking, to allow the flyer to analyse the push from the pushers. All the flyer must do is take off at an angle and follow the lift of the board under his feet till the tips of his toes. It is only after this that the flyer can begin to understand how to mark this movement. When running in from the back, the flyer must see the pushers go by his line of vision without looking at them. He must focus on their arrival and push off on the tilt of the board.

- Timing
The flyer must focus on the feet of the pushers and start his bend push action when the pusher's feet are 30cm from the board.

- Position
The flyers heels must be down on the board and never off it. The push transfer goes through the heel bone and then comes up the legs, thighs, pelvis and trunk.

- Directional Intention of the movement
Initial jumps will be vertical or straight and not focus on travelling and then move to straight jumps that travel backwards. The first jumps with backward trotation should be back flips with forward extension, before attempting tucked or piked rotations. This is because the first quality to develop in backwards jumps is holding on to the appropriate angle needed to travel before starting the twist. To do a back flip with extension you need to think of doing a straight jump because with the angle and the effect of the board, rotation happens by itself and often in an uncontrolled and ill-timed way. After the bend push action and taking off at the right angle it is best to focus on synchronised leg extension and arm lift. To get into the angle, it is advisable to move the sternum backwards and upwards rather than to throw the shoulders and arms back. This maintains strength in the back and prevents the pelvis from moving forward in the frontal plane. Be careful to avoid excessive movement of the arms upwards and backwards as this might cause the pelvis to be forward of the frontal plane (over-rotation, disrupted, unstable and low jump)

- Back jump angle
As always in acrobatics a balance must be struck between height (stability) and rotation. An entirely vertical jump with no angle cannot rotate. However if there is too much of an angle the board will push the flyer's feet towards the rotation that he will be unable to control. So do not get fixated on quality or timing of opening when the problem arises from excessive rotation at take off. Angle depends on the parabola and figure we want to execute. During the jump, after the bend push there should be perfect alignment of the feet, pelvis, shoulders and arms in the frontal plane. If the pelvis moves in front of the frontal plane, this will tend to disrupt the jump and bring it back towards the board.

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4.2. Forward take off by the flyer

These are harder than backward take offs. It is therefore advisable to wait till students have had some practice and developed good instincts on the back takeoffs and in the pusher flyer relationship before doing this. The same gradual process must be followed starting from straight jumps without and then with travel. The first forward rotation/twist will be the American Pike in order to learn to stabilise shoulders and arms and rotation using the heels.

- Position

The back is to the plank with arms already in the air, looking backward to see the pushers and determine the right time to bend and push.

- Directional Intention of the movement

Proper biomechanical alignment (feet, pelvis, shoulders) must be maintained during the knee bend and as the body moves into stabilisation. If the hips drop behind the frontal plane and lose alignment the figure will be in the wrong parabola.

- Angle on a forward takeoff:

For forward take-off, after the knee bend the flyer must bring the feet, hips and shoulders into alignment as he moves forward.

Correct bend push by the flyer

5. Different landings for the flyer

5.1. Mat Landing

Refer to section on the Korean teeterboard.

5.2. Banquine Landing

For banquine landings the flyer must be caught high up with the arms and then the shock is absorbed with the legs. The whole body must move and not just the arms. The whole banquine must bend if landing is not vertical and comes down in a curve.

5.3. Column Landing

Protect the ears of the catcher whose shoulders are landed on. Before starting column work, there must be « pull over » tutorials on the shoulders on the trampoline. The catcher must wait for the flyer with arms up and spread to let the flyers legs through.

Correct waiting position for catcher 2 arms up and spread looking high at the feet of the flyer.

Initial column jumps with 3 acrobats should take place on a high mat taking the place of the bottom catcher. The second catcher stands on top of this mat.

Landing Tutorial for a column of 3 on a high mat

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At the start the flyer should not overabsorb his landing so that the catcher can feel hisweight. When the catcher starts to get used to taking the weight, the flyer can start to absorb his landing.
When catching in a column of 3, the catcher in the second position indicates movement to the bottom catcher. Two catchers can be put at the base, which would make it more stable but also less mobile. When catching in a column of 3 with a safety line on the flyer, spotters must protect the second level catcher in the event of a fall. Whatever the case, spotters must use their bodies to break the speed and weight of the fall.

Landing on a column of 3. Flyer with safety line and second catcher protected by spotters on the floor.

5.4. Jump over the board
All forward takeoffs of the barany out system. And disrupted back twists.

PART 4/ ARTISTRY THROUGH TECHNIQUE:

Without getting into the debate on circus « aesthetics » we focussed on the innate logic ofthis module's activity which is learning the fundamentals for technical performance. A circus acrobat must find his own style. Teachers should therefore avoid a stereotypical approach like that seen in top professional sports. Movement and personal quality can often pleasantly surprise us when faults are transformed into style and quality. Each acrobat and dangerous jump is different because of varying body types, approach, aspirations and depending on what meaning is given to the work.
Here are some factors that add quality and presence to aerial acrobatics: lightness, height, breadth, speed, intention and completion of movements, calmness, precision, openness to the audience, partner and space, absence of unnecessary movement. Our acrobatic idiom is traditional as it revolves around three basic axes and planes of rotation. It is difficult but not impossible to be different. A window has been opened on new types of acrobatics by street dancers and acrobats from the world of sliding sports.