What an awesome beginning of Sugar Mountain’s 40th season. We opened slopes on Friday, Nov. 27, the day after Thanksgiving; then we got some very cold temperatures and could make snow around the clock; we had a terrific SugarFest; skied with great Olympians (like Diann Roffe who received gold medal in 1994 and silver in 1992, Paul Wylie who was the silver medalist in 1992 in Figure Skating, Krista Schmidinger who was a two time Olympian – 1992 and 1994); skied with other great coaches and racers who dominated US Ski Team at one point; enjoyed a well-represented consumer demo days; on Dec. 19 Mother Nature looked up to us by dumping upwards of 20 fabulous inches of the white stuff with several additional inches that followed; then came Christmas to top it all off. New Year’s Eve also tried to stay in the mix of things. And now is the New Year 2010. Making it this far in life for some, like myself, is an accomplishment in itself. So, congratulations!
Did you make the New Year resolutions yet? Are you going to make a commitment to living them out, or are they just temporary changes? Here are some healthy resolution ideas that you might consider:

- Eat at least 5 servings of vegetables every day.
- Cut down on cholesterol, sugar and sodium.
- Find a way to deal with stress.
- Exercise daily.
- Live by example.
- Find the support you need to stop smoking.
- Ski/ride physically and/or mentally every day of the year.
- Eat calcium-rich foods such as low-fat dairy, dark leafy green vegetables, and beans.

I want to again thank you for your contributions to Peak Performance, for your articles, pictures, announcements, ideas, responses, and other forms of support. In particular, I want to thank those who contribute to this project and remain behind the scenes, like my son Konrad, who monthly produces our Peak Performance – who some call a “handsome publication.” Don’t forget that all the previous issues can be downloaded from my Web page www.mathsci.appstate.edu/~wak/. Please continue to send me stuff at Kosmalaw@bellsouth.net. I hope that the New Year 2010 will be the most rewarding year you ever had. Don’t forget to stop and count your blessings, and remember that no matter how bad some things may seem, it could always be worse. Wishing you all the very best, Witold.

**Education**

“How Do You Know?” and “What Can You Do?”

*By Gordon Carr*

*PSIA-E Alpine, Level II*

In the September Peak Performance when discussing pacing in clinics and private lessons I suggested we ought to use easier terrain as the arena in which to learn more difficult
technical skills: Challenge with Technique, not Terrain. By doing this we remove one of the new environmental and experiential factors for our students (or us) in moving to more difficult slopes. Know some of the skill sets of negotiating challenging terrain before you get there. Witold, in the October Peak Performance added further by suggesting we think systematically, but creatively, of ways in which to use Green terrain to learn Blue terrain skill sets, and Blue terrain to prepare for the challenges of Black or Double Black trails!

Arguably, a high percentage of injuries to skiers and riders occurs on trails for which they do not have the experience or skills necessary to negotiate the trail safely for themselves AND those around them. But we all also know, without moving out of our comfort zone, without challenging ourselves and our skills, we never improve.

So how do you know when a guest is ready to move up a level of difficulty? What can you do to prepare the guest (or ourselves) to be ready for the black and double black? How do you do this stuff on easier terrain, was, I think, Witold’s challenge to us.

It boils down to two factors I believe: 1.) reduce the “unknown” (potentially fear inducing) factors associated with steeper terrain as much as possible; 2.) learn the skill sets on more gentle terrain where initial errors in judgment and execution do not lead to disaster e.g. image the difference in an error of execution of linked pivot slips on LOWER FLYING MILE or from the top of WHOOPDEDOO… one leads perhaps to embarrassment and white hat and goggles… the later may lead to an uncontrollable slide, hopefully, to the bottom of the trail without injury and not a “tumbler” or slide off into the trees.

So the challenge is: Let’s all put on our thinking caps and pool our hundreds of years of experience and compile a list of things and tasks and class handling activities where we deal with this dilemma. Then we can have an ongoing article which lists these ideas for all of our education. We are the guests’ guide and mentor and all our suggestions and ideas should apply to them. But we, too, want to improve our skills, and our mentor must be one of the more experienced and more skillful trainers at Sugar Mountain. Take advantage of them.

Free runs can be just as much fun if a learning focus has been added and a mentor is evaluating our performance. That is the only way we get better. There is an old saying that without this personal learning focus, 20 years of skiing experience can just be ONE YEAR repeated 20 times.

I’ll start with a first suggestion to kick off this hopefully ongoing dialogue:

SKI FAMILIAR SLOPES FASTER! Steeper slopes inevitably lead to increased speed. Make sure you are comfortable with that added speed dimension on a trail where you know,
absolutely, you can regain control and stop if necessary. Then when moving up to black, the speed increase, by itself won’t throw you off your concentration on the new skill sets you are performing.

OK GUYS AND GALS, DUST OFF YOUR THINKING CAPS
LET’S HAVE SOME OF YOUR IDEAS

One Leg Skiing

By Witold Kosmala
PSIA-E Alpine, Level III

If you are a skier, sooner or later you will need to ski on one leg. It will be either by choice, or by request, or out of necessity. You will need to demonstrate one-leg skiing as well as a number of associated tasks on blue terrain at PSIA level 2 and 3 exams, and most likely at an update clinic. So to avoid feeling like a fool, learn to ski on one ski. Besides, if you improve one-leg skiing, you will improve your overall skiing performance.

There are two ways to ski on one leg. Either you just lift up one leg off the snow keeping the ski attached to your boot, or you take that ski off. There are advantages and disadvantages to both, but main points remain the same – accurate and correct set of movements with most body parts, including your toes.

It is best to start exploring skiing on one leg by simply lifting the other off the snow. The advantage to this is simple – you can always put that ski back on the snow if needed. Also, you have this security so you will be more eager to try one-leg skiing. Unfortunately, since your boot and ski are heavy, to lift it you will need a lot of lateral shift. This will automatically put more pressure on the outside edge of the ski you are standing on. When trying to navigate down on one ski:

• pressure your shins against the cuff of your boot.
• press all your toes firmly against the footbed inside your boot for added stability and balance, and steer the ski with your toes.
• keep your skis relatively flat on the snow. (If edges are high and your lateral movement is not accurate, you might fall to the inside of the turn while turning to the outside. Poking the snow with your pole might put you back in business.)
• move your body in the desired direction of travel, don’t just let the ski take you on a ride, or it might be ride of your life. Avoid excessive lateral moves.
• if it is your first time, use a ski that has a larger turn radius (16 meters or more) and has a wider waist (74 cm or more).
• be sure to ski on each leg the same amount of time and/or distance.

Now you are ready to take one ski off your boot and go down the hill on the other. Make sure you leave your ski where it is safe and no one will run into it. Do what you did before, just make sure you do not put your boot on the snow while you are skiing. In skiing on one leg with no ski on the other you will enjoy more equal weight distribution on both edges of the ski, and the free leg will not fatigue as quickly. Try to feel how your toes pressure and how this pressure moves from one toe to the next. Try to do different tasks while skiing on one leg, like different radius turns, lane changes, faster, slower, snake turns, etc. Try to feel as comfortable on one leg as you would on two. That would be equivalent to a horse running on only two legs. Follow this link: http://localhostr.com/files/6452c7/securedownload.gif and enjoy. (You horse lovers – this is for you.)

At a number of PSIA events your coach might request that you put 90% continuous pressure on one ski and 10% on the other. That does not mean normal skiing and you cannot fool your coach. In your lateral movement they can see your weight distribution between the skis as well as in the depth of their tracks. A common drill in this configuration is to ski some wedge Christie turns.

Being on a one-leg skiing subject, there are drills that you should do when you have both skis on, but you ski on only one during a certain part of a turn and then on the other. Learning never stops, but if you can do well on one ski, just think how good you will be if you use both legs.

Teaching Tips

Wedge Christie Turns

By Witold Kosmala
PSIA-E Alpine, Level III

and

By Ross McNeil
PSIA-E Alpine, Level II

Purpose

Wedge Christie turns are a link between wedge turns and “open” parallel turns. Wedge Christies, are characterized by wedge entry to a skidded parallel finish of a turn. The skidded
parallel turn — a Christie — is named after the city of Kristiania (now Oslo), the capitol of Norway.

Wedge Christies allow turning at higher speeds than regular wedge turns, and provide speed control on green slopes. They give the skier the first feel for long leg/short leg position, with hips more to the inside of a turn. In order to master these turns, the skier will need to implement improved balance, will need to improve leg-to-leg action, and will have to be more conscious of ski edging and pressure.

The term “Wedge Christies” are the preferred over “Stem Christies” by PSIA because of the pivot point being under the foot (oppose to the tip of the ski) and minimizing the potential for bad habits and future hang-ups.

An idea to think about when teaching wedge Christies is that the outside ski is always in a correct position, since it is the ski that the inside ski is matching. Therefore wedge Christies are only focusing on the edging and rotary movements of the inside ski throughout the turn.

**Technical Aspects of the wedge Christie**

**Balance**

From standing across the hill, each turn starts in forming a wedge as the skier moves the center of mass with the skis toward the fall line. During this activity the skier is evenly balanced over both skis. After the fall line is reached and the turn continues, skier needs to narrow down the wedge with the inside ski until it becomes parallel to the outside ski as the turn is completed. This process is called “matching the outside ski.” This matching requires leg-to-leg balancing.

**Edging**

When the skier begins their turn, parallel skis gradually need to form a wedge position. As they do this, the inside edges are gently engaged. After the skier is pointing directly down the hill, progressively inside ski gets flatter and allows the skier to narrow down the wedge. By the end of the turn, the inside ski changed edges from the inside to the outside. The outside ski stays the entire time on the inside edge.

**Pressure**

As the skier begins the turn from the parallel ski position, the skis are gradually pointed down the slope without pushing out the tails of the outside ski. It is the tips of the skis that
should gradually direct the skier down the hill. The skis are flattened as they begin forming the wedge. When the fall line is reached and the turn continues, the outside leg should feel more pressure formed by the ski resisting the gravity pull. The skier should respond to this pressure by staying a little more to the inside of the turn. At this point the outside leg will feel “heavy” and the inside leg should feel lighter. The outside leg should be fully extended, with weight over the ball of the foot and the big toe. At the end of the turn, both skis should be edged the same amount. This amount varies depending on the speed, pitch of the slope, weight of the person, length of the skis, etc.

**Rotary Movements**

As the turn begins, skier’s skis are parallel to each other and across the fall line, tipped on the uphill edges. A gentle rotary move is made to pivot the skis under the balls of the feet as the turn begins. There is more rotary movement on the outside ski, which needs to form a wedge before skier faces straight down the hill. Be sure that all of the steering with the skis begins with the tips of the skis. This is opposite to steering being made with the tail of the uphill ski (sliding the ski tail up the hill to initiate the turn.) This means the skier needs to slide as the wedge is formed.

After the skier reaches the fall line, the inside ski should be made flat on the snow and more extensive steering now occurs with the inside ski. The outside ski should leave a very uniform arc on the snow whereas the inside ski should have a little tighter arc toward the end of the turn. All rotary is slow but never stopping. There is no “dead” moment in rotary and no traverse, unless dictated by slope conditions and skier’s desires. Some angles in the body are naturally formed. Since the hip is more to the inside of the turn, the inside ski is naturally flattened. This flat ski can easily be steered to match the outside leg and make skis parallel to each other as the turn is completed.

The flattening of the ski should be made with several key body movements. The first of which is moving the little toe of the inside ski towards the snow. Simultaneously the knee is moved over the ski in order to fully flatten the ski on to the snow. These movements continue after the ski becomes flat in order to move the skis from opposing edges to flat and finally to simultaneous edges.

As the ski moves from opposing edges to simultaneous edges steering should be made with the entire foot. The easiest way to see if the entire foot is steering (oppose to just the front or just the back of the foot) is to make sure that the tips of the skis are opening (separating) as the tails of the ski move closer together. In order for this to happen the pivot point of the ski
is toe pad beneath the little toe.

**Teaching the Wedge Christie Turns**

**Terrain**

Wedge Christies can be performed on green and blue slopes, provided the snow is not too deep or icy. If the wedge Christie is to be the next step in student’s progression after the wedge turn, introduce the wedge Christies on the same terrain as the skier is making the wedge turns – green slope.

**Selecting a Progression**

There are several progressions for wedge Christies. Selecting the appropriate progression depends on your students and what you feel confident teaching and adapting to limitations of time, terrain, experience and ability.

**Progression #1**

1. Start the Christies from their end. Show them how they should end up with their skis after all is said and done with. Have them stand across the fall line with their uphill edges engaged more into the snow than the downhill edges.

   If the downhill ski keeps slipping laterally, have them tip their knees more toward the hill. This move actually comes from ankles and hips. You can stand next to them on the downhill side, and pull them by their arms. This produces extra pressure on the uphill edges and natural body angles.

2. Do traverses, just make sure everyone looks up the hill and does not get in anyone’s way. Go forward and backward. Then change sides.

3. Side-step up the hill. Side-step down the hill. See if they can slide sideways down the hill – these are called side-slips. This allows the lesson to begin to understand basic edging principals and how edging affects the skis.

4. If they can side-slip, you can do side slip races. They are fun and develop edge awareness. If too much snow builds up against the ski, try running sideways down the hill until they start to slide.

5. Start from bull-fighter’s position facing down the slope in a wedge position. Make half a turn but end up sideways to the hill with parallel skis.
6. Now do one complete turn as described above and stop. Then do one to the other side and stop. Then link couple turns together.

**Progression #2 (with child focus, however can be easily adapted to adults)**

1. Start by having the skier make their wedge turns. Be sure to start this on terrain that the child is comfortable.

2. Have the child enter their turn in the wedge. As they make this turn have them flatten their ski at the start of the turn. This will naturally have the child begin to make some good movements such as long leg short leg and moving their body down the hill.

3. Allow the child to get some practice with flattening the ski at the start of turn and skiing that way. After the child has become comfortable have them practice opening up their ski tips and closing the tails.

4. As the child becomes more comfortable with this movement, have them to continue the movements of flattening their ski, leg steering and then moving that ski to the opposing edge.

   You can show a child by having them position their skis parallel across the hill. Tell the child to steady themselves as you try and pull them down the hill. The child should be able to edge their skis to prevent this from happening. Just like adults this allows them to see and feel edging movements that are generated by the ankle and hips.

5. Ski with the child and encourage the child to begin making these movements sooner in the turn, and begin to blend these movements together. This will lead to the child making open parallel turns.

**Progression #3 – Accidental (Spontaneous) Christies**

This progression is great for lessons that may have just learned, are excelling, but still have limited experience on the snow. However since they do have limited experience we want to be sure not to overwhelm the skier with new information. This is a very simple progression that can lead to Christies without the lesson even being aware. Therefore are given the name
“Accidental Christies.”

1. Challenge the skier to decrease the size of their wedge, and control their speed by turn shape instead of increasing the size of the wedge. Ideally the feet will be shoulder width apart, with the skis in a small wedge.

2. Increase the speed of the skier. However remember to keep it safe.

3. Increase the pitch of the run.

By doing these 3 simple things “Accidental Christies” will begin to appear. Be sure to show the skier how their skis are beginning to match upon the completion of a turn, and how they shouldn’t fight this to remain in the wedge and that it is actually a good thing. If the skier comes back for another lesson, or the skier digest previous information and is ready for new information lead into a progression for wedge Christies to reinforce these positive movements. However be careful not to overwhelm skier with new information. This can cause their skiing to digress and they leave the lesson confused and frustrated.

**Common Problems, Their Possible Causes, and Ways to Break Them.**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause</th>
<th>Way to Break Them</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting the wedge by pushing tails of the future outside leg up hill.</td>
<td>This is because pivot point is in the front part of the ski. Steer skis with toes to move tips of both skis down. Try to “scoop” up some snow with the outside ski. This will create a bigger and stronger pivoting under the center of the outside boot. Perform exercises given at the end of the “The Turning Wedge” article in December issue of Peak Performance.</td>
<td></td>
</tr>
<tr>
<td>Skis slide from under the skier.</td>
<td>When skis enter the fall line, they will want to accelerate. That may put the skier on the tails, often referred to as “back seat,” meaning that weight is on the heels. Try to prevent that by staying in close touch with the cuff of your boot and constantly pressuring toes down in both boots.</td>
<td></td>
</tr>
<tr>
<td>There is a need to lift the inside ski in order to match because the tail of the ski catches on the snow.</td>
<td>Hips are too far to the outside of the turn. Skier turns by moving hips around instead of steering skis with their feet. Hip being over the top of the outside ski creates hip rotation which causes the inside ski to be tipped onto the inside edge. This edge catches on the snow. The ski cannot slide on its bottom to match the outside ski. So, lifting is exercised by the skier to be successful in matching skis. Instead, skier should move hip back to the inside of the turn where the hip came from and observe how that makes inside ski flat on the snow. Now slide it toward the outside ski.</td>
<td></td>
</tr>
</tbody>
</table>
1. This is the very beginning of the wedge Christie turn. Skier will be making a left turn. The wedge position is being obtained as ski tips travel down the hill. Note the rest of the body position, including gentle flex in the knees, upright stance, arms apart with pole baskets behind the body, and eyes looking ahead.

2. Here the fall line is entered. Note that the ski tips are separating as the inside ski is flattened. The outside right ski is anticipating more pressure by getting just so slightly more on edge.

3. The turn is completed. Observe that inside leg is slightly shorter than the outside. It is bend a little more as well, and there is almost no ski lead of the uphill ski. To start the next turn tips of the skis will be drifting down the hill attempting to reach a wedge similar to the one given in the first picture above.
Driving and Skiing: Are they Related?

By Witold Kosmala
PSIA-E Alpine, Level III

Here are some winter driving safety tips. Can you relate any of them to skiing/riding?

• Get a tune-up
• Check tire pressure
• Refill all the fluids
• Check your wiper blades
• Fill your gas tank
• Drive on good-traction tires
• Always clear ALL the windows
• Carry fully charged cell phone – use it ONLY for emergencies
• Drive in a safe speed for yourself and others
• Take supplies with you. In your reach keep an ice scraper and snow brush, as well as gloves, blanket, food and a cell phone. In the trunk keep a shovel, tire chains, strong rope and sand bag. Do not put them in the passenger compartment since in the case of an accident they can become deadly projectiles.
• Put the vehicle in 4-wheel drive mode if it has one
• Practice driving on slick roads

Some of these trivially relate to skiing/riding, but some might not cross our minds. When skiing/riding do not carry food items that can freeze rock hard in your pockets. They can break your ribs when you fall.

When we drive in wintry conditions, there is one thing that we fear of the most, and that is: loosing control over the vehicle. Usually this means that the rear of the car slides out, meaning that rear wheels do not follow the path of the front ones. Kind of like in a “fork lift.” But, isn’t that exactly what many of us do on purpose when skiing, called skidding? On the slick snow we become fork-lift drivers instead of car drivers. This is an important skill to
have, but also the hardest to break if we want our skiing to become dynamic in order to ski more challenging conditions, like powder, crud, ice, steeps, bumps, and off piste. Just like you do not want to suddenly turn the wheel in your car, you also do not want to surprise your skis. Driving in the snow is fun also, just be careful and watch out for others.

Newsmakers

In the December 17 issue of the High Country Press, Justin Grimes, our ski instructor, wrote an article about our beloved Director Len Bauer and his lovely wife Michelle. You need to check it out at


Turn To Wisdom

- First we make control. Then we make style. Then speed will come by itself. So macht man es! (That's the way you do it!)
- Failure in people is caused more by lack of determination than by lack in talent.
• It is good to remember that the tea kettle, although up to its neck in hot water, continues to ski – I mean: sing.

• The mighty oak was once a little nut that stood its ground.

Thoughts For The Month

• What is the difference between the dorsi flex and the plantar flex? Which one do you use in skiing more often?

• What is a “crevasse, (not a crevice,)” and what should you do when you see one? What is a “cornice” and what should you do when you see one?

• What is better in skiing: chatter or skidding, and why?

• Which ski generally holds better on steep hard packed slope: the one with a short turn radius or the one with a long turn radius? Why?

Announcements

• Here are some Winter Olympics links that you might wish to check out:

  http://nbcsports.msnbc.com/id/11101841/fmt/full/
  http://www.vancouver2010.com/olympic-schedule-results/

• PSIA/AASI is offering a number of events in our area. At Beech there will be: PSIA Workshop Clinic, Level II Practice Exam, and Level I Exam, and AASI Level II Prep on Feb. 4–5. At Appalachian there will be: PSIA Development Series Clinic and Level I Exam, and AASI Level I Exam on Feb. 6–7. I strongly encourage your participation.

• Here are some things to remember about the month of January:

  It is a Celebration of Life Month
  It is Reaching Your Potential Month
  Golf Day is Jan. 17
Martin Luther King Junior’s Birthday is celebrated on the third Monday in January, this year it is Jan. 18.

National Hugging Day is Jan. 21

Spouse’s Day is Jan. 26

Marketplace

At the beginning of the season I purchased rear-entry Nordica Gransport Executive Ski Boot(s) in size 28 – 28.5. I used only the right boot for a few days. During that time my swelling went down and tender parts around the ankle toughened up, so I had to get a smaller boot. This gives me a pair of boots for sale – almost new, very comfortable, easy in and out, with 4 buckles that make the boots look like and adjust like front entry boots. Flex index is 95, so good for teaching and free-skiing. Asking $375, which is below the wholesale price. Write me at kosmalaw@bellsouth.net, talk to me at the Ski/Snowboard School, or call at 828-719-6884.

A Funny Turn

The Deep Stuff

One day, after a heavy snowfall at Mammoth Mountain in California, I was skiing off piste with my brother-in-law Peter. (You should never go off piste by yourself.) Coming out of the woods there was still one more small bowl to ski through before reaching the groomed slope. The last bit of the deep stuff was pretty flat and we ran out of the momentum and stopped about 30 feet from the end. Now we are both standing there debating as to what to do next. So, why not just walk out, right? And so I made the first step by sliding my right leg forward. That put a touch more weight on my left leg which sunk a bit deeper into the bottom-less Sierra “cement” which was hugging tightly our legs. Now being unable to properly balance myself on this sunken leg, I very gently tipped to the outside and landed sideways on this
glue-like quick send – sorry, meant snow – that just wanted to eat me alive. My hips and shoulders were deeper in this white animal than my feet and skis. Now it is funny to me, but at that time it was a little scary. How do you put your body over the skis that are higher than you are, and everything around feels almost sticky? Peter came in very helpful in pulling me up. Fortunately he did not tip over as well, or else we would be still there trying to dig out. I am not sure if the shovel he was carrying would have helped much.

*By Witold Kosmala*

"Thousands gather to protest global warming" – from Mike Simmons