From the Top

By Witold Kosmala
PSIA-E Alpine, Level III
K2 Ambassador

I am so excited about this publication of Peak Performance. We have so many informative and motivational things to share with our readers. We started a very well-received section “From Cars to Skis,” as well as a section about cross-training and other sports. In the previous issue, Jennifer Pinkus wrote about ice climbing. Under this cover, Will Mauney shares his love about kayaking, which is so very popular in our area. In the next issue we will hear about road cycling. It all relates to skiing and riding.

My biggest problem pertaining to Peak Performance is getting to my computer to put things down. It seems like everyone’s lives in our household depends on it. We practically need to take numbers as to who gets it next. As you can see on the photo, even our cat wants time on my computer.

The newest set of skis on the market is pictured on the right. What a super idea for the “skidders” and “heel-thrusters” and “back-seat drivers.” Now they can skid in style and almost make others think they are actually turning. Now there is no need to improve ski technique, just get a new pair of skis that fixes their problems, right?

October is a wonderful month,
especially here in the Appalachian Mountains. Leaves are changing colors; ski areas are getting ready; skis, boards and bodies are getting tuned; new equipment is arriving in local ski shops; temperatures are dropping; dry-land is underway. We normally get on the hill in November, but don’t rush your life away. There is plenty to do before that time comes. So, relax and enjoy this publication. You should also check out our previous issues of *Peak Performance* that are posted and downloadable from my web page found at

www.mathsci.appstate.edu/~wak/.

Please, continue to write me at Kosmalaw@bellsouth.net. I would love to hear from you. Have a spooky Halloween.

**Main Course**

**Close Encounters of the Weird Kind**

*By Gordon Carr
PSIA-E Alpine, Level II*

This summer Doug Washer was kind enough to give me a DVD of a video he shot of me skiing late last season. Aren’t the new helmet mini-cameras amazing! BUT there is nothing so revealing as the actual live video of you skiing, riding, or anything else, where precision of technique and performance of motor skills are the ultimate purpose of viewing the video. You never seem to actually LOOK in the video as you BELIEVE you look in your mind. It seems to me analogous to the times you hear a recording of your voice… “Is that me talking?” As it turns out you see, I’m not sure whether to be really grateful to Doug for his kindness and consideration in videoing me OR whether, this winter, to slip a little sand in his she crab soup for all the harsh realities the video forced me to face (again) about my ACTUAL skiing performance.

Just to name a few of the glaring errors of execution and mechanical belly flops, let me enumerate: 1.) on some turns to the left, I lifted the tail of the left ski (to get it out of the way) instead of tipping both skis simultaneously and equally to initiate turns; 2.) at times the space between my skis would vary leaving tracks which narrowed and widened sort of like an hour glass shape; 3.) many of my turns were not symmetrical; that is, I was rushing the top 2/3s of the turn (to get out of the fall line more quickly?), and letting the completion phase drag out. Like I say… to name just a few of my more glaring errors of execution.

Now, each of the above movements can be done deliberately for tactical reasons, but I have to admit that tactical alterations of skiing maneuvers were not my excuse that fateful day in late February. True, I hadn’t free skied as much last year as I would have liked, but I really did believe my fundamentals were still on the mark (pretty much). Also true, I wasn’t really concentrating with a focus “to make a demo shot”; I was just having a fun time skiing with friends on a great North Carolina Blue Day with good snow! But I didn’t believe I was sloppy and careless. But as I mentioned earlier the video doesn’t lie and the day obviously was a close encounter of the weird kind! My skiing had gotten careless and sloppy in execution and I was reverting to inefficient motor movements, not for tactical reasons but because of enduring bad habits, lack of practice, and poor focus.

What then are some of the generally recognized motor movements in skiing which, collectively, have been called “mechanical consistency”? Remember in reading this, you are reading my distillation and interpretation of a lot of written and spoken words by far more competent and accomplished PSIA-E skiers, trainers, clinic leaders, examiners and demo team members. The concepts and insights are theirs; the errors of interpretation and misstatement are mine.

*Peak Performance*
As I understand it, efficient, dynamic, modern skiing relies upon and has as its foundation certain commonalities, to name just a few:

1. Both skis maintain constant snow contact with parallel lower legs. Skis, boots and legs maintain equal distance throughout the turns creating unvarying parallel tracks. There is a strong “body core” with most movements affecting ski performance occurring in the lower body. Bones are “stacked” against the forces generated with joints flexing in equal amounts.

2. Both skis, at turn transition, go from edge to edge smoothly, seamlessly, and simultaneously.

3. There is a “strong” and disciplined inside half of the body (ski, boot, foot, hip, shoulder, hand) which leads into the turns and stays strong throughout all turns. The angle planes of shoulders, hips, knees, boots, and skis tend to match the slope of the hill.

4. The mechanical forces used to produce rotational torque on the skis are generated primarily within and below the hip sockets, so that legs, boots, and skis rotate more, while turning, than the upper body.

5. There is a rhythm developed in the turns such that they are symmetrical where the initiation phase (1st third), the shaping phase (2nd third) and completion phase (last third) all last about the same time.

Changes from these general principles of mechanical consistency occur dynamically and intentionally for tactical reasons to meet changing trail or snow conditions, when the skier chooses to vary muscular movements to deliberately affect snow/ski interaction in a specific way. For example, one might engage early high edge angles and hold the 2nd phase of the turn in the fall line longer in order to produce more speed. Or, one might deliberately narrow stance and skis when moving from a groomed section of the trail into chopped up crud. Or, stance can be narrowed deliberately when ski moguls so that both skis encounter similar terrain features of the mogul simultaneously. Or one may use converging step turns, where skis’ change width and track, and edge changes are not simultaneous, to alter your line. And a myriad of other tactical changes in muscle movements related to terrain changes, desired snow tool outcome, or just plain ole personal cussedness because you want to. Many of these tactical variations of skier input are covered by the anagram, DIRT, the down and DIRTY, of dynamic skiing. The forces you add to (or subtract from) the snow/ski interaction can be altered by: a.) how long you apply the force (DURATION); b.) The intensity or degree of muscular strength with which you apply a force (INTENSITY); c.) the speed or rapidity with which you apply a force or successive forces (RATE); and, d.) when, during the turn or series of turns you apply the intentional, tactical force (TIMING). DURATION, INTENSITY, RATE, AND TIMING, the DIRT of skiing.

I should not quote a statement without the ability to acknowledge the source, but I will break that rule because it is so germane to this topic. If anyone knows the source let me know (or if I search the recesses of my Swiss cheese mind and find it); I will put the reference in the next edition of Peak Performance. This is a paraphrase, but pretty close to the original: “Out there at the end of the ability trail, out where greatness lies, each skier stamps his/her own style and personality on their skiing. But underneath their unique greatness lie certain fundamentals, common to all good skiers, which will always show through.” I think most expert skiers and instructors would agree that these mechanical consistencies serve as a “home base” from which all tactical departures vary. I use “home base” in the same sense that an expert tennis player ready to receive a serve, or a pro baseball batter, have a mechanical position, loaded with athletic balance and stored power, available to explode into functional and violent movement! Baseball batters are notorious for pulling, tugging, scratching, fiddling, spitting, waving the bat, all to stay “athletically loose”. But in that final instant before the pitch, the batter comes to his “home base” position ready for explosive movement. Same too with tennis players and most other athletes who have to remain athletically loose, but functionally loaded with stored, dynamic energy ready to be discharged more quickly than can be thought about.

Thus it is with skiers and riders I believe. These concepts of mechanical consistency, or “home base movements”, which serve as the fundamental movements from which explosive and tactical alterations can occur when desired or demanded by immediate snow and trail conditions, always form the foundations for all expert skiing and riding. And it is from this base of fundamental movements that skiers and riders “explode” into different tactical actions as conditions dictate, and do so more rapidly than can be consciously thought about.
Expert skiers, I believe, are always balancing into the future, forming tactical strategies for impending snow and/or trail conditions, and letting their bodies automatically react to the challenges of the current “instant” of snow contact.

Does analysis and study of video footage of your performance help you become a better skier or rider? You bet it does! And it does so because of that discrepancy between how we ACTUALLY are performing moves and how we BELIEVE (in our internal video) we are performing those moves. And out there where greatness lies, the exceptional ability can be in movement analysis (MA) as well as in movement execution by the really outstanding expert skiers or riders. Several years ago during a videoed training prep session for the Level II Skiing Exam, the group of skiers was being videoed individually AND also being observed by Peter Howard, PSIA-E Examiner (and skier par excellence!). The task was for us to ski medium to long radius turns and then at a designated spot on the trail to transition INSTANTLY into short radius turns. This ain’t easy folks… the rather large forces being generated by the longer turns at higher speed really put up resistance to being instantly transformed into short turns. But, I had worked on this exercise and I really thought I had nailed it. As I skied up to the meeting place where the group was waiting and from which Peter was observing us, sort of in passing, he said, “Gordon, at the transition, on the first short turn to the left, you’re lifting the tail of your left ski. You need to focus on that next time.” Whaaaat!!? I had nailed the whole exercise, or so I thought. But, I had had feedback from Peter during many many training sessions, and he was ALWAYS spot on. (Except this time, in the back of my mind a tiny, little bitty quiet voice said, “But this time, I think you are wrong, Peter.”) I couldn’t wait to get my copy of the video and view that specific section of the run. I got my copy, took it home and played it on a DVD player capable of slow motion down to 1/12th speed. AND to my superficial surprise even at 1/12th speed I saw NO lift of the tail of the left ski on that transition in question. So with slightly inflated chest I mentioned it to Peter the next time I saw him and his comment was, “I could be wrong, but you might want to look again.” Double “Waaaat!!!?” But that evening I went to the DVD player, got to the section, and advanced the video frame by individual frame. ON ONE INDIVIDUAL FRAME, and one ONLY, sure enough, the tail of my left ski came up and down in less than a blink of an eye! Now knowing exactly where and when to look, I could see that drated left tail come up, but still only when in slo-mo. To this day I still can’t see the lifted ski in real time! (I always thought I would get better in movement observation and analysis and that someday I would have the “eye” to see that bit of slight of foot... hasn’t happened yet!) Needless to say, with much crow down my goozzle and feathers still dangling from my mouth, the next time I saw Peter I acknowledged his accurate observation. He just smiled as he said his oft repeated comment, “Awareness of the need to change is the first step on the learning journey.” What a Guy!

There are two points to this story…. one: The “Out there where greatness lies” when referring to true experts like Peter Howard, the greatness can apply to Movement Assessment as well as skiing proficiency! The other point is that you NEVER look in actuality as you believe in your head that you look. For this reason we, ourselves, tend not to be the people we should rely on for accurate feedback about personal performance. YOU HAVE TO HAVE A MENTOR and it helps if you can get videos of yourself performing specific tasks so that you can review improvement or lack thereof based upon OBJECTIVE feedback and comments by your mentor. We are fortunate to be at Sugar Mountain. As I have said in many previous articles we have numerous really great skiers and riders, who, I know from personal experiences, are more than willing to help us all improve our skiing and riding or our movement assessment skills. You just have to ask! You all know their names.

Notice, at the beginning of this article I said that one of the ways I got sloppy last year was lifting the tail of the left ski on left turns. Same thing was happening 9 years ago when Peter brought it to my attention. I guess we get sloppy in all the old familiar ways. Bad habits are tough to break! Two more take-aways… at least I’m consistent in my bad habits and errors over time; and, I’m not totally useless… I can always serve as a bad example!

And so thanks, Doug, for the video… what an eye opener. These close encounters of the weird kind can become close encounters of the wonderful kind at the starting point on our learning journey and I thank you for your assistance with mine. And by the way you can safely eat that she crab soup next winter! I’ll use the video to good purpose and I look forward to making a couple of turns with you this coming season.

TIME TO START THINKING SNOW!
The Legend of the 10th Mountain Division and the Ski Trooper

By Chris Anthony

A plant’s roots can tell us so much about the history of that plant, including how it has adapted to survive in its environment. The same is true for human history. Buried away like the roots of a plant in the pages of books, old films and photos, is the history of the human race waiting to divulge itself.

Several years ago I tackled a personal goal, which had been on my bucket list for years. I just needed the right combination of relationships to come together in order for it to come to life. Recently the synergy clicked and my goal of sharing a moment of human history fell into place.

The partnerships arrived from those that found an importance in what I was doing. These supporters pushed me to put forth actions instead of words. With major support from the Colorado Ski & Snowboard Museum, Warren Miller Entertainment and financial grants from a couple of foundations, a documentary film project to life.

The period of our history I wanted to focus on has had a direct effect on where our ski industry is today. They were a population of men that came into existence between the years of 1941 – 1945 by an executive order from the President himself.

I wanted to show gratitude and pay tribute to these men of our past while engaging the future. Thus came to be our project of documenting this group of men known as the 10th Mountain Division.

This fall my segment for the annual Warren Miller film titled “FLOW STATE” will pay tribute to the men of the 10th Mountain Division and Camp Hale. This will be followed by a longer more detailed documentary of the 10th. In all two projects are being created.

I’m proud to be an American and am really intrigued by our skiing heritage. The story of its evolution is parallel with the industrial boom in our country, post-World War II. This is a time when America prospered and leisure time activities became an industry of their own.

Who was the 10th Mountain Division?

Many Coloradoans are aware of the 10th logo or have seen its affiliation with numerous entities such as license plates, restaurants, highways, the hut system – but not many know why.

A snap shot of the 10th and their inspiration:

- In November 1939, the Soviet Union invaded Finland. Finnish soldiers on skis annihilated two tank divisions, humiliating the Russians. Charles Minot (Minnie) Dole, the president of the National Ski Patrol saw this as a perfect example of why the U.S. Army needed mountain troops. Dole spent months lobbying the War Department to train troops in mountain and winter warfare. In September 1940, Dole was able to present his case to General George C. Marshall, the Army Chief of Staff serving under the 32nd President, Franklin D. Roosevelt.
On December 8, 1941, the Army activated its first mountain unit, the 87th Mountain Infantry Battalion (which later became an entire regiment) at Fort Lewis, Washington. The unit was dubbed “Minnie’s Ski Troops” in honor of Dole. The 87th trained on Mount Rainer’s 14,408-foot peak. The National Ski Patrol took on the unique role of recruiting for the 87th Infantry Regiment and later the 10th Mountain Division. Thus born was the “10th Mountain Division” in Colorado.

Thus born was the “10th Mountain Division” in Colorado.

This unique organization came into existence on July 13, 1943, at an army base built in the Colorado Rockies known as “Camp Hale”. The Division trained at 9,200 feet above sea level and honed the skills of its soldiers to fight and survive under the most brutal mountain conditions. They were deemed “The Ski Troopers.”

The 10th Mountain Division entered combat on January 28, 1945 in the North Apennine Mountains of Italy. The division faced German troops positioned along the five-mile long Monte Belvedere-Monte Della Torraccia ridge. Other Army divisions had attempted to secure Mount Belvedere three times, even holding it temporarily, but none had succeeded. To get Mount Belvedere secured, the ski troopers had to take a ridgeline to the west known to the Americans as Riva Ridge (Vail Mountain named a ski run “Riva Ridge” in honor of this battle.) The Germans on Riva Ridge protected the approaches to Mount Belvedere. The assault on Riva Ridge was the task of the 1st Battalion and F Company, 2nd Battalion, 86th Mountain Infantry. After much scouting, it was decided the assault would be at night, a 1,500-vertical ascent. The Germans considered the ridge to be impossible to scale and manned it with only one battalion of mountain troops. The attack by the 86th (the 10th) on February 18, 1945, was a complete success and an unwelcome surprise to the Germans.

Sources: http://www.drum.army.mil/AboutFortDrum/Pages/hist_10thMountainHistory_lv3.aspx

Camp Hale was built in 1942, and decommissioned in 1945. It took seven months to build, hosted 8,000 ski troopers and eventually grew to a population of 14,000 men and women. The camp was built alongside a portion of the Rio Grande Railway at the Pando Valley.

Ironically, as I wrote this article in the summer of 2012, a railroad tunnel from the original Rio Grande railway built in 1890 was discovered when a portion of the 10th Mountain Memorial Highway collapsed in upon itself. The old wood beams of the tunnel had rotted away. A 35-foot-wide, 100 foot-deep hole swallowed the road and revealed the old track that was the inspiration for placing “Camp Hale” geographically at that spot. History buried, history revealed.

In 1942 the Army Corp of Engineers altered the river that ran through the Pando valley, as well as changed the location of the road between Leadville and Minturn. This occurred twenty years before Vail Ski Mountain was envisioned by 10th Mountain veterans Pete Seibert, Bob Parker & Ben Duke.

Camp Hale included mess halls, infirmaries, a ski shop, administrative offices, a movie theater, and stables for livestock. The troops built their own ski area a couple of miles further up the road. Hundreds of white painted barracks housing 15,000 soldiers ran like a grid across the valley floor.
Training in Camp Hale introduced many to the Rocky Mountains, and while fueling their love of the sport, it also accelerated the engineering of equipment and clothing, and the transportation on snow. At Cooper Hill, where the men would train, the Army built what was the world’s longest rope tow at the time to take the ski trooper up slope for ski maneuvers down.

The military base had an almost “romantic” feel about it, and the recruitment effort was boosted through film, emotionally inspired photos and music. The image of skiing was additionally enhanced in the film “Sun Valley Serenade” screened in 1942, featuring the Glen Miller Orchestra and a darling Olympic ice skater: Sonja Henie. Later, two war-time films were shot at Camp Hale featuring the white clothed ski troopers, “Mountain Fighters” in 1943 and “I Love a Soldier” in 1944.

The Ski Trooper was featured on covers of national magazines and on popular radio shows. Although the effort brought in recruits to add to the 86th and 85th regiments, recruiters realized not enough skiers existed to fill the new ranks, therefore efforts were made to bring in rugged outdoorsmen of all types with the compelling slogan “The 10th Mountain Division. Additionally, 200 women from the Women’s Army Corps were enlisted for administrative support.

SOURCE: [http://en.wikipedia.org/wiki/Women%27s_Army_Corps](http://en.wikipedia.org/wiki/Women%27s_Army_Corps)

In 1945, four months before the atomic bomb drop and ended World War Two, the 10th Mountain Division was activated and sent to Italy. Victorious on several significant fronts, the 10th chased the Germans out from several strongholds, although at the same time during those four months they took on the most casualties of any division in the United States military.

Post-war, the 10th Mountain Division continued to make headway with large impacts on the outdoor industry and more important advancement of the ski industry into the future. Many of the veterans brought their love of the outdoors and the mountains back to places such as Colorado. Following the war, many 10th Mountain veterans managed or directed ski schools at sixty-two ski areas, while an estimated 2,000 became full or part-time ski instructors.

Men such as Friedle Pfeiffer dreamed of building a mountain utopia in Colorado much like the village of St. Anton where he grew up. The skiing would be the heart and soul of the dream resort. During training maneuvers in Camp Hale, Pfeiffer was part of a small group from the third platoon that hiked through the snow to Aspen, Colorado. Pfeiffer, along with Percy Rideout, hiked up Ajax and visualized where ski trails could be cut. He vowed he would return after the war and turn Aspen into a recreational ski mountain and five months after Hitler surrendered in May, Pfeiffer returned state-side did just that. December 1945 was the unofficial opening of Aspen Ski Mountain; Pfeiffer, along with veterans Rideout and John Litchfield also created the ski school.

In 1953, Jim Winthers, a veteran of the 10th Mountain Division and ski-school director at the Donner Ski Ranch in Northern California, met with a couple of old friends who each had a leg amputated during WWII. Using techniques he had learned in Europe while on a ski vacation, Winthers taught his friends how to ski on one leg, and soon opened up the Donner ski school to amputees.

In 1946, 10th Mountain veteran Larry Jump was another good representative of his special forces training. Highly educated with a passion for the mountains and skiing, Jump was part of the Dartmouth Ski Team. During his time in Camp Hale he fell in love with Colorado. He returned to create the Arapahoe Basin LLC and later developed a ski area with his wife and investor Marjorie Brown. Jump, along with partners Pamagalski, also helped develop the standard design for the beginner slope for ski areas all over the country.

10th Mountain veteran Pete Seibert was injured from mortar fire in 1945. Shrapnel went through his helmet. Fragments almost severed his left arm and destroyed his right kneecap. He also suffered a broken femur. He was told he would never ski again. He spent 17 of his 39 total months in the army in the hospital, but later went on to win the Roch Cup in 1947. In 1962 with fellow 10th Mountain alumni Bob Parker, Ben Duke, William Brown, and Dick Wilson Vail Ski Mountain opened.

People like 10th Mountain veteran Steve Knowlton also exemplified love for the sport. He returned from the war and worked as manual labor on Aspen trying to get it ready for business while saving his money and training for the 1948 Olympic Team, in which he eventually competed.
The impact of the 10th on the ski industry was huge and I’m only touching on a bit of it. Some of the immediate effects included the unloading of all the surplus equipment to the public following the war, including 100,000 pairs of skis, boots, bindings and poles. This provided an affordable opportunity for a massive amount of the population to jump into the sport. It also opened up opportunities to produce some high-end gear; for example, this is how the HEAD Standard came to be.

During this project, history became relevant to me because I found something with which I felt a personal connection. This opportunity led me to research a moment in time about a generation of Americans who made a major impact on the growth of our nation. Dreams became reality led by the greatest generation. They were not scared to take risks. They just did what they felt was right and found a way to reach the vision.

I hope this article, along with the two film projects with Warren Miller Entertainment and the Colorado Ski & Snowboard Museum, will be successful in passing this message forward to audiences young and old.

I knew my dream had finally taken shape when Warren Miller Entertainment sent their top guns in an RV to spend time with me at the site of where Camp Hale once stood. There they set up camp and did not move until we had completed filming.

The director of cinematography, Chris Patterson, came prepared. From collectors he had located all of the original gear right down to goggles, skis and boots. He even brought an antique hand wound camera to film portions of the footage.

It’s hard to believe that skiing has inspired my intrigue in American history, but it has. My elementary school teacher would be proud of me. Maybe I can finally earn that gold star that eluded me in history class. Or better yet, perhaps this documentary will inspire some or all of our current students to earn a gold star.

* Bowerman joined the United States Army as a 2nd Lieutenant in the days following the Pearl Harbor attack. He was assigned to Fort Lawton in Washington and served a year there before being assigned to the 86th Mountain Infantry Regiment at Camp Hale in Leadville, Colorado. Along with the 87th Mountain Infantry Regiment, his regiment would become the 10th Mountain Division.

Bowerman’s duty entailed organizing the troops’ supplies and maintaining the mules used to carry the supplies in the mountains. On December 23, 1944, the division arrived in Naples, Italy and soon moved north to the mountains of northern Italy. During his tour of duty, Bowerman was promoted to commander of the 86th Regiment's First Battalion at the rank of Major. Bowerman negotiated a stand-down of German forces near the Brenner Pass in the days before the surrender of the German army in all of Italy. For his service, Bowerman received four Bronze Star Medals, a Good Conduct Medal, and a Silver Star. He was honorably discharged in October 1945.

**William Jay “Bill” Bowerman** (February 19, 1911 – December 24, 1999) was an American track and field coach and co-founder of Nike, Inc. Over his career, he trained 31 Olympic athletes, 51 All-Americans, 12 American record-holders, 24 NCAA champions and 16 sub-4 minute milers.

Chris Anthony, a Big Mountain skier is a Colorado native and longtime Vail resident. For a good portion of his life, Chris competed at an international level, including World Cup, as well as traveled as an athlete and on-screen personality with the Warren Miller Film Team. Chris has filmed with the legendary action sports production company for 23 years and continues to do so currently. His feats are displayed in the annual Warren Miller feature film as well as numerous television programs.
and documentaries such as “Warren Miller Global Adventures.” Chris is a former Alaskan Extreme Skiing Champion, a veteran of 9 World Extreme Skiing Championships, and US Heli Ski Association Level 3 Mechanized Ski Guide.

Between film shoots and sponsor appearances Chris manages specialized ski programs under his company “Chris Anthony Adventures” in Alaska, Italy and Colorado. Additionally, Chris co-hosts the “Camp of the Superstars” every August in Portillo, Chile. Also, Chris is available for speaking engagements. His website is www.chrisanthony.com.

Here is Chris surrounded by his “love.”

Alpine Exam Process Evolution; Important Updates

By Mickey Sullivan
PSIA-E Alpine Examiner
PSIA-E Director of Education & Programming

Reprinted by permission from Summer 2012 issue of SnowPro published by PSIA-E.

We received much feedback from members regarding the proposed changes to the alpine exam process. After careful consideration the alpine steering committee and the Board of Directors approved some adjustments to the process. As you will see, the most significant addition to the process is the requirement to obtain the Children’s Specialist certificate. The previously approved race/Nastar requirement has been dropped.

We are continuing to work with other PSIA divisions to improve our exam process through an examiner exchange program and idea sharing with the goal of creating “best practices” and a future PSIA cross-divisional exam. The Eastern alpine steering committee and your Board of Directors are committed to providing the eastern members with the best exam process and education programs possible that serve the Eastern Division. PSIA-E Director of Education, Mickey Sullivan says, “While we embrace, respect and learn from other division’s exam formats, we will always do what’s best for the eastern division membership.”

The requirements for the Alpine Level II Certification have some changes beginning this 2012-2013 season. There are also changes to the Alpine Level III Certification beginning in the 2013-2014 season (next season). Here are the new alpine prerequisite requirements approved at the June 2012 Board Meeting:

Alpine Level II Exam Transition (updated June 2012)

An enhanced Alpine Level II exam process will begin in the 2012-13 season. For members who begin or have started the Level II exam process prior to April 15, 2012 the requirements will be under the “former” exam format (please refer to the October 2011 Alpine Exam Guide). For members who begin or start the Level II exam
process after April 15, 2012 the requirements will be under the NEW (2012-13) exam format (Refer to the information below and the October 2012 Exam Guide).

**Note:** Beginning the exam process is defined as passing either the On Snow Skiing exam (formerly called part 1) or passing the online professional knowledge exam. Either of these must have been successfully completed prior to April 15, 2012 in order to continue the Level II exam process under the “former” exam format.

Requirements of the NEW process (2012-13) can be completed in any order unless it is specifically indicated otherwise.

**All exam requirements must be attained prior to registering for the On Snow Teaching exam.**

### 2012-13 Alpine Level II Certification Requirements

- Pass the Level II online Professional Knowledge exam. Note: must be passed inside of 5 years of the passing date of the Level II, On Snow Skiing exam. Online exams are available August 15 to April 15 each season. Candidates are allowed two attempts per season.
- Attain the Children’s Specialist 1 credential (CS1). This can be done any time prior to registering for the On Snow Teaching exam.
- Attend an approved exam prerequisite course that the member feels will be most beneficial to them. An exam prerequisite course is valid for the season it is taken and the following season.
- Pass the On Snow Skiing exam. Passing the On Snow Skiing exam will be valid for the season it is taken and the following 2 seasons.
- Pass the On Snow Teaching exam.

**Note:** The CS1 course is an approved prerequisite course. If a member desires to use the CS1 course for the required exam prerequisite course then the CS1 must be attained within the exam prerequisite time requirement.

In summary:

- Beginning this season (2012-13), members that are beginning the Alpine Level II certification process will be required to meet the former (2011-12) exam requirements and attain the CS1 credential.
- While it is not required, it is “suggested” that Level II exam candidates either attain a Nastar Silver Medal or participate in race training with coaching.

### Alpine Level III Exam Transition (updated June 2012)

An enhanced Alpine Level III exam process will begin in the 2013-14 season. For members who begin or have started the Level III exam process prior to April 15, 2013 the requirements will be under the current (2012-13 season) exam format. For members who begin or start the Level III exam process after April 15, 2013 the requirements will be under the NEW (2013-14) exam format.

**Note:** Beginning the exam process is defined as passing either the On Snow Skiing exam (formerly called part 1) or passing the online professional knowledge exam. Either of these must be successfully completed prior to April 15, 2013 in order to continue the Level III exam process under the 2012-13 exam format.

Requirements of the NEW system (2013-14) can be completed in any order unless it is specifically indicated otherwise.

**All exam requirements must be attained prior to registering for the On Snow Teaching exam.**

### 2013-14 Alpine Level III Certification Requirements

- Pass the Level III online Professional Knowledge exam. Note: must be passed inside of 5 years of the passing date of the Level III, On Snow Skiing exam. Online exams are available August 15 to April 15 each season. Candidates are allowed two attempts per season.
• Attain the Children’s Specialist 2 credential (CS2). This can be done any time prior to registering for the On Snow Teaching exam.

• Pass the On Snow Skiing exam. Passing the On Snow Skiing exam will be valid for the season it is taken and the following 2 seasons.

• Pass the On Snow Teaching exam.

Note: Current Level II members in good standing are not required to have their CS1 credential prior to taking the CS2 course. However, it is strongly recommended that members complete the CS1 workbook. This will help members determine if they should take the CS1 course. Unless you are an experienced children’s instructor, taking the CS2 course without the CS1 credential is a very difficult task.

In summary:

• Beginning in the 2013-14 season, members seeking their Alpine Level III certification will be required to meet the 2012-13 exam requirements and attain the CS2 credential.

• While it is not required, it is “suggested” that Level III exam candidates either attain a Nastar Gold Medal or participate in race training with coaching.

Cross-Training

People do all kinds of sports around the world. They all have some connection to skiing and riding. Some, of course, are closer related then others. For instance, the sport of bee-bearding (if one can call it a sport) was invented in Russia in the 1830’s, when competitors attracted bees to their faces with the help of one strategically placed queen bee. Now, in this pretty bee-ierd sport, the entire body is used in an attempt to attract as many bees as possible.

On Sunday, July 17th, in Hunan Province of China, with the help of a queen bee, Mr. Wang tipped the scales with 26kg (57 lbs) worth of bees in an hour, while wearing just a pair of shorts. The world record for the heaviest mantle of bees is held by Vipin Seth, from India, who was able to hold 61.4 kilos of bees in March 2009, according to Guinness World Records.

Now, here is another sport, perhaps created at home. On the left is Patricia Marie Barrier who climbed 15 milk crates. This sport translates to skiing and riding. It will improve your balance and decrease fear factors.
Kayaking

By Will Mauney
PSIA-E Alpine, Level II

In front of me appeared a horizon line with car-sized boulders dividing the river into three sections. The left and right sides are clogged with rocks while the middle line pours over a 12-15 foot drop with a shallow rock at bottom left. The only option is to boof to the right in the center line and paddle away from the hydraulic at the bottom. If my line was off even by a few inches, I would hit the rock and risk getting stuck in the hydraulic. I circled above the drop in an eddy as several other boaters paddle by and over the drop and out of sight. Seeing a thumbs up from the boaters below I started up to ferry across and line up the falls. Leaning and bracing upstream into the current I shoot my bow across the 350 cubic feet per second swiftly moving Watauga River and carve downstream towards Stateline Falls. I've got time for three paddle strokes, each have to be perfectly placed and timed... specially the last one. My goal is to dodge the rock at the bottom left while landing far enough away to clear the hydraulic. As I pour over the drop I time my last paddle stroke and boof over the falls. I land flat with whitewater stinging my eyes as they squint and search for anything visible. My hips find their balance in the turbulent water and I paddle instinctively away from the boiling whitewash. Look backing blinking... stunned and amazed, shocked and exhilarated... upright and alive!

Stateline Falls is just one of the many class V rapids in the Watauga River Gorge which is less than an hour from Sugar Mountain. North Carolina and the Southeast in general has some of the best whitewater in the world. Kayaking has taken me to remote gorges and vast lakes. I've paddled 6 miles out to the center of Lake Tahoe, CA where the depth was 1640 feet and the water temperature was 42 degrees in the middle of January with not another boat in sight. On the way back a storm caught up with me and a small moth landed on my sprayskirt. The moth and I made it back to shore as 30 mph winds and sideways rain/snow mix started blowing in. The beauty of Lake Tahoe is breathtaking. With amazing whitewater rivers as well, California is a mecca for kayakers.

In North Carolina the Green River Narrows near Asheville is paddled by the best in the world all year long as it is dam released. The first Saturday of every November the annual Green River Race runs through some of the most intense slides and waterfalls anywhere in the world. Called the “greatest show in sports” thousands hike down the steep gorge trail to witness kayakers tackle one of the most incredible creeks on the planet. The strength and endurance required by competitors hiking into the river, racing, hiking back up and racing again in another category, it’s truly incredible. Paddling can be as easy or as difficult as you want it to be. Just make sure
you gather as much info on a river as possible before deciding to paddle it. Just as in skiing/boarding, proper gear, safety and training is the difference between having fun and finding yourself in a life-threatening situation.

Skiing and kayaking do have a lot in common. In kayaking we can talk about edges, carving, and turning. These skills require balance, strength and good technique. Core strength is crucial in kayaking when bracing with a paddle, rolling and hiking and balancing with your boat. The muscles used while pushing forward with ski poles are the same ones used to paddle. Boofing a kayak is done by paddling fast enough over a rock or wave launching up and over a hole or hydraulic. This is much like a jump on skis or like an ollie on a snowboard. If you need to get over something in a river, you boof over it. Kayaks can “carve” into and out of currents. Catching an eddy or a change in the current feels a lot like a hockey stop does on skis. It can be executed very accurately to turn back upstream and hold your position in the river. Kayaks can also have “rocker” in the bow to help keep the nose up much like rocker on powder skis. Bracing is done with the paddle to maintain balance. Kayaking can be divided into a few categories or disciplines. Creek boating, river running, playboating and sea kayaking. There are specialized boats for each type of water or activity. In playboating a shorter boat is used with a flat bottom to surf and execute maneuvers such as spins and loops that are performed on a wave or in a hydraulic. Higher volume creek boats are used to paddle high water runs or for multi-day trips. If you caught the Olympic kayak footage you watched river running boats carve their way through gates along a set course much like slalom racing in skiing. So just as I have my powder skis, racing, skis, and park skis I also have a creek boat, a play boat and a slalom boat. Deciding on which boat to use can be very important.

If you’d like to make spring, summer and fall just as much fun as winter you should take up kayaking. It not only strengthens your core and leg muscles by paddling and hiking to the river, it is also a great way to meet friendly people who love what they do. There’s a sense of camaraderie amongst boaters. It’s important to know and trust who you are boating with. There’s a chance they maybe saving your life or you maybe saving theirs. A throw rope is a paddler’s best safety device. A throw rope is simply a rope in a bag that is thrown out to a swimmer from another person on shore. I have personally used mine on more than one occasion to pull people from rivers who might not have made it out otherwise. I would have felt helpless without it. A whitewater kayaker should always have one and know how to use it.
When technique, talent, gear and guts come together anything is possible in a kayak. The highest waterfall run in a kayak is 196ft, higher than Niagara Falls. I started kayaking in 2002 shortly after college, mostly on a lake or small river. When I started visiting the United States National Whitewater Center in Charlotte I was very intimidated by the volume of water in the channels until of course I see a couple of ten year olds calmly paddling past me in their play boats. The whitewater center in Charlotte is a tremendously useful place for kayakers. By practicing here I have become more competent in bigger water I am now more comfortable on harder rivers and creeks. The whitewater center is a great place to learn to paddle. They offer lessons and one could easily borrow equipment and go with a friend willing to offer assistance.

Skiers/snowboarders are naturally attracted to kayaking. It’s an outdoor sport that requires a few pieces of gear to get started and then it’s free aside from gas and food. There’s no lift ticket needed to kayak and there’s always a river close by. As a snow sports enthusiast I get excited when it’s snowing and cold. As a kayaker, my adrenaline rushes with each drop of rain. Weather dictates whether or not we go kayaking just as in snow.
By paying special attention to radar images and various USGS Gauges, I can decide if it’s worth going to the river or if it’s too high and therefore unsafe. Prior planning, a knowledge of where you’re going and good safety are crucial to any successful kayaking trip. Learning to “wet” exit the kayak underwater and learning to roll up after flipping are necessary first and foremost. Eventually kayaking becomes like any other learned activity, almost automatic. Technique in paddling is crucial to avoid injuries and to be as efficient as possible. The first time I rolled a kayak successfully was comparable to learning to stand up on skis without help. The freedom of movement, the flow of water and gravity and the camaraderie experienced among the paddling community is what keeps me wanting to kayak. New rivers are like new playgrounds to explore and enjoy. Now if only we could get a chairlift to get us back up to the to top of the river.

About the author: Ski and snowboard instructor for the past 15 years. Currently coaching at Alpine Meadows and Squaw Valley in the winter season and spending summers in NC working, kayaking and biking up Sugar or Beech from my house in Banner Elk. Thanks for reading. See you on the mountain… or river.

From Cars to Skis

Understeering

By Witold Kosmala
PSIA-E Alpine, Level III

There is an amazing connection between driving a car and skiing. They both turn in front, they both have outside and inside wheels/edges, they both go on a surface, they both accelerate and slow down, they make turns, they slip and slide, oversteer, understeer, and so on. And, you can race them both. But for some reason people can relate to driving a car much easier then to skiing. So, I thought that for the next few issues of Peak Performance I will bring up different things that we do, or at least we should do when driving a car that translate directly to skiing. Since it will be the optimal performance of the car in interest, we will think about car racing. In the previous issues we briefly discussed smoothness and oversteering. Here we will discuss understeering.

Understeering is the tendency for the front end of the car to take a straighter line then the driver intends to when cornering. This is when traction is lost at the front wheels while cornering, forcing you to go wide on a corner despite applying the correct steering angle. In everyday driving there is no reason understeer should be a concern. In rain, snow, ice or mud, and on gravel roads however, especially in the front-wheel cars, you might feel as if you are not applying enough steering to take the corner and you go wide; perhaps off the road.
The term oversteer is used to describe the sensitivity of a vehicle to steering. Simply put, oversteer is what occurs when a car turns by more than (over) the amount commanded by the driver. Conversely, understeer is what occurs when a car steers less than (under) the amount commanded by the driver.

**The built-in natural properties of the car that can cause understeering (passive causes):**

- Weight distribution (front or rear bias)
- Engine and drive layout
- Suspension & chassis setup
- Tire type, wear and pressures

**The way the car is being driven (active causes):**

- Cornering speed
- Throttle
- Braking
- Steering inputs
- Weight transfer

**You can recognize understeering coming on if:**

- Steering is light.
- The car drifts toward the outside of the corner.
- There is a front tire noise.

**Common active causes for understeer.**

- Approaching a corner too fast.
- Accelerating through a turn.
- Braking into a turn.

Low traction conditions on the corner such as ice, oil, sand or gravel can very likely cause understeering. Understeer is actually a fairly stable state for the car to be in – car usually does not spin nor flip, simply goes straight (and then who knows what happens when it leaves the road.) This is why many manufacturers “engineer in” this behavior into many cars, like the front-wheel drive cars.

**Preventing and correcting understeer.**

1. **Entering the corner too fast** is never good and you might go wide. But, in an understeered car, since natural human reaction would be to hit the brakes, you just might get lucky and save the turn. By braking, or even simply by reducing throttle, you will transfer more weight to the steering front wheels. This extra pressure might be just what you need to steer your car out of a corner. The best is to enter the corner at a slower speed, then get on the power early on the way out.

2. **Accelerating through the corner.** If your car starts to go wide, ease off the throttle. The
resulting forward weight transfer might increase the level of adhesion at the front wheels just enough to get you out. Don’t over do it with brakes as you can easily exceed the front wheel grip limit.

3. **Braking into the corner or mid corner.** When you apply the brakes, most of the braking effort is exerted on the front wheels. So if you’re braking into the corner you’re already using most of your available grip trying to scrub off speed. If you then apply some steering lock, the addition of these lateral forces on the tires can cause the limits of grip to be exceeded and you slow down the turning. So, in this case, correct the understeer seems simple by easing off the brakes. Next time, brake before entering the corner.

4. Whatever the cause of understeer it is imperative that you keep the front wheels pointing in the direction you’re hoping to go, (see the diagram.) Watch for a suddenly slicker pavement. Quickly look for the best bailout spot. Perhaps going straight off the road right away will result in a good run off place, while fighting to the bitter end just to go off a cliff, or hit the edge or ditch sideways and go into a flip, may not be the best choice.

**Simple modifications to make a car less prone to oversteer.**

If you have a car with understeering being a problem, you can make some relatively easy modifications which can make the handling more neutral, such as:

- reducing the front tire pressure.
- softening front springs or anti-roll bar.
- use softer front tires.
- increase front down force, (maybe install a front spoiler.)

Now, of course, the question is: **what does all this have to do with skiing?** Naturally, understeering tendencies can be built into your equipment, like dull edges on the skis and improper canting in your boots. But, usually understeering is most often caused by the skier. This is when a skier wants to turn, but can’t. From going straight down the hill, the skier goes into an unwanted side-slip.

There are many things that skiers can do to create understeering. Here is a partial list.

- Edge angles too small.
- Platform angles too big.
- Too much pivoting and not enough steering.
- Not enough forward movement of the skier.
- Too much weight on the tails and the ski tips cannot got hooked.
- Skier’s balance is not correct. Perhaps there is too much lateral lean toward the hill.
- Skier pushes skis laterally.
- Skier does not have enough pressure on their toes and balls of their feet.
- There is not enough pressure on the ski shovels (sometimes caused by excessive counter.)
- Skier’s hips move to the outside of a turn.

For skiers there may be a need to understeer. Understeering can be useful if done on purpose.

**Turn to Wisdom**

- The grass may look greener on the other side, but it still has to be mowed.
- Patience is the ability to keep your motor idling when you feel like stripping your gears.
- Your companions are like the buttons on an elevator. They will either take you up or they will take you down.
- The bridge you burn now may be the one you later have to cross.
- “Unity” does not mean “uniformity.”
Thoughts for the Month

• “Z” turns. What are they, what causes them, why are they used, what should be done to make them more like “S” or “C” turns? Are “Z” turns good or bad? (These thoughts are from the April issue of Peak Performance, but we postponed the answer until we were closer to the ski season.)

• What is frost?

Elaborations on last month’s Thoughts for the Month.

Question: The Blue Ridge Parkway practically passes through our backyards. So, if someone asked you to tell them a few things about the Parkway, what would you say?

Answer: The Blue Ridge Parkway is a National Parkway that is 469 miles long and runs mostly along the famous Blue Ridge, a major mountain chain that is part of the Appalachian Mountains. The Blue Ridge Parkway was built to connect Shenandoah National Park to the Great Smoky Mountains National Park. It is noted for its scenic beauty. The Parkway is the most visited unit in the United States National Park System. The land on either side of the road is maintained by the National Park Service.

Here are some interesting facts pertaining to the Blue Ridge Parkway.

• The work begun during the administration of President Franklin D. Roosevelt on September 11, 1935. This project gave work to hundreds of jobless men during the height of the Great Depression and provided economic relief to hard-hit mountain communities.

• Builders used stonework for tunnels, bridges and guard walls, to retain a rustic architectural style. Rather than grading parts of mountains to make way for the road, the parkway was laid out to match the mountainsides’ contours. There is one tunnel in Virginia and 25 in North Carolina. Parkway has 168 bridges and six viaducts in all.

• Mileposts along the parkway start at zero at the northeast end in Virginia and count to 469 at the southern end in North Carolina. Major towns and cities along the way include Waynesboro, Roanoke, and...
Galax in Virginia; and Boone and Asheville in North Carolina. Mount Mitchell (the highest point in eastern North America) is only accessible via a state road from the parkway at milepost 355 in North Carolina. The highest point on the parkway is 6,053 feet above sea level at milepost 431 in NC.

• There is no fee for using the parkway, however commercial vehicles are not permitted. The roadway is not maintained in the winter, and sections may be closed. Weather is extremely variable in the mountains, so conditions and closures often change rapidly. The speed limit is 45 mph, (or less in some sections.)

• The Blue Ridge Parkway’s last link was the Linn Cove Viaduct which officially opened on Sept. 11, 1987 with a ceremonial dedication. The bridge is 1,243 feet long and cost $8,000 per foot. It was built with 153 segments weighing 50 tons each. The American Society of Civil Engineers awarded the viaduct its “Civil Engineering Achievement of Merit.”

• Linn Cove Viaduct Turned 25 on September 11.

This and That

GORDON GOES NATIONAL

Check this out! This is our own Gordon Carr in the National PSIA Accessories Catalog. (Gordon, sorry you are out of focus.)

FROM FIRES TO FLOODING

On August 30 and after, the Hurricane Isaac flooded Louisiana and neighboring States. It dumped more water than Katrina in 2005. Those that did not have waterfront homes, acquired them. Even the dead were affected and tried to move to new resting spots. Check out some photos of those unfortunate events.
ONE SQUARE MILE OF HOPE

Inlet regains world’s largest raft title in cancer fundraiser event to raise money for breast cancer awareness. On Feb. 16, 2012, a small Adirondack community has reclaimed its world record for the largest raft of canoes, kayaks and guideboats, making it back to the Guinness World Records book.

BIRTHDAY CAKE FOR HEALTHY KIDS

Let’s keep these kids happy and healthy. Check out the ingredients list for this tasty birthday cake that all kids just love.
Announcements

PSIA-E has a new Director of Education & Programs for the Eastern Division! It is Don Haringa, who, at present, is the Director of Snowsports & Operations Manager at Peek ‘n Peak resort in western NY. We feel that he brings to PSIA-E the best combination of experience, personality, and passion of all the available candidates. Don has been with Peek ‘n Peak since 1996 as the Snowsports School Director and (since 2008) the expanded role of Director of Snowsports. In 2011 he was chosen to be a member of the PSIA Eastern Alpine Team and attended the National Team Tryouts in April of 2012. He has also served as a member of the PSIA-E Alpine Board of Examiners since 1992. Don will be joining PSIA-E staff in Albany on or about October 1. Mickey Sullivan will continue to assist in a transitional role throughout October and into November if/as needed. Congratulations and a warm welcome to Don!! Many thank-you’s continue to go to Mickey Sullivan for all the great work he has done and continue to do for PSIA-E. Good luck in your new job, Mickey...

But, can Don waterski as good as Mickey??? Here is Mickey on water skis with a big smile.

Pet of the Month

Flo Davis shares her Arabian horse with us, whose name is Amira.