

## **Introduction**

**By Katie Fry**

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PSIA/AASI's national demonstration teams are currently in the throes of preparation for the 2011 Interski Congress scheduled for January 2011 in St. Anton, Austria. What's cool is that these ideas are also what the teams are sharing as they are out on the road this season. Our goal is to represent the association in all disciplines, and return with information that teams from around the world will have shared at the conference. Our teams have submitted applications for keynote lectures, indoor workshops, and on-snow clinics. We will have a better idea by September 2010 regarding which applications have been accepted, and will utilize time on- and off-mountain leading up to fall training to organize talks and topics. There will be a preview event before the Interski Congress to allow members to spend time skiing and riding in St. Anton with the teams while getting to know the area. Please keep your eyes peeled for additional information in the spring issue of *32 Degrees*.

The following report gathers some of the main ideas presented during the recent PSIA/AASI National Team Training held in Copper Mountain, Colorado. This 2010 Annual Manual is meant to provide ideas and thoughts as the teams are continually striving to better serve our members, the association, the association's divisions, and our sponsors.

Members of the PSIA/AASI national teams (alpine, snowboard, nordic, and adaptive) are available for visits to meet and work with your school or snowsports area. As a courtesy to team members and your local organization, your first step in securing some time with a team member is to check with your division regarding appropriate timing for your school or resort to host a training. The next step is to contact a team member to establish his or her availability and a timeframe for a visit. The PSIA/AASI [Education Department](#) can help put you in touch with the team members that you are interested in utilizing.

## **ALPINE**

Members of the PSIA Alpine Team have been focusing their attention on a "unified theory" of snow sliding. The team is directing renewed attention to fundamental skiing concepts

thanks, in part, to a widening array of new equipment (including mid-fat, fat, twin-tip, and rockered skis) that has broadened the spectrum of what students can accomplish and now divides what was once a unified skiing culture. A neophyte today is faced with choices labeled “all-mountain,” “big mountain,” “free-skiing,” and “park & pipe.” In response, the alpine team has an ambitious plan to promote a short list of “universal fundamentals” that serve the needs of all types of skiers—regardless of their desired on-snow outcomes.

Looking toward the 2011 Interski Congress to be held in St. Anton, Austria, PSIA national alpine team members pose this question: why not create something that applies to all of the various alpine cultures? Part of the team’s final presentation at team training, the latest version of “Fundamental Skiing Concepts” (see the following) was in the back of team members’ minds throughout the week at Copper Mountain.

## **Fundamental Skiing Concepts**

*Great skiing is characterized by the skier’s ability to have a positive, selective effect on any of the following skills at any time:*

- Maintain a consistent Base of Support; stance width and parallel skis
- Continuous movement of the Center of Mass to maintain fore/aft and lateral balance over a constantly moving Base of Support
- Mentally and physically anticipate changes in the environment and forces acting on the Center of Mass

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- Control the distribution of pressure along the length of the skis
  - Direct pressure from outside ski to outside ski
  - Manage the overall magnitude of force acting on the skis/skier

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- Inclination is used to adjust edge angle
  - Angulation is used to direct balance toward the outside ski
  - Progressive and simultaneous adjustment in the edge angle of both skis

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- Stability and Discipline in the core enable steering and tipping movements in the feet and legs
  - Rotational movements in the legs result in separation between the upper and lower body
  - Independent rotation/steering of both legs
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- Timing and direction of the pole swing varies to complement the desired movement of the body
- The pole swing is linear to facilitate accurate direction of movement of the Center of Mass
- The carriage of the arms and hands supports a stable upper body

PSIA Alpine Team member Dave Oliver noted that the true test of the bullet points above is that these constants can be applied to a skier moving forward *or* backward.

Because next season's Interski takes place in Austria, the team has also given plenty of thought to the notion that snowsports in general have vastly different audiences on opposite sides of the Atlantic. Team member Dave Lundberg, son of former team alum Max Lundberg, points out that "ski technique in the U.S. is much broader than what you find in Europe. Skiing over there is much more traditional, while the populace in [the U.S.] definitely drives more diversity through ski technology. Interski is a byproduct of where we are going as an organization, and we need to explore all ranges of the mountain environment—we need to be teaching in a way that's not strictly carve-oriented."

Alpine Team Coach Rob Sogard points out that the omnipresence of the fundamentals can also provide a great deal of freedom for instructors in terms of success, regardless of style or discipline.

"The alpine team's technical statement has always lived in a document we called the 'Skiing Concepts,'" he says. "The interesting thing is that the fundamentals do not change. In fact, we are hoping that in dedicating ourselves to defining 'universal' fundamentals we will

become more flexible in adapting them to fit the wide range of outcomes and ‘cultures’ in American skiing.”

## **ADAPTIVE**

Bill Bowness and Geoff Krill make up the PSIA/AASI Adaptive Team, a couple of hands-on educators striving to improve everything from the nuts and bolts of equipment to refining movement strategies. They’ll share new ideas with adaptive teachers and students across the country this season, and, as usual, will be doing a lot of on-site assembling and adjustment of equipment. And while peers on the alpine team readily talk about high-level learning and skills, Bill and Geoff primarily focus on beginner-through-intermediate progressions for their adaptive audience.

During team training, Bill (now adaptive team coach, joined the PSIA team in 2004) and Geoff (named to the team last season) fielded numerous questions from members of the other teams about mono skiing, ability-dependence issues, and the seemingly endless nuances that are a regular part of adaptive skiing. Such cross-team conversations stimulate Geoff and Bill’s creativity, helping them to think “outside the box.”

### **Goal Number One: “Ditch the Brake”**

When it comes to beginning progressions involving outrigger movement for mono skiers, Bill and Geoff want to eliminate the word “brake” from the adaptive vocabulary. Technically, outrigger braking is used only by beginning mono skiers. Braking with outriggers is a 50-year-old technique, first used by stand-up 3-trackers, and is a totally inefficient method that eventually has to be un-learned (i.e., outright forgotten) as each skier improves.

Considering this, why introduce the braking sequence in the first place? Why not introduce a technique at the beginning that the student will actually use in real-life situations?

In order to slow down by using the brakes, the brake adjustment bolt has to be very long—something that initiates all kinds of bad outrigger habits by the beginning student. Therefore, the team’s current focus is to introduce an outrigger technique previously only used by experienced mono skiers to beginners. The method involves a “turning-out” of the outriggers (picture creating an inverted “wedge” with the tips of the outriggers) in order to

generate friction and produce a slowing effect. Such a scenario means that the beginning student won't have to learn a technique that encourages dependency upon aggressive brake adjustment. In a true run on a hill, turns alone provide speed control. Such avoidance will serve each mono skier on the way to a successful future on snow.

## **Goal Number Two: Uphill Outrigger Extension**

One new adaptive technique calls for using downhill pressure on the uphill outrigger for active cross-over. At one point during Team Training, an alpine team member watching Bill and Geoff practice moves blurted out: "Holy [expletive deleted]! Was that a stem?!"

Indeed it was. The plan is to get adaptive skiers to use the uphill outrigger to create downward pressure (or downward *and outward* pressure) to move actively downhill and initiate the turn. It's definitely a move that's "ability-dependent" (for example, high-level paraplegics may push down while lower-level paraplegics make more of a rotary push-off move), and the downward pressure will either be directed downward into the snow or downward and slightly outward. The active cross-over for adaptive skiers can either be a pure cross-over or will be blended with a rotary mechanism. This uphill outrigger extension move has been used by experienced mono skiers for years, but has never made it into the teaching progressions of PSIA Adaptive. Bill and Geoff have identified it as an obvious benefit that should be integrated into intermediate lessons.

Katie Fry observed the move at Copper Mountain, and described it thusly: "It's like the lengthening and shortening of the uphill leg [for able-bodied skiers]." Indeed, the uphill outrigger push-off is like the extension of the uphill leg by stand-up peers.

## **Goal Number Three: Drop-and-Block**

While the bi-skiing drop-and-block movement has been included in PSIA Adaptive training material for years, it's not embraced by the entire adaptive community. While Bill and Geoff aren't locked into a drop-and-block progression, they do suggest that the advantage is that it allows the skier with a high level of disability to make independent turns that would not have been possible with the mono ski-style of bi-skiing. There are two trains of thought when considering the beginning bi-ski progression. One is a mono ski-style progression prioritizing rotary skills to make the first turns. The second technique is a "drop-and-block" that prioritizes edging skills for the student's first turns. The use of these two techniques

equates with the stand-up skier's progression of either a classic "wedge progression" or utilizing "stepping stones," and going "direct-to-parallel."

Athletic and coordinated bi-ski students can benefit from the classic rotary prioritized progression, and will advance faster and ski unassisted on steeper terrain. For many bi-ski students, though, placing extremely short outriggers closer to the hip will allow for the strength necessary to independently maintain balance and effect a cross-over movement to make carved turns. Without the drop-and-block technique, many of these skiers would end up with fixed outriggers and would have to be fully assisted (i.e., tethered). While a drop-and-block is not an effective maneuver for those working beyond medium-blue terrain, the technique allows certain skiers across a broad range of disabilities to continue skiing blue runs independently!

### **Goal Number Four: Tuning**

Although it might be the last thing in a long list of needs and necessities that adaptive instructors have to think about when preparing for a lesson, tuning can make a huge difference for someone in a mono- or dual-ski. Beveling the base of the sit-ski's ski allows for ease of entry into a turn, and this can make all the difference for a beginning adaptive student.

Bill points out that "a lot of adaptive programs don't think about beveling being for anyone but racers, but beveling can be extremely important for students in terms of enhancing their overall experience." Geoff adds that "as fat and mid-fat skis find a place in a program's mono- and dual-ski quiver, having a base bevel of 3 degrees becomes extremely important."

If your snowsports school or division would like more information about these and many more cutting-edge adaptive teaching techniques, contact PSIA/AASI's National Office to schedule a clinic with Geoff or Bill!

## **NORDIC**

The PSIA Nordic Team put on its own *pre-Team-Training* team training by spending three days in Buena Vista, Colorado, putting in time roller-skiing and talking about new teaching methods.

Discussions focused on the book “Fierce Conversations: Achieving Success at Work & in Life, One Conversation at a Time” by executive education expert Susan Scott. The book emphasizes using clear, probing, and challenging communication to provoke each individual’s higher aspirations. The team credits this new perspective on breakthroughs before and during team training that led to improved understanding and a stronger team dynamic—successes team members aim to repeat with the membership at large over the next year.

## **Rocker Roll**

When it comes to skiing or teaching telemark skiing, one of the biggest recent changes in the sport was the introduction of wide-platform, rockered tele ski technology. The skis practically lift the skier’s rear heel, thus activating the bindings’ springs to generate tip pressure. Such a development means that the pressure in the forward ski forces the trailing ski to dive, and the early-rise “rocker” effect compensates to smooth out the ride. All of this means more options for tele in terms of increased ability in powder: the skier can now choose to drift a bit through powder without consequence, or slash turns without thinking twice about them.

The moderate rocker and the shorter, effective edge on groomed snow gives beginners increased ease of turning. Intermediates can learn to ski off-groomed easier, and expert skiers can be more aggressive thanks to increased ease of balancing on rockered skis. The rocker helps keep both tips from diving: having the big tip out front makes it easier to not sit back too far in a “guarded” stance while the rocker prevents a trailing ski from diving. All in all, this means more options for tele in terms of increased ability in powder because the skier can now choose to drift a bit through champagne or slash turns. The skis allow the skier to produce smoother “smearing” moves than ever. The technology really shines when the snow conditions deteriorate and the boards increase the fun of skiing the punchy, wind-crust; help you move through thick cheesecake snow at a faster pace; and ease the stress of facing the unexpected.

The team is convinced that the appearance of these news skis opens the door to freestyle application as well as a more aggressive approach to off-piste adventures.

## **Four Sources of Power**

When the discussion turned to enhancing classic and skate-ski teaching, the focus shifted to body position and the sources of power for the skier's forward momentum. Looking at overall body movement as an integral part of the classic and skate-skiing forms, the team adopted the metaphor of a "panel" to describe what should or should not happen to the skier's upper body while skiing. The "tool" used to discuss the panel idea is basic, affordable, and visually effective: it's a single sheet of paper. Held vertically between the fingertips of two hands, the paper represents the upright carriage of the skier's upper body and the stillness that should reside there. The upper corners of the sheet stand in for a skier's shoulders, and the lower corners are the high points of his or her iliac crest (a.k.a., the pelvic crests on the skier's right and left sides of the waist), and the overall rectangle mimics the ideal in the flexion and extension of the upper body without too much twisting, bending or tipping.

To emphasize what is *not* supposed to happen in terms of body positioning, the instructor can hold the paper by its top and bottom edges while twisting his or her hands in opposite directions to illustrate wasted movement occurring during unnecessary rotation and counter-rotation. To emphasize unnecessary bending at the waist while poling or kicking, the sheet can be folded appropriately to provide a stark visual picture.

In conjunction with the panel concept, the team's vital message includes a detailed explanation of the four sources of power in classic and skate. The first source involves powering the ski with a flexing leg. The second source requires powering the ski with an extending leg. The third source powers the ski via dynamic weight transfer (a forward and diagonal movement). The fourth source requires powering movement by dynamic poling.

From nordic racers to recreational skiers, everyone wants to be more efficient on the snow, and such efficiency derives from three sources: body position, timing, and power. While body position and timing are usually easier for instructors to teach and simpler for students to understand, the idea of generating and maintaining power with the least amount of energy output can be difficult to explain. It's important for instructors and coaches to carefully discuss each power source of the glide, hopefully creating greater understanding for students. Additionally, the concept of the four sources of power will help coaches and instructors create better, more skill-specific drills and exercises will enhance students' ability to optimize their energy output. (Look for a more detailed explanation of drills involving the four sources of power in an upcoming issue of *32 Degrees*.)

"It's important to point out that [the panel and the four sources of power] aren't new concepts or movements," says nordic team member David Lawrence. "Instead, we

want to find new ways to talk about these things in a way that students can ‘ski it and feel it’ in a tangible way.”

## **Inteski Themes**

In an effort to get in touch with its PSIA roots as well as mentally prep for the upcoming Interski Congress in Austria in 2011, the nordic team set up a phone conference prior to team training that included individuals representing five generations of PSIA Nordic Demonstration members—including long-time veteran Don Portman who was on the team in the '60s; recent team coach Craig “Pando” Panarisi; and former team members Deb Willits, Tor Brown, Dan Clausen, and Jimmy Ludlow.

When current team members reunite at Copper Mountain in April, they’re planning to develop a strong off-piste theme for Austria in 2011. Part of the impetus for this is a nod to the European origins of the sport and the current Euro-trends, but the team also wants to shift attention from the usual U.S. focus on blue-groomer skills when it comes to free-heel skiing. By highlighting rockered ski technology, nordic team members hope that the added maneuverability and success in off-piste situations will give international onlookers something to talk about.

## **SNOWBOARD**

The overarching directive of the AASI Snowboard Team’s visit during team training was the need to foster *inclusiveness* within snowboard culture.

### **The Cool Factory**

AASI national snowboard team members encourage snowsports schools to make a dramatic shift, a shake-up of traditional snowsports-school hierarchy. Rather than serving as figures of authority, snowboard teachers need to be more a part of the riding crowd. Instead of a top-down model in which instructors ask students to play follow-the-leader, classes would assume a peer-to-peer guidance style.

“The [psychological] emphasis is as much about becoming a rider as it is about learning to board,” says AASI team member Josh Spoelstra. “You welcome them into the

fold immediately. *'You're in the club, looking cool.'* The idea is to be less instructor and student than it is to create a lesson that's about having fun with a group of friends."

The idea isn't so much about learning to snowboard as it is *becoming* a snowboarder. Simply showing up for a lesson makes you a *rider*.

A similar cultural shift inside the teaching community doesn't mean there won't be standards or exams. "It just means that you can get all of your information in a different way," says team member Gregg Davis. "You still give evaluations and have standards, but you simply think about them in a fresh light."

"Whether you pass or not isn't such a big deal," adds Josh. "This way of looking at things leaves instructors feeling good about what they did and learned through the process. Sure, you're going to get feedback, but it's the attitude coming out of the experience that makes the difference. We love to teach to that and help examiners teach that way."

## **Tricked into Tricks**

In keeping with the idea of embracing students as riders from the outset, team members point out that it's easy to do the same with skills. For a group of never-ers, you could spend a few minutes before class shoveling a miniature freestyle area into shape with its own tiny halfpipe. Basically, you alter the terrain to help the board move. Make sure to check with your school first that it's okay before doing something like this, though!

Using such a philosophy, an instructor can almost immediately get beginning riders to think about tricks. By simply "drawing" outlines of imaginary features in the snow, you can help new riders' minds work on two levels: 1) you get them physically moving over "features", and 2) thinking ahead about how the real thing might feel when they do it for real: "*Dude!* Like you're almost ready to be doin' a box!"

By pushing the idea that you can help people to immediately think of themselves as riders, the team has its sights set on reinventing how people look at the sport. "Retention is a big part of the drive behind this change," says Gregg. "We're intent on creating riders who come back for more."

## **Can You Say, "Intersnowboard"?**

Looking ahead to the increasingly mislabeled event called *Interski*, team members have been thinking about how to translate the very American soul of riding—with its deep roots

set deep in the colorful worlds of surfing and skateboarding—for the world at large. The team plans to show that American riding is the essence of freedom, and that being the best means that you have to try harder to bring others up to your level. Buoyed by the built-in camaraderie of the culture, the AASI riders plan to show other international groups that this organization is at the forefront of what's happening in the sport.