Well, that is a WTA (Western Trauma Association) moment! Classic Western Trauma! That would make the perfect WTA abstract! These phrases are a unique part of our lexicon and mythology. I do not think I have ever heard of an AAST (American Association for the Surgery of Trauma) moment and definitely not an SUS or American Surgical moment. There is no doubt that this is a special and unique organization such that being your president is the pinnacle of my professional career. When I thought about the most memorable addresses I have heard in this forum during the past 2 decades, they have been personal and have come from the heart. They also most commonly could not have been given as presidential addresses to any other “professional” organization. Thus, they were the true embodiment of a “WTA moment.”

I surely have no idea where medicine is going or how to best teach the next generation. My own research, which you have heard mentioned, is fairly eclectic, and while I consider it interesting, it likely holds minimal interest for many. Sort of like porcupines making love, fascinating as a concept, but not something you really want to see. No, what I kept coming back to is what the WTA represents, why this is the perfect meeting, and why we actually need the WTA in our lives, maybe even more now than when it was founded. More importantly, it is what the WTA might be able to teach you about balance in your professional life; how some of these concepts might sustain you for the 51 weeks we are not together; and just how did a bunch of orthopods on a ski boondoggle get it so right or, if they did not, how the wisdom of those who followed did. To accomplish this, I am going to go through a bit about our society and especially the structure of our annual meeting—how
that structure positively facilitates scientific education and learning, how it fosters the well-being of our members and in turn our whole organization. In addition, I will even try to interject some hopefully interesting science to back all of it up.

The title of this talk is “Fellowship of the snow.” While at first blush, it may seem a bit Tolkien-esque, I hope I will be able to persuade you of the rightness of the title and concept. Most dictionaries define fellowship twofold. The one we most commonly associate with medicine is actually the second definition: “the status of a fellow of a college or society.” A fellow of the ACS (American College of Surgeons) is our most obvious example. We also train fellows, but we rarely give all that much thought to the primary definition of fellowship—“friendly association, especially with people who share one’s interests.” Some phrases used as examples in the definition of fellowship are “they valued fun and good fellowship as the cement of the community” and “a community bound together in fellowship.” The synonyms are as follows: companionship, companionableness, sociability, camaraderie, friendship, mutual support, togetherness, solidarity, and my personal favorite, informal chumminess. Sounds like WTA? The spirit of fellowship was no more apparent in the outpouring of wishes following the death this year of two of our past presidents. Several of us were able to be at Gage’s memorial last spring, and while we could and do represent many different organizations and groups, I could not help thinking that we were there because of the WTA first and foremost. A line from one of the WTA past presidents summed it up best “I have read the trail of e-mails and must say that the sentiment is classic WTA—we care about our members.”

You only have to read our mission statement and core values to understand this organization’s unique philosophy. While the first line of the mission statement describes that we are a trauma organization dedicated to advancing the care of our patients, it is the second line that sets us apart. “The goals of the Association are not only the intellectual growth … but also the emotional growth attained through camaraderie and interaction with family and friends in an environment conducive to winter sports.” This is also reflected in the last two of our three core values (Table 1). One could easily substitute the word fellowship for collegiality and then combine numbers 2 and 3 for the title of this talk. The interconnectedness of science, fellowship, exercise in the great outdoors, the concern for emotional health, and the inclusion of family is the heart of the WTA. Let us start to explore some of these ideas a bit more rigorously.

One of the first things you notice about our annual meeting is how different it is. It is fairly unique and a true rarity in this day and age. As other organizations move to cram in more and shorten their meetings, we remain a 5-day, 1-week meeting. A whole week! How many of us hardly take a week’s vacation at a time, and if we do, how guilty we feel? Do not get me started on how we feel obligated to stay “in touch” with work via e-mail or smart phones when we are supposedly “off” or on vacation. Yet, here we are an oasis of sanity in an oversubscribed world. No wonder we love the WTA. Despite that, our meeting is a week long; the attendance is getting bigger each year. What does that say about the need for the WTA in people’s lives? What are we offering? If we can figure it out, let us bottle it, sell it, and raise money for the foundation.

Here is a quick overview comparing our annual WTA meeting and with most other traditional scientific meetings. The WTA meeting begins Sunday night with a reception over food and drink. Never underestimate cultural and emotional significance of sharing food and drink. Often, it is the first time we have seen some people in the past year, and the reconnection is often instantaneous. The conversations often pick up right after we left off the year before, seemingly without missing a beat. The next morning, the meeting “officially begins” and is composed of a 2-hour block of papers and talks separated by 6 hours of exercise and outdoor fellowship. We regroup in the afternoon for another 2-hour block of science followed by another nighttime activity with friends and colleagues. Repeat QD × 5! In between, the entire group is engaged in a “friendly” NASTAR race, a family barbeque, and an awards banquet. Let us not forget the panel of experts “hard likker” session and the patient-centric Paint the Ceiling lecture.

Compare that with the traditional scientific meeting of approximately 2.5 days usually beginning on Thursday and ending approximately noon on Saturday. You arrive some time Wednesday night, usually after working all day and/or the night before. Depending on flights, maybe you make plans to catch up with one or two of your close friends (likely WTA members) for dinner, or you meet at the bar for a drink, or maybe your plane is delayed, and you are thankful to get to the hotel at all. The official meeting begins the next day usually 7:30 AM (or before) and goes until 5 PM (or later). Breaks are few, and lunch is often hurried or taken up with another scientific or educational activity. There are no group activities. Time with friends and colleagues are almost always at the expense going to the meeting itself. Often, we are trying to do squeeze in some other society’s work as well. Multitasking to the max! More on that issue later in the talk.

The next major decision point is asking yourself, is there something I need to hang around for on Saturday? Maybe, I could get that Friday night or early Saturday morning flight to get home to see the family since I am on call on Sunday. OK, maybe I painted a little too bleak a picture, but after 25+ years of doing this, I do not think I am that far off the mark, and I will confess that I have done every one of those things at one time or another. Instead of being an educational activity, the meeting often can feel an exercise in conflict management. “Do I do this, or do I do that?” Obviously, there are huge differences, but who is to say the WTA model is better? Well me and just about everybody else. Here is some science, although some of you at the end might say pseudoscience, to back up the assertions.

Similar to the line that “half the battle in life is just showing up,” the key to successful education is to just pay attention. Attention span can be defined as the amount of time

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**TABLE 1. Core Values of The WTA**

1. Continuing education by participation in a diverse, multidisciplinary scientific program with the goal of improving the care of injured patients.
2. Outdoor activity by participation in winter sports in a mountainous setting.
3. Interaction with friends and family in a spirit of collegiality.
needed to spend on a specific task without becoming distracted. Distraction results in what is termed mind wandering, and I do not think anyone could have come up with a better or more descriptive term. Failure to pay attention usually leads to failure to achieve your goals or to use the wording of M+M—a term often associated with bad outcomes.” Attention itself can be broadly subdivided into two types. Focused attention is the short-term response needed to deal with a temporary external event such as “my dog is barking, I need to let her out; my child is crying, I need to call my spouse,” and so on. The individual can then attempt to refocus and go back to what they were doing previously or move on to something new. Easy distractibility and lack of refocusing on the original task can lead to a failure to complete any task. More germane to educational success is the concept of sustained attention. Sustained attention is the level of constant attention that is required for the consistent performance in a task, for example, learning a new operative technique or the mastery of a new skill or concept. Attention span is modulated by many things: the mood of the learner, the environment, the topic presented, motivations of the subject to learn, and stress on the learner, which can be internal or from competing external events. Under standard educational circumstances, attention begins to decline, and mind wandering begins to increase at the 10-minute mark. At this point, the learner must be refocused or somehow reengaged. Performance on recall examinations and other cognitive measures shows significant deterioration when attention span is required to go longer than 10 minutes. I am not sure whether it was general time constraints, serendipity, or actual planning, but that 10-minute time limit is exactly what our and other scientific meetings use for most presentations.

However, one key difference is that for the WTA meeting, there are no invited discussants. At face value, you would not think that matters much, but I believe it does. With an invited discussant, the 10 minutes of discussion often decreases to 5 or less minutes of audience participation time. If the session is running late, the discussant is the only other voice heard. More importantly, the audience begins to feel excluded, and the presentation is no longer interactive. Since the audience knows this, there is no reason to keep listening and reengage. Cell phones and iPads are out, and people are heading for the exits as soon as the paper is concluded and, sometimes, even before the conclusion slide. Maybe that is the last time they think about it. Maybe they have even tuned out before the discussant ever gets up to the podium. This attitude may affect the subsequent papers in the session as well.

In contrast, our meeting is clearly more of a give and take, sometimes quite lively give and take, especially those afternoon sessions. The people who are experts or feel strongly about the topic are at the microphones, and unless it is a bluebird powder morning, we are all inclined to give the paper as much time as necessary. We might even learn something. The 2-hour wall is about all that one can tolerate in a single sitting before retention and memory begins to decline and mind wandering can no longer be controlled. Even an elite athlete who trains for two or more hours does not do the same exercise over and over again. Funny how our meeting seems to parallel that structure. As internal stress is one of the important factors modulating attention (“I should be doing this instead of that”), knowing that each segment of the meeting is only 2 hours long makes the entire environment different and more conducive to sustained attention. We know we will have plenty of downtime or face-to-face time on the slopes and in the bar. Compared with other meetings, the WTA does not make you choose between listening to a paper or having a discussion with a colleague. OK, now that I am probably way past the 10-minute mark and probably lost your attention, it is time to reengage you and explore what other factors about our meeting and group makes people more receptive, improve motivation, and enhance learning.

Recently, there has been an increased interest in what is termed mindfulness as it specifically relates to education, learning, and creativity. This is not a new idea. Middle age philosophers held a dichotomous view of the world and life. They described one group of individuals who were involved in “the active life,” those who got along by doing more than thinking—farmers, peasants, merchants, soldiers, surgical residents. Conversely, there were others who were involved in “the contemplative life.” Usually, these were monks and other clergy who not surprisingly were the guardians of knowledge. However, these individuals also had to grow food and brew beer to survive, so their life was not solely devoted to meditation and contemplative thought. In addition, they were surrounded and interacted with like-minded brethren. Sounds like a WTA meeting and maybe a fellowship of monks? Some even skied. Obviously, our world has become complex since the middle ages, which may make time for contemplative thought all that more necessary but unfortunately harder to come by. How difficult it is for us to find an uninterrupted hour simply to read and think? How guilty do that make you feel? Examples of retreating from the day-to-day world to create, write, or paint are legend and well documented. Think Van Gogh at Arles, but locking yourself away in a monastery is not all that practical, and most of us do not really have the 49 days of vacation time that it took for Siddhartha Gautama to reach enlightenment and become Buddha. Imagine explaining that vacation request to your chair or dean?

The good news is that short-course mindfulness training (MT) can achieve some pretty interesting effects. MT involves body relaxation, breath adjustment, and mental imagery to achieve focus and limit mind wandering. Sounds like skiing at the WTA. Since the 1980s, this concept has proliferated in medical centers around the country and has formed the basis of mindfulness-based stress reduction. You may even have this in your own medical center or university. Mindfulness-based stress reduction has been used in patients with cancer, stroke, Alzheimer disease, and a host of other conditions with positive results on improving patient outlook and outcomes. It has also been embraced by numerous Fortune 500 companies to
enhance executive productivity and reduce stress. In one study, marines (not considered to be the most touchy feely group) who were about to be deployed to Iraq were subjected to a short course of MT. As short as 12 minutes a day, it improved attention and working memory. It also made them more resilient in an austere environment, decreased stress, and allowed them to improve focus and stay on task.  Short-course MT has also been shown to improve GRE and LSAT test scores. I postulate that the WTA meeting structure facilitates subliminal MT and improved education.

Another component of our mission statement and core values involves skiing, fishing, or other winter sports. Exercise itself has been shown to improve cognition and decrease stress. In one study, sedentary men and women between 40 years and 60 years of age (my peer group!) were randomly assigned to either aerobic endurance training, in this case cycling, or nonendurance training using stretching and coordination. Both groups exercised twice a week for 6 months. A sedentary control group, we shall call them the couch potatoes, was also included. All groups were tested at baseline and at 6 months using a battery of standardized psychometric tests. They also underwent a cardiovascular fitness testing. The researchers found significant improvements in memory in both the cycling and the stretching/coordination groups compared with the couch potatoes. However, there were also some interesting differences. Improvements in episodic memory correlated positively with increased cardiovascular fitness, but stretching/coordination training particularly improved selective attention as compared with the aerobic training. In my analysis, the stretching group sounded a lot like MT, and both aspects are important and necessary for optimal learning. Similar effects have been seen with jogging and other aerobic exercise, but none that I could find on skiing. Another WTA multicenter trial grant opportunity in the making.

Using functional magnetic resonance neuroimaging demonstrates some interesting findings. Similar areas and pathways of activation occur during exercise, MT, and focused attention. To a naive reader, me, it was no surprise that there would be an overlap and a connection between MT and exercise as both require focus, control of breathing, and the need to clear one’s mind of extraneous stimuli. All of these lead to a decrease in mind wandering and increase in executive and cognitive functions. However, is mind wandering all that bad?

While the ability to pay attention and achieve sustained concentration is necessary for advanced cognitive learning, I think we can accept that real brilliance does not come from executive functioning alone. While most people can play with their rubber duck in the bath, it takes an insightful mind like Archimedes to figure out the concept of buoyancy and displacement, leading him to yell “eureka” and run through the streets naked. Thus, many investigators feel that some degree of mind wandering is necessary for achieving great insights and optimal integrative learning. So, where does that fit in with the WTA?

It is in the WTA’s connection with nature. John Muir in Our National Parks in 1901 wrote, “Climb the mountains and get their good tiding. Nature’s peace will flow into you as the sunshine flows into trees. The winds will blow their own freshness into you, and the storms their energy while cares will drop off like autumn leaves.” Muir was one mindful guy before the term ever existed and whose philosophy could easily put him up to be the patron saint of the WTA. There is no doubt that we are blessed to hold our meetings in some of the most awe inspiring and beautiful locations on earth. While I cannot scientifically prove to you just being outside in nature will make you a better student, it has been shown to decrease stress and allow for contemplative reflection and mind wandering. We are also back to the concept of Monet in Giverny, Thoreau at Walden, or Pollock out in Southampton. Nature and daydreaming unlocks creativity and imagination and might lead to the next great idea.

There has also been a long negative connotation with mind wandering. How often did we all get yelled at in class for staring out the window while the teacher was droning on and on? How many of us also had some pretty interesting insights during that time? Despite its bad rap, daydreaming has recently reemerged as important in improved cognition and academic performance. Again, compared with other meetings consisting of continuous scientific sessions, the breaks at the WTA allow new ideas to emerge. Like many things in science, the necessity of daydreaming to improve learning is not a new idea. Jerome Singer, considered the father of daydreaming, 60 years ago proposed and described two basic neural networks: the executive attention network and the default mode network. Even the names sound like what they are supposed to do. It is fascinating to me that your brain’s default mode is involved in daydreaming and mind wandering and attention is actually an active process. Maybe, that is why paying attention is so hard? Maybe that explains some of the blank looks I get on rounds? These two networks seem to be inversely correlated, meaning that when one is on, the other is off. Functional magnetic resonance imaging studies show that they also predominantly light up in different parts of the brain with the executive attention network lighting up, similar to studies examining focused sustained attention. Thus, you need both. However, as with many biologic systems, context and balance are everything. We want to be able to be focused when learning something new. Conversely, we want to have a robust and active mind wandering when allowing new concepts and ideas to emerge. There is a suggestion that the ability to seamlessly toggle between and down-regulate the nonoperative network is associated with higher intelligence, creativity, and happiness.

Another aspect of mind wandering on education is how it affects the individual and his or her happiness. Are these extraneous thoughts intrusive? For example, I really do not want my surgeon to lose focus and daydream when getting to that all important “critical part of the operation,” or are they perceived as positive, pleasurable, stress reducing, making you ready to take on the next challenge. Recently, Killingsworth, using the Web and an iPhone application, reported the emotional consequences of mind wandering. The results included more than a quarter of a million data points from more than 5,000 people of all ages from around the globe. The results were intriguing. Overall, just less than half of the subjects reported to be daydreaming or mind wandering when contacted. As a group, these people were slightly less happy than those who were not mind wandering. Maybe, it was because they should have been concentrating on doing something else. Analyzing the mind wandering group further showed that if you were thinking good
thoughts, you were much happier than the mean and if your mind wandering was unpleasant, you were miserable. Mind wandering occurred during every type of activity except making love (you can draw whatever conclusion you want about that). The activities that were associated with the most happiness—exercise, playing, face-to-face conversation, talking with friends—sounds like the WTA. The overall conclusions was that mind wandering itself was not associated with happiness, but what they were thinking, the content of the mind wandering, was a better predictor of happiness than what they were doing. Taken together, mind wandering when intrusive to critical tasks is negative but can be quite positive in most other circumstances. I cannot think of a better mechanism than skiing in the beautiful outdoors to unlock the daydreaming network. All you need to be able to do is quickly toggle and reengage your executive attention network not to hit the next tree or turn back when someone says, “Follow me, I know a shortcut and it is not too bad.”

So, I have hoped that I have convinced you that being out on the slopes or on the river during this meeting is a necessary component of cognitive learning, which is missing in our other scientific meetings and all too often in our day-to-day life. I wonder if we can convince the ACS to give us continuing medical education credit for it. Maybe 1 hour per 5,000 vertical feet? Nah, I did not think so either. Another important aspect of this research on mind wandering is facilitated by being away from our electronic; “I have to be connected every minute of the day to the world.”

As I mentioned before, one of the key aspects of our meeting is the discrete 2-hour sessions and knowing that there is time before and after to contact the office, answer e-mail, blah blah blah. In other words, there is no need to multitask, and we think texting and driving are an issue, well try texting and skiing. There is a tree with your name on it, and that is not what we want as a WTA moment.

However, as much as we try to deny it, we live in a world where more and more information and media are competing for your attention. The effect of multitasking on intellectual performance is complicated, but the entire line of inquiry was brought to attention by Clifford Nass, a Stanford professor. While we may think we look for people who can multitask or corporations praise multitaskers, I believe they are often confusing the term with efficiency. We want individuals in our departments and organizations who can stay on task and actually accomplish something, lots of things. We want this for ourselves. Remember the last time you really sat down and were able to accomplish something big—wrote a grant, wrote a paper, or uttered a coherent and grammatically correct thought that contained more than 140 characters. Did not it feel great? Unfortunately, in this day and age, there are more and more people who are clamoring for your attention, e-mail, text messages, and smartphones being the main culprits. The increased ability of others to have access to your personal time gives them a sense of entitlement to intrude on you 24/7. Would it not be great if you could place yourself on the do-not-call list? How WTA!

So far it sounds like a WTA meeting, but wait, there is one more component—family.

There is a natural dichotomy and distance between one’s professional and personal life. While this may be easy in some jobs, it is not part of who we are as physicians. The telephone call from the residents or patients always seems to interrupt dinner and intrudes on our family personal time. While this may have been “tolerated” or expected in the past, it is may be less accepted now. While I said I would not discuss the next generation, there are undeniable differences, and I believe separating work and family is of increasing importance to younger colleagues. The family presence at our meeting is another unique aspect of our group, which allows us to synchronize our professional and personal life. You do not have to choose. It is this aspect of our organization that should be most strongly embraced by new and potential members. If our personal and professional lives can at times be like oil and water, the WTA is an emulsifier that allows the two to interact and make them richer and more than the sum of their parts. Think WTA as hollandaise for our eggs benedict.

OK, I am in the home stretch, so stay with me. I hope I did not have to twist your arm too hard to see that the WTA offers a meeting that is in perfect balance and harmony. While I am not saying that by participating in the WTA, you will achieve enlightenment, although hitting a great powder run through the trees on a blue bird day with your kids and other WTA colleagues sure comes close. However, in some ways, I believe we came to this “conclusion” because we need the WTA and what it represents in our lives. There is hardly a person that I have brought to this meeting who has not wanted to return and become a member. Another unique family feature of the WTA is the recognition of what the past presidents bring to the group. The past presidents, of whom there are 16 in the audience, are like the elders of our tribe. They provide institutional memory. I would be remiss not to recognize their invaluable and guidance and importance to our fellowship of the snow. However, like all organisms and organizations, failure to adapt may be a recipe for decline, and I wonder if we are
approaching a bit of a crossroad. On a positive side, we heard three of the next generation of WTA’ers presenting their work during this year’s meeting. This clearly demonstrates our organization’s health. On the other hand, each year, the meeting is getting larger. Thankfully, with the exception of one location, it has not and probably will not prevent us from going to any venue we choose. More importantly, it has continued to retain the informality and fellowship that I hope I have convinced you is the hallmark of the WTA. In Fitzgerald’s The Great Gatsby, Daisy Buchanan talking to Nick Carraway states that she “prefers a large party to a smaller one as she could disappear easier.” I never want anyone coming to our meeting to disappear. I have had some informal conversations with some of our newer members and the generation coming up from behind. While they universally love the meeting, some may not feel as connected as others. I do not think that it is because I am just a nostalgic old fart, but if this is really so, we need to face this issue going forward. We need to continue to be the inclusive and welcoming organization I know we are. Senior and established members need to reach out to new members and guests. I can distinctly remember Debbie and I walking into the welcome reception right here in Steamboat in 1992 with Jason, age four and a half years, and Andrew, who was almost 2 years, being personally greeted and made feel welcome by President Peter Mucha. To facilitate this feeling of inclusion, I believe the organization needs to do everything in our power to retain and foster the family presence at the meeting.

To our younger and future members, you need to see how important this is. Money, school pressure (now beginning in elementary school), and pressure from one’s departments (what do you mean you are going to a meeting for a week!) force you to make choices. You begin to think, “Maybe, I will only come for 2 days. No I won’t bring the spouse and children.” I can only say “Do not do it!” It will be worth it so many times over. In addition to skiing hundreds of miles, during our WTA adventures with Jason and Andrew growing up, we snowmobiled with the Shackfords and Vanes through Yellowstone, dog Sledded to a yurt, fed elk, and so much more. The journals that Debbie made them keep during elementary school are family treasures, although they mostly seemed to say in one way or the other, I was awesome and I skied fast! Just skiing with the kids after ski school and watching them kick Debbie’s and my butt were the best part of being at the WTA. Yes, it can be costly, and yes, maybe we did not take another “just us” family vacation some other time during the year, and yes, it is more difficult with two career couples, but similar to that MasterCard commercial, the memories will be priceless. It is also how families connect with each other and be part of this organization. Similar to life at home, it is through your children how you really meet colleagues of your “generation” from across the country. Running into each other when you are picking up the kids at ski school or going to the hot tub. It is how spouses and significant others find each other. It is how you find people to go out to dinner with who would not mind if your kids have a meltdown because tomorrow night it will be their turn.

Like with most worthwhile relationships, the involvement with the WTA whether you have a partner and children must be nurtured and savored. It requires effort and commitment, but one that will be rewarded many times over. This is another “half the battle is just showing up” moment. This is what makes lifelong friendships that will sustain you for the rest of your professional lives. It is also amazing that it can occur at this time of life. The saying, “Friends help you move, good friends help you move bodies, and lifelong friends bring their own shovels and are in the cell next to you saying, ‘That was awesome, I definitely would do that again.’” While most of the latter two groups often began in secondary school or college, the WTA allows that kind of friendship to occur well past adolescence. Maybe, the WTA prolongs adolescence? I know more about the families and children of many WTA members than I do of my colleagues back home (and I have been there 25 years!). It is that kind of friendship that allowed Mark and Marie Louise Metzdroff to take Andrew into their home and their hearts. It now has Andrew and their son Alex living together with De and Jerry Jurkovich and the rest of the Denver WTA family taking over any needed parental roles. It is Andrew feeling comfortable enough to e-mail Tom Thomas about two friends with knee injuries.

I hope I have convinced that our meeting has all of the aspects necessary to be the ideal model of advanced professional education. The components—science, nature, skiing, and family—and the structure of the WTA are balanced in perfect harmony. The WTA is possibly a true path on your way to achieve enlightenment or at least tenure. In my own practice and group, I have tried to instill the ideas and concepts of dedicated time off and time for creative scientific thought. Turn your e-mail and phone off when you are working on something important. I even hold some of my resident laboratory meetings on my boat. I strongly recommend that you embrace these concepts in the non-WTA part of your professional life. More importantly, I hope I have convinced you that the WTA is more than a professional trauma organization. We are unique, we are family, and we are truly a fellowship of the snow. Thank you for listening.

DISCLOSURE
The author declares no conflict of interest.

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