



Power Training. Powerful Results!

PEAKS COACHING GROUP

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Zen and the art of bicycle racing?

In order to learn the true nature of something, you have to remove all the extraneous layers that obfuscate that simple raw truth. You have to peel back the layers of deception, peel back the layers of the frivolousness, peel back the layers of the onion to finally get to the core. The raw core. That stinky raw core that is inside of every 'thing' and every 'one'. In the act of exposing this true nature, it allows you to see for the first time what exactly this 'thing' really is comprised of in it's naked, layerless, exposed truth. When exposing the truth, you learn more about this 'thing', your knowledge of it grows and you discover new truths. In this discovery you get a unique opportunity to understand it more completely and possibly use this knowledge to your advantage. What am I talking about here? Just a simple question.

What is the sport of bicycle racing really?

When you take away all the fancy carbon fiber equipment, all the aero wheels and skin suits, when you strip the sport of cycling down to the raw nature of the sport. What exactly is this sport about anyway? When you peel away the hard layers of training, when you pull back the armor of every racer, when you expose the raw truth, you are left with one question. What the hell is this sport really about? Don't confuse this question with the question of why we do the sport, that's going to be in another article.. But, for now, let's first examine this sport in it's raw, naked, exposed truth. The core. I want to know what's at the core. That stinky pit of a core. What the hell is it? Is it really racing your bike? Is it really a sport just about racing your bike and competing against others to see who can pedal harder, faster? Is that it? Is it about the 'gear'? Consuming and just another way to consume stuff and materialism? Buying cool stuff and making your bike the lightest in the neighborhood? For you, is it "keeping up with the Joneses' " ? Or is it about comradery and being a part of a social group? Is bicycle racing just another modern way for us "cave men and women" to establish and belong in our clan?

I would argue that it's these things and more for each of us. Each of us has an answer to what the sport that we love is really about. And each of those answers are right. However, I am going to propose that when you peel back the layers of bicycle racing and look at that stinky core, you will find that this sport is really a metaphor for life. Pacing your life. I would argue that this sport is really a sport of pacing. It's a sport of pacing and we just happen to all enjoy doing it on a bicycle. It's pacing our effort over the entire race. It's pacing our effort in the last 300meters to the finish line. It's pacing our food and fluid intake to make sure we don't bloat our stomachs, but also get in just enough to keep our energy levels high to finish strong. It's pacing our efforts over a 21 day stage race, and holding back in the first 8 stages so that when the mountains come we'll have more 'in the tank' than our competition. When you break it down and look at the raw nature of bicycle racing, it's really all about pacing. That's it. No matter how fit you are, what category you race or what speed you average on that century ride, it's still an internal battle that you face. You have to pace yourself in every way and in every bicycle ride or race that you do.

If you accept my argument that this complicated, multi-dimensional, hyper gear intensive sport is really just a simple competition of who can pace themselves the best, then this might reveal some simple truths that you can take advantage of in order to win your next competitive event of pacing. If you don't accept

this argument, then stop reading now and turn the page, and let the 'fools' continue reading, because you'll beat them anyway.

Some simple truths.

Let's examine pacing your effort in a race or your power output to keep things even more simple. If you have done any competitive cycling, then you know that there is a critical point in every bike race that the race is decided, there is a 10 minute period of time that decides the winners and the pack fillers. If you have paced yourself correctly in the time before this 10 minute critical decision point, then you'll have the effort/energy/wattage to make the 'break'. Let's look at an example of this in a race winner's power file. In the Tour of Shenandoah last year(now, Tour of Virginia), CyclingPeaks Software sponsored a 'Power Preme' on each stage. Each day was different in that the preme was based on a different criteria. One day, it was the best 20 minutes watts per kilogram, another day it was the best 1 minute watts per kilogram number, another was the best 5 seconds, etc. On the 95 mile stage 5 from Lexington to Bedford, Va., the preme was for the rider that finished the highest on the stage, but used the least amount of energy in doing so. As it turned out, the rider that won the stage, Bruno Langolis of the AEG/Toshiba team was not only the winner of the stage, but also used the least amount of energy in his success. Hmmm. What exactly did he do to win the stage and also use the least energy in doing so? Well, let's examine his power file to see if we pull apart the layers of ride and get to the core. The first truth we need to discover is just how much did Bruno pedal during the stage? Did he pedal more than the other riders and that's how he won? Did he pedal the same amount as the rest of the riders in the peloton and just got lucky? Or maybe he pedaled the least of riders in contention for the win and therefore saved the most energy for when it was needed. When we look at the cadence distribution chart for his win, we find that he only pedaled 79% of the stage. A full 21% of the stage or 54 minutes of a 4 hour 30minute race, he was not pedaling. What was he doing? Resting, coasting, relaxing, eating, biding his time. {INSERT FIGURE 1 HERE}

This is consistent with what I have found when examining hundreds of winning road race power files. It's nearly a requirement for 95% of road race wins that the rider that wins usually NOT pedals 15% of the race time or greater. Obviously, if you go in a solo or multi-rider breakaway at the starting gun and you survive to the finish, then this will not be the case, but this is one of the remaining 5% of the wins that this rule does not apply too. So, in the sport of pacing oneself on a bicycle, how much time you do not pedal is important to conserving energy, so that when you that critical 10 minutes comes, you are ready to effective use that energy 'reserve'. The second truth that we can learn from this one race file, is that in most road races, the winning effort comes in the last 1/3 of the race. This is no big secret and any winning racer will tell you that the real race is in the last third. This is the case in this stage as well and Bruno is not afraid to put out a serious effort in the last hour and half. When we examine this last hour and half of racing, we see the highest wattage output for the race. These last 30 miles were the critical miles that the breakaway was created and then established it's lead over the rest of the peloton. During this time, Bruno was averaged a normalized power 318watts, which very close to his functional threshold power of 330 watts. So, the real key to this truth is not in knowing that the winning move comes in the last 1/3 of the stage, but in knowing that when the time comes to spend your reserve of energy, you spend it! So, it's not only important to be efficient in your pacing of your finite supply of energy, but you also have to be willing to spend that energy effectively when it's needed and not worry about efficiency. {INSERT FIGURE 2}

The third and final truth that is revealed in this race analysis appears as we look even closer at the last 13 minutes of the stage. During this time, there were many attacks by the riders in the breakaway. Bruno was smart in that while he followed the attacks and even counterattacked a couple of times, but he also consciously rested during these intense final moments. If you examine the power file, it shows that in the last 13 minutes, he had to do fifteen accelerations over his threshold ranging from 5 seconds to 30 seconds long. That's a lot of 'matches' that are getting burned in the last 5 miles. And certainly as a racer, you have to respond to these attacks and not worry about pacing yourself too much, but in the times between attacks, you need to rest, rest, rest as much as you can! In those last 13 minutes, Bruno did NOT

pedal for 1:10 combined time. Now, that doesn't sound like much, but these 'micro rest periods', could have been what gave him the extra punch to win the stage with a 36 second, 739watt average final sprint ! So, this third truth that we have discovered is related to the first two. It's important even when the finish is getting close to give yourself every opportunity to recover between attacks and counterattacks. {INSERT FIGURE 3}

In this sport of pacing, this is just one example of how important it is to pace your efforts, your energy, your attacks and everything that you do on the day of the race. Make sure that you also understand that while conserving energy is important, it's only one part of a successful racer. A successful racer also has to be willing to be effective in their power output. When you have to go over a 10 minute climb in the stage and in order to stay at the front of the field, you have to get out of the saddle and respond to attack after attack, this is not about being efficient! It's about effectively taking the energy you have and pushing hard on those pedals and staying with the leaders. There will be wasted energy, but if you fail to act or react, there will be no chance to use your energy 'reserve' for the win. Keeping all the components of bicycle racing in your mind will be key to more and greater success. Remembering that pacing is the center stinking core of the sport will help you to better define your race winning strategy, whether that's a match sprint at the track or a Grand Tour win.

Hunter Allen is a USA Cycling Level 1 coach and former Professional Cyclist. He is the co-author of "Training and Racing with a Power Meter, co-developer of CyclingPeaks Software, and is the CEO and Founder of the Peaks Coaching Group. He has coached over 500 athletes ranging from professionals to fitness enthusiasts, and has helped many athletes achieve dreams and goals that they didn't think were possible. He specializes in coaching cyclists with wattage meters and is on the forefront coaching with cycling's newest tool.

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