Bike Racing: General Strategies

Adam Mills, MSEd

- Coaching full time since 2008
- Masters in Exercise Science, University of Kansas
- USA Cycling Level 1 Coach
- Training Peaks Level 2 Coach
- Clients have earned 24 national championships in 11 disciplines
- Director/ Assistant Director Sportif: UCI CT: Elevate Pro Cycling 2016-17
- Manager: Mercy Cycling/ Think Finance/ Elevate Domestic Elite 2009-2015

Taylor Warren, BSEd

- Bachelors in Exercise Science, Colorado State University
- USA Cycling Level 1 Coach
- Training Peaks Level 2 Coach
- Pro racer on CS Velo

- Based Around the Event
- Based on Personnel Available
- Team and Individual Goals

Event

- Discipline- Road, Track, Criterium
 - Each has nuances that can favor different strategies
- Know the history of the event
 - How have the last ~5 editions of the race played out
- Know the terrain or strategic features
 - Climbs, descents, pinch points, corners
- Weather and how it will/ could affect the race

- Based on Personnel Available
 - Does your team have riders who can accomplish the team goal?
 - Do you need to choose a new goal?
 - What are strengths and weaknesses of your riders?

- Team and Individual Goals
 - What is the Goal?
 - Win outright
 - Most Aggressive, Lap Leader
 - Points
 - Team classification
 - Announcer shout out
 - Primes, breakaways (regardless of success)

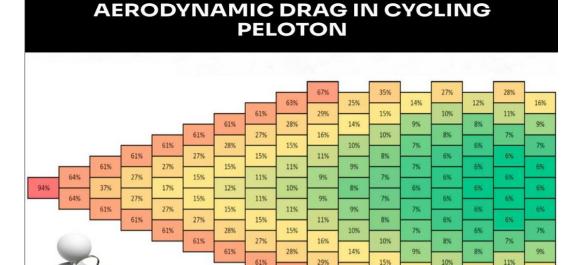
- Team and Individual Goals
 - How to create scenarios to maximize odds of success.
 - Good matchups
 - Probability of success
- Breakaway
- Climbing
- Crosswinds
- Field Sprints
- Time bonuses
- Primes

All require different approaches and variations depending on riders

- The Physics of Strategy
 - Drafting
 - Positioning

Reference: Blocken et al. 2018

 Drafting is the basis of ALL tactics in road racing and criteriums



The percentages values are aerodynamic drags as a percentage of the drag of an isolated cyclist riding at the same speed.

16%

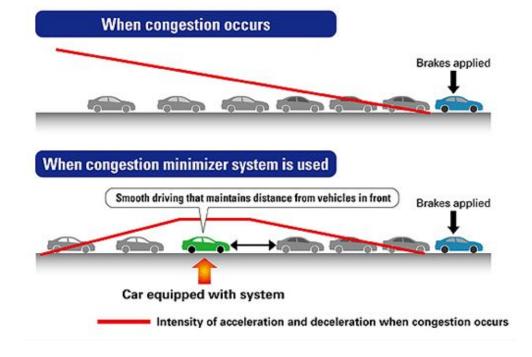
TEAM TIME TRIAL DRAG

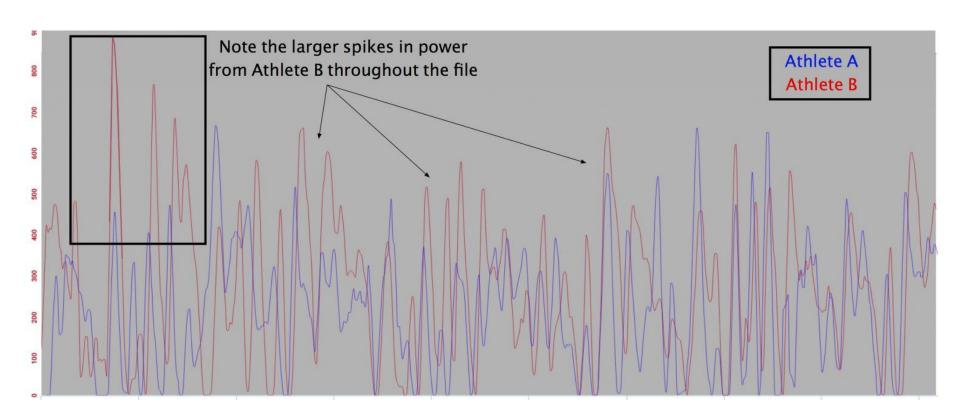
Aerodynamic resistance (drag) in drafting cycling groups. Percentage indicates drag compared to cyclist alone.

100%	AVG: 100%
3	
97.6% 64.1%	AVG: 80.9%
3. 3.	
97.2% 61.7% 51.7%	AVG: 70.2%
36 36 36	
97.1% 61.2% 49.5% 45.9%	AVG: 63.4%
36-36-36-	
97.1% 61.1% 49.1% 43.9% 43.6%	AVG: 58.9%
Bo Bo Bo Bo	
97.1% 61.0% 48.9% 43.4% 41.7% 42.5%	AVG: 55.8%
Bo Bo Bo Bo Bo	
97.0% 61.0% 48.8% 43.2% 41.2% 40.7% 41.9%	AVG: 53.4%
The The The The The The	
97.0% 61.0% 48.8% 43.2% 41.0% 40.2% 40.1% 41.5%	AVG: 51.6%
Bo Bo Bo Bo Bo Bo	
97.0% 61.0% 48.8% 43.2% 41.0% 40.1% 39.7% 39.8% 41.2%	AVG: 50.2%
Bo Bo Bo Bo Bo Bo Bo Bo	

The Concertina Effect:

Image of congestion prevention effect with the system





Teammates "In Play" and Teammates "Out of Play"

- In Play: forward enough to cover moves, typically in the first 20 spots
- Out of play: Sitting in the field, staying sheltered and conserving energy

- Communication around tactics
 - Pre-race communication
 - Communication during the race
 - Communication after the race

Harsh Truths of Amateur Racing

- Most plans fail because teammates act selfishly at crucial moments
- Complicated plans are just that
- Keep tactics as simple as possible
- "The plan" never works as drawn up
- Adapt your "plan" to meet the demands of the race
- Teammates must be in position to win a race before they can help each other

Harsh Truths of Amateur Racing

- Team tactics: In essence, everyone covers everything until the strongest guys establish a break
- There is no "setting tempo"
- There are no team leaders
- Do not designate team leaders until the selection has occurred in the race
- Protected rider: "team formation" is not a reality, it is the responsibility of the protected rider to stay sheltered

Pre-race Communication

- Establish defined and realistic goals
- Establish expectations for each rider
- Who is riding well, who is sick etc.
- Typical plans for road and criterium races?

Communication During the Race

- How does everyone feel?
- Upcoming strategic points to be aware of
- Revision of the "plan"
- Privacy of in-race talk

Communication After the Race

- Immediately following the race
- Everyone talks about the race, everyone listens
- Individual and as a team
 - -What was done well, what can be improved
 - Winners and learners
- Discuss how to improve for next time

Questions???