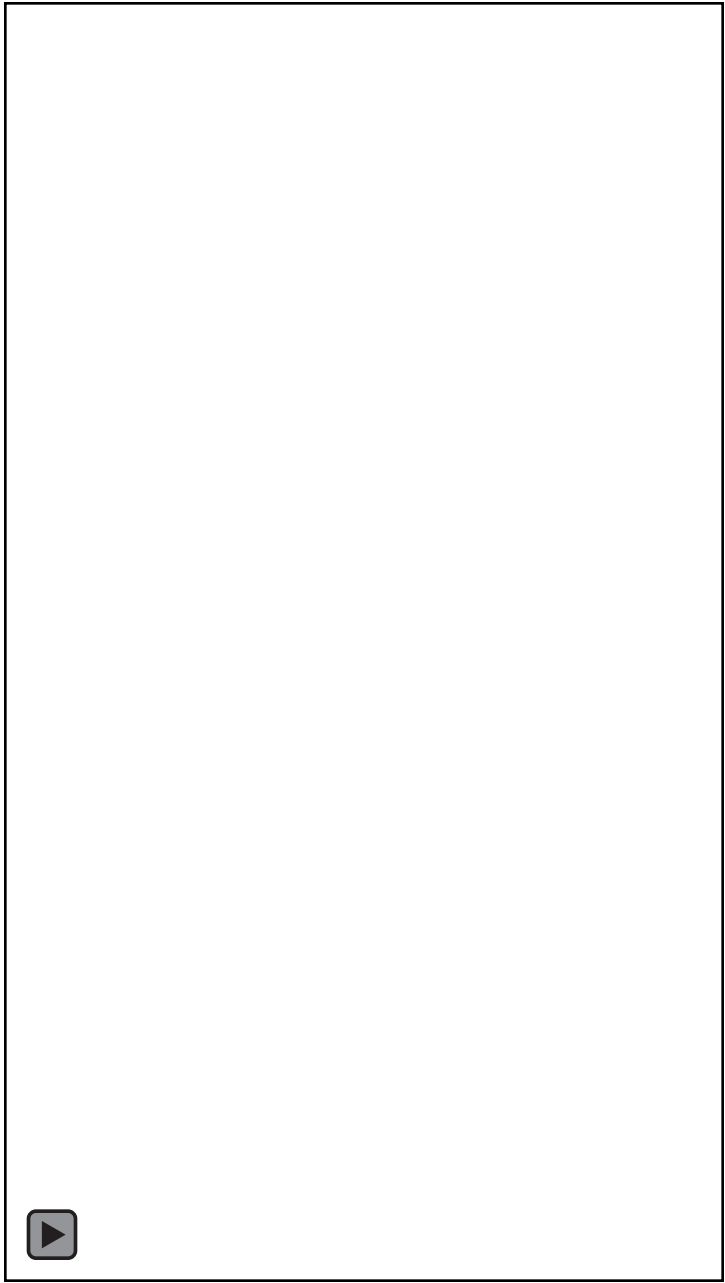


Outliers, Talent Codes and Myths: Identifying Sporting Talent

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Toronto, Canada**



‘Talent’ is the most important concept
in high performance sport today.

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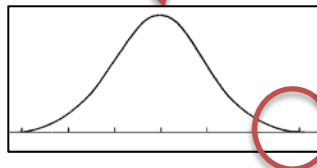
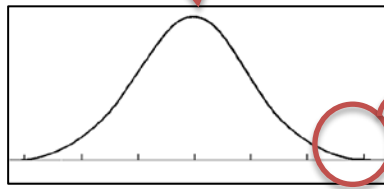
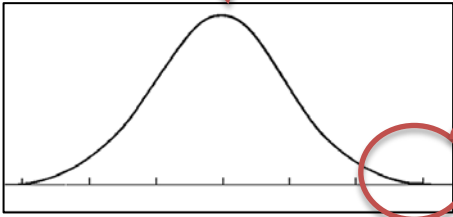
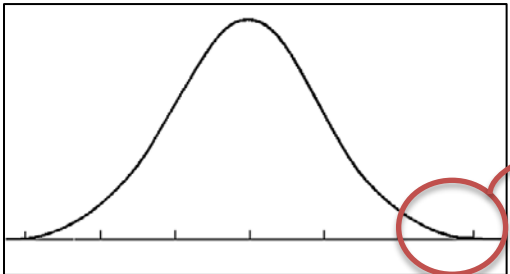
SEARCH FOR AMERICA'S SEXIEST PEOPLE

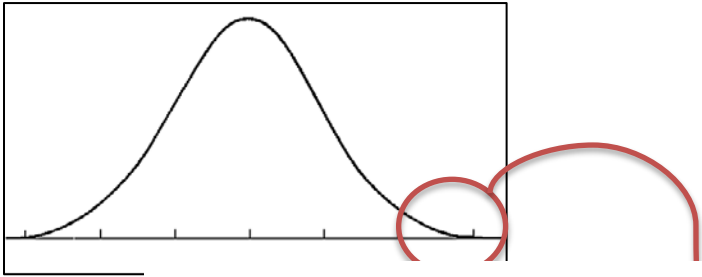
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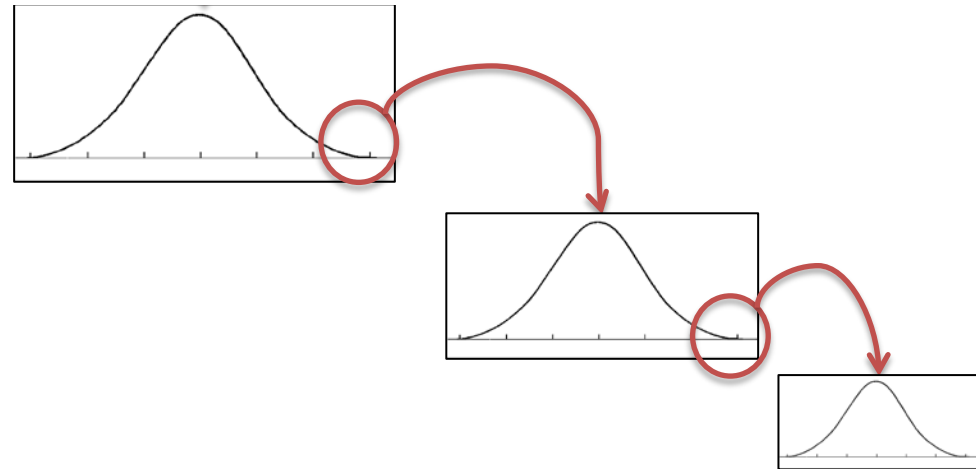
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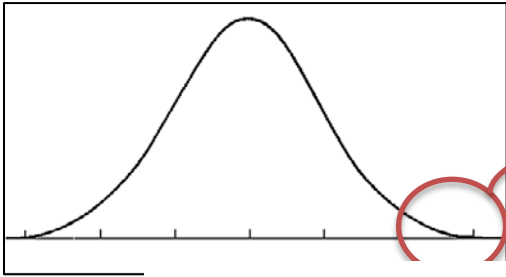
HAIRBATTLE
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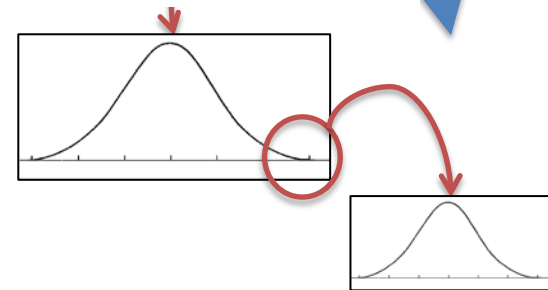
A quality (or qualities) identified at one point in time that can be used to predict success at a future point in time.

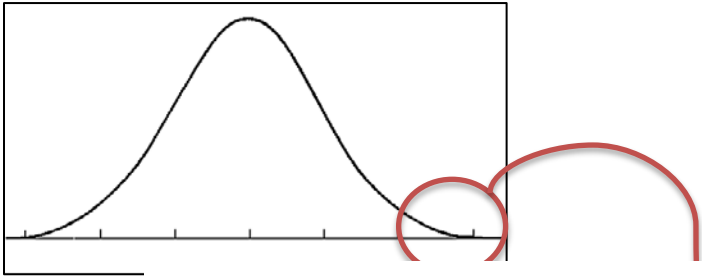




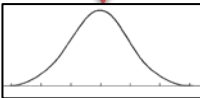
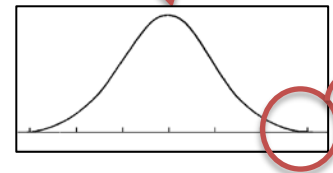
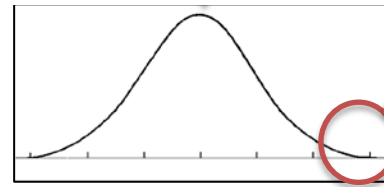
TALENT SELECTION

The process of selecting athletes with this quality is termed *talent selection*.





The process of helping these athletes train, practice and succeed is termed *talent development*.



TALENT DEVELOPMENT

4-6 million youth

High school - ~ 18,000 schools = ~360,000 players

DIV 1 - 346 teams =
~4500 players

Why does this matter?

Conclusion: Talent identification and selection has consequences.

NBA draft - 2 rounds ~ 50
college players

15-20 go on to NBA

What is talent?

- Purpose of TID – allows an efficient use of resources in an environment where resources are limited

What is talent?

3 approaches

1. Talent exists and is easily predicted using stable indicators (genetic/nature approach)

ACE, ACTN3, COL5A1, etc.

"I am willing to guarantee that you will not read a more important and useful book in 2009, or any other year."

—TOM PETERS, coauthor of *In Search of Excellence*

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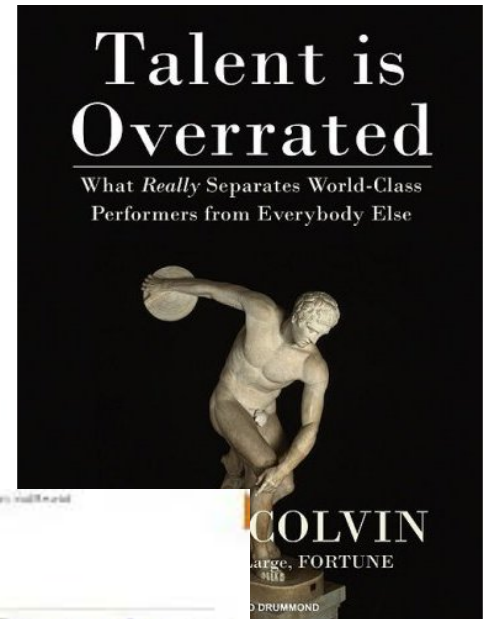
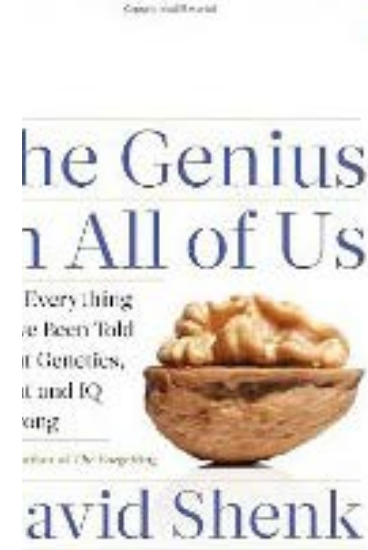
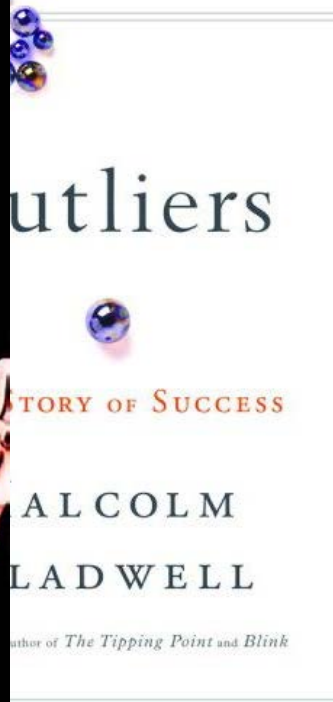
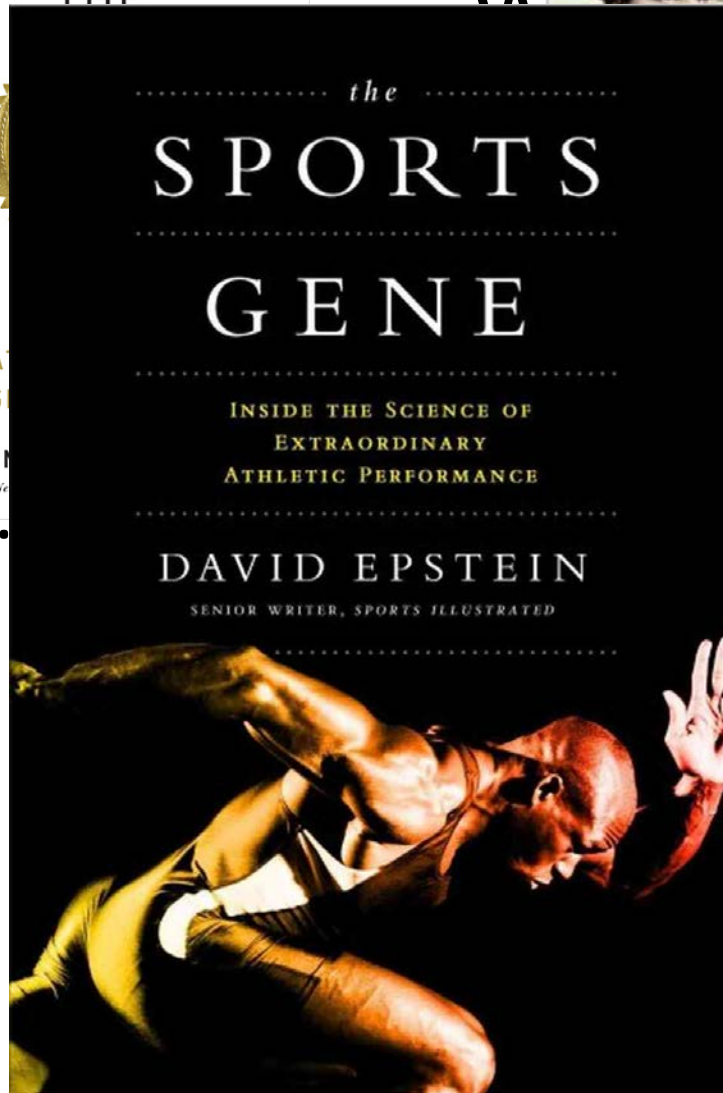
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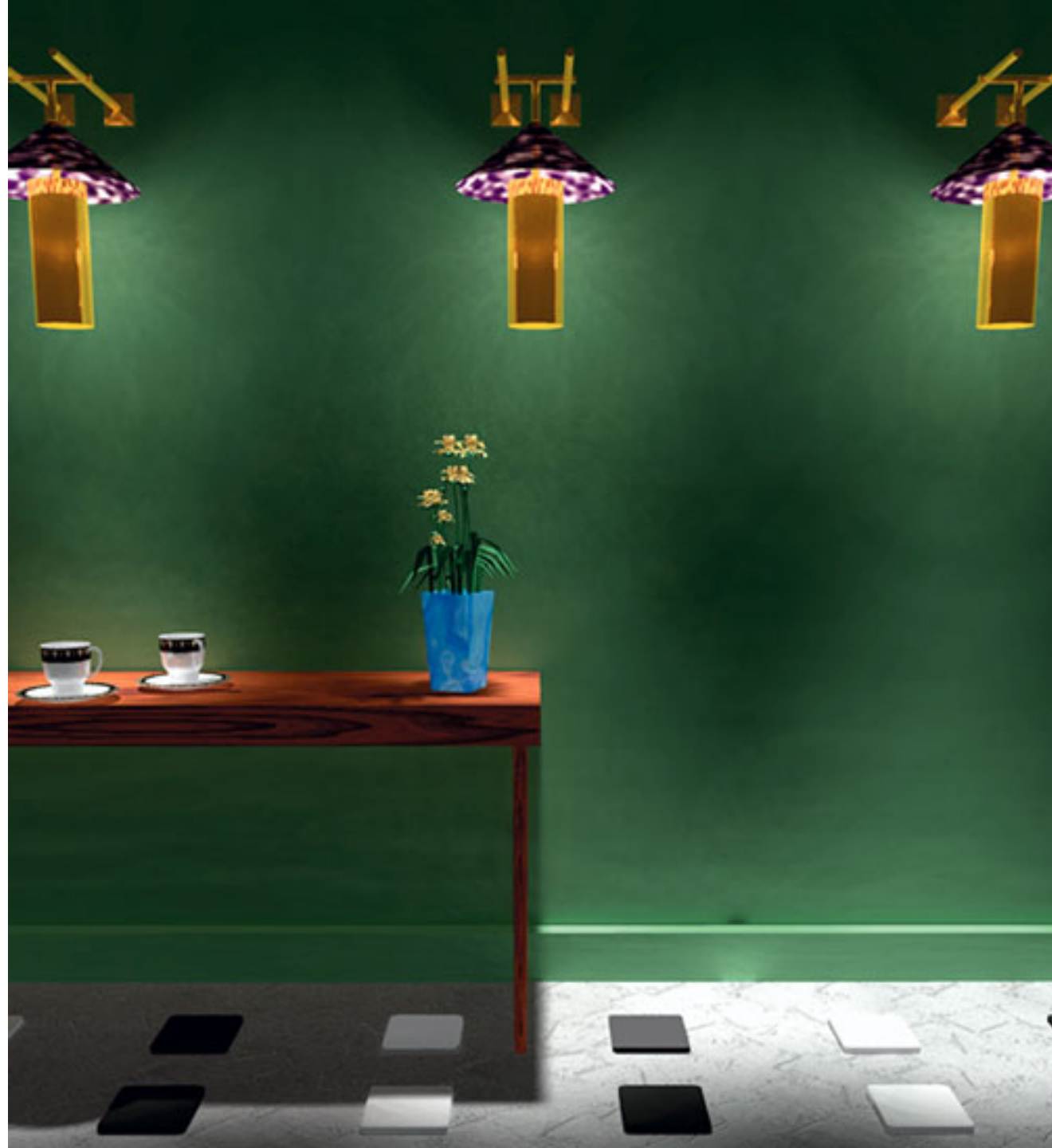
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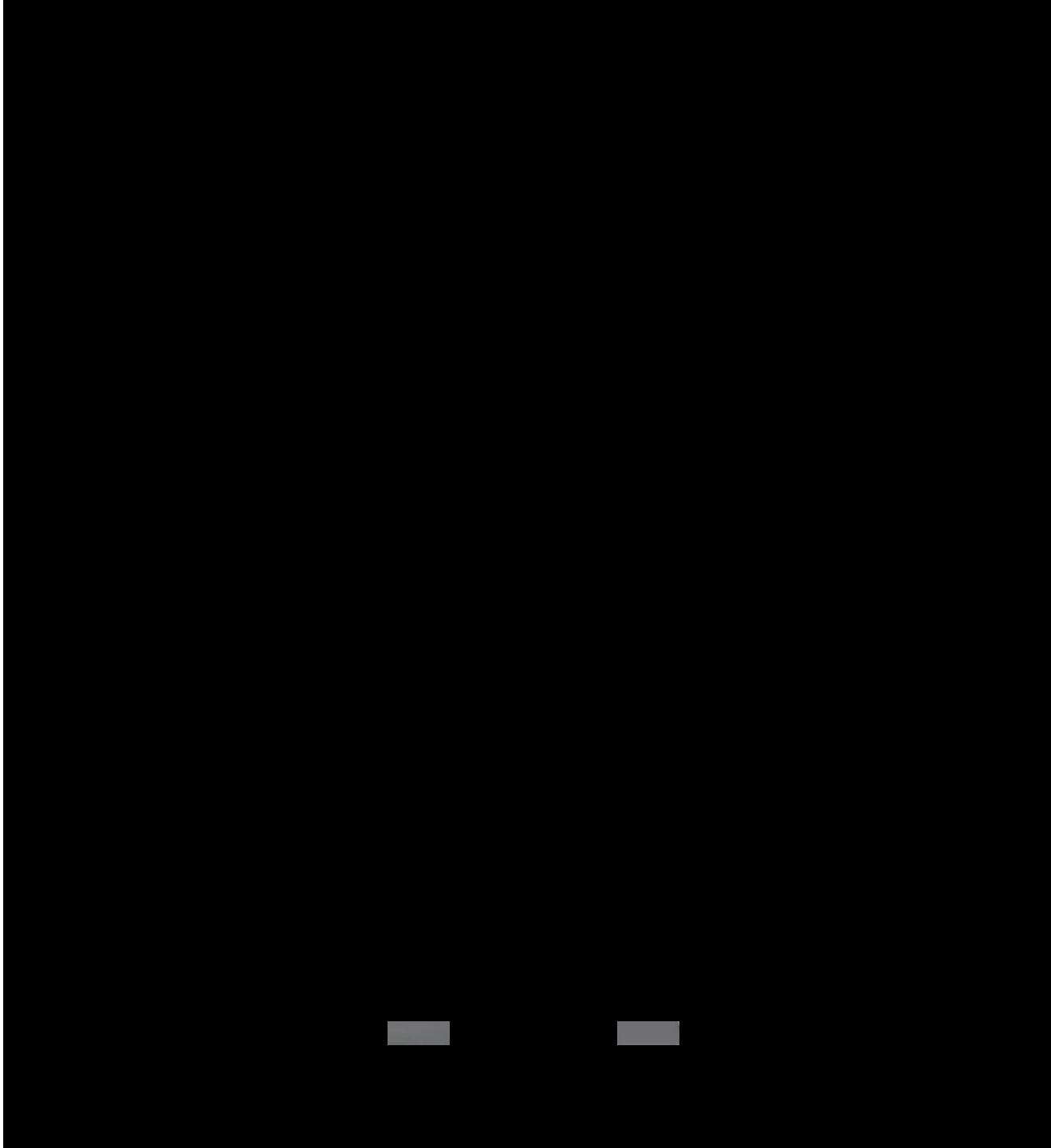


Is
ing

What is talent and why do we care?

Conclusion: Forget the nature vs nurture debate. It's been settled. We are an indivisible combination of both factors.





How you conceptualize 'talent' is important.

Mindset – how do you explain your athletes' skill/performance?

1. Inherent ability (fixed)
2. Acquired skill (growth)

How do you explain athletic abilities/skills?

1. Inherent ability (fixed)

Seeing your abilities as fixed can lead to feelings of helplessness when they don't go your way. This negatively affects learning and future performance.

- Make more negative judgments and feel more pressure.

How do you explain athletic abilities/skills?

Conclusion: The way coaches interact with athletes can influence the way they think about their own skills.

How much do we
know about TID?

Systematic Review

(Johnson, Wattie, Schorer & Baker, 2017)

- Search terms “talent”, “expertise”, “giftedness”, AND “sport”
- Web of Science, Sport Discus
- Timeframe 1990-2015
- 1481 articles
- Inclusion criteria: skilled samples, longitudinal designs, peer-reviewed article
- N= 20 studies in final analysis

Systematic Review

(Johnson, Wattie, Schorer & Baker, 2017)

Conclusion: Coaches have very little 'strong evidence' for making talent selection decisions.

Prospective Studies of Talent ID?

Koz, Fraser-Thomas & Baker (2011)

Scan. J of Sci Med Sport

- Considered accuracy of professional sports drafts (NHL, NFL, NBA and MLB) in predicting future performance
- Results = very poor accuracy (ranging from 3% to 17% variance accounted for in MLB and NBA respectively)

Prospective Studies of Talent ID?

Schorer, Rienhoff, Fischer & Baker (2017)

- Considered accuracy of coaching talent selections by tracking where selected and rejected players end up.
- N = 58 German handball players measured in 2001 at age 13-14
- Assessed by national and regional coaches
- 10 yrs later - 14 were National team members

Prospective Studies of Talent ID?

Conclusion: Decisions we make about talent are generally not very good... or at least not as good as we think.

Why are we so poor at identifying talent?

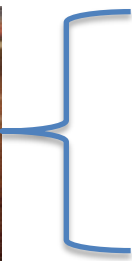
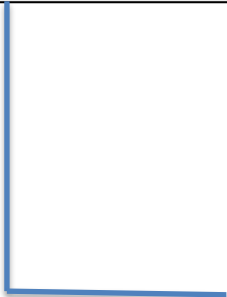
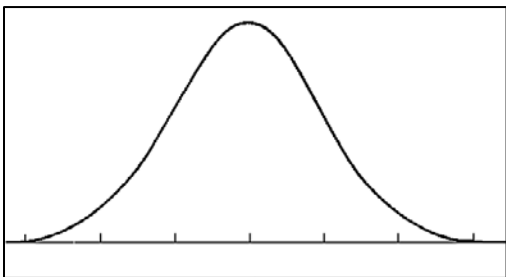
1. Lack of appropriate talent models

Talent isn't one thing:

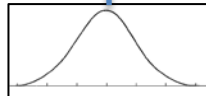
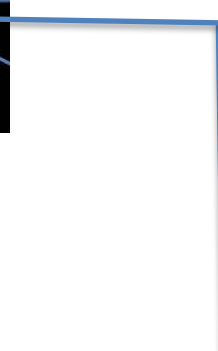
- Physical
- Mental
- Psychological
- Cognitive-Perceptual

Why are we so poor at identifying talent?

1. Lack of appropriate talent models
2. Absence of early indicators

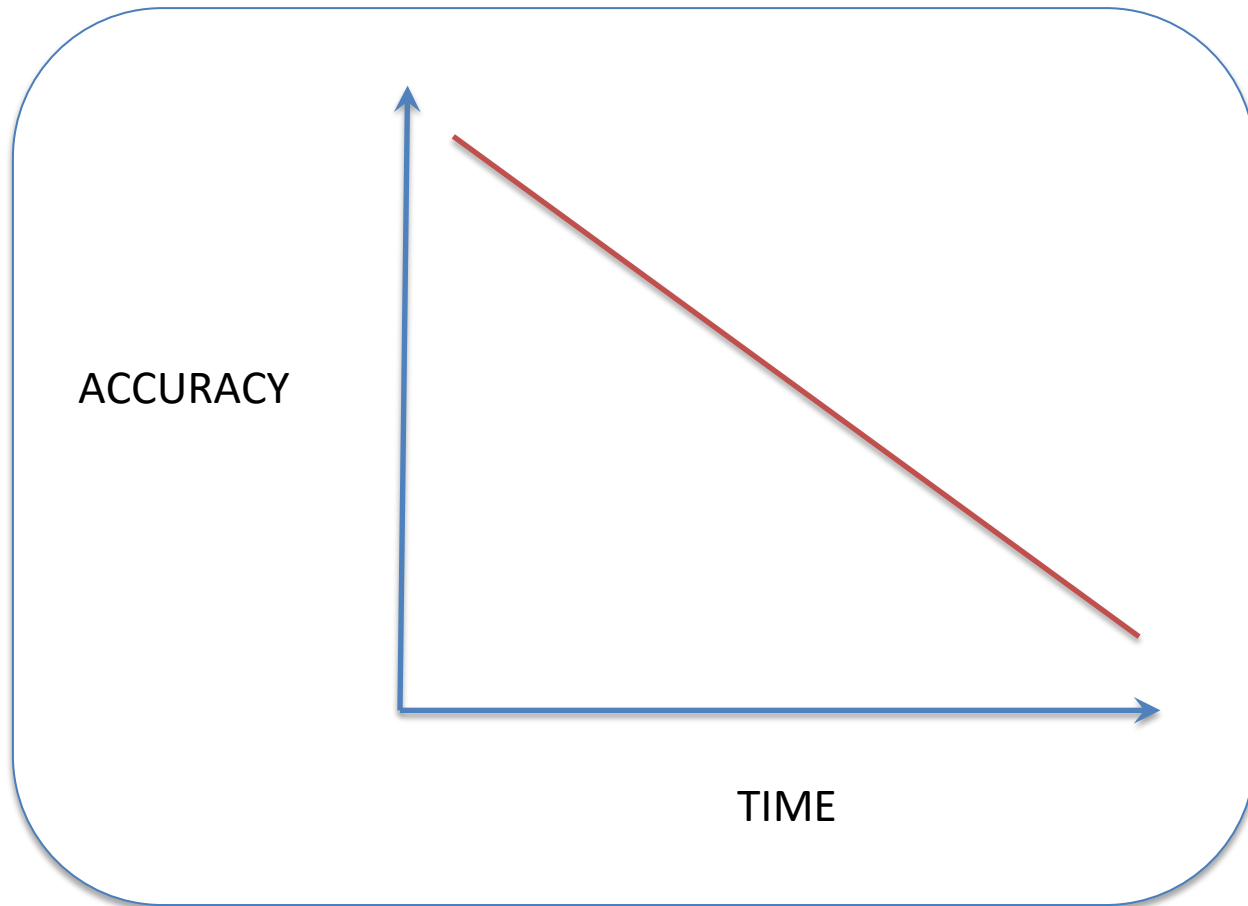


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Why are we so poor at identifying talent?

1. Lack of appropriate talent models
2. Absence of early indicators
3. We don't know how talent changes across development



Best



Peak Performance



AGE

Best



Peak Performance

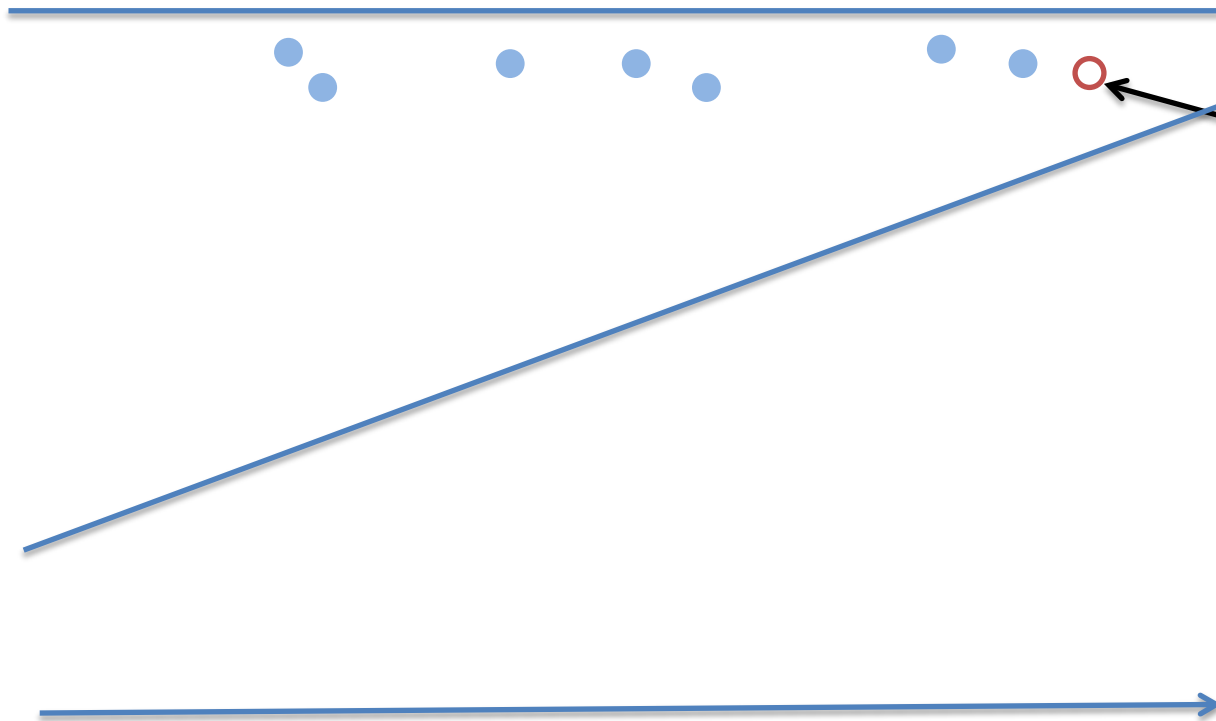
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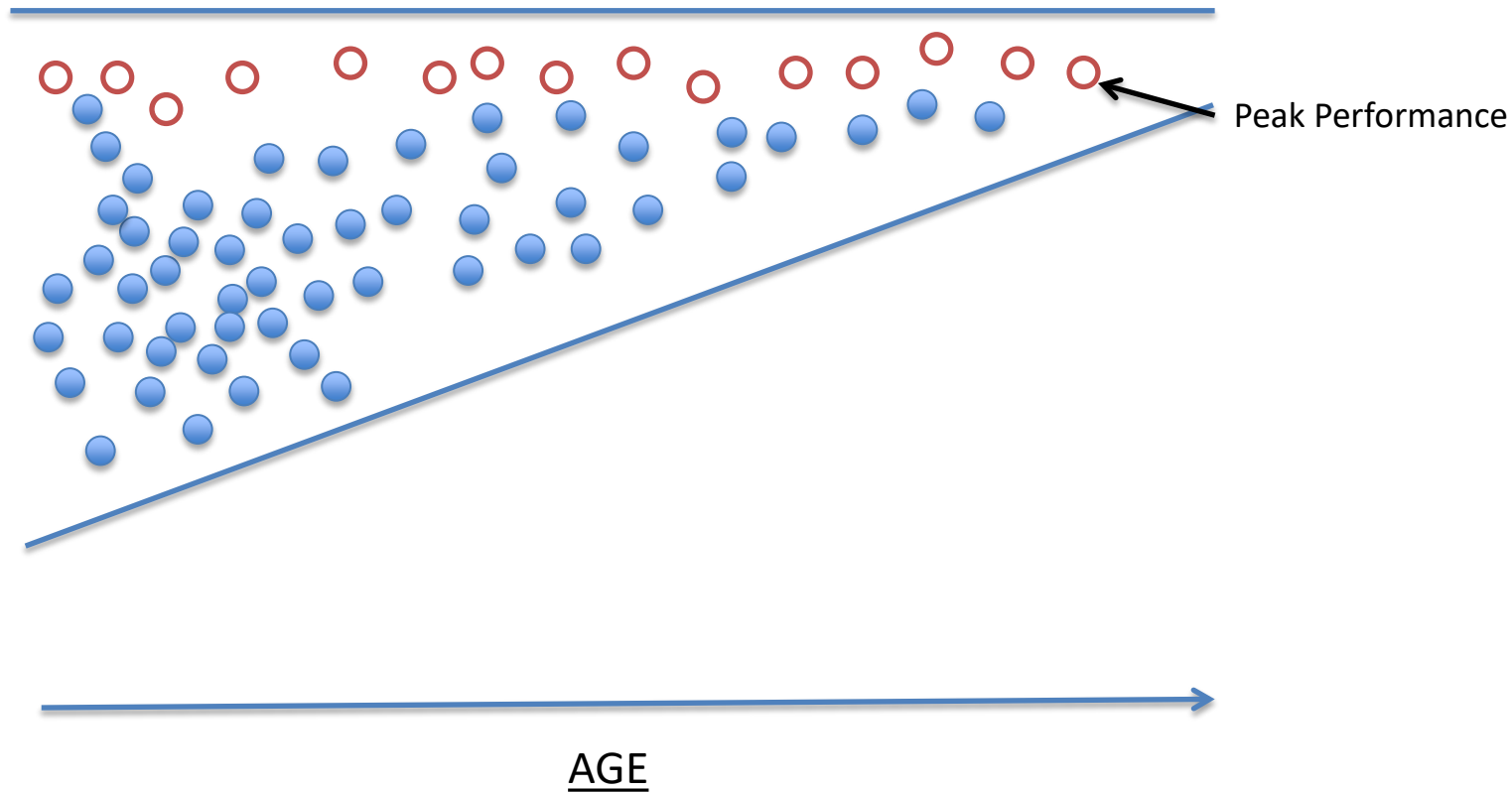
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Peak Performance



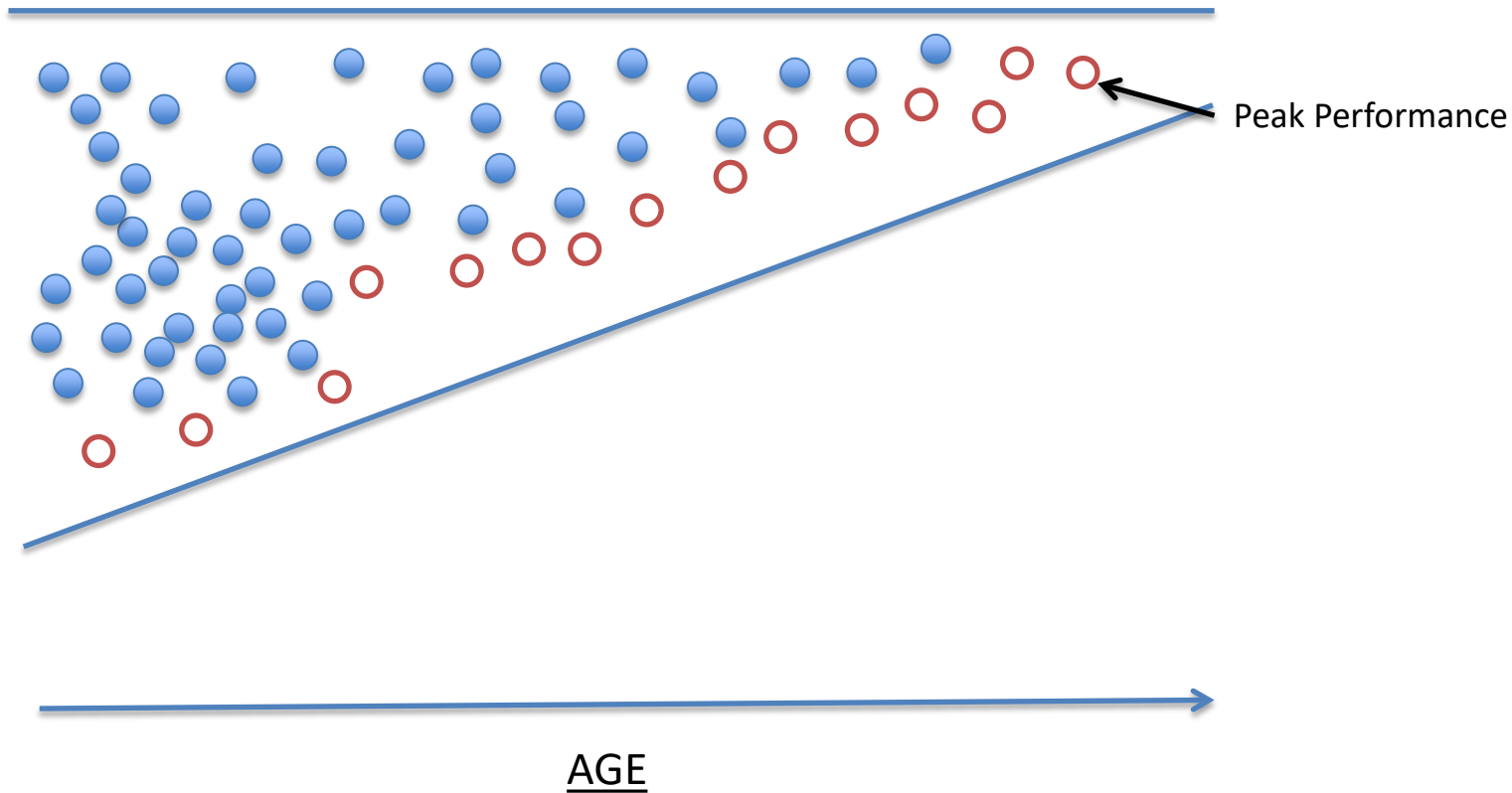
Best

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Best

Worst



Best



Conclusion: Long-term models of athlete development need to capture the 'noise' in the system in addition to top performances. Otherwise, talent may be lost through inefficiency.

Why are we so poor at identifying talent?

1. Lack of appropriate talent models
2. Absence of early indicators
3. We don't know what talent looks like or how it changes across development
4. Current athlete development approaches are biased

How do we improve TID?

More research

- On accuracy of prediction
 - Measured relative to ‘real world’ metrics
- On the development process
 - To understand interaction of TID factors and decisions across development
 - Talent as an emergent quality

Developing an Effective Athlete ID and Selection System

1. What are you going to measure?
 - Physical/Physiological Outcomes



Developing an Effective Athlete ID and Selection System

1. What are you going to measure?

- Physical/Physiological Outcomes
- Psychological Factors: self-regulation, resiliency, mental toughness, anxiety under pressure, etc.

Developing an Effective Athlete ID and Selection System

1. What are you going to measure?

- Physical/Physiological Outcomes
- Psychological Factors: self-regulation, resiliency, mental toughness, anxiety under pressure, etc.

Self-Regulation and Self-Regulated Learning

Relates to taking control of one's own learning and behavior. Involves 3 components

- Metacognition (thinking about thinking)
- Strategic Action (planning, monitoring, evaluating)
- Motivation to Learn

The ability to self-regulate your own learning is related to:

- Better performance in sports
- Higher grades in school

Self-regulated learners are more successful because they have better control of their learning environment.

Developing an Effective Athlete ID and Selection System

1. What are you going to measure?

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Developing an Effective Athlete ID and Selection System

1. What are you going to measure?

- Physical/Physiological Outcomes
- Psychological Factors: self-regulation, resiliency, mental toughness, anxiety under pressure, etc.
- Perceptual Cognitive Factors: decision-making, gaze behaviors (i.e., quiet eye)

Developing an Effective Athlete ID and Selection System

1. What are you going to measure?
2. When is the best time to measure it?
 - RFU position statement
 - “delay measurement and selection until as late as possible, preferably into the post adolescent period”

Developing an Effective Athlete ID and Selection System

1. What are you going to measure?
2. When is the best time to measure it?
3. How are you going to measure it?
 - Cross-sectional vs Longitudinal Approaches
 - Valid and reliable indicators
 - Trackman, Flightscope, Putt Perfection...

Developing an Effective Athlete ID and Selection System

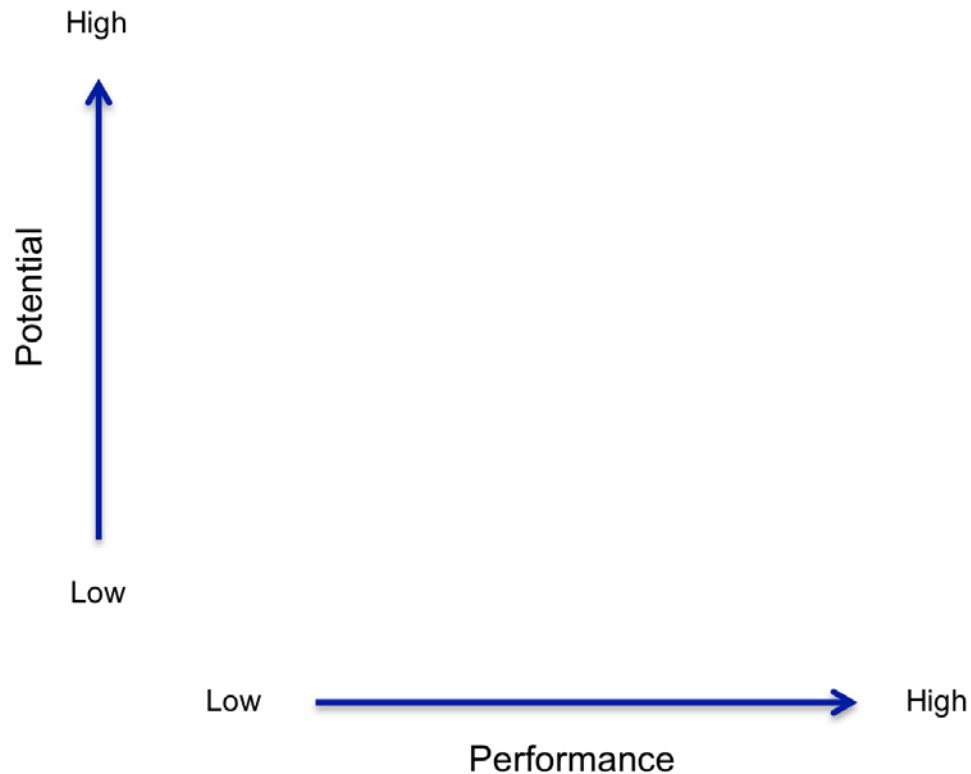
Conclusion: In the short-term use the approach that will get you good data in the most feasible way, but always work toward a longitudinal dataset.

Athlete Selection Decisions

All selection decisions do not hold the same level of risk

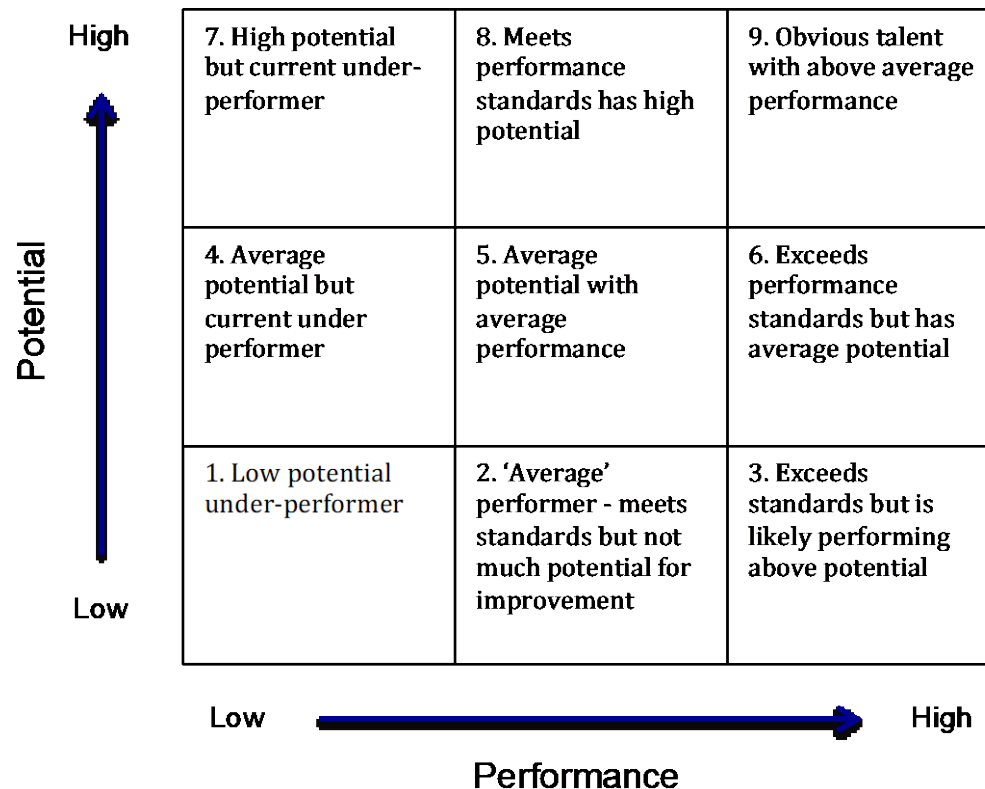
Athlete Selection Decisions

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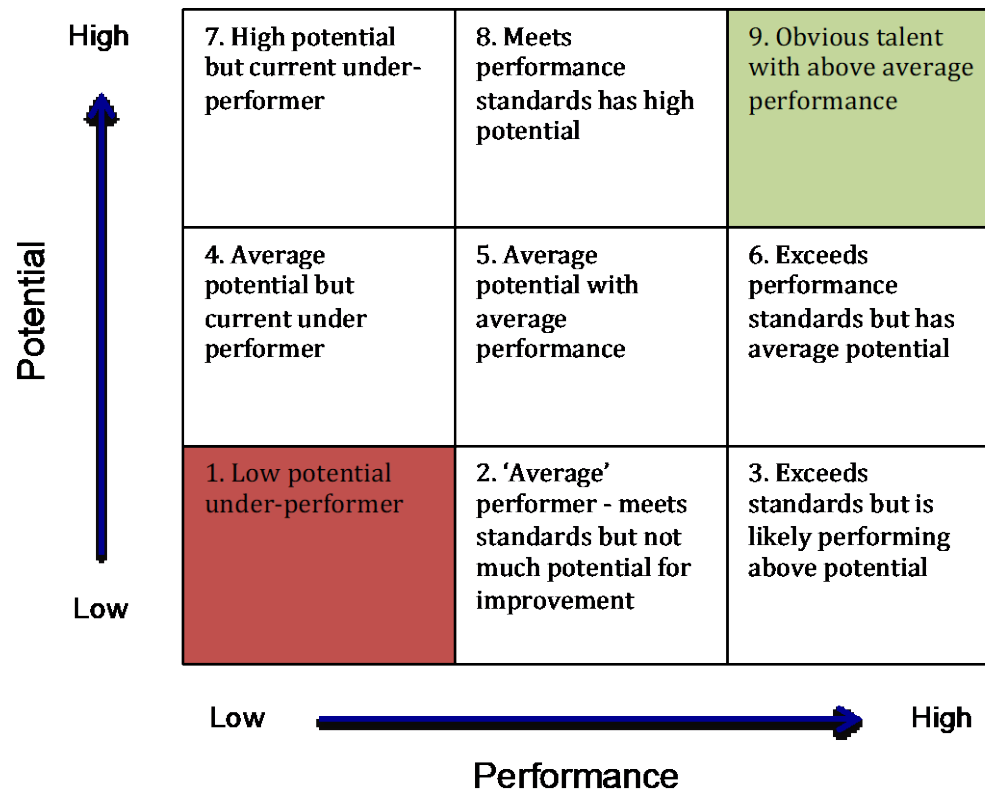
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Athlete Selection Decisions

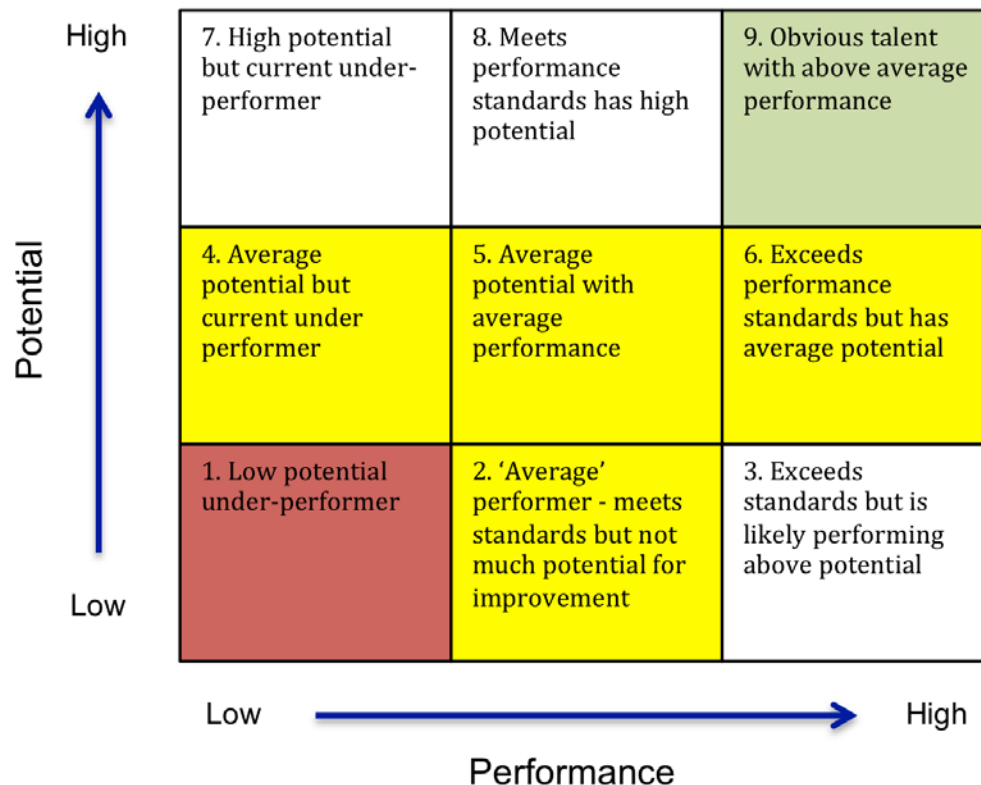
All selection decisions do not hold the same level of risk



Low risk (1 & 9)

Athlete Selection Decisions

All selection decisions do not hold the same level of risk

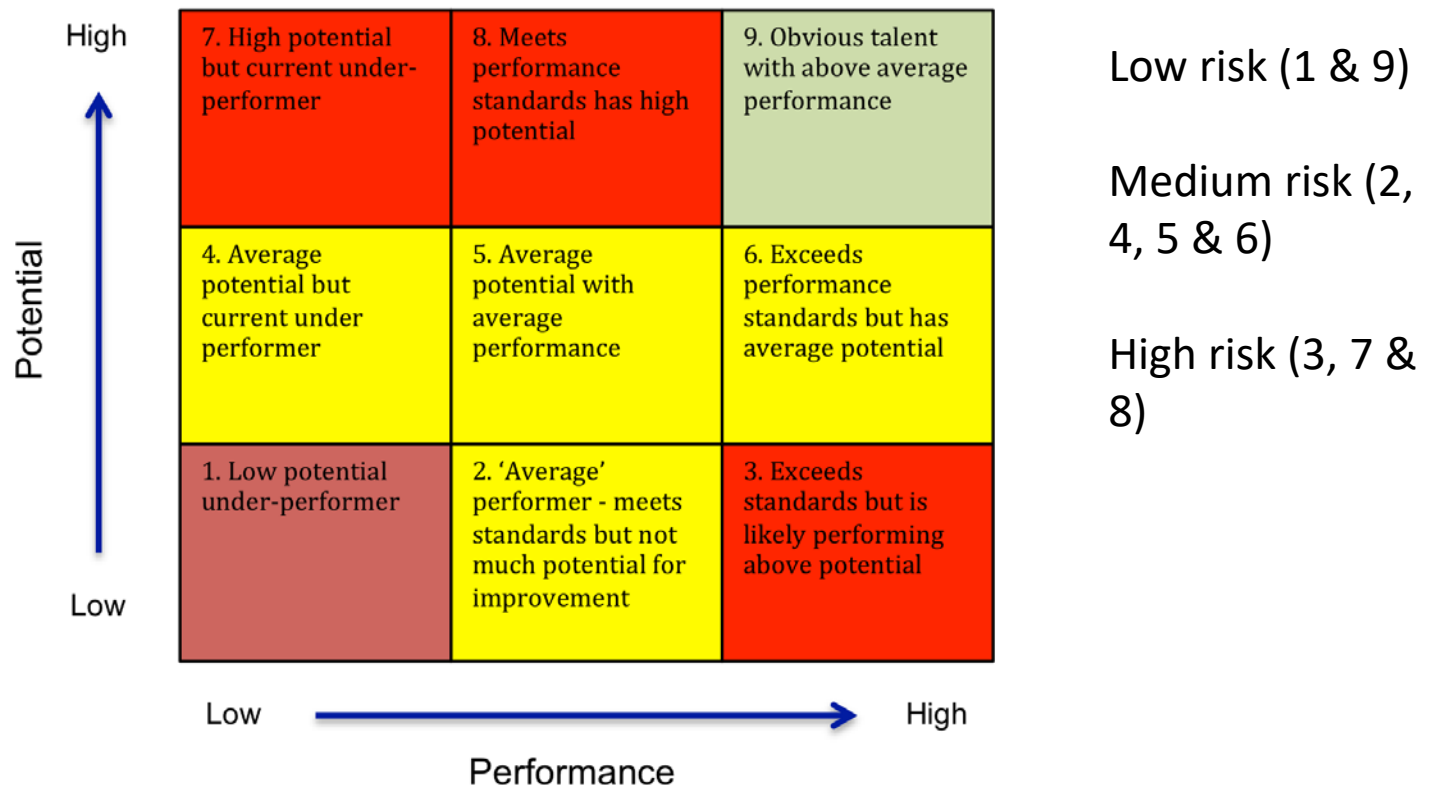


Low risk (1 & 9)

Medium risk (2, 4, 5 & 6)

Athlete Selection Decisions

All selection decisions do not hold the same level of risk



Conclusion: Determine what type of error you're most comfortable with. This will depend on the goals of your program and resources available.

‘Talent’ is the most important concept in high performance sport today.

Systems are still designed with this concept as the foundation

Funding is based on the assumption that talent is real and coaches can/should identify it

This approach has high costs re: early de-selection and dropout

Key Messages

1. Forget about talent

- If it exists, we don't really know how to measure it

2. Your messages about talent may be harmful

- Foster a growth mindset but be realistic

3. Focus on quality of training/practice

- This is where your greatest impact will be

Danke schön!

Questions?

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