Talent Identification and Development in Paralympic Sport

Dr. Joe Baker
Lifespan Health and Performance Lab
York University

What is talent?

What is talent?

- A quality (or qualities) that identified at one point in time can be used to predict success at a future point in time.
- The process of identifying these qualities is ‘talent identification’.
- The process of nurturing these qualities is ‘talent development’.
- For practitioners – accurate TID allows more efficient use of limited resources.

What is talent?

Talent ID is based on assumptions that:

- Talent exists
- Talent can be measured

What is talent?

3 approaches

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

ACE, ACTN3, COL5A1, etc.

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2. Tale ance is

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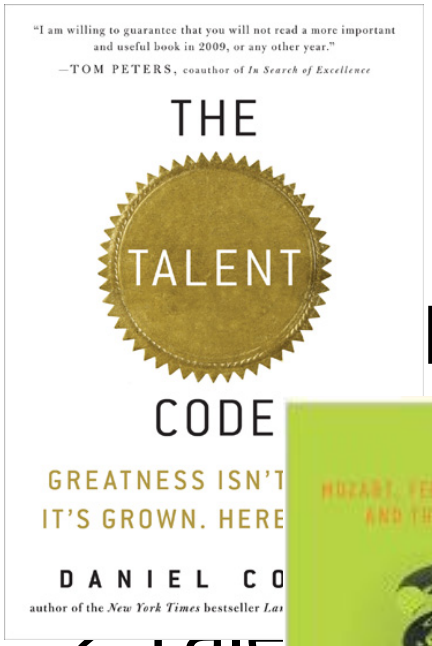

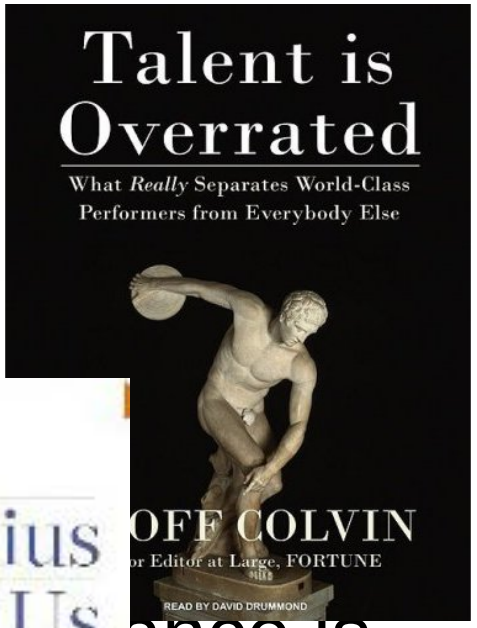

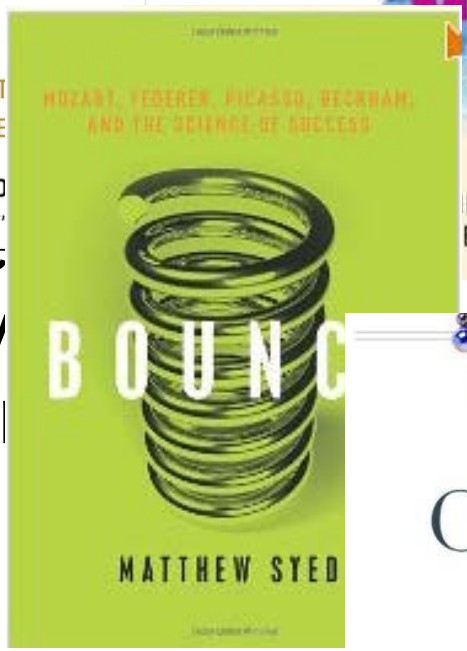

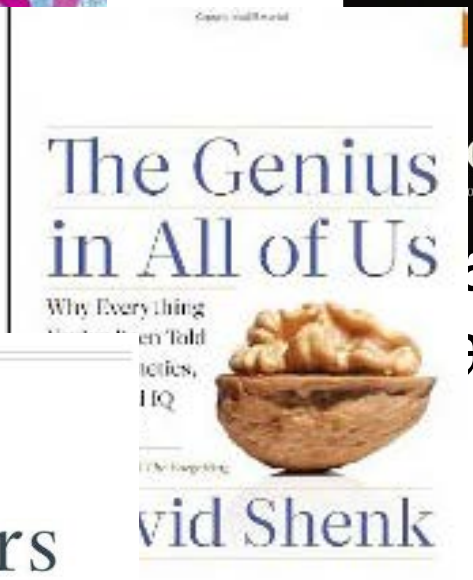

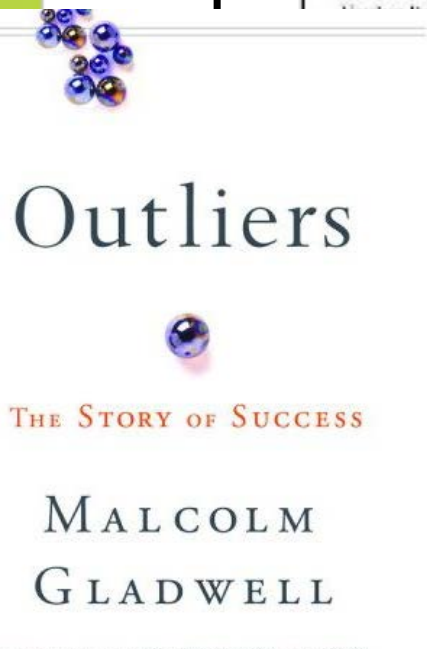

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What is talent and why do we care?

3 approaches

1. Talent exists and is easily predicted using stable indicators (genetic/nature approach)
2. Talent doesn't exist and elite performance is wholly explained through experience/training (nurture/deliberate practice approach)
3. Talent exists but is the result of a constant process of change based on genes and environment (interactionist/emergent approach)

Building an effective TID system

1. Evidence-based

What do we know about TID in parasport?

Adapted Physical Activity Quarterly, 2017, 34, 72-90
https://doi.org/10.1123/APAQ.2016-0030

Human Kinetics
REVIEW

A Systematic Review of Influences on Development of Athletes With Disabilities

Nima Dehghansai and Srdjan Lemez
York University

Nick Wattie
University of Ontario Institute of Technology

Joseph Baker
York University

Compared with mainstream sport athletes, relatively little is known regarding the factors affecting the development of athletes with a disability. Sport-specific training programs are essential to athletes' successful performance; to create appropriate programs and strategies, a clear understanding of the nuances of development of athletes with a disability is important. The objective of this systematic review was to synthesize existing research on development in athletes with a disability and

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What do we know about TID in parasport?

- 1950 to 2015
  - 21 articles examining issues re: development of athletes in parasport
    - Long term changes due to training (n=4)
    - Short-term interventions (n=8)
    - Training and practice (n=9)

What do we know about TID in parasport?

Table 2 Total Number of Appearances of Sports and Impairments in the Included Studies

Sport	Appearances, *n*	Impairment	Appearances, *n*
Wheelchair basketball	8	Spinal-cord injury	9
Track and field	6	Amputation	6
Swimming	4	Postpolio	3
Road racing	3	Paraplegia	3
Wheelchair rugby	2	Spina bifida	2
Wheelchair tennis	1	Visual impairment	2
Sledge hockey	1	SCF	1
Hand cycling	1	Poliomyelitis	1
Cross-country sledding	1	Cerebral palsy	1
Cross-country skiing	1	Muscular dystrophy	1
Shooting	1	Multiple sclerosis	1
Archery	1	Mental impairment	1
Table tennis	1	Quadriplegic	1
Weight lifting	1		

Note. SCF = spinal compression fracture.

What do we know about TID in parasport?

Conclusion: Not much!

What do we know about TID in general?

Running Head: TALENT IDENTIFICATION IN SPORT

Talent identification in sport: A systematic review

Kathryn Robinson - York University, Canada

Nick Wattie - University of Ontario Institute of Technology, Canada

Jörg Schorer - Car von Ossietzky Universitat Oldenburg, Germany

and

Joseph Baker - York University, Canada

Systematic Review

(Robinson, Wattie, Schorer & Baker, under review)

- 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

(Robinson, Wattie, Schorer & Baker, under review)

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

Prospective Studies of Talent ID?

Scand J Med Sci Sports 2012: 22: e64–e69
doi: 10.1111/j.1600-0838.2011.01408.x

SCANDINAVIAN JOURNAL OF MEDICINE & SCIENCE IN SPORTS

Accuracy of professional sports drafts in predicting career potential

D. Koz, J. Fraser-Thomas, J. Baker

School of Kinesiology and Health Science, York University, Toronto, Canada
Corresponding author: J. Baker, School of Kinesiology and Health Science York University, 4700 Keele St., Toronto, ON, Canada M3J 1P3. Tel: +1 416 736 2100 ex. 22361, Fax: +1 416 736 5774, E-mail: bakerj@yorku.ca

Accepted for publication 31 August 2011

The forecasting of talented players is a crucial aspect of building a successful sports franchise and professional sports invest significant resources in making player choices in sport drafts. The current study examined the relationship between career performance (i.e. games played) and draft round for the National Football League, National Hockey League, National Basketball League, and Major League Baseball for players drafted from 1980 to 1989 ($n = 4874$) against the assumption of a linear relationship between performance and draft round (i.e. that players with the most potential will be selected before players of lower potential). A two-step analysis revealed significant differences in games played across draft rounds (step 1) and a significant negative relationship between draft round and games played (step 2); however, the amount of variance accounted for was relatively low (less than 17%). Results highlight the challenges of accurately evaluating amateur talent.

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Prospective Studies of Talent ID?

frontiers in Psychology

ORIGINAL RESEARCH
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Long-Term Prognostic Validity of Talent Selections: Comparing National and Regional Coaches, Laypersons and Novices

Jörg Schorer[1], Rebecca Rienhoff[2], Lennart Fischer[2] and Joseph Baker[3]*

[1] Institute of Sport Science, University of Oldenburg, Oldenburg, Germany, [2] Institute of Sport and Exercise Sciences, University of Münster, Münster, Germany, [3] School of Kinesiology and Health Science, York University, Toronto, ON, Canada

In most sports, the development of elite athletes is a long-term process of talent identification and support. Typically, talent selection systems administer a multi-faceted strategy including national coach observations and varying physical and psychological tests when deciding who is chosen for talent development. The aim of this exploratory

Prospective Studies of Talent ID?

Schorer et al. (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?

Schorer et al. (2017)

- *A priori* probability = 76% (everyone forecasted as untalented)
- Accuracy ranged from 79% for National level coaches to 75% for regional level coaches
  - Similar rates of Type I and Type II errors
- Interestingly, randomly chosen novices had an accuracy rate of 73%.
  - More likely to make Type II errors

Building an effective TID system

1. Evidence-based
   - Lack of early indicators
   - Lack of evaluation of TID decisions
   - Lack of understanding of what these decisions mean

Building an effective TID system

1. Evidence-based
2. Forward thinking
   - Understand and acknowledge deficits and biases in current approach to facilitate improvement
   - Build an evaluation plan for your system (even if you might not like the results!)

Building an effective TID system

1. Evidence-based
2. Forward thinking
3. Integrated
   - Involve all elements of the support team (e.g., sport psychologists, biomechanists, physiologists, therapists, coaches, and so on)

Building an effective TID system

1. Evidence-based
2. Forward thinking
3. Integrated
4. Flexible
   - Don’t be trapped by tradition or convention
   - Pay attention to the noise in your system

Building an effective TID system

1. Evidence-based
2. Forward thinking
3. Integrated
4. Flexible
5. Creative
   - Be bold. Look where no one else is looking.

Thank you!

Joe Baker

School of Kinesiology and Health Science
York University

Email: bakerj@yorku.ca
Web: www.yorku.ca/bakerj
Twitter: @bakerjyorku

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Wheelchair Basketball Canada

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