

The power of competitive focus

Dr. Russell James III
Texas Tech University

A special case: Competitive focus

Decisions dominated by the short-term, impulsive self tend to reduce future happiness

1. Excessive future discounting
2. Finding negative addictions
3. Avoiding positive addictions

But, for some, decision training is also important because of the potential for **competitive mastery** resulting from focus.

Focus in the dual-self model

Long-term
Patient
Planner
Impartial spectator
Deliberative
Cold state

The rider can understand the cumulative benefits of focus over many years.

Short-term
Impulsive
Doer
Passions
Affective/Visceral
Hot state

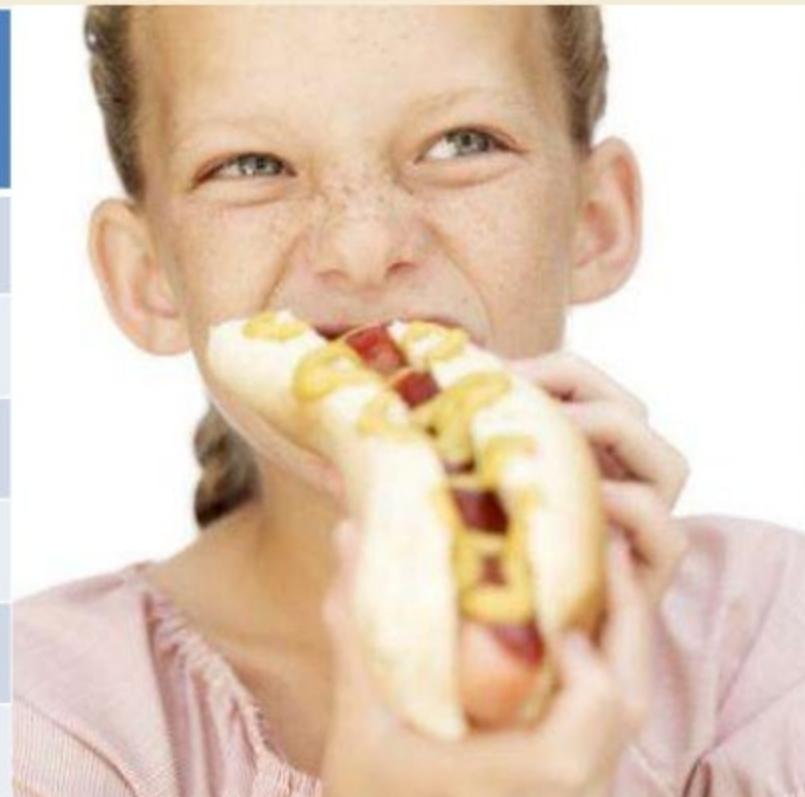
The elephant gets bored with repetition and wants to move on to the next new experience.



In standard consumption economics, focusing is often bad

Variety is important because diminishing marginal utility changes preferences. When enjoyment drops, we should switch to another choice.

| Hot Dogs Consumed | Utility from Each Hot Dog |
|-------------------|---------------------------|
| 1 | +10 |
| 2 | +4 |
| 3 | 0 |
| 4 | -1 |
| 5 | -4 |
| 6 | -10 |



In competition, the cumulative effect of focus may be good...

Diminishing marginal utility

| Hot Dogs Consumed | Utility from Each Hot Dog |
|-------------------|---------------------------|
| 1 | +6 |
| 2 | +2 |
| 3 | 0 |
| 4 | -2 |
| ... | ... |
| 64 | -40 |
| 65 | -45 |
| 66 | -50 |



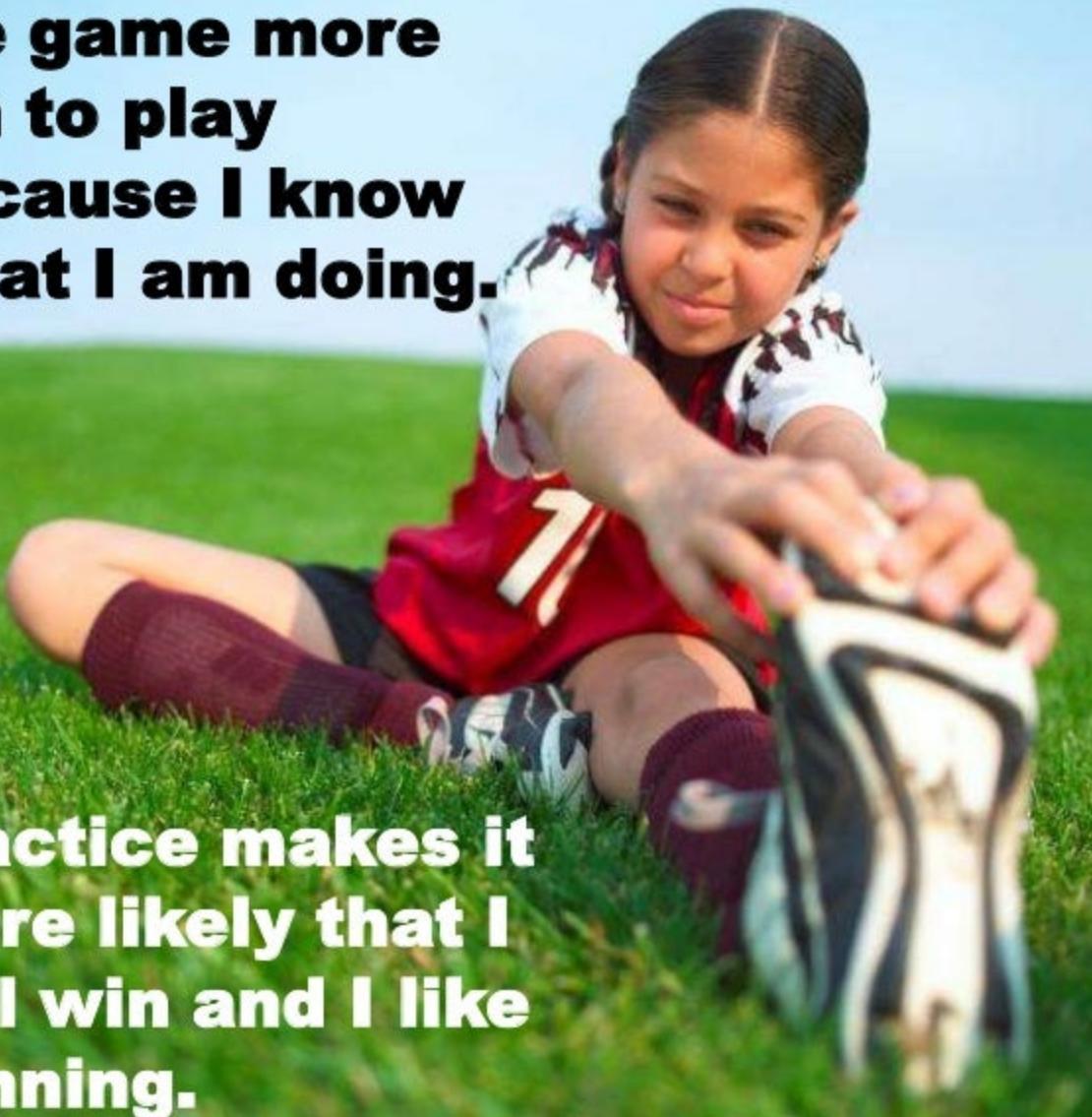
Point where Joey Chestnut ties Kobayashi for the 2007 championship

Differential outcome

| Hot Dogs Consumed | Utility from Each Hot Dog |
|-------------------|---------------------------|
| 1 | 0 |
| 2 | -1 |
| 3 | -2 |
| ... | ... |
| 63 | -50 |
| 64 | +5000 |
| 65 | +10000 |
| 66 | +1 |

Focus, enjoyment, and outcomes

**Practice makes
the game more
fun to play
because I know
what I am doing.**



**Practice makes it
more likely that I
will win and I like
winning.**

Focused practice may result in increased utility due to

1. Improved activity **experience** due to accumulated skill (consumption capital)
2. Improved activity **outcome** due to cumulative experience (human production capital)



How important is
focus when
trying to achieve
mastery in some
area?



Focus and differential outcomes

Does musical talent exist?

Does athletic talent exist?



Obviously, Yes,
Right?

A contrary argument

A series of findings suggest that, assuming basic dexterity or height, talent is simply the result of accumulated hours of focused practice with appropriate feedback.

So, seriously...

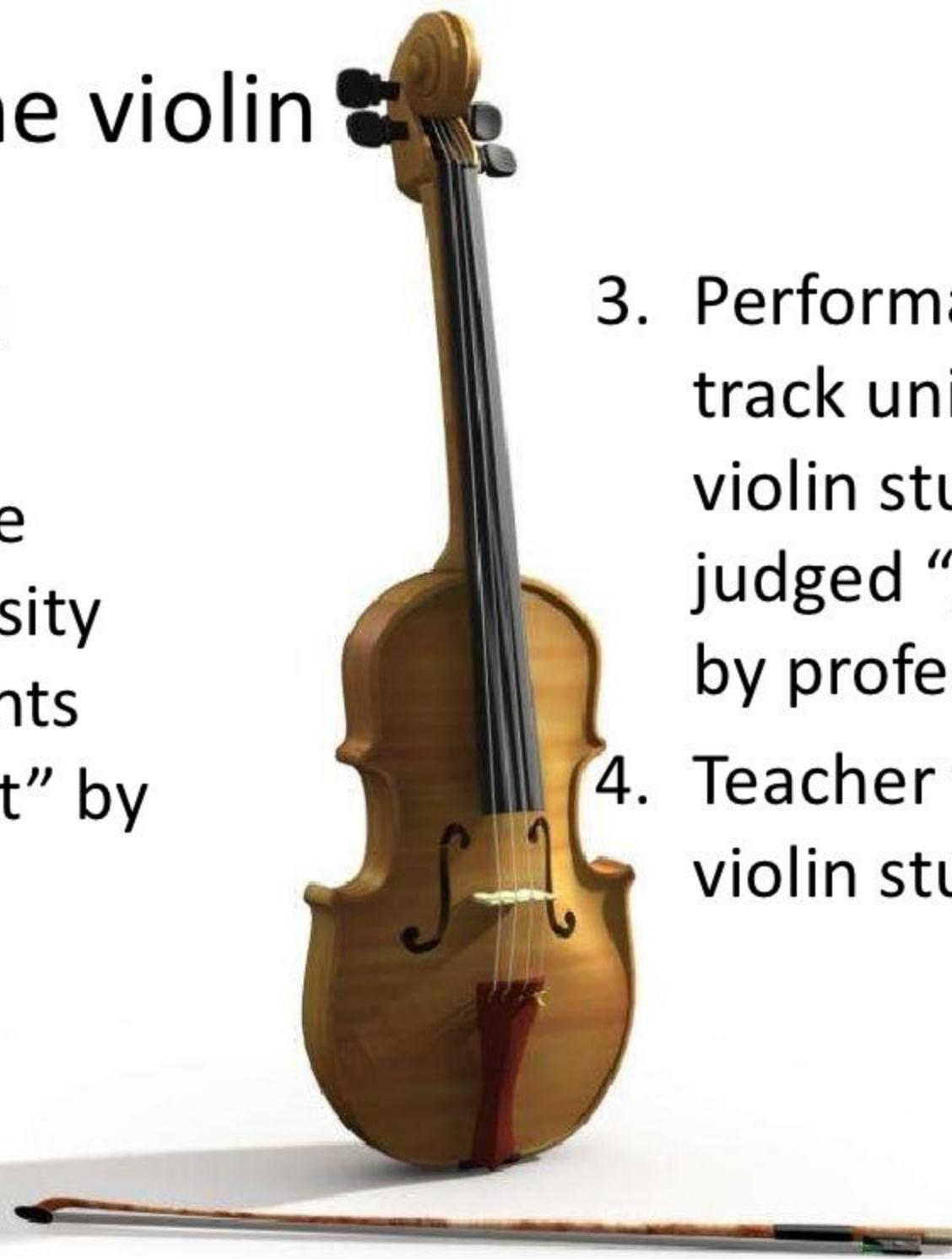
Does musical talent exist?

Does athletic talent exist?

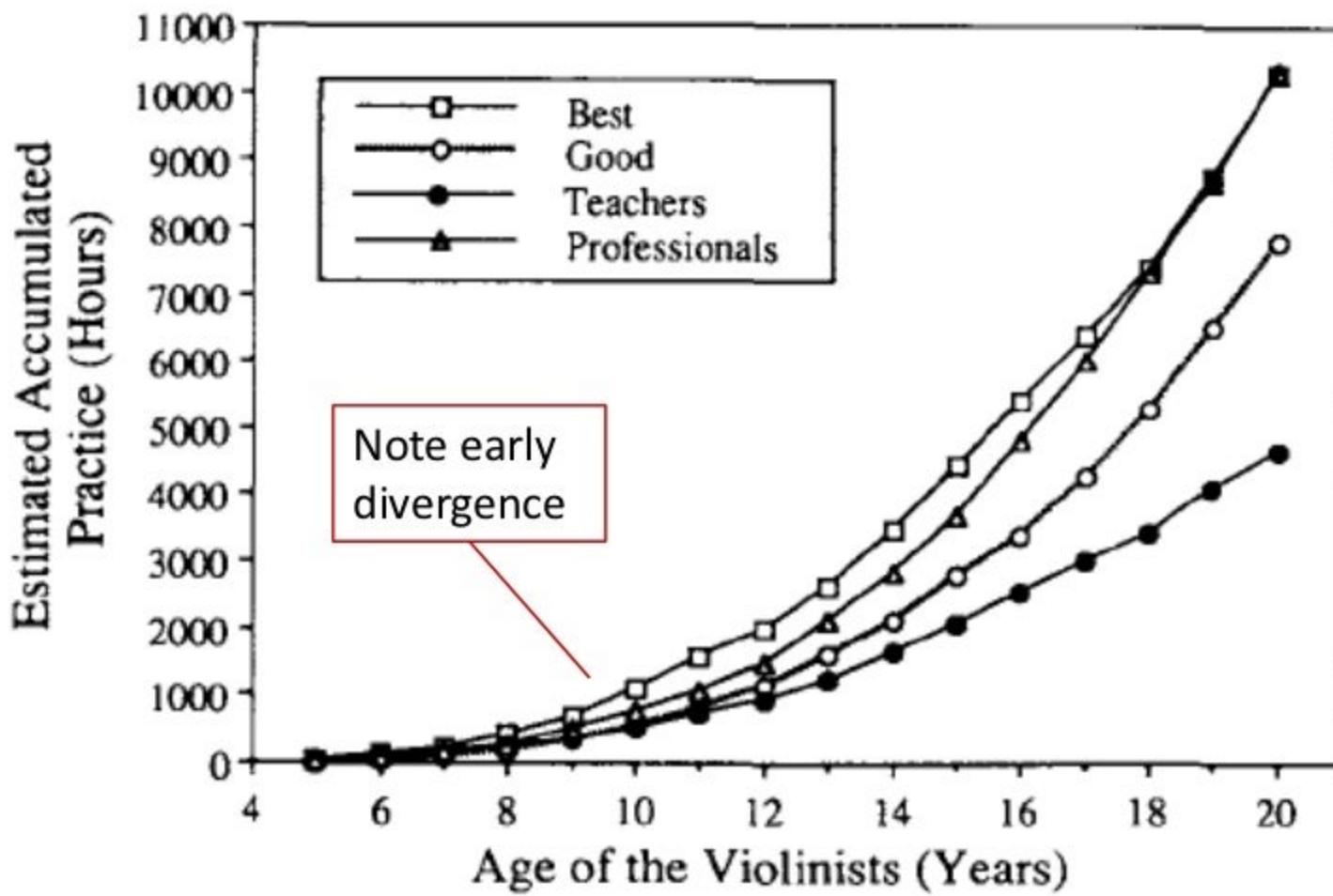


Talent on the violin

1. Professional performers
2. Performance track university violin students judged “best” by professors
3. Performance track university violin students judged “good” by professors
4. Teacher track violin students



Talent on the violin



Best/Good:
University violin students judged the best talent or good talent

Teachers:
Teacher-track violin students (not performers)

Professionals:
Professional violinists

Can you find the talented violinists with fewer hours of practice?

Adult piano players with 5-20+ years of
experience

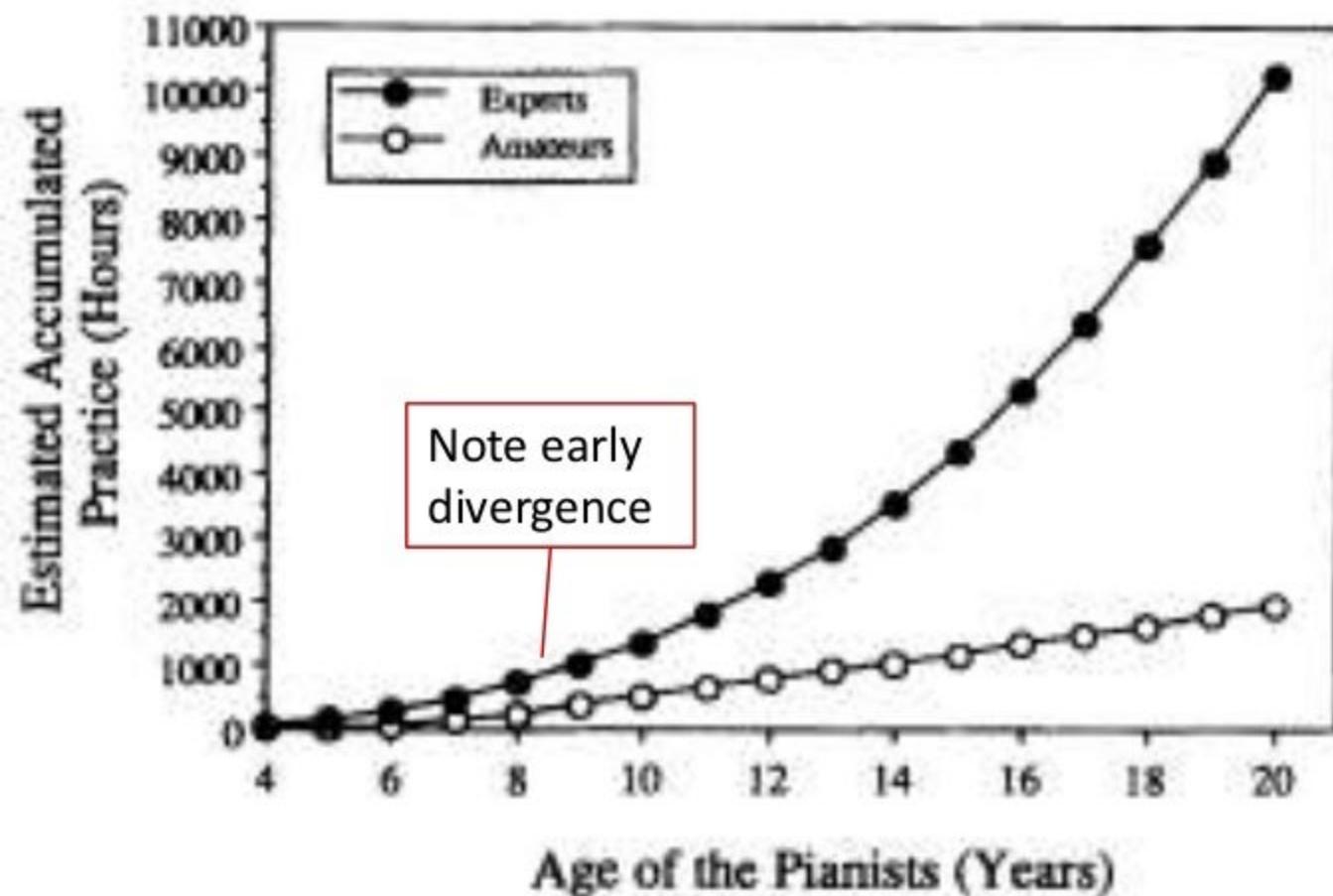


Expert Level Ability

v.

Amateur Level Ability

Talent on the piano



A retrospective study of expert-level and amateur-level adult piano players with 5-20+ years of practice.

Does “talent” seem to be related to hours of practice?

Innate differences of piano experts?

- There were no differences in general cognitive-motor skills.
- But, there were differences in specific abilities including single-hand movements, mirror-image movements in both hands, and different movements in opposite hands.



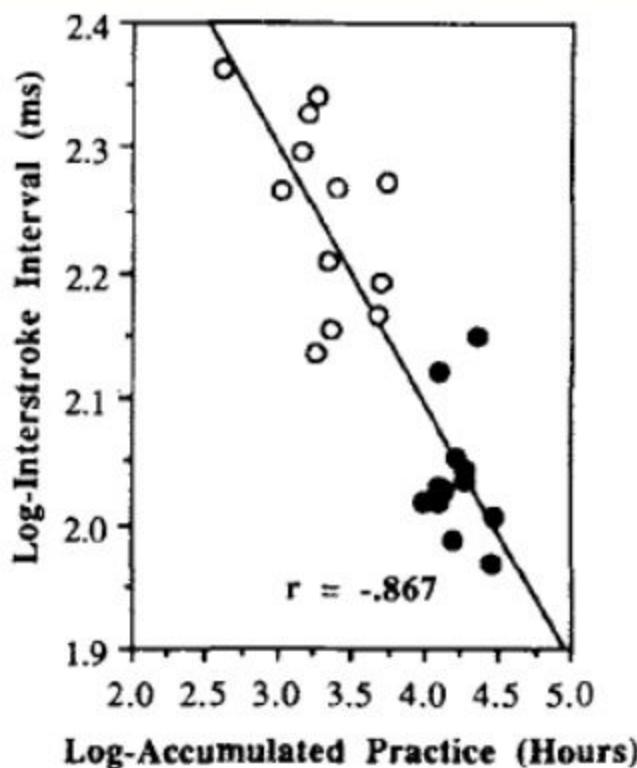
Innate differences of piano experts?

Were these specific hand skills

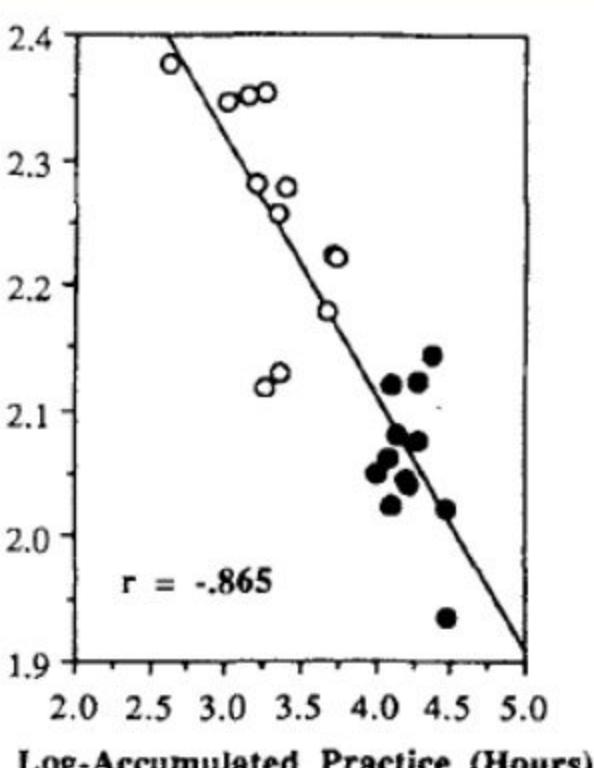
- a) An example of innate talent?
- b) Simply a reflection of accumulated hours of practice?



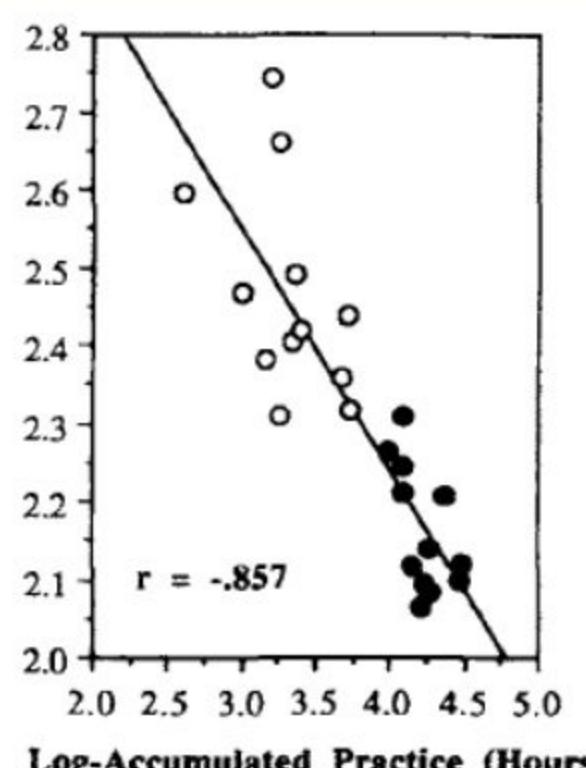
Core physical ability differences reflect accumulated practice



Single Hands



Mirror Image Movements



Different Movements

Experts are dark circles. Amateurs are empty circles.

Study of Belgian soccer players.
All about 25 years old.
All playing since they were about 5.
Now some play in
local competitions ("provincial"),
some in national competitions,
some in international competitions.

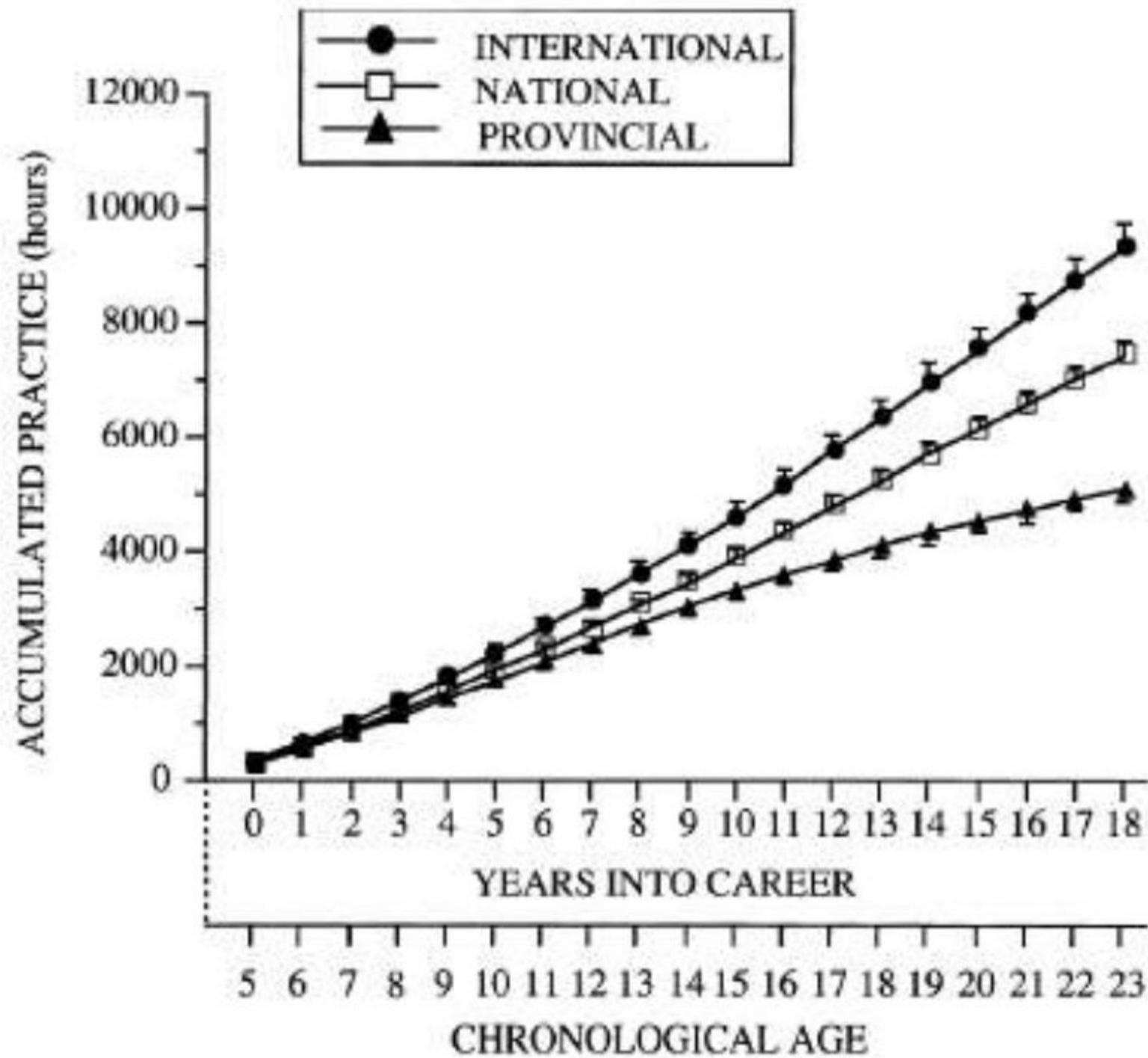
Any difference?

Expertise in soccer

3 groups, all
playing in
Belgian
soccer
leagues.

All about 25
years old.

All started
playing at
about age 5

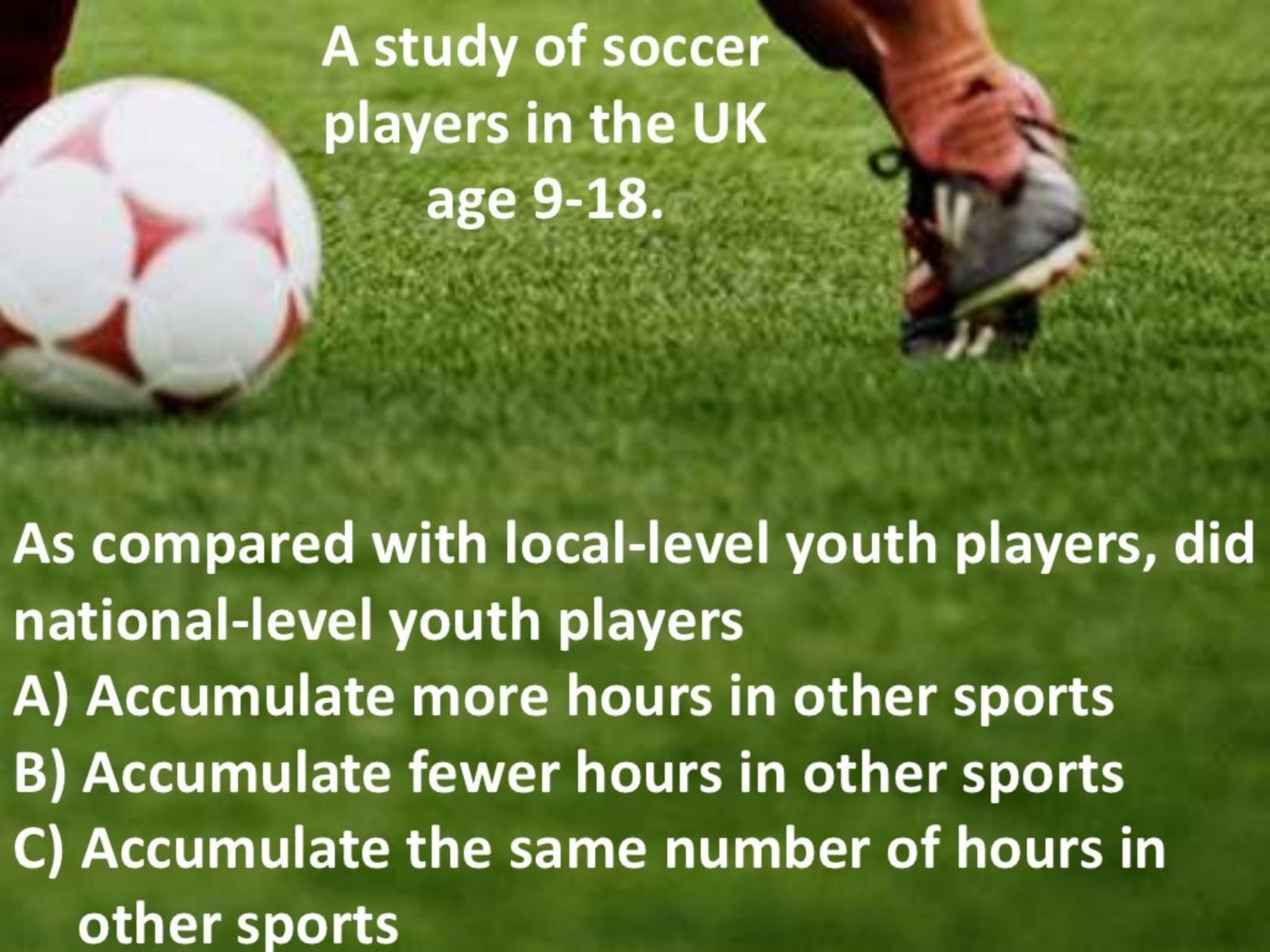


Helsen, et al.
(2000), The roles of
talent, physical
precocity, and practice
in the development of
soccer
expertise, *Journal of
Sports Science*, 18, 727-736

A study of
soccer
players in
the UK age
9-18.



Differences
between national-
level players and
local-level players
in playing **OTHER**
SPORTS.

A photograph of a soccer player's lower leg and foot in mid-kick. The player is wearing dark shorts and orange and black cleats. A white soccer ball with red panels is in the foreground, slightly blurred. The background is a bright green grassy field.

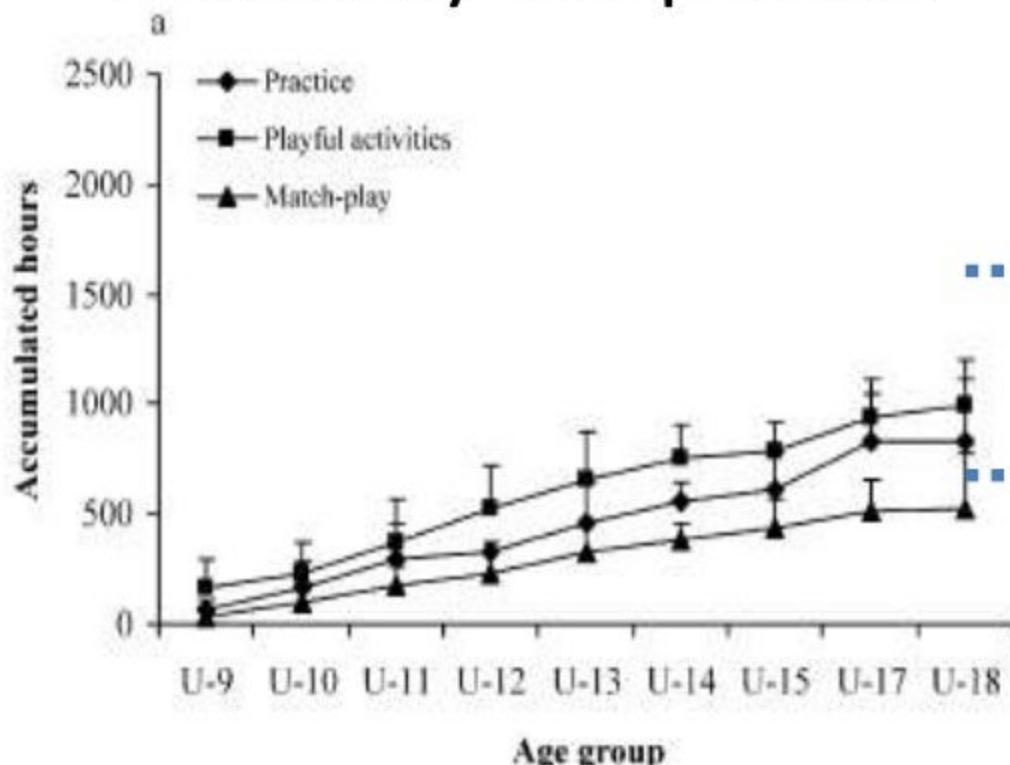
A study of soccer players in the UK age 9-18.

As compared with local-level youth players, did national-level youth players

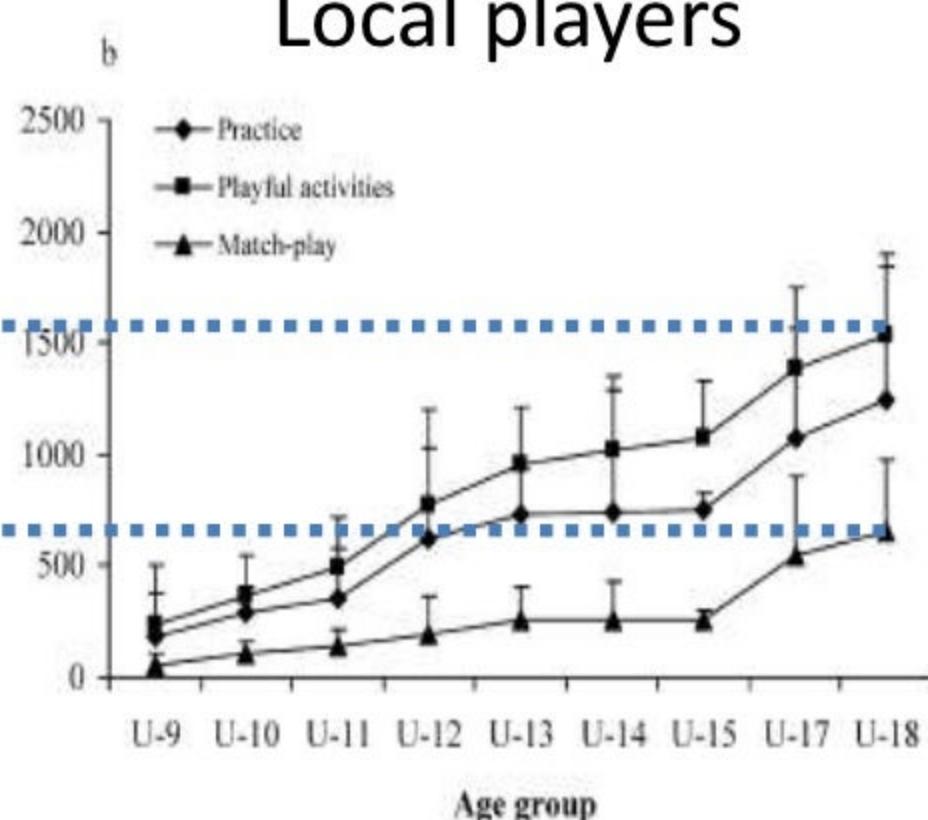
- A) Accumulate more hours in other sports
- B) Accumulate fewer hours in other sports
- C) Accumulate the same number of hours in other sports

Focus v. variety: Accumulated hours playing other sports

Nationally competitive



Local players



A study of soccer players in the UK age 9-18.

Accumulated hours of playing or practicing soccer matters.



Does the type of playing or practicing matter?

3 soccer activities: Individual practice, team practice, playful activities

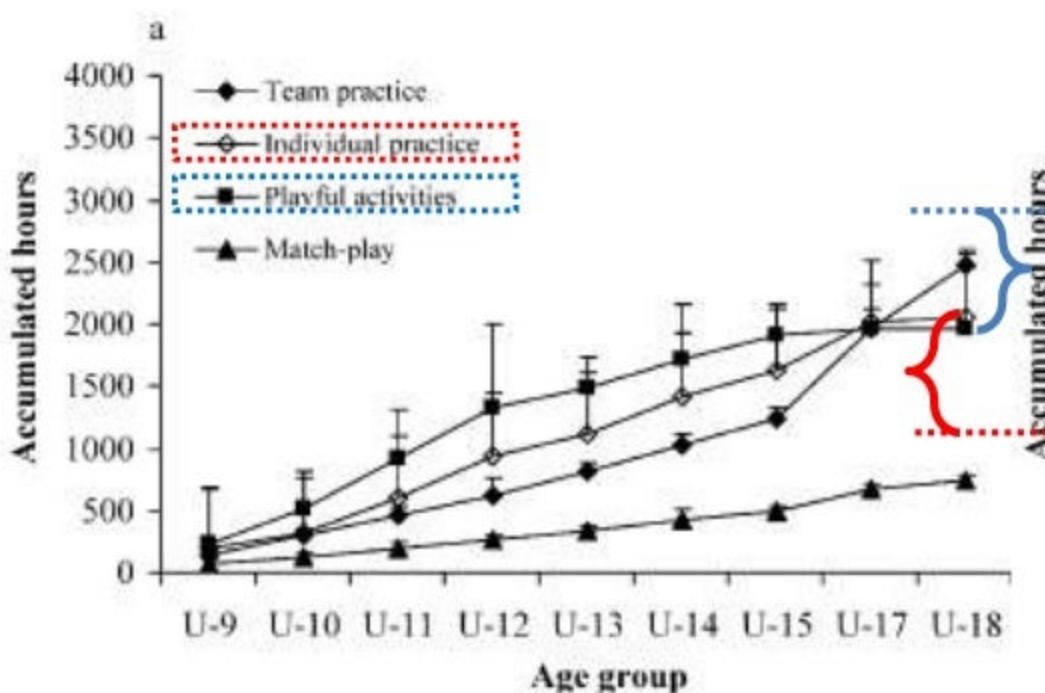
Did national-level youth players

- a) Get more hours in all three activities
- b) Get more hours in practice but fewer hours in playful activities
- c) Get more hours only in playful activities
- d) Get more hours in team practice and playful activities, but not in individual practice
- e) Get more hours in individual practice and playful activities, but not in team practice

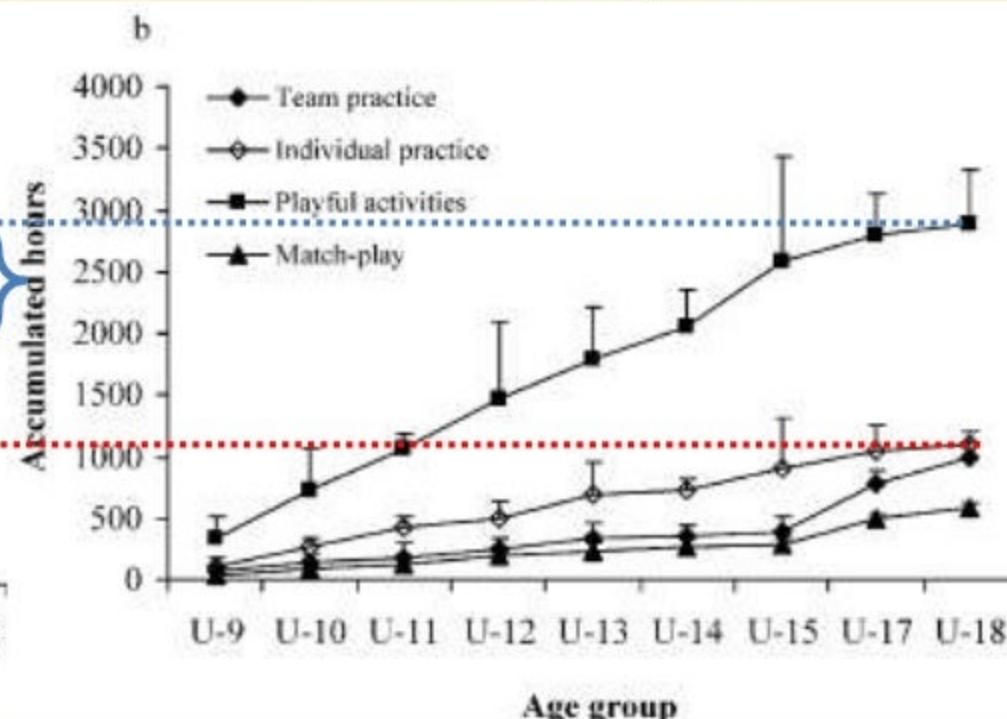


Deliberate practice v. playing around in soccer-related hours accumulated

Nationally competitive



Local players



A study of soccer players in the UK age 9-18.

Variety/playing around v. Focus/deliberate practice

Long-term
Patient
Planner
Impartial spectator
Deliberative
Cold state

The rider can understand the cumulative benefits of deliberate focused practice over many years.

Short-term
Impulsive
Doer
Passions
Affective/Visceral
Hot state

The elephant likes **variety**, but must be forced into focused repetition. The elephant likes to **play around**, but is not fond of deliberate practice.



The importance of feedback

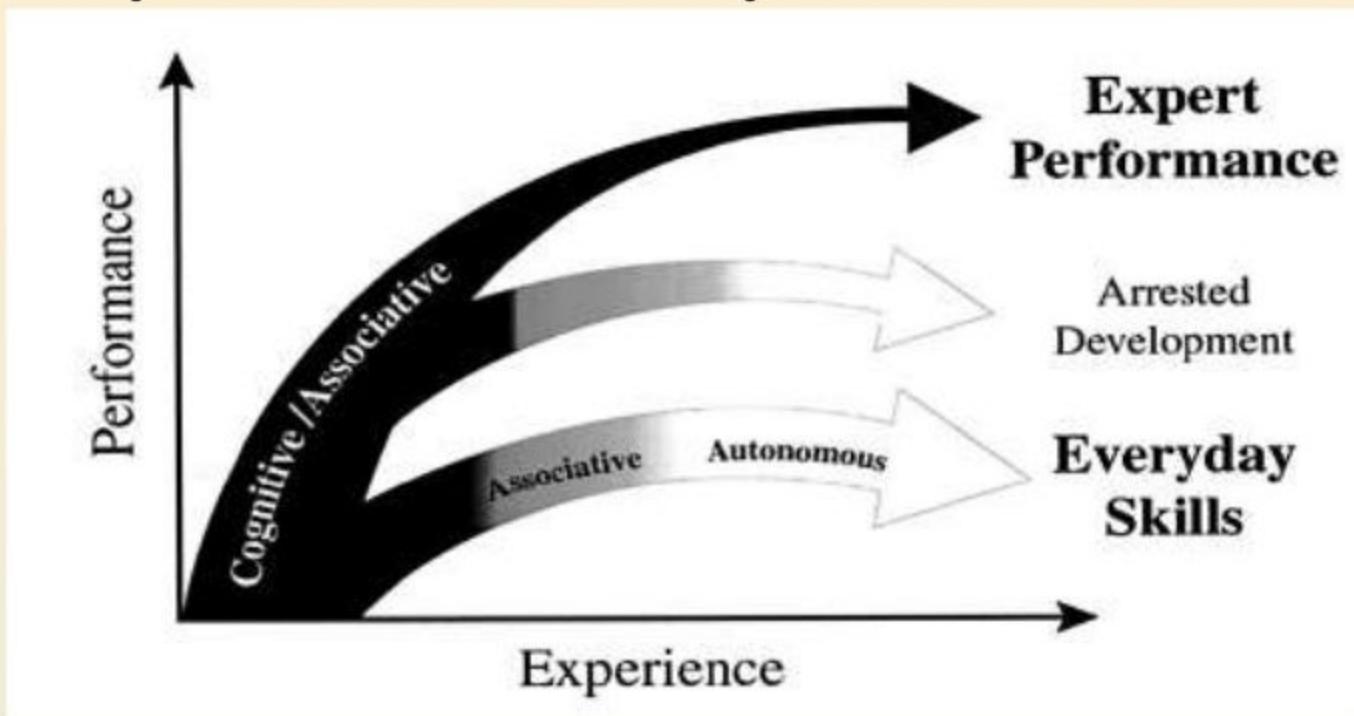
“In the absence of adequate feedback, efficient learning is impossible and improvement only minimal even for highly motivated subjects. Hence mere repetition of an activity will not automatically lead to improvement...”

Practice ≠ Perfect
Perfect Practice = Perfect



Ready for the Tour de France yet?

Continued improvement requires experience + expert feedback

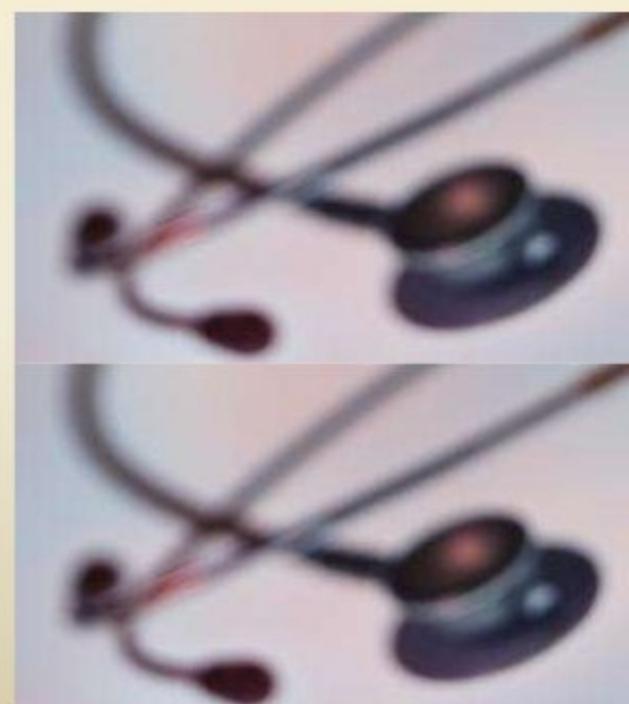


“The key challenge for aspiring expert performers is to avoid the arrested development associated with automaticity and to support continued learning and improvement, as shown in the upper arm of [the] Figure.”

Focus v. variety in medical skills

Doctors listened to recordings of heart sounds and murmurs of healthy and sick patients to diagnose the difference. Who was most accurate: new physicians completing residency (Residents), general practitioner physicians (GP), or cardiologists (Specialists)?

- a) Specialists 1st, GPs 2nd, Residents 3rd
- b) Specialists 1st, Residents 2nd, GPs 3rd
- c) GPs 1st, Specialists 2nd, Residents 3rd
- d) Residents 1st, Specialists 2nd, GPs 3rd
- e) Residents 1st, GPs 2nd, Specialists 3rd.



Focus v. variety in medical skills

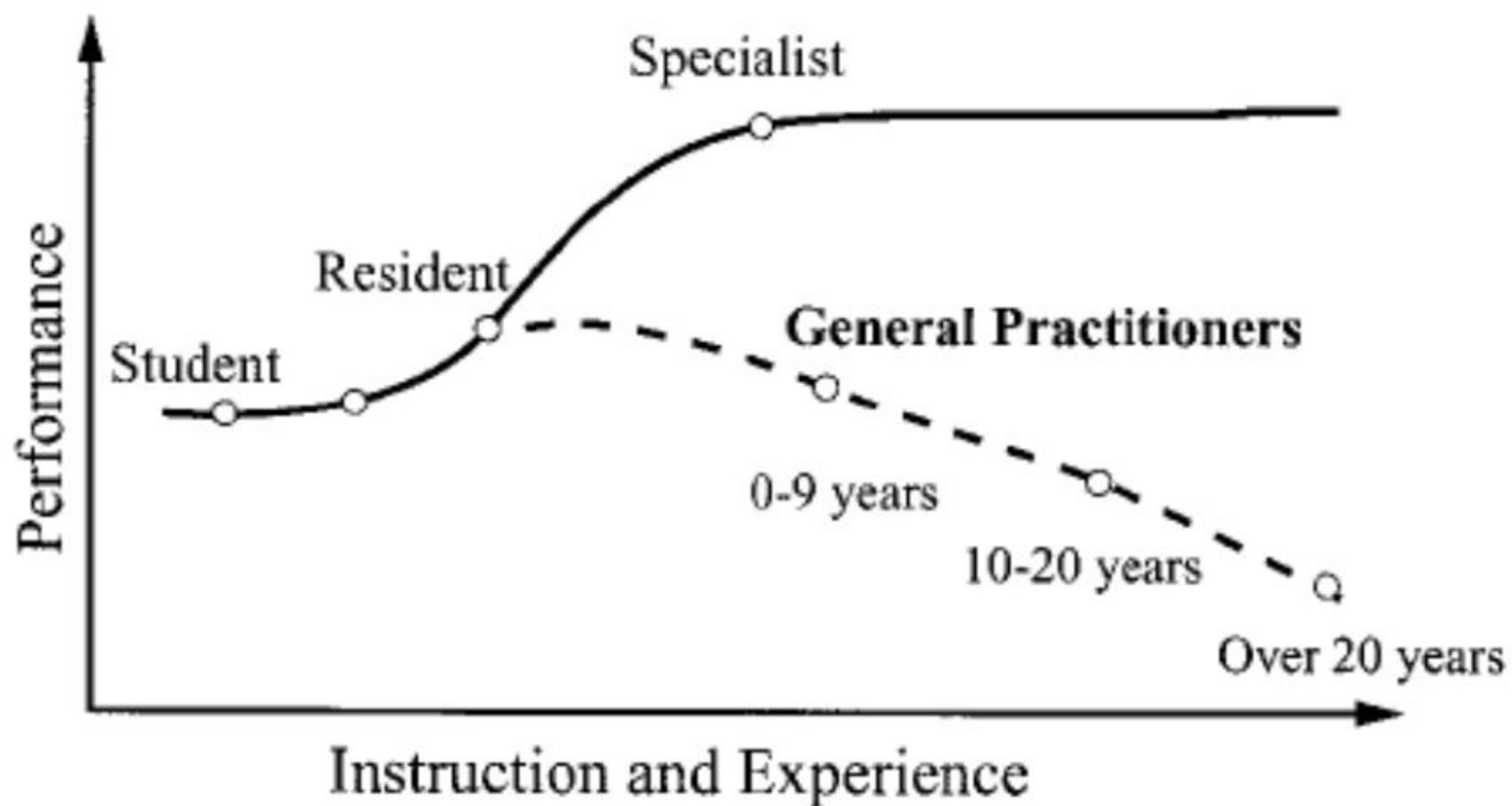


Figure 4. Two trends for development of medical performance as a function of experience and instruction.

Butterworth, J. (NYU), Reppert, E. (NYU), 1960, Auscultatory acumen in the general medical population. *Journal of the American Medical Association*, 174, 32-34. Graph from Ericsson, K. A. (Florida State U.), 2004, Deliberate practice and the acquisition and maintenance of expert performance in medicine and related disciplines. *Academic Medicine*, 79, S70-S81

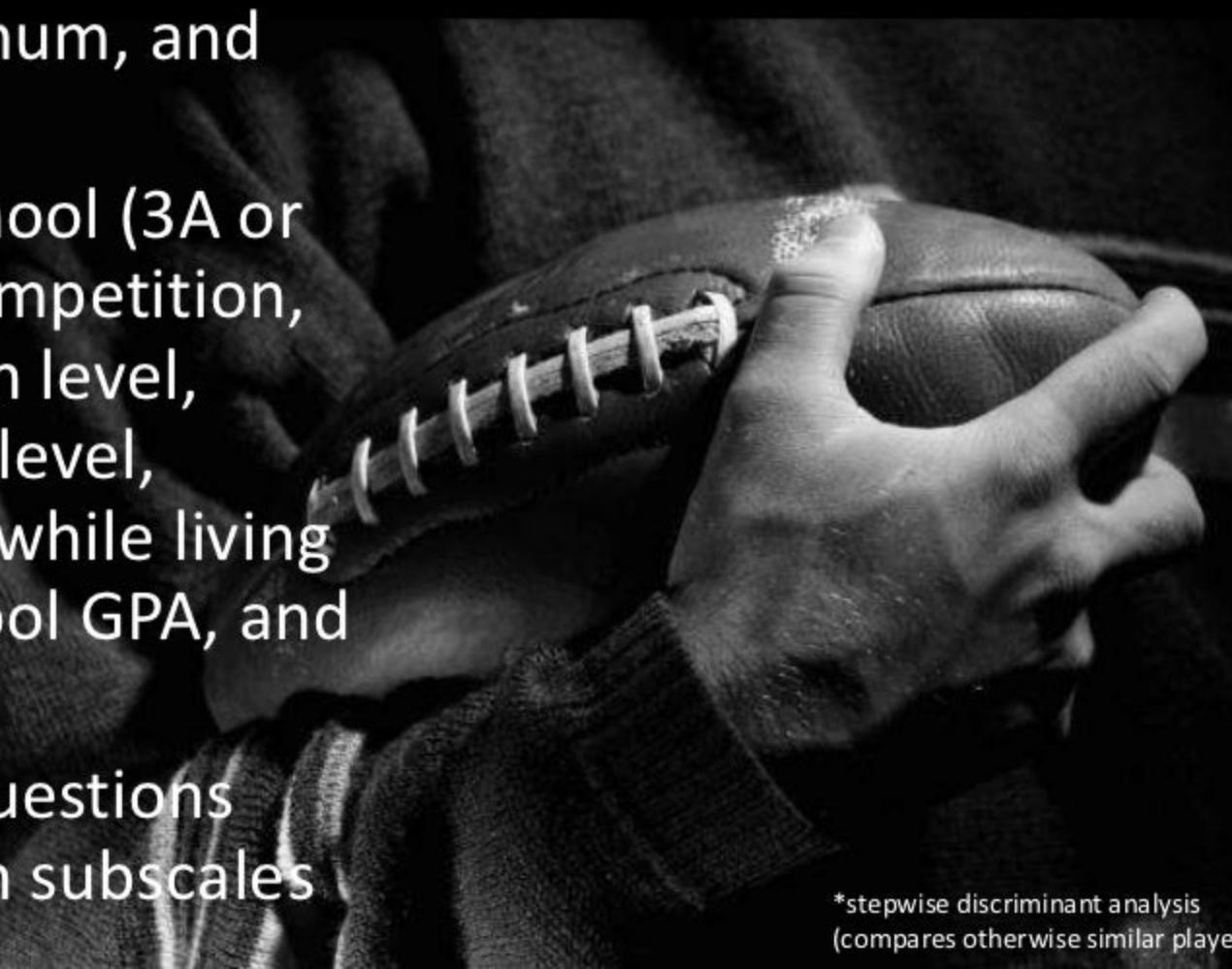
A study of 108 college football players from 5 teams in the southeast.

Question: What factors were different between starters and other team members?



Factors tested: Starters v. other players

- Height in inches, weight in pounds, back squat maximum, bench press maximum, and forty yard dash.
- Age, small high school (3A or below), state of competition, mother's education level, father's education level, parental presence while living at home, high school GPA, and SAT total.
- 28 psychological questions grouped into seven subscales



*stepwise discriminant analysis
(compares otherwise similar players)

What do you think? (Starters v. other players)

3 factors were significant: age, one psychological subscale, and...

1. Height in inches
2. weight in pounds
3. back squat maximum
4. bench press maximum
5. forty yard dash
6. small high school (3A or below)
7. state of competition
8. mother's education level
9. father's education level
10. parental presence while living at home
11. high school GPA
12. SAT total



*stepwise discriminant analysis
(compares otherwise similar players)

A study of college football players

Significant differences in starters: age, one psychological subscale and...

not being from a small high school (3A or below).

“While smaller schools may be playing both sides of the ball, or “Ironman Football,” larger school athletes may be able to hone their abilities at one position... A large school athlete may spend more time with coaches... This increases the number of focused, directed practice hours an individual obtains in a given season.”



Spieler, Czech, Joyner, Munkasy , Gentner & Long, 2007, Predicting Athletic Success: Factors Contributing to the Success of NCAA Division I AA Collegiate Football Players. *Athletic insight: The online journal of sport psychology*, 9(2)

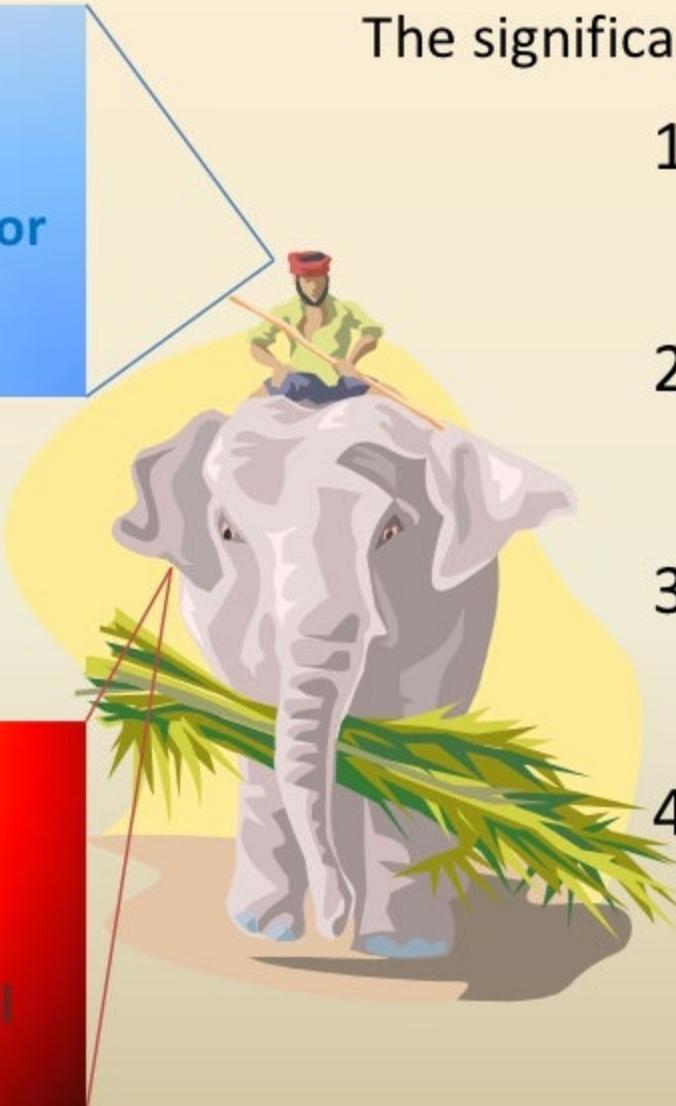
Does “elephant” control predict college football starting status?

Long-term
Patient
Planner
Impartial spectator
Deliberative
Cold state

Short-term
Impulsive
Doer
Passions
Affective/Visceral
Hot state

The significant psychological subscale was:

1. I maintain emotional control no matter how things are going for me.
2. When things are going badly, I tell myself to keep calm, and this works for me.
3. When I feel myself getting too tense, I can quickly relax my body and calm myself.
4. I remain positive and enthusiastic during competition, no matter how badly things are going.



Examples of hours accumulation

Who said that after he became a professional football player, “The first 10 years, my wife and I didn’t take a vacation”?

Examples of hours accumulation

Jerry Rice



Career Records

- All-purpose yards (23,546)
- Touchdowns (208)
- Receptions (1,549)

Playoff Records

- Yards receiving (2,245)
- Touchdowns (22)
- Receptions (151)

SuperBowl Records

- All-purpose yards (604)
- Touchdowns (8)
- Yards receiving in a single game (215)

Examples of hours accumulation

- Sinclair Lewis – First American to receive the Nobel Prize in Literature
- Booked to give a lecture at Columbia University on writing. He started by asking, **“How many of you here are really serious about being writers?”**
- Most of the audience raised their hands, then...



Examples of hours accumulation

Lewis said, “**Well, why
the hell aren’t you all
home writing?**”

And he sat down.



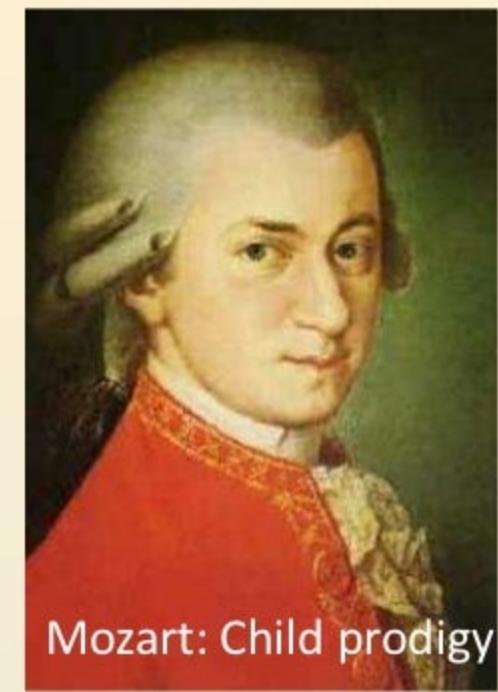
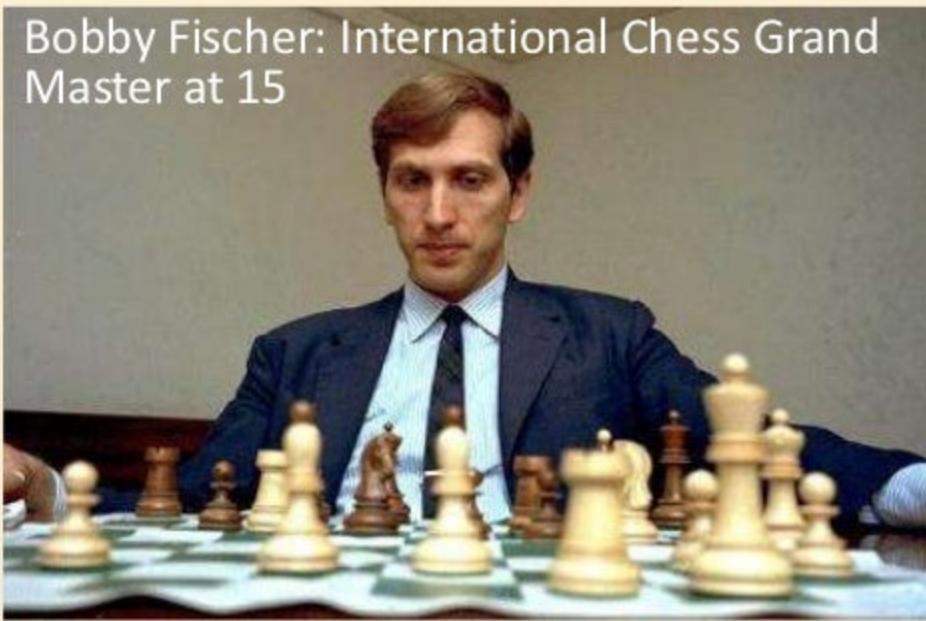
Talent v. 10,000 hours

Research suggests that mastery requires about 10 years or 10,000 hours of practice with appropriate feedback in music, mathematics, chess, composing, tennis, swimming, running, soccer, and for writers, poets, scientists, etc.

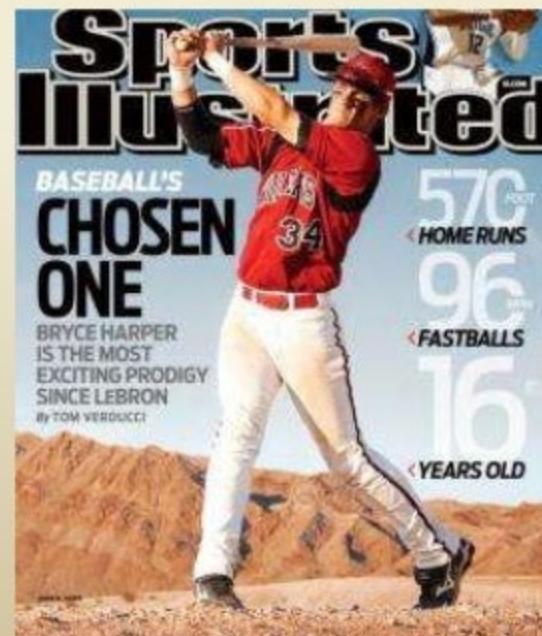


What about young phenoms and child prodigies?

Bobby Fischer: International Chess Grand Master at 15



The Beatles



Mozart: Child prodigy

Bryce Harper:

- 16 yr. old baseball phenom
- Longest distance home run ever hit at Tropicana Field
- 570 ft home run during a high school game at age 15

Bobby Fischer

International chess grand master at 15.

- Started playing at age 6
- At 7, began weekly tutoring by president of Brooklyn chess club
- At 12, joined one of the strongest chess clubs in the world and met several times a week with chess master Jack Collins with access to his library of chess books.



Result: Mastery in 9 years instead of 10 (probably resulting from intensity and hours of training).

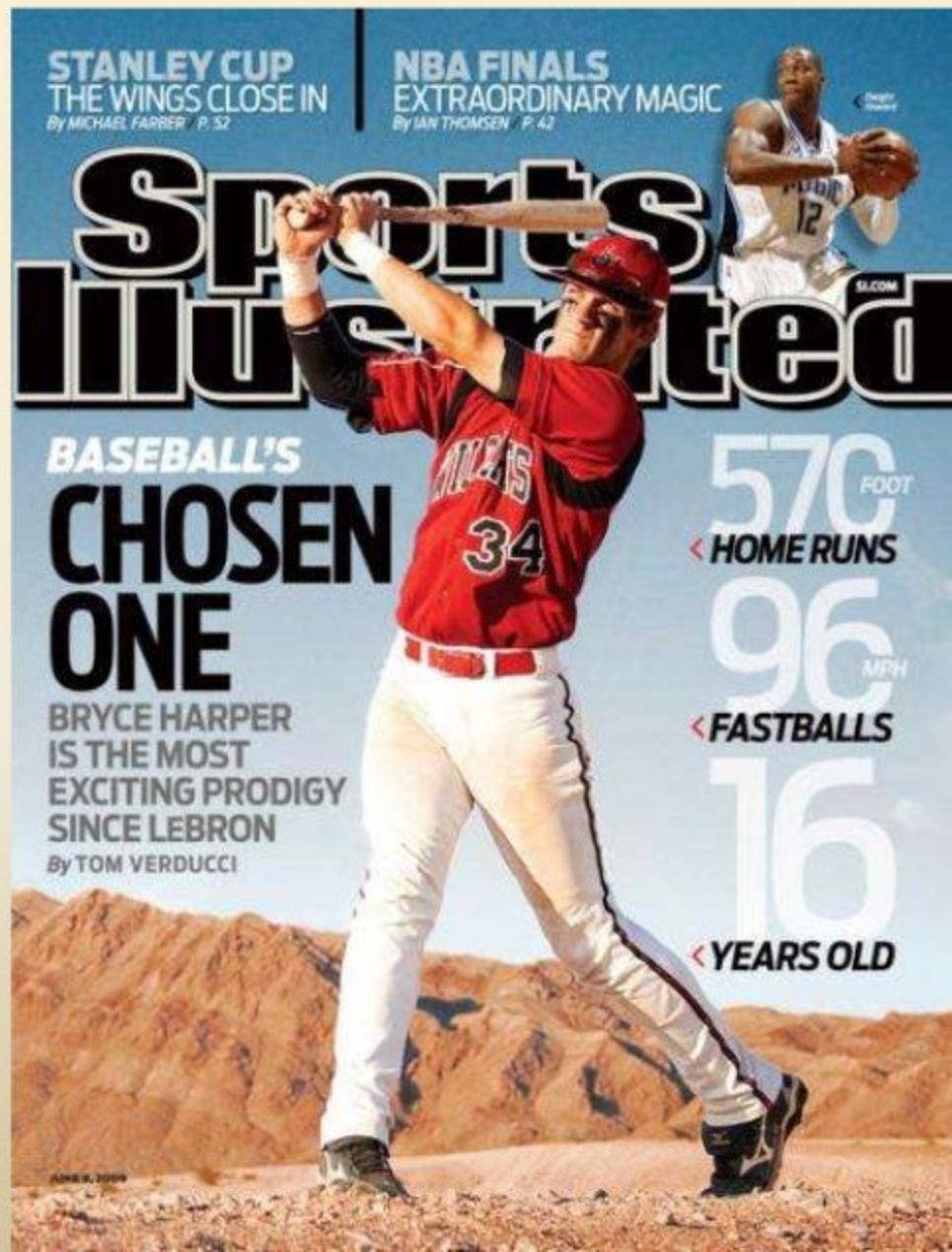
Bryce Harper

- 16 yr. old baseball phenom
- 570 ft home run during a high school game at age 15
- Longest distance home run ever hit at Tropicana Field

<http://sports.espn.go.com/espn/e60/news/story?id=4388790>

Start-3:16

[Bryce Harper 1.wmv](#)

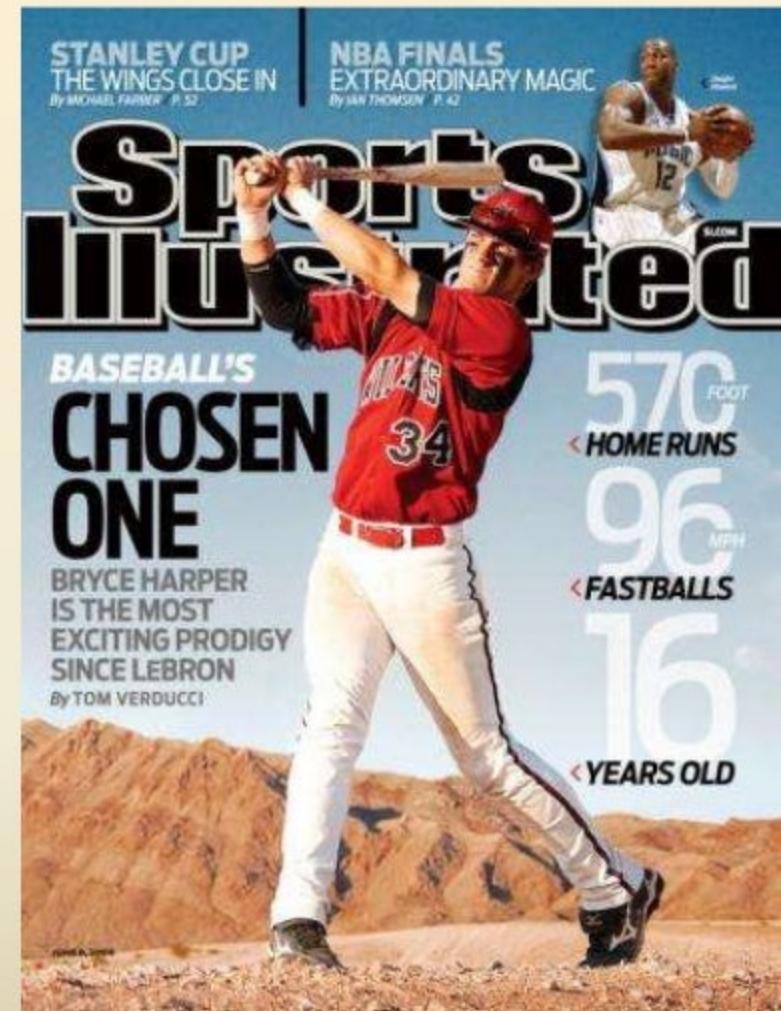


Bryce Harper and hours accumulation

"Bryce Harper was playing T-ball at age three against six-year-olds,... He has played between 80 and 130 baseball games a year each year for the past seven years..."

Bryce Harper is the product of a travel baseball industry that mushroomed, just as he himself was growing up, into big business. There seems no end to the tournaments, all-star games, showcases, wood-bat leagues, USA Baseball youth teams, "scout teams" sponsored by major league clubs."

-Quote from issue pictured at right



<http://sports.espn.go.com/espn/e60/news/story?id=4388790>
3:16-4:29

[Bryce Harper 2.wmv](#)

Wolfgang Amadeus Mozart

"By the standards of mature composers, Mozart's early works were not that outstanding.... Of those concertos that only contain music original to Mozart, the earliest that is now regarded as a masterwork (No. 9, K 271) was not composed until he was 21. By that time Mozart had already been composing concertos for ten years."



Michael Howe
Genius Explained

The Beatles

- 1960 went to Hamburg, Germany to play in strip clubs **8 hours a night, 7 days a week.**
- The Hamburg trips yielded 270 nights of performing at 8 hours/night in only 1.5 years.
- By 1964 when the Beatles came to the US, they had played at least 1,200 gigs (\approx 8,400 hours).



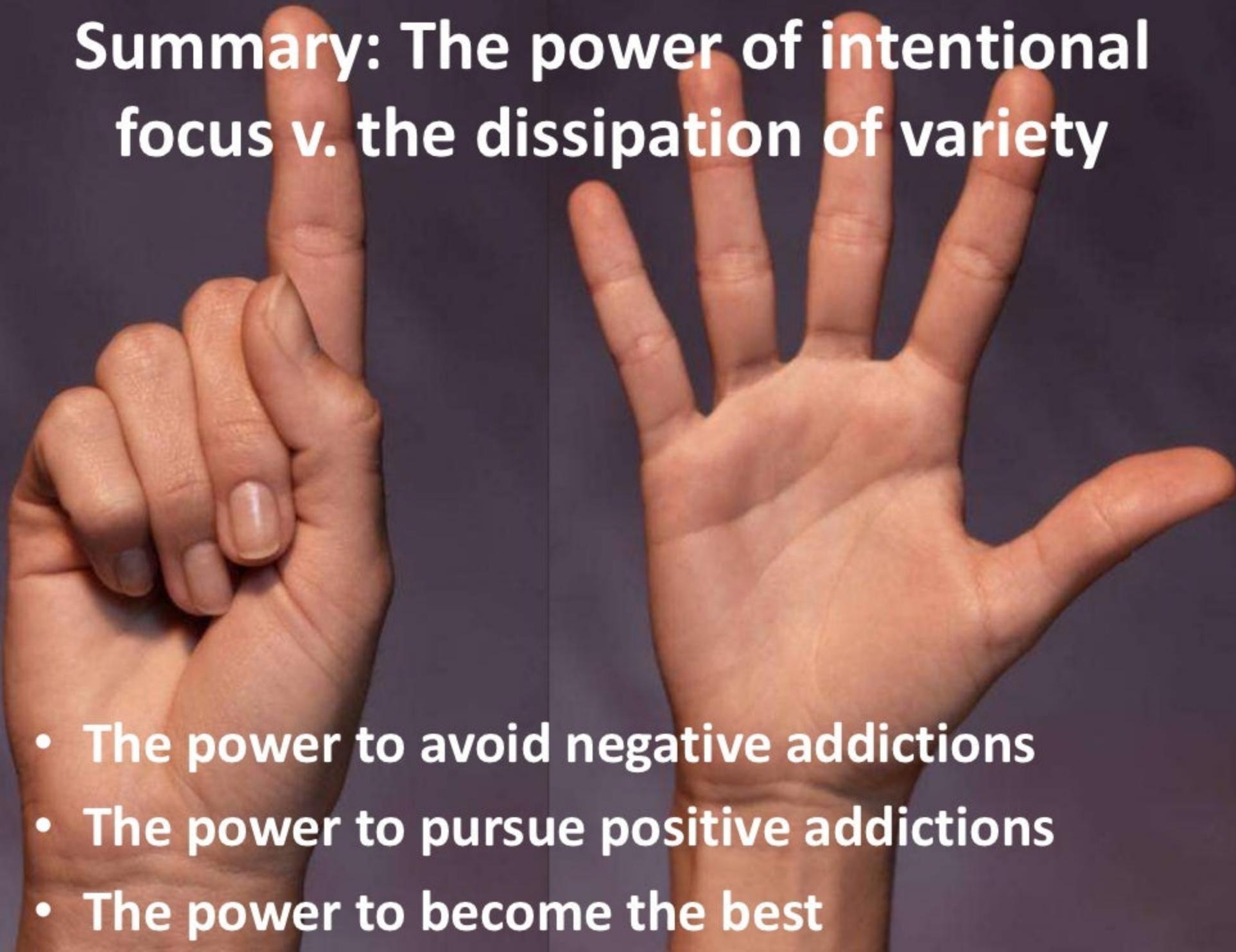
“They were no good onstage when they went there and they were very good when they came back... It was the making of them.” From *Shout! The Beatles in Their Generation* (1981) by P. Norman.

Magic?

Even in mythic tales
of seemingly
overwhelming,
undeniable talent,
the 10-year or 10,000
hour guidelines still
seems to apply.



Summary: The power of intentional focus v. the dissipation of variety



- The power to avoid negative addictions
- The power to pursue positive addictions
- The power to become the best

Slides by:

Russell James III, J.D., Ph.D., CFP®

Associate Professor

Division of Personal Financial Planning

Texas Tech University

russell.james@ttu.edu



Please use these slides!

If you think you might use anything here in a classroom,

please **CLICK HERE** to let me know.

Thanks!

The outline for this behavioral economics series is at

<http://www.slideshare.net/rnja8c/outline-for-behavioral-economics-course-component>