

Meta

Meta-Learning

META is where you'll learn to mimic the world's fastest learners.

It is possible to become world-class in just about anything in six months or less. Armed with the right framework, you can seemingly perform miracles, whether with Spanish, swimming, or anything in between.

Ed Cooke can memorize a shuffled deck of playing cards in 45 seconds, a feat accomplished purely through training. Ed became famous in *Moonwalking with Einstein* for coaching Joshua Foer to become the 2006 U.S.A. Memory Champion.



Daniel “Brain Man” Tammet learned to speak Icelandic in seven days.



“BILL GATES WALKS INTO A BAR...”: THE POWER OF OUTLIERS

“A good teacher must know the rules; a good pupil, the exceptions.”

—MARTIN H. FISCHER, PHYSICIAN AND AUTHOR

Smart Design became one of the top industrial design firms in the world by being (you guessed it) smart.

With locations in New York, San Francisco, and Barcelona, Smart Design represents clients ranging from Burton Snowboards to Starbucks. The company has also been strategic partners with OXO International since 1989. That ubiquitous line of Good Grips kitchenware with the comfy black handles? The ones that cover an entire wall at *Bed Bath & Beyond*? They made 'em.

In the documentary *Objectified*, Dan Formosa, PhD, then with Smart Design's research department, explained one of the first steps in its innovation process:

“We have clients come to us and say, ‘Here is our average customer.’ For instance, ‘Female, she is 34 years old, she has 2.3 kids,’ and we listen politely and say, ‘Well, that’s great, but we don’t care . . . about *that* person.’ What we really need to do, to design, is look at the extremes. The weakest, or the person with arthritis, or the athlete, or the strongest, the fastest person, because if we understand what the extremes are, the middle will take care of itself.”

In other words, the extremes inform the mean, but not vice versa.

That “average user” can be deceptive or even meaningless, just as all averages¹ can be. Here’s a statistician joke for your next hot date:

Person A: What happens when Bill Gates walks into a bar of 55 people?

Person B: I don’t know. What?

Person A: The “average” net worth jumps to more than a billion dollars!²

Buahaha! Not exactly Chris Rock, but the joke makes an important point: sometimes it pays to model the outliers, not flatten them into averages. This isn’t limited to business.

Take, for instance, this seemingly average 132-lb girl who ended up anything but:



The girl next door . . . kind of.

¹ Technically, arithmetic mean.

² Bill Gates's estimated net worth as of March 2012 was \$61 billion.



275-lb Mark Bell sumo dead-lifting 325 lbs, plus 160 lbs of band tension and chains at the top, for a 485-lb total. He has pulled 766 lbs in competition.

CREDIT: JIM MCDONALD, SUPERTRAINING.TV

Her picture was sent to me by Barry Ross, a sprint coach who creates world-record-breaking athletes, to illustrate an ab exercise called the torture twist. He nonchalantly added on the phone: “Oh, and she dead-lifts more than 400 lbs for repetitions.”

What?!? For those of you not familiar with the dead lift, take a look at the sequence at left.

Even more impressive, she developed this otherworldly power the “wrong” way:

- Rather than train the conventional full range of motion, she utilized only the weakest range of motion, lifting the bar to knee height and then lowering it.
- Total muscular tension (actual weight lifting) was limited to five minutes per week.

This all makes our average-looking high-schooler *extreme*.

But was she an *exception*?

In the outside world, absolutely. Even in track and field, she was a freak. Had she been thrown into a study with 40 randomly selected female sprinters, she would have been a ridiculous exception. “Must have been a measurement error!” Then the baby would get thrown out with the bathwater.

But WWWBS? That is: What Would Warren Buffett Say? I suspect the Oracle of Omaha would repeat what he said at Columbia University in 1984 when mocking proponents of the efficient-market hypothesis.

First, he pointed out that, yes, value investors (devotees of Benjamin Graham and David Dodd) who consistently beat the market are outliers. Then he posed a question, which I’ve condensed:

What if there were a nationwide competition in coin flipping, 225 million flippers total [then the population of the USA], each flipping once per morning, and we found a select few [say, 215 people] who’d flipped 20 straight winning flips [flips where the result was guessed correctly] on 20 mornings?

He then continued (bolding is mine):

“Some business school professor will probably be rude enough to bring up the fact that if 225 million orangutans had engaged in a similar exercise, the results would be much the same—215 egotistical orangutans with 20 straight winning flips.

There are some important differences in the examples [of value investors] I am going to present. For one thing, if a) you had taken 225 million orangutans distributed roughly as the U.S. population is; if b) 215 winners were left after 20 days; and if c) **you found that 40 came from a particular zoo in Omaha, you would be pretty sure you were on to something.** So you would probably go out and ask the zookeeper about what he’s feeding them, whether they had special exercises, what books they read, and who knows what else. **That is, if you found any really extraordinary concentrations of success, you might want to see if you could identify concentrations of unusual characteristics that might be causal factors.**”²

Our sprint coach, Barry Ross, has a most unusual zoo. In fact, he can engineer mutants at will.

His best female distance runner has dead-lifted 415 lbs at a body weight of 132 lbs.

His youngest male lifter, 11 years old, has dead-lifted 225 lbs at a body weight of 108 lbs.

Our *extreme* high-schooler is the standard in his gym.

This naturally led me to ask: could I, a nonelite runner and an *average*, possibly replicate her results? I tried, and . . . it worked flawlessly.

In less than 12 weeks, *sans* coach and following a printout from Barry, I went from a max dead lift of 300 lbs to more than 650 lbs.³

BEING THE BEST VS. BECOMING THE BEST

As I write this, the two most-viewed freestyle swimming videos in the world are of:

1. Michael Phelps
2. Shinji Takeuchi



3 Pulling from the knees using a double-overhand grip (not hook) without wrist wraps. I could then do 475 from the floor for repetitions. See “Effortless Superhuman” in *The 4-Hour Body* for the full program description.

Phelps makes sense, but . . . who the hell is Shinji Takeuchi?

Phelps learned to swim at the tender age of seven. Shinji learned to swim at the well-ripened age of 37. More interesting to me, Shinji learned to swim by doing practically the opposite of Phelps:

- Shinji drives his lead arm forward, almost two feet beneath the water, rather than “grabbing” near the surface and pulling.
- Rather than focus on kicking, Shinji appears to eliminate it altogether. No paddleboard workouts to be found.
- Shinji often trains freestyle stroke with closed fists, or by pointing his index finger forward and keeping the arms entirely underwater.

Phelps looks like he’s attached to an outboard motor. It’s a heroic output of horsepower. Shinji has been watched millions of times because he offers the flip side: effortless propulsion.

So who would you rather have as a teacher: Phelps or Shinji?

Arthur Jones, founder of Nautilus, when asked how to gain muscular mass quickly, recommended the following (I paraphrase): Approach the biggest bodybuilder at your gym, ideally a ripped 250–300-lb professional, and politely ask him for detailed advice. Then do precisely the opposite. If the T-Rex–size meathead recommends 10 sets, do one set; if he recommends post-workout protein, consume pre-workout protein, etc.

Jones’s tongue-in-cheek parable was used to highlight one of the dangers of hero worship:

The top 1% often succeed *despite* how they train, not because of it. Superior genetics, or a luxurious full-time schedule, make up for a lot.

This is not to say that Phelps isn’t technical. Everything needs to be flawless to win 18 gold medals. It’s the people a few rungs down—the best you realistically have access to—whom you need to be wary of.

And then there is the second danger of hero worship:

Career specialists can’t externalize what they’ve internalized. Second nature is hard to teach.

This is true across industries.

As Erik Cosselmon, executive chef at Kokkari, my favorite Greek restaurant in San Francisco, said to me amid my novice questioning: “The problem with me is I’ve always been a cook. I don’t remember ever wanting to be something else.”

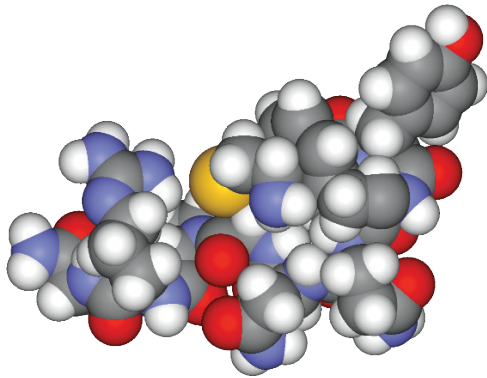
Daniel Burka, a designer at Google and the cofounder of tech start-up Milk, echoes the sentiment: “I don’t think I’d be particularly good at teaching the basics of CSS [a language used for the look and formatting of web pages⁴]. Now I do 12 things at once and they all make sense. I can’t remember which of those was confusing when I was just starting out.”

These top 0.01%, who’ve spent a lifetime honing their craft, are invaluable in later stages, but they’re not ideal if you want to rocket off the ground floor. The Shinji Takeuchis, on the other hand—the rare anomalies who’ve gone from zero to the global top 5% in record time, despite mediocre raw materials—are worth their weight in gold.

I’ve spent the last 15 years finding the Shinjis of the world and trying to model them.

⁴ Yes, I realize this is a vastly simplified definition.

INHALING HORMONES: WHAT COULD GO WRONG?



My old friend desmopressin.

My interest in accelerating learning started at a biochemical level.

In 1996, as a planned neuroscience major at Princeton University, I began experimenting with a panoply of smart drugs (nootropics) I'd imported to the U.S. under the FDA personal importation policy.⁵

After four weeks, I'd fine-tuned a routine for Mandarin Chinese character quizzes: 15 minutes prior to class, I would administer two hits of vaporized desmopressin in each nostril. Desmopressin is a synthetic version of vasopressin, a naturally occurring anti-diuretic and peptide hormone. As a nasal spray, it is often prescribed for children who bed-wet past a certain age. I was more interested in its off-label applications for short-term memory.

Putting theory into practice, it looked like this:

1. Two hits of desmopressin in each nostril.
2. Flip through characters in *Chinese Primer: Character Text* almost as quickly as I could turn the pages.
3. Score 100% on the quiz 5–10 minutes later.⁶

It was fantastically reliable.

But after a few months of testing Hydergine, oxiracetam, and combinations of dozens of other drugs, headaches set in and a thought occurred: perhaps snorting anti-diuretic hormones isn't the best long-term strategy? My dorm bathroom had also started to resemble a meth lab, which was repelling girls.

So I shifted my obsession from molecules to process.

Was it possible to develop a sequence, or a blueprint, that would allow one to learn *anything* faster? Any subject, any sport, anything at all?

I suspected so.

I'd glimpsed one piece of the puzzle four years earlier, in 1992.

MATERIAL BEATS METHOD

In 1992, I was 15 years old and had landed in Japan for my first extended trip abroad. I would be an exchange student at Seikei Gakuen high school for one year.

On the first day of classes, I reported to the faculty lounge in my required navy-blue uniform, looking like a West Point cadet. I nervously awaited my student chaperone, who would be taking me to my "home class," the group of 40 or so students I'd be spending most of my time with. One of the faculty members noticed me sitting in the corner and approached:

"Ah, *Timu-kun!*" he said with a wave. *Kun* is like *-san* but used to address male inferiors.

"*Kore wa . . .*" *This is . . .* he said as he pointed at a mysterious piece of paper. I could barely manage greetings, so he hailed an English teacher to explain the document. The page, written entirely in characters I couldn't read, detailed my daily schedule, as it turned out.

⁵ Not something I recommend. One mistake and you're illegally trafficking drugs, which the *Federales* frown upon.

⁶ If you'd like the opposite effect, go binge drinking. Excessive alcohol inhibits vasopressin release, which explains the peeing every 10 minutes followed by time travel (i.e., blacking out or forgetting everything).

The English teacher translated: “Physics, mathematics, world history, *kōbun*—ah . . . traditional Japanese,” and on it went.

Panic set in. I’d only had a few months of rudimentary Japanese prior to arrival, and my teachers in the U.S. had reassured me with: “Don’t worry, you’ll have plenty of Japanese classes!”

Now irretrievably in Tokyo, I realized I was dealing with a major *Lost in Translation* screwup. “Japanese classes” hadn’t meant language classes. For the entire year ahead, I was to attend normal Japanese high school classes alongside 5,000 Japanese students prepping for university exams! This is when I pooped my Pampers.

I proceeded to flounder horribly, just as I’d failed with Spanish in junior high. Sadly, it seemed I was simply “bad at languages.” Six months into my exchange, I was ready to go home.

Then Lady Luck smiled upon me. I stumbled upon a poster (see opposite) while looking for *The Book of Five Rings* in the Kinokuniya bookstore in Shinjuku.

This poster, which I still have on my wall 20 years later, contains all 1,945 of the *jōyō kanji* (常用漢字), the characters designated for basic literacy by the Japanese Ministry of Education. Most newspapers and magazines limit themselves to the *jōyō kanji*. For all practical purposes, this means that if you know the meaning-rich characters on the poster, you know Japanese, including all the most important verbs.

Japanese on one page! Holy shit!

Language is infinitely expansive (much like cooking) and therefore horribly overwhelming if unfiltered.

This poster was a revelation. It brought to light the most important lesson of language learning: *what* you study is more important than *how* you study.

Students are subordinate to materials, much like novice cooks are subordinate to recipes. If you select the wrong material, the wrong textbook, the wrong group of words, it doesn’t

matter how much (or how well) you study. It doesn’t matter how good your teacher is. One must find the highest-frequency material.

Material beats method.

THE GRAMMAR OF JUDO: TRANSFER

If you have no interest in politics, will you enjoy a language course that uses political articles? Of course not. You’ll get bored and quit.

The authors of most Japanese language books appeared to think that reading the *Asahi Shimbun* (Asahi Newspaper) was the only litmus test for Japanese mastery. For a high school student, and even now, reading the *Asahi Shimbun* is about as interesting as watching paint dry.

Fortunately, as long as you hit the highest-frequency material, I learned that content matters very little.

My panacea, it turned out, was judo textbooks.

Though the vocabulary (think, *ingredients*) was highly specialized, I eclipsed the grammatical ability of four- and five-year students of Japanese after two months of studying judo. Why? Because the grammar (think, *cooking methods*) was universal.

The principles transferred to everything.

