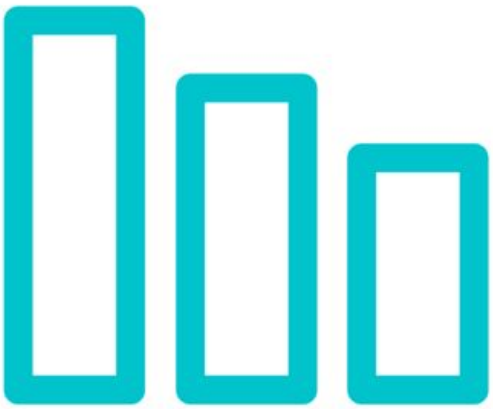
# Process Improvement:

## A Brief Guide on How to Master the Art of Continuous Improvement



James Clear

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# This Coach Improved Every Tiny Thing by 1 Percent and Here's What Happened

In 2010, Dave Brailsford faced a tough job.

No British cyclist had ever won the Tour de France, but as the new General Manager and Performance Director for Team Sky (Great Britain's professional cycling team), Brailsford was asked to change that.

His approach was simple.

Brailsford believed in a concept that he referred to as the "aggregation of marginal gains." He explained it as "the 1 percent margin for improvement in everything you do." His belief was that if you improved every area related to cycling by just 1 percent, then those small gains would add up to remarkable improvement.

They started by optimizing the things you might expect: the nutrition of riders, their weekly training program, the ergonomics of the bike seat, and the weight of the tires.

But Brailsford and his team didn't stop there. They searched for 1 percent improvements in tiny areas that were overlooked by almost everyone else: discovering the pillow that offered the best sleep and taking it with them to hotels, testing for the most effective type of massage gel, and teaching riders the best way to wash their hands to avoid infection. They searched for 1 percent improvements everywhere.

Brailsford believed that if they could successfully execute this strategy, then Team Sky would be in a position to win the Tour de France in five years time.

He was wrong. They won it in three years.

In 2012, Team Sky rider Sir Bradley Wiggins became the first British cyclist to win the Tour de France. That same year, Brailsford coached the British cycling team at the 2012 Olympic Games and dominated the competition by winning 70 percent of the gold medals available.

In 2013, Team Sky repeated their feat by winning the Tour de France again, this time with rider Chris Froome. Many have referred to the British cycling feats in the Olympics and the Tour de France over the past 10 years as the most successful run in modern cycling history.

And now for the important question: what can we learn from Brailsford's approach?

## The Aggregation of Marginal Gains

It's so easy to overestimate the importance of one defining moment and underestimate the value of making better decisions on a daily basis.

Almost every habit that you have — good or bad — is the result of many small decisions over time.

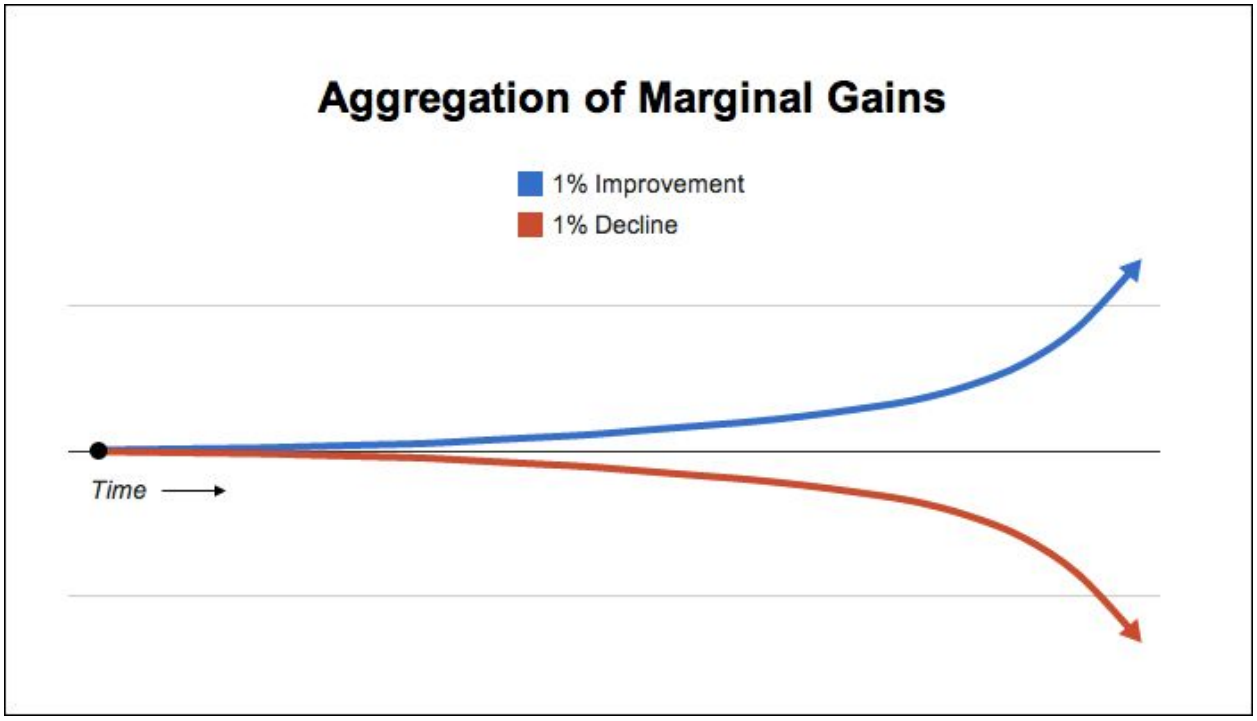
And yet, how easily we forget this when we want to make a change.

So often we convince ourselves that change is only meaningful if there is some large, visible outcome associated with it. Whether it is losing weight, building a business, traveling the world

or any other goal, we often put pressure on ourselves to make some earth-shattering improvement that everyone will talk about.

Meanwhile, improving by just 1 percent isn't notable (and sometimes it isn't even noticeable). But it can be just as meaningful, especially in the long run.

And from what I can tell, this pattern works the same way in reverse. (An aggregation of marginal losses, in other words.) If you find yourself stuck with bad habits or poor results, it's usually not because something happened overnight. It's the sum of many small choices — a 1 percent decline here and there — that eventually leads to a problem.




Inspiration for this image came from a graphic in The Slight Edge by Jeff Olson.

In the beginning, there is basically no difference between making a choice that is 1 percent better or 1 percent worse. (In other words, it won't impact you very much today.) But as time goes on,

these small improvements or declines compound and you suddenly find a very big gap between people who make slightly better decisions on a daily basis and those who don't. This is why small choices don't make much of a difference at the time, but add up over the long-term.

On a related note, this is why I love setting a schedule for important things, planning for failure, and using the "never miss twice" rule. I know that it's not a big deal if I make a mistake or slip up on a habit every now and then. It's the compound effect of never getting back on track that causes problems. By setting a schedule to never miss twice, you can prevent simple errors from snowballing out of control.

## The Bottom Line

> *Success is a few simple disciplines, practiced every day; while failure is simply a few errors in judgment, repeated every day.*
> *—Jim Rohn*

You probably won't find yourself in the Tour de France anytime soon, but the concept of aggregating marginal gains can be useful all the same.

Most people love to talk about success (and life in general) as an event. We talk about losing 50 pounds or building a successful business or winning the Tour de France as if they are events. But the truth is that most of the significant things in life aren't stand-alone events, but rather the sum of all the moments when we chose to do things 1 percent better or 1 percent worse. Aggregating these marginal gains makes a difference.

There is power in small wins and slow gains. This is why average speed yields above average results. This is why the system is greater than the goal. This is why mastering your habits is more important than achieving a certain outcome.

Where are the 1 percent improvements in your life?

# Design for Default: How to Optimize Your Daily Decisions

You might assume that humans buy products because of what they are, but the truth is that we often buy things because of where they are. For example, items on store shelves that are at eye level tend to be purchased more than items on less visible shelves.

In the best-selling book Nudge (Kindle | Audiobook), authors Richard Thaler and Cass Sunstein explain a variety of ways that our everyday decisions are shaped by the world around us. The effect that eye-level shelves have on our purchase habits is just one example.

Here's another:

The ends of aisles are money-making machines for retailers. According to data cited by the New York Times, 45 percent of Coca-Cola sales come specifically from end-of-the-aisle racks. [1]

Here's why this is important:

*Something* has to go on the shelf at eye level. Something has to be placed on the rack at the end of the aisle. Something must be the default choice. Something must be the option with the most visibility and prominence. This is true not just in stores, but in nearly every area of our lives. There are default choices in your office and in your car, in your kitchen and in your living room.

My argument is this:

If you optimize the default decisions in your life, rather than accepting whatever is handed to you, then it will be easier to live a better life.

Let's talk about how to do that right now.

## Design for Default

Although most of us have the freedom to make a wide range of choices at any given moment, we often make decisions based on the environment we find ourselves in.

For example, if I wanted to do so, I could drink a beer as I write this article. However, I am currently sitting at my desk with a glass of water next to me. There are no beers in sight. Although I possess the capability to get up, walk to my car, drive to the store, and buy a beer, I probably won't because I surrounded by easier alternatives—namely, drinking water. In this case, taking a sip of water is the default decision, the easy decision.

Consider how your default decisions are designed throughout your personal and professional life. For example:

- If you sleep with your phone next to your bed, then checking social media and email as soon as you wake up is likely to be the default decision.
- If you walk into your living room and your couches and chairs all face the television, then watching television is likely to be the default decision.
- If you keep alcohol in your kitchen, then drinking consistently is more likely to be the default decision.

Of course, defaults can be positive as well.

- If you keep a dumbbell next to your desk at work, then pumping out some quick curls is more likely to be the default decision.
- If you keep a water bottle with you throughout the day, then drinking water rather than soda is more likely to be the default decision.
- If you place floss in a visible location (like next to your toothbrush), then flossing is more likely to be the default decision.

Researchers have referred to the impact that environmental defaults can have on our decision making as choice architecture. It is important to realize that you can be the architect of your choices. You can design for default. [2]

## How to Optimize Your Default Decisions

Here are a few strategies I have found useful when trying to design better default decisions into my life:

**Simplicity**. It is hard to focus on the signal when you're constantly surrounded by noise. It is more difficult to eat healthy when your kitchen is filled with junk food. It is more difficult to focus on reading a blog post when you have 10 tabs open in your browser. It is more difficult to accomplish your most important task when you fall into the myth of multitasking. When in doubt, eliminate options.

**Visual Cues**. In the supermarket, placing items on shelves at eye level makes them more visual and more likely to be purchased. Outside of the supermarket, you can use visual cues like the Paper Clip Method or the Seinfeld Strategy to create an environment that visually nudges your actions in the right direction.

**Opt-Out vs. Opt-In**. There is a famous organ donation study that revealed how multiple European countries skyrocketed their organ donation rates: they required citizens to opt-out of donating rather than opt-in to donating. You can do something similar in your life by opting your future self into better habits ahead of time. For example, you could schedule your yoga session for next week while you are feeling motivated today. When your workout rolls around, you have to justify opting-out rather than motivating yourself to opt-in.

Designing for default comes down to a very simple premise: shift your environment so that the good behaviors are easier and the bad behaviors are harder.

## Designed For You vs. Designed By You

Default choices are not inherently bad, but the entire world was not designed with your goals in mind. In fact, many companies have goals that directly compete with yours (a food company may want you to buy their bag of chips, while you want to lose weight). For this reason, you should be wary of accepting every default as if it is supposed to be the optimal choice.

I have found more success by living a life that I design rather than accepting the standard one that has been handed to me. Question everything. You need to alter, tweak, and shift your environment until it matches what you want out of life.

Yes, the world around you shapes your habits and choices, but there is something important to realize: someone had to shape that world in the first place. Now, that someone can be you.

# Do More of What Already Works

In 2004, nine hospitals in Michigan began implementing a new procedure in their intensive care units (I.C.U.). Almost overnight, healthcare professionals were stunned with its success.

Three months after it began, the procedure had cut the infection rate of I.C.U. patients by sixty-six percent. Within 18 months, this one method had saved 75 million dollars in healthcare expenses. Best of all, this single intervention saved the lives of more than 1,500 people in just a year and a half. The strategy was immediately published in a blockbuster paper for the New England Journal of Medicine.

This medical miracle was also simpler that you could ever imagine. It was a checklist.

## The Power of Never Skipping Steps

The checklist strategy implemented at Michigan hospitals was named the Keystone ICU Project. It was led by a physician named Peter Pronovost and later popularized by writer Atul Gawande. [3]

In Gawande's best-selling book, The Checklist Manifesto (audiobook), he describes how Pronovost's simple checklist could drive such dramatic results. In the following quote, Gawande explains one of the checklists that was used to reduce the risk of infection when installing a central line in a patient (a relatively common procedure).

> *On a sheet of plain paper, [Pronovost] plotted out the steps to take in order to avoid infections when putting a line in. Doctors are supposed to (1) wash their hands with soap, (2) clean the patient's skin with chlorhexidine antiseptic, (3) put sterile drapes over the entire patient, (4) wear a sterile mask, hat, gown, and gloves, and (5) put a sterile dressing over the catheter site once the line is in. Check, check, check, check, check.*
>
> *These steps are no-brainers; they have been known and taught for years. So it seemed silly to make a checklist just for them. Still, Pronovost asked the nurses in his I.C.U. to observe the doctors for a month as they put lines into patients, and record how often they completed each step. In more than a third of patients, they skipped at least one.*

This five-step checklist was the simple solution that Michigan hospitals used to save 1,500 lives. Think about that for a moment. There were no technical innovations. There were no pharmaceutical discoveries or cutting-edge procedures. The physicians just stopped skipping steps. They implemented the answers they already had on a more consistent basis.

## New Solutions vs. Old Solutions

We have a tendency to undervalue answers that we have already discovered. We underutilize old solutions—even if they are best practices—because they seem like something we have already considered.

Here's the problem: *"Everybody already knows that" is very different from "Everybody already does that."* Just because a solution is known doesn't mean it is utilized.

Even more critical, just because a solution is implemented occasionally, doesn't mean it is implemented consistently. Every physician knew the five steps on Peter Pronovost's checklist, but very few did all five steps flawlessly each time.

We assume that new solutions are needed if we want to make real progress, but that isn't always the case.

## Use What You Already Have

This pattern is just as present in our personal lives as it is in corporations and governments. We waste the resources and ideas at our fingertips because they don't seem new and exciting.

There are many examples of behaviors, big and small, that have the opportunity to drive progress in our lives if we just did them with more consistency. Flossing every day. Never missing workouts. Performing fundamental business tasks each day, not just when you have time. Apologizing more often. Writing Thank You notes each week.

Of course, these answers are boring. Mastering the fundamentals isn't sexy, but it works. No matter what task you are working on, there is a simple checklist of steps that you can follow right now—basic fundamentals that you have known about for years—that can immediately yield results if you just practice them more consistently.

Progress often hides behind boring solutions and underused insights. You don't need more information. You don't need a better strategy. You just need to do more of what already works.

# To Make Big Gains, Avoid Tiny Losses

In many cases, improvement is not about doing more things right, but about doing less things wrong.

To understand what I mean, we need to take a trip to Japan.

## The Curious Case of Japanese Television Sets

In the decades that followed World War II, the manufacturing industry in America thrived. For years, American companies grew in size and profitability—even though they produced many products of average quality.

This gravy train began to slide off the tracks in the 1970s. Japanese firms implemented a series of surprising changes that helped them crush their American counterparts. As one New Yorker article put it…

*"Japanese firms emphasized what came to be known as "lean production," relentlessly looking to remove waste of all kinds from the production process, down to redesigning workspaces, so workers didn't have to waste time twisting and turning to reach their tools. The result was that Japanese factories were more efficient and Japanese products were more reliable than American ones. In 1974, service calls for American-made color televisions were five times as common as for Japanese televisions. By 1979, it took American workers three times as long to assemble their sets." [4]*

Business buzzwords like Kaizen, Lean Production, and Process Improvement are so ubiquitous today that it can be easy to gloss over the subtlety of the Japanese strategy.

**The key insight I'd like to point out here is the difference between focusing on getting better vs. not getting worse.** Japanese television makers did not seek out more intelligent workers or better materials, they simply said, "Let's build the same product, but make fewer mistakes." Japanese companies improved by subtracting the things that didn't work, not by creating a bigger, better, or more expansive product.

This is an important distinction and it applies to habits, processes, and goals of all kinds, not just television sets.

## Two Paths to Improvement

The distinction we are making here is between improvement by addition vs. improvement by subtraction. Improvement by addition is focused on doing more of what does work: producing a faster car, creating a more powerful speaker, building a stronger table. Improvement by subtraction is focused on doing less of what doesn't work: eliminating mistakes, reducing complexity, and stripping away the inessential.

These concepts of addition and subtraction apply to many areas of life.

### Education

- Addition: become more intelligent, increase your IQ.
- Subtraction: avoid stupid mistakes, make fewer mental errors.

### Investing

- Addition: earn more money, seek growth opportunities.
- Subtraction: never lose money, limit your risk.

**Web Design**

- Addition: improve your call-to-action copy, boost conversions.
- Subtraction: remove the on page elements that distract visitors.

**Baseball**

- Addition: get more hits.
- Subtraction: make fewer outs.

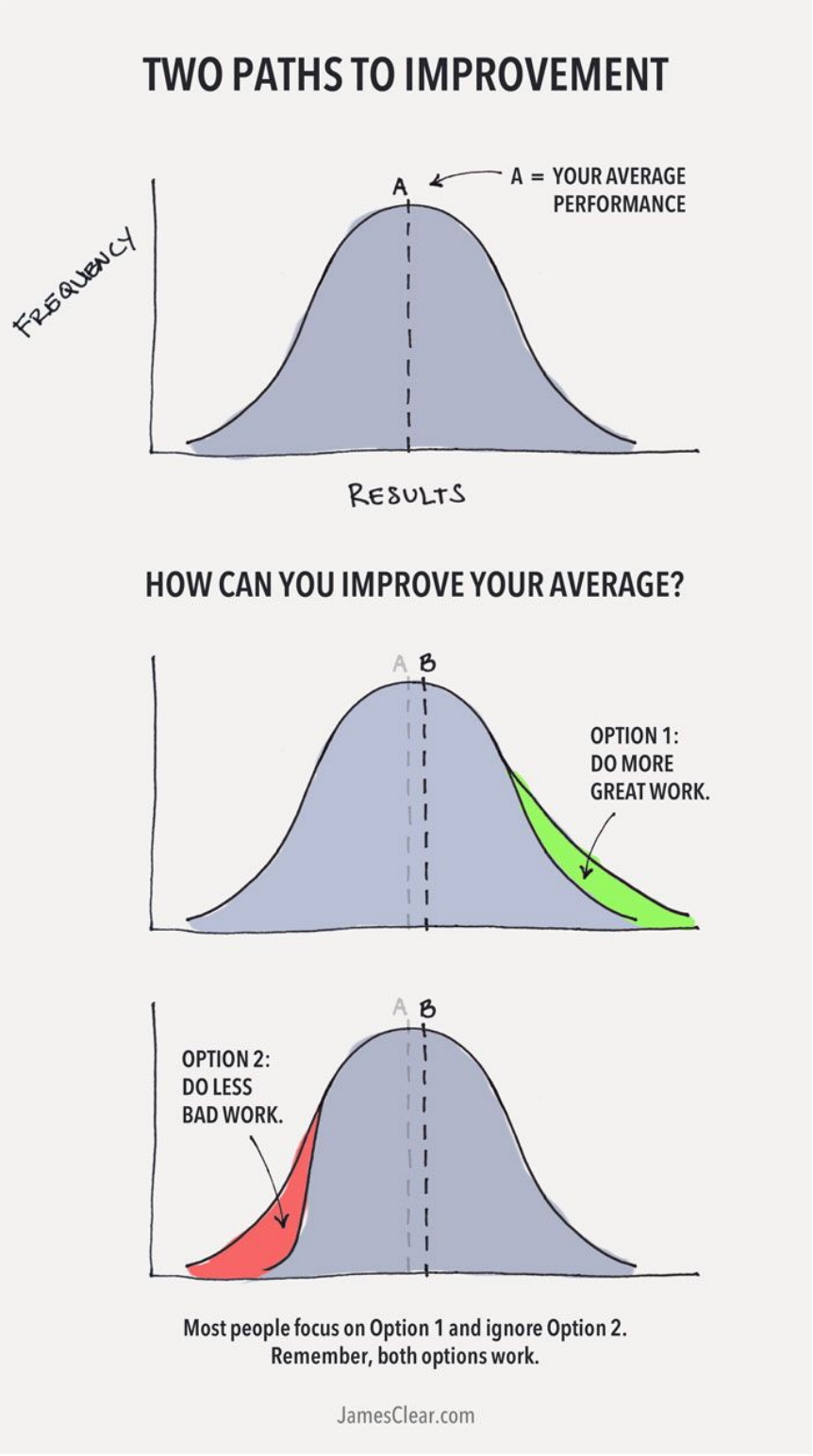
**Exercise**

- Addition: make your workouts more intense.
- Subtraction: miss fewer workouts.

**Nutrition**

- Addition: follow a new diet of healthy foods.
- Subtraction: eat fewer unhealthy foods.

Many of these approaches seem similar, but they are not the same. Take the nutrition example above. Eating healthy foods and avoiding unhealthy foods seems very similar. However, in the first case, your focus is on “how to eat better” whereas the second case is focused on “how to not eat worse.” In one scenario you are trying to chase the upside, in another you are focused on limiting the downside.


TWO PATHS TO IMPROVEMENT
A
A = YOUR AVERAGE PERFORMANCE
FREQUENCY
RESULTS
HOW CAN YOU IMPROVE YOUR AVERAGE?
A B
OPTION 1:
DO MORE
GREAT WORK.
A B
OPTION 2:
DO LESS
BAD WORK.
Most people focus on Option 1 and ignore Option 2.
Remember, both options work.
JamesClear.com

## Improvement by Subtraction

Nearly every manager in the world wants to "do more great work", but very few people want to "do less bad work." We love peak performances. Every athlete wants to play an amazing game. Every business owner wants to land a blockbuster sale. Every writer wants to launch a best-selling book. Our desire for that next level of performance causes us to disproportionately focus on the front end of the curve.

Eliminating mistakes is an underappreciated way to improve. In the real world, it is often easier to improve your performance by cutting the downside rather than capturing the upside. Subtraction is more practical than addition. This is true for two reasons.

First, it is often easier to eliminate errors than it is to master peak performance. By simply writing down every step of a process, you can often identify a few areas that can be reduced or eliminated all together. The easiest improvements I have made to my website were a result of eliminating every inessential element.

Second, improvement by subtraction does not require you to achieve a new level of performance. This method is about doing what you are capable of doing more frequently. It is about reducing the likelihood that you'll perform below your ability.

One of the best ways to make big gains is to avoid tiny losses.

**Thanks** to readers Jim and Andrius for recommending the New Yorker article and to Shane Parrish for priming my thoughts on this topic by writing about why "avoiding stupidity is easier than seeking brilliance."

# Habit Creep: The Proven, Reasonable and Totally Unsexy Way to Become More Successful

There is a common phenomenon in the world of personal finance called “lifestyle creep.” It describes our tendency to buy bigger, better, and nicer things as our income rises.

For example, say that you receive a promotion at work and suddenly you have $10,000 more of income each year. Rather than save the extra money and continue living as normal, you’re more likely to upgrade to a bigger TV or stay at better hotels or buy designer clothes. Your normal lifestyle will creep up slowly and goods that were once seen as a luxury will gradually become a necessity. What was once out of reach will become your new normal. [5]

Changing human behavior is often considered to be one of the hardest things to do in business and in life. Yet, lifestyle creep describes a very reliable way that human behavior changes over the long-term.

What if we adapted this concept to the rest of our lives?

## Changing Your Normal

Let’s list some typical financial goals.

- I want to own designer jeans.

- I want to have a bigger house.
- I want to drive a faster car.

Here's the interesting thing:

These big goals naturally happen as a side effect when we have the means to make them happen. When our purchasing power goes up, our purchases tend to go up too. That's lifestyle creep.

What if similar side effects could happen in other areas of life?

Consider these goals:

- I want to add 10 pounds of muscle.
- I want to find a partner and get married.
- I want to earn six figures per year.
- I want to get a higher score on my test.
- I want to own a successful business.

What if we trusted that adding more muscle or earning more money or getting better grades would come as a natural side effect of improving our normal routines? In other words, as our normal habits improved, so would our results.

This idea of slightly adjusting your habits until behaviors and results that were once out of reach become your new normal is a concept I like to call "habit creep." [6]

## How to Practice Habit Creep

If you buy more things than your bank account can sustain, that's not lifestyle creep. That's called debt.

Similarly, if you adopt a bunch of new behaviors you can't sustain, that's not habit creep. In other words, the key is to avoid the trap of trying to grow too fast. Lifestyle creep happens so slowly that it is almost imperceptible. Habit creep should be the same way. Your goal is to nudge your behaviors along in very small ways.

In my experience, there are two primary ways to change long-term behaviors and improve performance for good.

1. Increase your performance by a little bit each day. (Most people take this to the extreme.)
2. Change your environment to remove small distractions and barriers. (Most people never think about this.)

Here are some thoughts on each one:

**Increasing your performance**. You have a normal way of living. For example, your current level of physical fitness is generally a reflection of how much activity you get on a normal day. Let's say that your standard day requires you walk 8,000 steps. If you want to get in better shape, the standard approach would be to start training for a race or exercise more. But the habit creep approach would be to add a very small amount to your standard behavior. Say, 8,100 steps per day rather than 8,000 steps. You can apply this logic to nearly any area of life. You have a normal amount of sales calls you make at work each day, a normal amount of Thank You notes you write each year, a normal amount of books you read each month. If you want to become more successful, more grateful, or more intelligent, then you can use the idea of habit creep to slowly improve those areas simply by improving the way you live your normal day.

**Changing your environment.** There are all sorts of things we do each day that are a response to the environment we live in. We eat cookies because they are on the counter. We pick up our phones because someone sends us a text. We turn on TV because it's the first thing we look at when we sit on the couch. If you change your environment in small ways (hide the cookies in the pantry, leave the phone in another room while you work, place the TV inside a cabinet), then your actions change as well. Imagine if you made one positive environment change each week. Where would your life creep to by the end of the year?

## Changing Your Normal

The results you enjoy on your best day are typically a reflection of how you spend your normal day.

Everyone gets obsessed with achieving their very best day—pulling the best score on their test, running their fastest race ever, making the most sales in the department.

I say forget that stuff. Just improve your normal day and the results will take care of themselves. We naturally make long-term changes in our lives by slowly and slightly adjusting our normal everyday habits and behaviors.

# Sources

1. This data comes from the article, "Nudged to the Produce Aisle by a Look in the Mirror."
2. Thanks to my friend Christine Lai for originally tossing out the term "design for default" in a conversation I had with her.
3. Although he is one of my favorite authors, calling Gawande a writer is a bit of a misnomer. He writes best-selling books in his spare time. His day job is working as a surgeon at a large hospital in Boston, Massachusetts. You know, just being a best-selling author and a world-class surgeon as one casually does.
4. "Better All the Time" by James Surowiecki. November 10, 2014.
5. We could have an entirely separate discussion about whether lifestyle creep is a good thing or not. Typically, the concept is viewed in a negative light because it indicates unnecessary consumerism and the purchasing of items that you don't really need. Furthermore, lifestyle creeps seems to increase the risk of loss aversion. For example, once you own designer clothes and an expensive car, it can be difficult to go back to rocking Levis and driving a Toyota Camry. That said, I'm not entirely against buying nice things for yourself (provided they are useful or that they bring you happiness), but this discussion is outside the scope of this article. I bring up lifestyle creep here simply to provide an example of how human behavior changes over the long-term in a reliable and long-lasting way. It's an example of how you can make changes that actually stick and, as is always the case with humans, those changes can be positive or negative.
6. If you're wondering, habit creep is a phrase I just invented. Bonus points for me.