



# Habit Formation

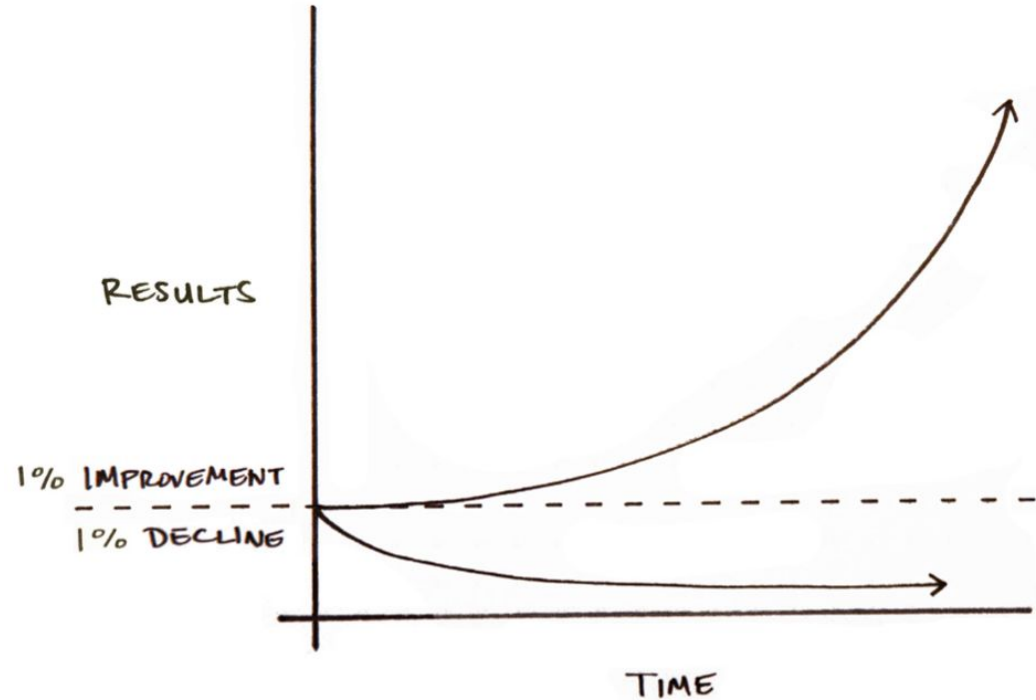
Clear, James. *Atomic Habits: An Easy and Proven Way to Build Good Habits and Break Bad Ones*. Cornerstone Digital, 2019.

# 1% Better Every Day

The effects of small habits compound over time. For example, if you can get just 1 percent better each day, you'll end up with results that are nearly 37 times better after one year.

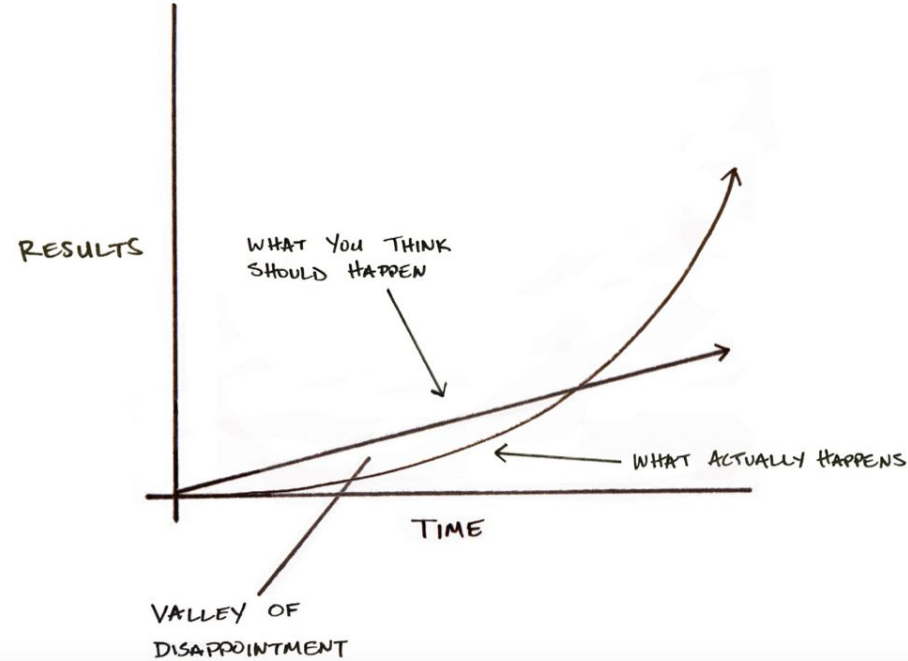
1% worse every day for one year.  $0.99^{365} = 00.03$

1% better every day for one year.  $1.01^{365} = 37.78$



# The Plateau of Latent Potential

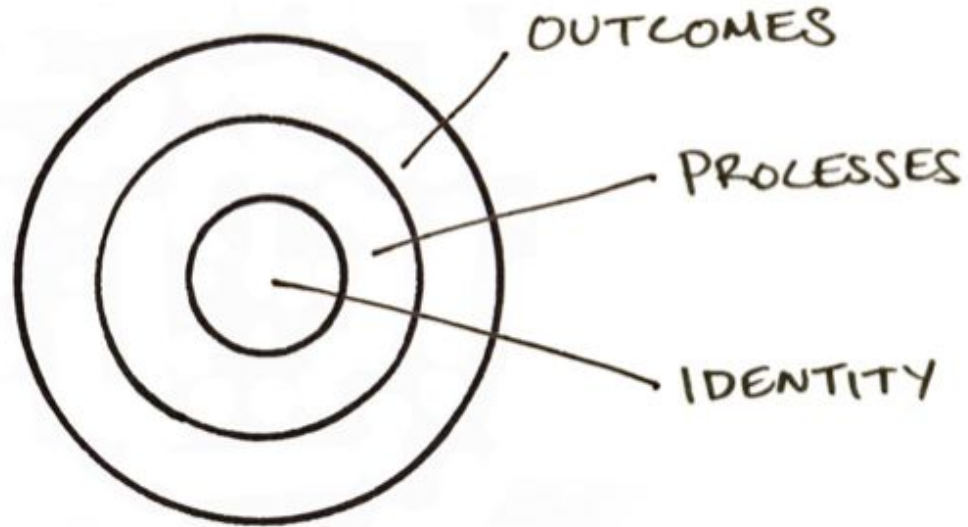
We often expect progress to be linear. At the very least, we hope it will come quickly. In reality, the results of our efforts are often delayed. It is not until months or years later that we realize the true value of the previous work we have done. This can result in a “valley of disappointment” where people feel discouraged after putting in weeks or months of hard work without experiencing any results. However, this work was not wasted. It was simply being stored. It is not until much later that the full value of previous efforts is revealed.



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## Three Layers of Behavior Change

There are three layers of behavior change: a change in your outcomes, a change in your processes, or a change in your identity.

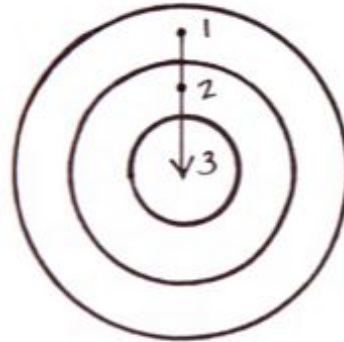


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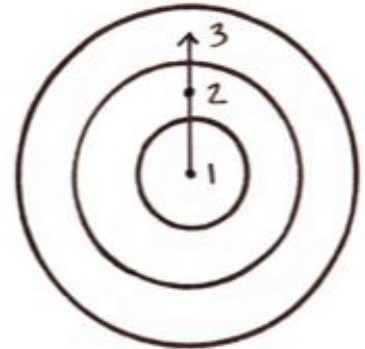
# Outcome-Based vs Identity-Based

With outcome-based habits, the focus is on what you want to achieve. With identity-based habits, the focus is on who you wish to become.

## OUTCOME-BASED HABITS



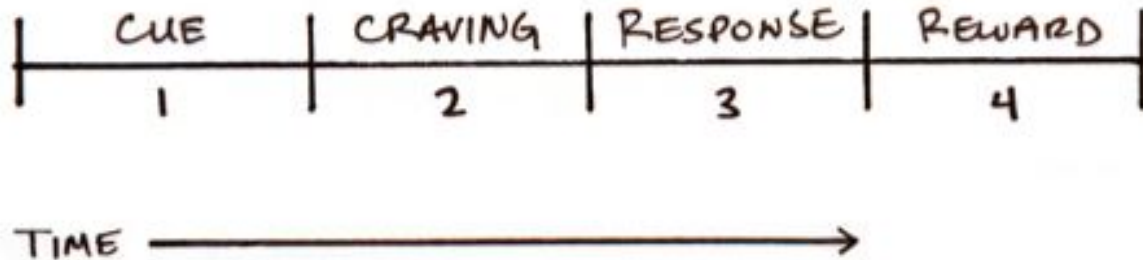
## IDENTITY-BASED HABITS





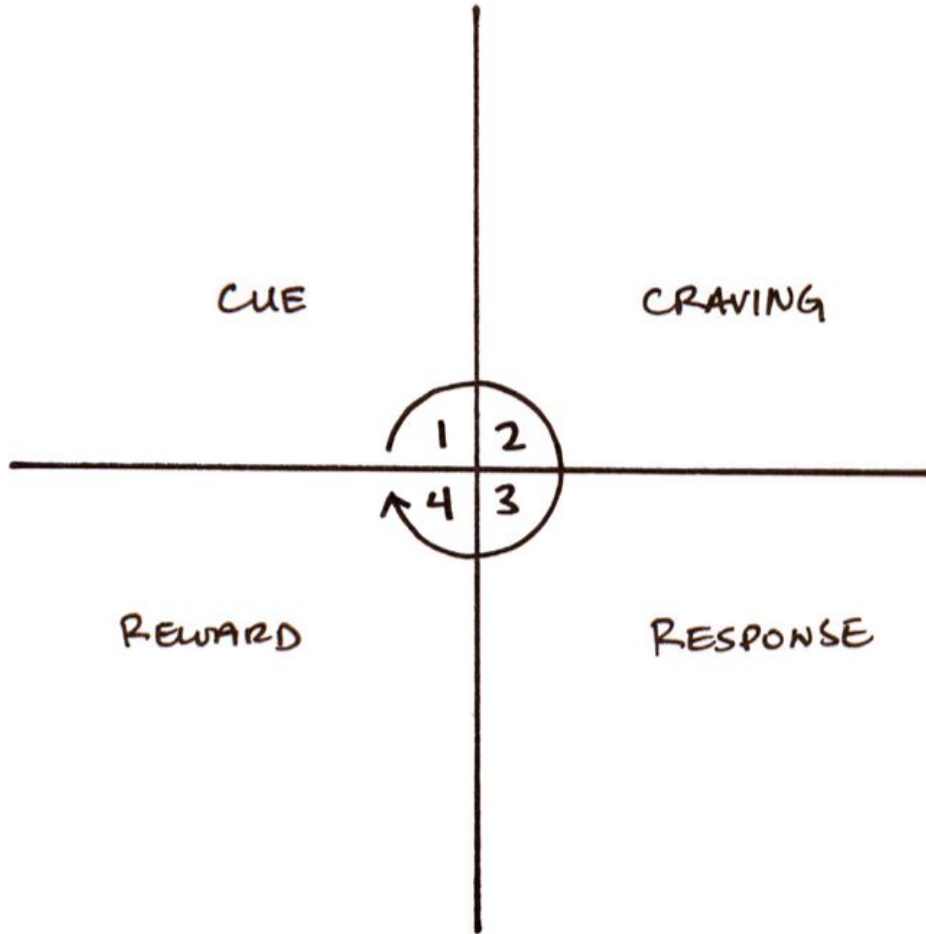
# The Four Stages of Habit

All habits proceed through four stages in the same order: cue, craving, response, and reward.



# The Habit Loop

The four stages of habit are best described as a feedback loop. They form an endless cycle that is running every moment you are alive. This “habit loop” is continually scanning the environment, predicting what will happen next, trying out different responses, and learning from results. In summary, the cue triggers a craving, which motivates a response, which provides a reward, which satisfies the craving and, ultimately, becomes associated with the cue.



**The 1st Law of Behavior  
Change is to make it obvious.**







# The Habit Scorecard

The Habit Scorecard is a simple method you can use to become more self-aware and notice habits and behaviors that you may overlook. This is a method we discuss in detail in Chapter 4 of Atomic Habits. To create your own Habits Scorecard, start by making a list of your daily habits. Start at the beginning of your day and write down each habit you do: wake up, turn off your alarm, make your bed, brush your teeth, etc. You can make this list as long or as short as you would like, but I tend to find that a longer and more comprehensive list is more effective. Once you have a full list, look at each behavior, and ask yourself, “Is this a good habit, a bad habit, or a neutral habit?”



# The Habit Scorecard

- If it is a good habit, write “+” next to it.
- If it is a bad habit, write “-” next to it.
- If it is a neutral habit, write “=” next to it.

DAILY HABITS	POSITIVE (+), NEGATIVE (-), OR NEUTRAL (=)



# The Habit Scorecard

If you're having trouble determining how to rate a particular habit, here is a question I like to use: "Does this behavior help me become the type of person I wish to be? Does this habit cast a vote for or against my desired identity?" Habits that reinforce your desired identity are generally good. Habits that conflict with your desired identity are generally bad. When creating your Habits Scorecard, there is no need to change anything at first. The goal of this exercise is not to change your behavior— even for the bad habits. The goal is to simply notice what is actually going on.

I will \_\_\_\_\_ at  
ACTION



## Implementation Intention

\_\_\_\_\_ in \_\_\_\_\_ .  
TIME LOCATION

You are three times more likely to follow through with a habit if you make a specific plan for when, where, and how you are going to implement it. By outlining a clear plan of action and clarifying exactly what you need to work on, you make the task simpler which means it requires less motivation to do. So when you wake up the next morning and find that your motivation has faded, you still might have enough to get started because the next step has already been outlined and is simple and clear. Researchers refer to these action plans as an “implementation intention,” a specific plan of action that can be executed when the time comes to act. An implementation intention is a choice we make beforehand about when and where to act. It refers to how you intend to implement a particular habit.



# Implementation Intention

The format for creating an implementation intention is: “When situation X arises, I will perform response Y.” A simple framework to design your own implementation intention is what I call The Action/Time/Location Strategy. I will [ACTION] at [TIME] in [LOCATION]. For example:

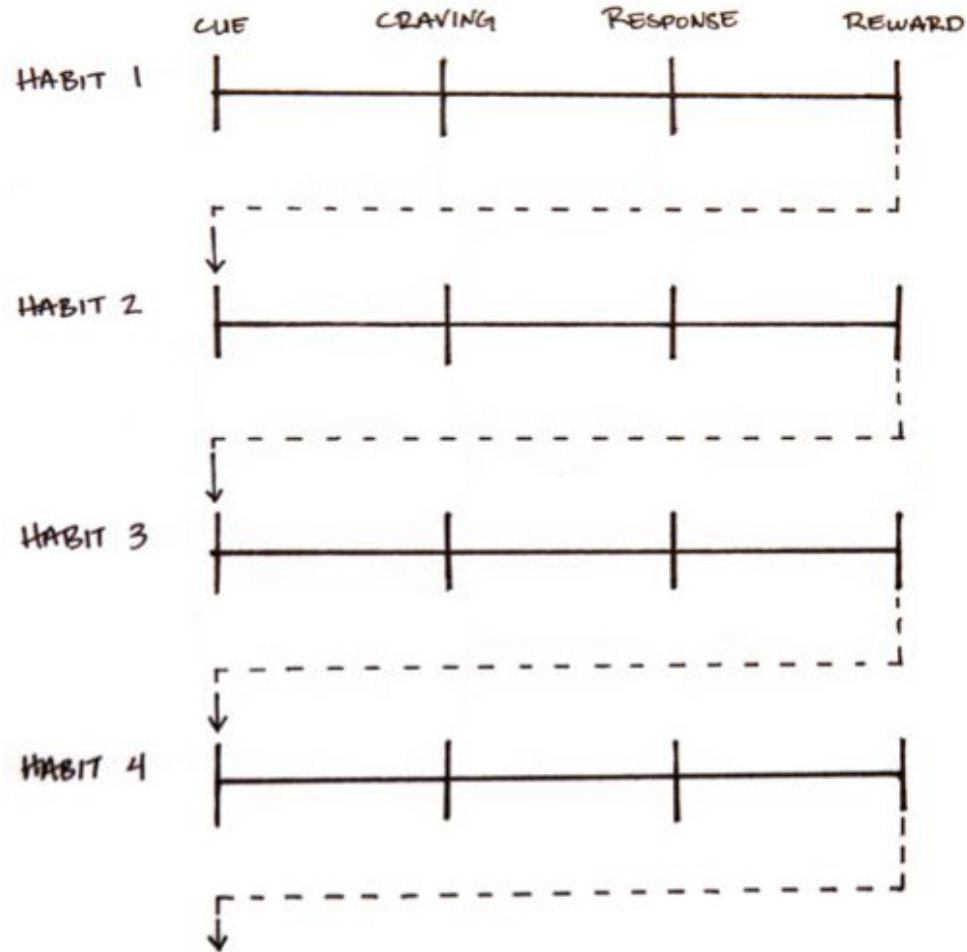
- I will meditate for one minute at 7 a.m. in my kitchen.
- I will study Spanish for twenty minutes at 6 p.m. in my bedroom.
- I will exercise for one hour at 5 p.m. in my local gym.

I will \_\_\_\_\_ at  
ACTION

\_\_\_\_\_ in \_\_\_\_\_ .  
TIME LOCATION

# Habit Stacking

Habit stacking increases the likelihood that you'll stick with a habit by stacking your new behavior on top of an old one. This process can be repeated to chain numerous habits together, each one acting as the cue for the next.





# Habit Stacking

One of the best ways to build a new habit is to find a habit you already do each day and then stack your new behavior on top of it. In other words, your current habit becomes the trigger for your new one. This strategy, which I refer to as “habit stacking,” has been popularized by BJ Fogg at Stanford University.

After \_\_\_\_\_ ,  
CURRENT HABIT

I will \_\_\_\_\_ .  
NEW HABIT



# Habit Stacking: Examples

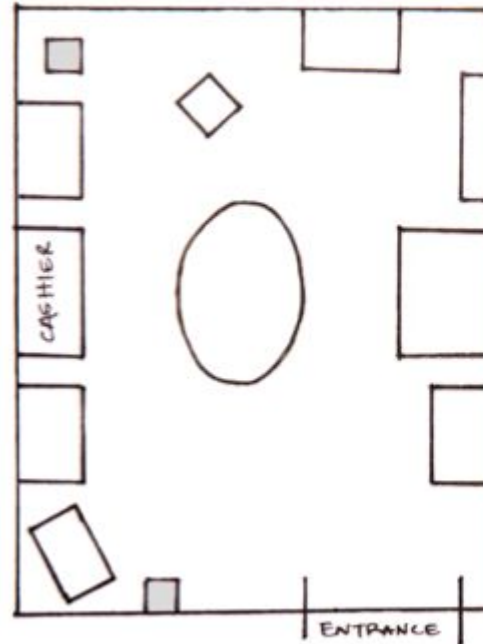
- When I get on the subway, I will always stand instead of sitting.
- Every year on my birthday, I donate to charity.
- After I turn on the shower, I will do five burpees.
- After I lay down in bed for the night, I think of one positive thing that happened today.
- After I get in my car, I will take three deep breaths.
- After I get home from my violin lesson, I will take my violin out of the case and put it on a stand where I can see it.
- When I see my water bottle is half empty, I will fill it back up.
- When I close the trunk, I will look to see if I am holding the keys.
- When I feel stressed or anxious, I will close my eyes and take five deep breaths.
- Before I travel on a plane, I pack a healthy snack to take with me.



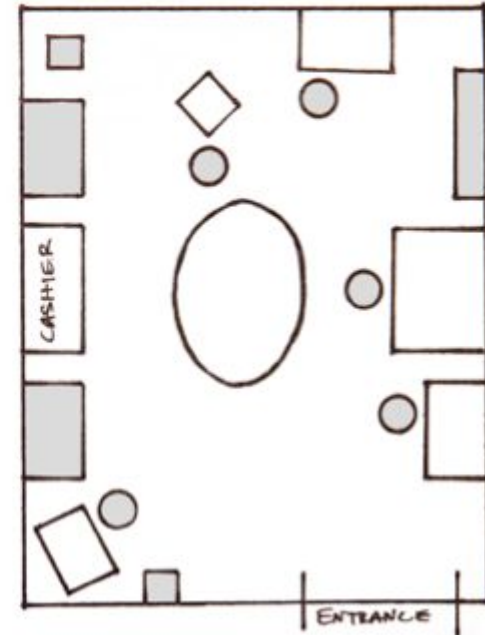
# Environment Changes

Here is a representation of what the cafeteria looked like before the environment design changes were made (left) and after (right). The shaded boxes indicate areas where bottled water was available in each instance. Because the amount of water in the environment was increased, behavior shifted naturally and without additional motivation.

**BEFORE**



**AFTER**





# The 1st Law

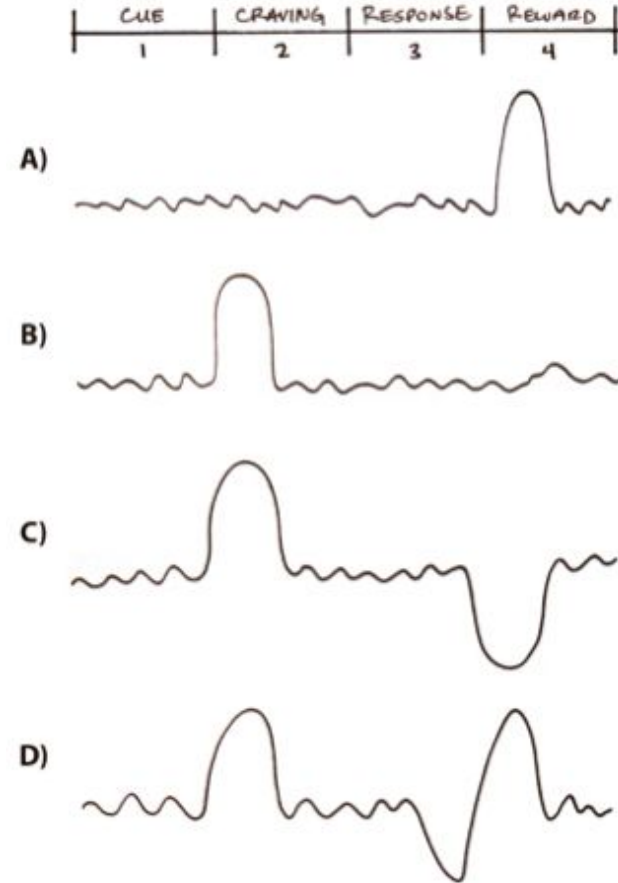
The 1st Law	Make It Obvious
1.1	Fill out the Habits Scorecard. Write down your current habits to become aware of them.
1.2	Use implementation intentions: “I will [BEHAVIOR] at [TIME] in [LOCATION].”
1.3	Use habit stacking: “After [CURRENT HABIT], I will [NEW HABIT].”
1.4	Design your environment. Make the cues of good habits obvious and visible.

**The 2nd Law of Behavior  
Change is to make it attractive.**



# The Dopamine Spike

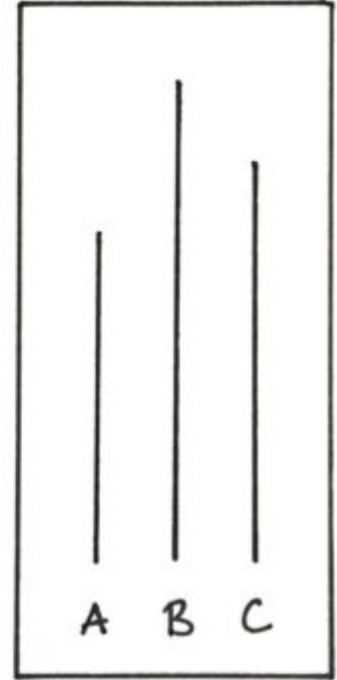
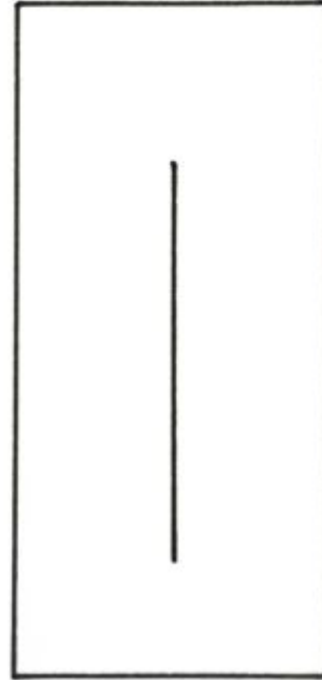
Before a habit is learned (A), dopamine is released when the reward is experienced for the first time. The next time around (B), dopamine rises before taking action, immediately after a cue is recognized. This spike leads to a feeling of desire and a craving to take action whenever the cue is spotted. Once a habit is learned, dopamine will not rise when a reward is experienced because you already expect the reward. However, if you see a cue and expect a reward, but do not get one, then dopamine will drop in disappointment (C). The sensitivity of the dopamine response can clearly be seen when a reward is provided late (D). First, the cue is identified and dopamine rises as a craving builds. Next, a response is taken but the reward does not come as quickly as expected and dopamine begins to drop. Finally, when the reward comes a little later than you had hoped, dopamine spikes again. It is as if the brain is saying, “See! I knew I was right. Don’t forget to repeat this action next time.”



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## Conforming to Social Norms

This is a representation of two cards used by Solomon Asch in his famous social conformity experiments. The length of the line on the first card (left) is obviously the same as line C, but when a group of actors claimed it was a different length the research subjects would often change their minds and go with the crowd rather than believe their own eyes.





## The 2nd Law

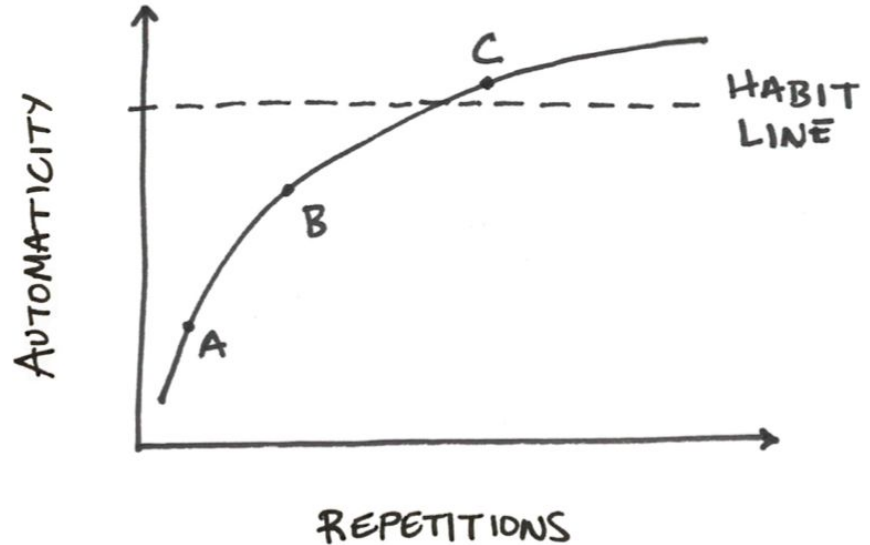
The 2nd Law	Make It Attractive
2.1	Use temptation bundling. Pair an action you want to do with an action you need to do.
2.2	Join a culture where your desired behavior is the normal behavior.
2.3	Create a motivation ritual. Do something you enjoy immediately before a difficult habit.

**The 3rd Law of Behavior  
Change is to make it easy.**



# The Habit Line

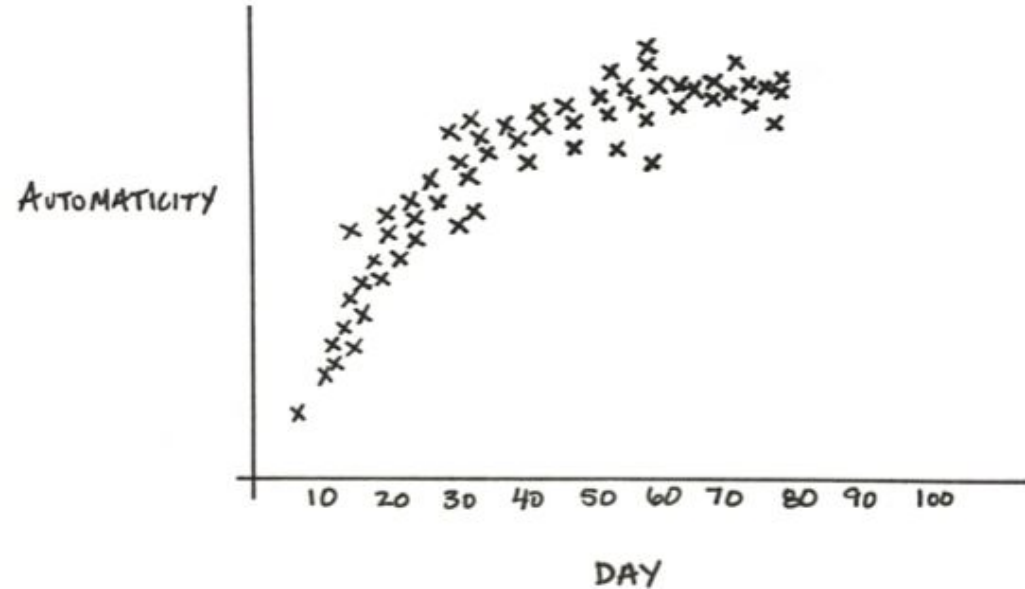
In the beginning (point A), a habit requires a good deal of effort and concentration to perform. After a few repetitions (point B), it gets easier, but still requires some conscious attention. With enough practice (point C), the habit becomes more automatic than conscious. Beyond this threshold - the habit line - the behavior can be done more or less without thinking. A new habit has been formed.





# Walking 10 Minutes Per Day

This graph shows someone who built the habit of walking for ten minutes after breakfast each day. Notice that as the repetitions increase, so does automaticity, until the behavior is as easy and automatic as it can be.





## The 3rd Law

The 3rd Law	Make It Easy
3.1	Reduce friction. Decrease the number of steps between you and your good habits.
3.2	Prime the environment. Prepare your environment to make future actions easier.
3.3	Master the decisive moment. Optimize the small choices that deliver outsized impact.
3.4	Use the Two-Minute Rule. Downscale your habits until they can be done in two minutes or less.
3.5	Automate your habits. Invest in technology and onetime purchases that lock in future behavior.

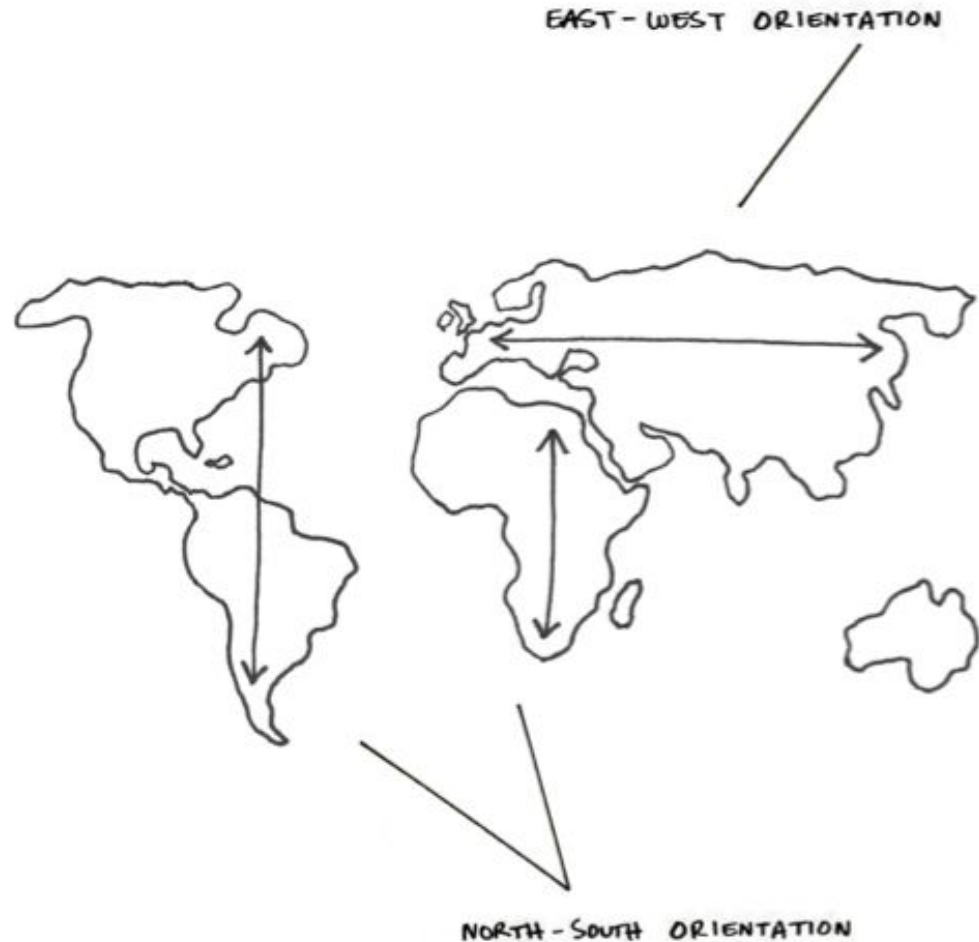
**The 4th Law of Behavior  
Change is to make it satisfying.**



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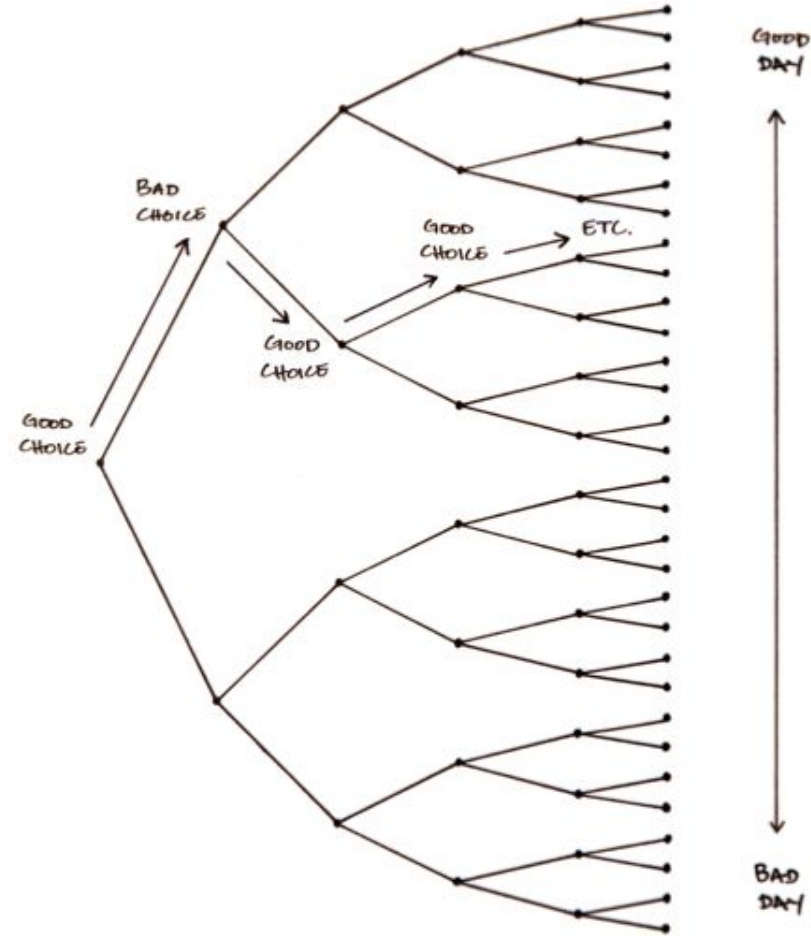
## The Shape of Human Behavior

The primary axis of Europe and Asia is east-west. The primary axis of the Americas and Africa is north-south. This leads to a wider range of climates up-and-down the Americas than across Europe and Asia. As a result, agriculture spread nearly twice as fast across Europe and Asia than it did elsewhere. The behavior of farmers—even across hundreds or thousands of years—was constrained by the amount of friction in the environment.



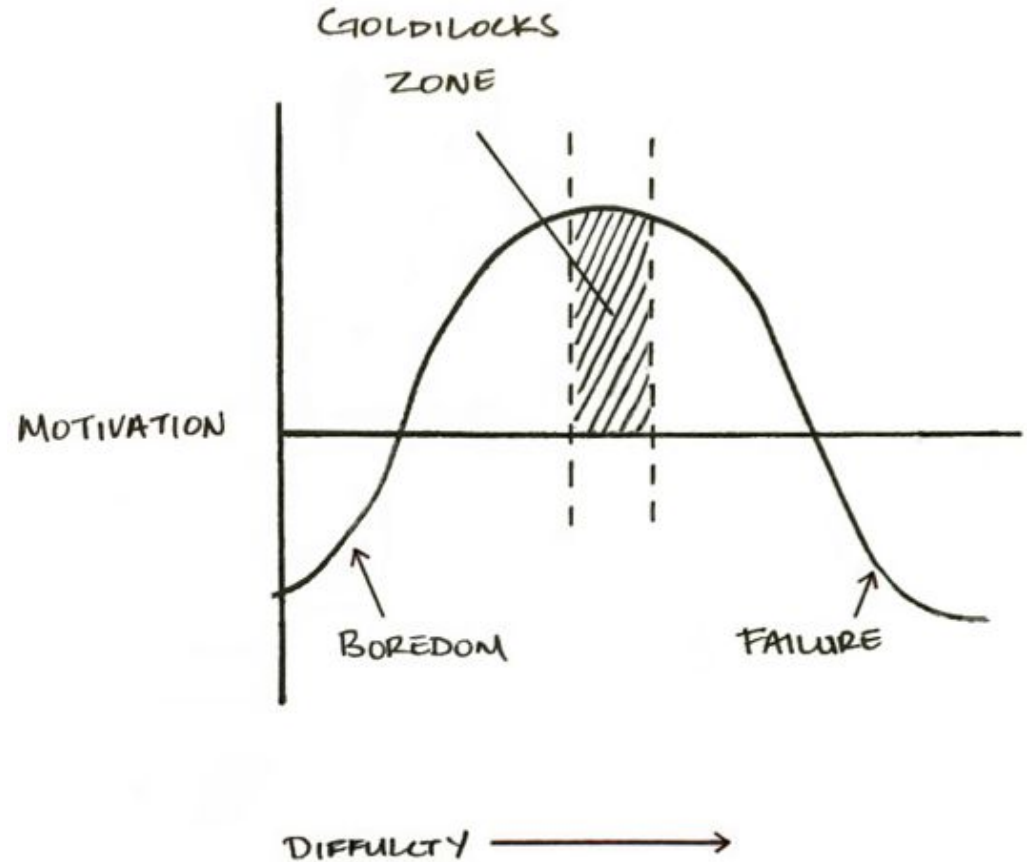
# Decisive Moments

The difference between a good day and a bad day is often a few productive and healthy choices made at decisive moments. Each one is like a fork in the road, and these choices stack up throughout the day and can ultimately lead to very different outcomes.



# The Goldilocks Rule

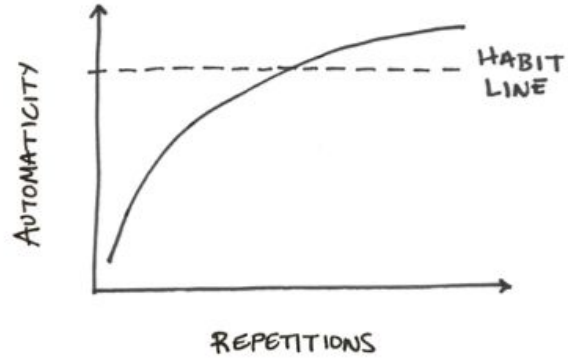
Maximum motivation occurs when facing a challenge of just manageable difficulty. In psychology research this is known as the Yerkes-Dodson law, which describes the optimal level of arousal as the midpoint between boredom and anxiety.



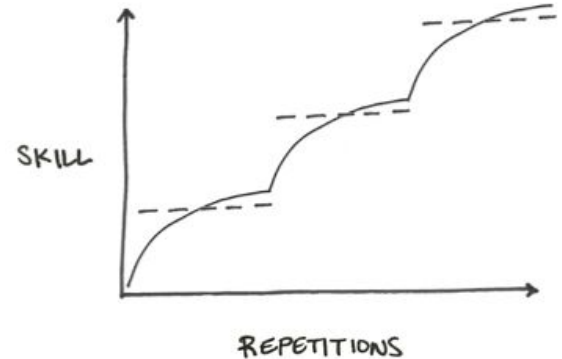
# Mastery

The process of mastery requires that you progressively layer improvements on top of one another, each habit building upon the last until a new level of performance has been reached and a higher range of skills has been internalized.

## MASTERING ONE HABIT



## MASTERING A FIELD





# Habit Tracker

A habit tracker is a simple way to measure whether you did a habit. The most basic format is to get a calendar and cross off each day you stick with your routine. For example, if you meditate on Monday, Wednesday, and Friday, each of those dates gets an X. As time rolls by, the calendar becomes a record of your habit streak.

“Don’t break the chain” is a powerful mantra. Don’t break the chain of sales calls and you’ll build a successful book of business. Don’t break the chain of workouts and you’ll get fit faster than you’d expect. Don’t break the chain of creating every day and you will end up with an impressive portfolio. Habit tracking is powerful because it leverages multiple laws of behavior change. It simultaneously makes a behavior obvious, attractive, and satisfying.





## Habit Contract



# Habit Contract

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WHAT IS YOUR MAIN OBJECTIVE?

---

IF YOU DON'T FOLLOW THROUGH, WHAT IS THE CONSEQUENCE?

---

WHO WILL YOU REPORT TO?

---

YOUR SIGNATURE

---

DATE

---

PARTNER'S SIGNATURE

---

DATE



## The 4th Law

The 4th Law	Make It Satisfying
4.1	Use reinforcement. Give yourself an immediate reward when you complete your habit.
4.2	Make “doing nothing” enjoyable. When avoiding a bad habit, design a way to see the benefits.
4.3	Use a habit tracker. Keep track of your habit streak and “don’t break the chain.”
4.4	Never miss twice. When you forget to do a habit, make sure you get back on track immediately.



# Breaking Habits

<b>Inversion of the 1st Law</b>	<b>Make It Invisible</b>
1.5	Reduce exposure. Remove the cues of your bad habits from your environment.
<b>Inversion of the 2nd Law</b>	<b>Make It Unattractive</b>
2.4	Reframe your mindset. Highlight the benefits of avoiding your bad habits.
<b>Inversion of the 3rd Law</b>	<b>Make It Difficult</b>
3.6	Increase friction. Increase the number of steps between you and your bad habits.
3.7	Use a commitment device. Restrict your future choices to the ones that benefit you.
<b>Inversion of the 4th Law</b>	<b>Make It Unsatisfying</b>
4.5	Get an accountability partner. Ask someone to watch your behavior.
4.6	Create a habit contract. Make the costs of your bad habits public and painful.



# Resources


- Chapter 5 supplement – [More examples of implementation intentions \(article\)](#)
- Chapter 5 supplement – [More examples of habit stacking \(article\)](#)
- Chapter 6 supplement – [More examples of choice architecture\(article\)](#)
- Chapter 12 supplement – [More examples of environment design\(article\)](#)
- Chapter 12 supplement – [More examples of addition by subtraction\(article\)](#)
- Chapter 13 supplement – [More examples of the Two-Minute Rule\(article\)](#)
- Chapter 14 supplement – [One-time actions that pay off again and again \(Twitter\)](#)
- Chapter 16 supplement – [More examples of the Paper Clip Strategy\(article\)](#)



## How can I create an environment conducive to good habits?

The physical environment is one of the most overlooked drivers of habits and behavior change.

Your habits are often triggered by what is obvious or available to you in your current environment. Drive down any major road. It is no surprise we eat so much fast food when we are surrounded by it. It's hard to resist the pull of what engulfs us. Thankfully, you don't have to be the victim of your environment. You can also be the architect of it. Want to practice guitar more frequently? Place your guitar stand in the middle of your living room. Want to read more? Put a book on top of your pillow when you make your bed each morning and then read a few pages when you go to bed at night. If you want to make a habit a big part of your life, make the cue a big part of your environment. By sprinkling triggers throughout your surroundings, you increase the odds that you'll think about your habit throughout the day. Making a better decision is easier when the cues for good habits are right in front of you.



# How can I stay motivated when my habits go against the grain of my social environment?

Social norms are a powerful driver of our everyday behavior. If you find yourself in a social situation where your desired habit goes against the grain of the group, then it will be hard to stick with it because doing so seems unattractive (an inversion of the 2nd Law).

The best option is to join a culture where (1) your desired behavior is the normal behavior and (2) you already have something in common with the group.

When this is not possible, you'll need to leverage the remaining three Laws of Behavior Change. If you can manage to make a habit obvious, easy, and satisfying, then it's possible you'll be able to stick with it—even if it runs against the social norm.




## How small can a change be and still remain useful?

It can be easy to dismiss small habits as not being worthwhile.

The truth is, small habits can reinforce the identity you want to build. If you show up at the gym five days in a row—even if it's just for two minutes—you are casting votes for your new identity. As the votes accumulate, so does the evidence of your new identity.

If a small habit reinforces your desired identity, then it is meaningful. And if it is meaningful, then it is





**You say habit tracking is a good way to make a habit satisfying. How do you specifically track your habits?**

First, it's not necessary to track every habit. If you employ the Four Laws of Behavior Change, then you'll find that you can often stick to a tiny behavior whether you track it or not. However, I do believe tracking can be beneficial for the most important tasks. Personally, I track my exercise habits (how many workouts I do), writing habits (how many new articles I write), and travel habits (how many new places I visit). I generally believe using a habit tracker is the simplest way to get started. The most basic format is a calendar on which you mark an "X" on each day you do the habit. To make this easier, I have created a Habit Journal, which includes a habit tracking template.