

Before and After

Week One - Our Change-Making God

A Lifelong Learning Study with Dr. Allen Hilton at NC Congo

Open - A Transformational God and Lives that Needs Change

This is the time of year when Before/After photos abound. Anyone marketing diets or workouts or other self-improvement products toss those inspiring and disgusting side-by-sides in front of our face: the voluminous man on the left becomes six-pack-abs guy on the right, and all he needed were these food supplements and water. The couch potato eating bon bons becomes the hard-body maxing out Peloton workouts. It all looks so easy on the ads.

You and I seek change in our lives. It's a part of being human - part of why we came out of the cave. It's deeply engrained in us, not only to survive but to thrive. And yet we could all probably name ten things about our lives that we'd like to change. Maybe it is the shape of our body. Or maybe it's the way we respond to criticism, or our tendency to criticize. It could be the clutter we build in our house or our schedule. It could be that we over- or under-work. If we're honest, our end-of-one-year-beginning-of-the-next inventory is probably not: "Perfect! Just the way I want to be!"

The question that hounds us when we aspire to be better is simple: "How?" New Year's resolutions notoriously fail, as do many of our most inspired commitments to start new things or stop old things. But how? How do we tap the infinite resource of God's Spirit to become the people we believe God is trying to build in us? How do we welcome God's amazing grace as unconditional acceptance AND welcome God's clear call to higher things?

These are the questions we'll ask together in this study.

Part One - A Pairing of the Bible and Science

Are you looking for inspiration?

It helps to hear people who can send shivers up and down your spine with their words, so can track down great speeches: Lincoln's Second Inaugural or Gettysburg

Address, maybe MLK's "I Have a Dream" speech, or Sojourner Truth's "[Ain't I a Woman](#)".

Looking to be inspired by remarkable athletes? We know to watch [Usain Bolt](#) blow past sprint records in Beijing (2008) or Tiger Woods win by margins previously unknown at [Augusta](#) (1997) or [Pebble Beach](#) (2000). Secretariat leave a world-class field of horses in the dust at the [1972 Belmont](#), or [Simone Biles](#) pushing herself near perfection all over the world.

Maybe music does it for you. You could build a play list all of the most bracing and uplifting songs you know and feel your spirits rise.

Or maybe you'll find inspiration in the majesty or tranquility of creation: a walk through snowy lanes or by the seashore or in the mountains.

Inspiring moments are great, aren't they? Something in us thrills. We may even weep or laugh from the sheer exhilaration. In fact, I'm a bit of an inspiration junkie. I'll find a favorite Sorkin episode from the West Wing or watch Secretariat again or

But here's the problem with these moments of inspiration: they evaporate. We make resolutions when "high" that we can't fulfill once our feet hit the ground again. Our sources of inspiration can only get us so far. Sooner or later, we need to ask the more practical question:

Where do we go when we actually want our lives to change? Where do we go when we're stuck in a behavior or attitude that we don't like? Or when we aspire to a behavior or attitude we do like but don't yet have?

In these weeks together we'll find our way to two experts on the subject:

- The first is the scripture. The God who made us has partnered with our authors to litter the Bible with stories of human transformation and instruction and specific guidance that direct the preferred shape of our change.
- The second is the booming field of neuroscience. Recent developments in specific brain imaging have made it possible to pinpoint the way our brains develop habits and process change.

Now, faith and science haven't always gotten along, as you know. That's a long story. For our part, you and I will follow the path of the great [Doctor Francis Collins](#). Dr.

Collins is the kind of expert we ought to listen to: a devout, guitar-playing evangelical Christian who was the head of the Human Genome Project under Pres. Clinton and is now the Director of the National Institute for Health under Pres. Trump. He recently received the coveted 2020 Templeton Prize for probing deeply the relationship between religion and science. Smart and faithful fellow, this.

Now, the path. In his terrific book, *The Language of God*, shares the words he spoke when President Clinton and he presented the results of the Genome Project:

It's a happy day for the world. It is humbling for me, and awe-inspiring, to realize that we have caught the first glimpse of our own instruction book, previously known only to God.

Notice that Collins sees science as a significant way to discover God's nature. Throughout his book, he demonstrates the ease with which he marries faith and science, because they both have the same end: to know "the language of God."

In this course, we'll tap both the timeless wisdom of scripture and the timely recent discoveries of neuroscientists to help us see how God works transformation in our lives.

Part Two: Our Beginning with Bible

Many Christian writers have attempted to capture the change-making part of God in a simple saying.

God loves us just the way we are. And God loves us too much to leave us just the way we are.

The God of the universe does not stop loving us when we go astray. But that God designed us for something better - for life lived out toward one another in thriving community.

If that's the nature of God, the next question is how. How does God effect transformation in a life. How can we be changed?

In scripture, the starting point for learning how God changes people is Romans 12.1-2. Paul goes more directly at the subject in these sentences than he or any writer

treats it anywhere else in the Bible. That makes it a pretty good idea for anyone exploring Christian transformation to learn this verse by heart and meditate on its meaning.

Step One in our attempt to understand any passage is to make sure we know what it's saying. Below are two translations and a few notes on the original Greek language Paul used to convey his insights.

Two Translations

Translations help us dig deeper into important passages. Here are two for Transformation Central:

I appeal to you therefore, brothers and sisters, by the mercies of God, to present your bodies as a living sacrifice, holy and acceptable to God, which is your spiritual worship. Do not be conformed to this world, but be transformed by the renewing of your minds, so that you may discern what is the will of God—what is good and acceptable and perfect. (NRSV)

With eyes wide open to the mercies of God, I beg you, my brothers, as an act of intelligent worship, to give him your bodies, as a living sacrifice, consecrated to him and acceptable by him. Don't let the world around you squeeze you into its own mould, but let God re-mould your minds from within, so that you may prove in practice that the plan of God for you is good, meets all his demands and moves towards the goal of true maturity. (JB Phillips Translation)

Beneath the Surface

As with all Bible study, we can find help going deeper
adelphoi - Literally "brothers" but, in all of Paul's letters and through all early Christianity, it is used to describe all the baptized or faithful folk whom the speaker or author is addressing. (See Galatians 3.28 for this kinship as children of God)

dia ton oiktirmon tou theou - "on account of the mercies/compassion(s) of God." This picks up all eleven chapters that have gone before. Paul turns our eyes toward ALL of his good news, that he's not ashamed of because it reveals God's power (1.16-17), that promises salvation to everyone who has faith (3.21-29), that changes our lives by replacing our old lives with a steadily-growing new life in Christ (chs 6 and 8), that

somehow figured out how to include in this good news even those Jews who haven't yet consented to the Messiah (chs 9–11) and that involves us in the community of God's children (ch. 12). Casting our eyes on all of that and BECAUSE of all that...

parakalo oun humas...parastesai ta somata humon...theo - "Therefore, I implore/urge/exhort you...to hand over/present your bodies...to God" On the basis of all that good news and what it tells us about God, Paul urges us to place our bodies on God's altar.

thusian zosan - "living sacrifice" The contradiction in terms is powerful. Sacrifice by definition involves a death - of a lamb or a bird, or, in some cultures, a human. So how are we to imagine a LIVING sacrifice? Is this Dead Man Walking? What does it mean to you?

hagian euareston - "holy, pleasing/acceptable"

ten logiken latreian humon - "your rational/reasonable/spiritual? worship/service." This is a fascinating phrase. The language of presenting our bodies as living sacrifice has tilted some translators toward "worship" and thus to spiritual. But you can see the English "logic" in the Greek word "*logiken*," so "spiritual" isn't the first thing to pop in one's head. Others have tilted toward another meaning of *latreia*, which is "service."

My own translation is "reasonable worship," because *logiken* needs the mind, and Romans 1.25 puts *latreia* in play to describe the idolatrous choice of bowing to creatures, rather than the Creator. That

me suschematizesthe to aioni touto - "don't be con-formed (literally co-schematized) to this age/world" (see "Eon")

alla metamorphousthe - "to the contrary, be trans-formed" {"be metamorphosized!" Notice this is passive and does not mean "transform yourself." Paul implies that God does the transforming.)

te anakainosei tou noos - "by the new-making/renovation of the (i.e. your) mind" Paul seems to be telling us the means of transformation: a full renovation of the mind.

eis to dokimazein humas - "so that/for the purpose that you may test/prove/approve"

to *thelema tou theou* - "the will/desire of God" (same language as the Lord's prayer where it is *thelema sou*)

to *agathon kai euareston kai teleion* - "the good and acceptable/pleasing and mature/perfected [will]"

Meaning

So, to summarize, Romans 12.1-2 offers us steps:

1. we see and appreciate how mercifully God has treated us through Jesus and the Holy Spirit;
2. as a response, we present our bodies/lives to God as a sort of living sacrifice;
3. then God transforms us by making our minds new;
4. all of this sets us up to demonstrate God's will in our lives.

All of this means that God is the sort of God who wants to help us change, and God even offers to do that. All we need to do is hand ourselves over to God. Sounds simple.

Other Scriptures

If Romans 12.1-2 is Transformation Central, it is certainly not alone. God's call forward runs like a red thread through the whole Bible.

- Formerly a swindler of Esau's birthright and blessing, Jacob saw his view of God and his subsequent life pattern transformed by his brother's unexpected and magnanimous reconciling embrace in Genesis 33. "In your face, I see the face of God."
- Esther changes from self-protective avoidance of conflict to a willingness to risk her own life to free the Jewish people from a planned genocide at "such a time as this" (Esther 4.14)
- Jeremiah tells of God's intention to replace Israel's (and our) disobedient heart of stone with a soft and fleshy heart. (Jeremiah 36.26)
- The Apostle Peter was notoriously weak when Jesus' arrest turned up the heat on his discipleship - even denying Jesus three times because of a servant girl's questions. (Luke 22.59-62) But after Jesus' resurrection and the gift of the Holy Spirit, he stood boldly and faithfully before the very people who had sent Jesus to his crucifixion. (Acts 4.1-12)

- The Apostle Paul viciously persecuted Christians, “breathing threats and murder”, until Jesus met him on the Damascus Road, where he began to become the most significant purveyor of the Gospel in history. (Acts 9–28)
- The successful Armani merchant (trader in purple linens), Lydia of Philippi, found her life rerouted and became hostess and co-founder of the first Christian community in Europe. (Acts 16).

I could go on and on, of course. It’s no wonder Paul writes in 2 Corinthians 5, “If anyone is in Christ she or he is a new creation. Old things have passed away, behold all things have become new.”

In these weeks together we will chase down a passel of passages that elucidate, not only God’s heart for human transformation, but the ways that God partners with us to bring about the changes we know to seek.

Part Three - The Ways of God and the Science of Transformation

How does God change people? Every once in a while, with Halley’s Comet frequency, God just presto changes a life, night and day. These transformations do happen - or at least seem to - and you may know or even have such a story. But most of the time, the process is more Colorado River and Grand Canyon than it is spontaneous metamorphosis. Recent brain science helps us to understand how God uses the cultivation of new habits in our lives to “remake us from within.” (Rom 12.2)

The Power of Habits

Which comes first, the attitudinal change or the behavioral change? Do we feel love and then act lovingly? Or do we act lovingly and begin to feel love? It’s an age-old debate. In the realm of habit change, though, both moral philosophers and brain scientists agree that we almost never change habits by wishing or waiting for a feeling.

Aristotle, the ancient Greek philosopher and student of Plato, wrote,

Moral excellence comes about as a result of habit. We become just by doing just acts, temperate by doing temperate acts, brave by doing brave acts. (Nichomachean Ethics)

The early twentieth-century psychologists and philosopher, William James, defined the human being similarly, without the nod to virtue:

All our life, so far as it has definite form, is but a mass of habits - practical, emotional, and intellectual - systematically organized for our weal or woe, and bearing us irresistibly toward our destiny, whatever the latter may be.

As Charles DuHigg, the author of *The Power of Habits*, puts it, "We are, each of us, a big bundle of habits." In fact, researchers estimate that 40-45% of all we do is habitual.

What Is a Habit?

The brain economizes. It has only a certain amount of energy and attention to give, so it takes shortcuts as often as it can. Think of the last time you backed out of your driveway or brushed your teeth or drove to church. How much direct attention did you need to accomplish those repeated actions? Probably not much. In fact, you may have backed out of your driveway and driven to work or to a common destination many times without even noticing that you were doing it. The brain likes things like that, because they allow it to save space for the new experiences that require more attention.

A habit is one of those shortcuts - a behavior or thought or emotion that runs a loop without much attention. Athletes practice consciously over and over so they won't have to think to shoot a jump shot or stroke a put, and ballerinas do the same with a *pas de deux*. We have a habit when little attention or intention are required to engage in the action.

Of course, we don't like all of our habits.

- Brad Roberts, lyricist for the alt rock band, the Crash Test Dummies muses, "How come I just smoke and smoke and smoke, curse every butt I spit out?"
- The Paul the Apostle lets us in on his own frustration: "The good that I wish, I do not do, but I practice the very evil that I do not wish." (Romans 7.19)
- And in our time, some of us run into our difficult-to-drop habit, usually cultivated when we were very young, of reacting to people differently because of their skin color.

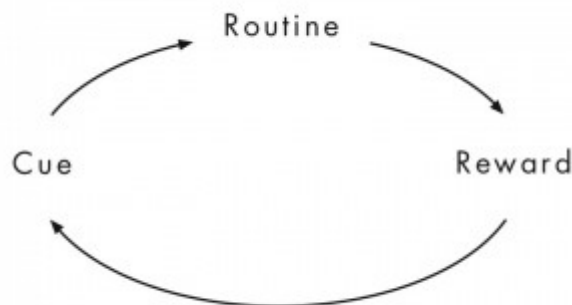
To understate, there are some parts of our big bundle that we'd just as soon get rid of. So...

How Do I Change One?

In his book, *The Power of Habit: Why We Do What We Do in Life and Business*, Charles DuHigg explores the recent brain science that can help us understand how transformation happens in the mind (*nous* from Romans 12.2). Habit change involves rerouting neural pathways, a freedom God offers us to prep ourselves to be renovated [*anakainosei* from 12.2). And there are some proven ways to do this.

Almost all of our habits arise because the behavior they hold got rewarded at some point and continues to pay back. Duhigg uses the example of his own experience of gaining weight because he kept snagging afternoon cookies from the refectory at work. Researchers at MIT helped him break the habit. Here's how.

"MIT researchers have discovered a simple neurological loop at the core of every habit, a loop that consists of three parts: A cue, a routine and a reward.



"To understand your own habits, you need to identify the components of your loops. Once you have diagnosed the habit loop of a particular behavior, you can look for ways to supplant old vices with new routines."

In DuHigg's case, he needed a break from writing about 3 PM, so he wandered out to find people and ran into a cookie. Pretty soon, the cookie became a standard part of his daily rhythm. His cue was a desire to be with people, but his routine included a cookie, which made him gain weight. When he was able to break down his motivation and reroute his social need to less caloric visits, the habit changed. He changed the routine and still got the reward. He lost weight.

Can you think of a successful habit change you have made? What were your cue, routine, and reward before and after?

Back to Romans 12

Let's transport this logic to the realm of Christian devotion. What faithful habits do you want to form or what unfaithful habits do you want to break? List below at least five habit changes you'd like to make.

- 1.
- 2.
- 3.
- 4.
- 5.

Remember that the Apostle Paul says that all this change begins when we hand our bodies and lives over to God as a "living sacrifice". How does that language get along with the science of habit change? Over the course of these six weeks, we will ask that question often and begin to define roles to God and ourselves. Simply put, our question will be this:

If God transforms us (remember, the verb *metamorphousthe* is passive), what part do we play in the changes? We might begin by identifying our cues, routines, and rewards.

Part Four - Why Do We Change? Going Beyond Self-Help

Our desire to get better, while a good one, needs some reflection. Some Biblical people want change for the wrong reasons.

- Pharisees want to get better at prayer so other people will think more highly of them. (Matthew 6)
- A magician named Simon wants to buy Peter and John's power to heal because he wants a market advantage (Acts 8)
- James and John want to follow Jesus more closely so they can hold places of power and honor in his kingdom. (Mark 10)

Many others want to change because they do not think God (or people) will really love them until they do. Paul answers this motive resoundingly in Romans 5:

Rarely will anyone die for a righteous person—though perhaps for a good person someone might actually dare to die. But God proves his love for us in that while we still were sinners Christ died for us. (Romans 5.7-8)

Why does Paul think we should seek transformation?

1. Because we're grateful to God for all the good He has done us. (12.1)
"With eyes wide open to the mercies of God..."
2. Because when we're transformed, we'll be visual aids for what God's will looks like. (12.2)

*Do not be con-formed to this world, but...
Be trans-formed by the renewing of your minds,
SO THAT you may prove/demonstrate what God's will is,
A will that is good, acceptable, and perfected.*

3. To equip us for love in the world.

Regarding our motivation, here's a good rule of thumb: If God becomes a means instead of an end, our motivation is off.

Close - Charting the Course

Before and After

Transformation in the Bible and Brain Science

with Allen Hilton

06JAN Our Change-Making God - Human Need and God's Desire

Luke 22.54-62 vs Acts 4. 1-13; Romans 12.1-2; 2 Corinthians 5.16-21

Everything begins with God. In our lift-yourself-up-by-the-bootstraps world it's easy to forget that the prime mover in our lives and in the world is the one who made it all in the first place - and that's a good thing. So many of us are frustrated by our inability to break our old bad habits or form new good ones. This week we'll begin our series with a spirit of reliance on the change-making God.

13JAN A Role Change - Method Acting and the Task of Transformation

Colossians 3.1-11; Romans 13.11-14; Galatians 2.20-21; 3.26-29

Method actors assume the persona of their character. For weeks and months, they eat like them walk like them, think like them. In fact, they sometimes go so far into roles that they fear they can't get out. That's not great if you're Darth Vader or Hannibal Lector, but it's pretty good if the one we're putting on is Christ. This week we'll see how Bible and brain science both picture us becoming a new character...and staying there.

20JAN Choosing the One - Shrinking the List and Celebrating Small Wins

Matthew 6.33

I know a guy (couldn't be me!) who gets all inspired and wants to change 17 things about himself at once. "I'm going to become better at thank you notes and workout every day at 4 AM and...." The recitation goes on.... His wife gently stops him and says, "Maybe one at a time?" The Bible and brain science agree that focus is a key to transformation. Choosing well the habit (not habits) to address can make all the difference between transformative success and futile failure. This week we'll learn how to choose and stick to our choice.

27JAN Movin' Out - Turning Focus Toward the World

Acts 8; John 13.34-35; 17.20-23; Matthew 25.31-46; 28.16-20; 2 Cor 5.15

A funny thing happens whenever Jesus talks about transforming Christian groups toward unity from division. Just when we begin to think that he will celebrate the great new feeling of togetherness, he track shifts to the world. "A new commandment I give you: love one another," are his famous words in John 13. Sounds pleasant, warm, and fuzzy. But when we get to Jesus' "why" for the command, it's about the world, not the church: "All people will know that you're my disciples" is the payoff. This week, we'll talk about God's desire to redeem the whole world and how transforming us fits into that plan.

03FEB **Changed Together - Exploring Group Transformation**

Galatians 3.26-29; Romans 12.3ff.; 1 Corinthians 12.12ff.

Groups can change, too. Most of us know this from experience. We've been on teams that went from worst to first, or corporate work groups that turned performance around, or churches that became a new thing. But how can a group change habits? Of course, the project of the Apostle Paul and other early Christian leaders was precisely this: the transformation of persons by the transformation of a church. And leadership gurus in our time draw heavily on brain science to move change through teams. This week we'll focus on group change, and the Bible and brain science have plenty to say about it.

10FEB **Transformation That Travels - Sustaining Habits for the Long Haul**

2 Timothy 4.6-8; 1 Corinthians 9.24-27

Most people's New Year's resolutions notoriously, woefully fall by the wayside by February. Futility reigns, and some people give up on the whole enterprise. But the great transformation stories of scripture feature one-way change - the kind that endures. Peter and Paul both transformed, neither turning back or losing the fire. Both the Bible and brain science go deep with the crucial topic of maintenance, continuation, change that lasts - and so will we, in this final week of our series.

The Power of Habit

[BY CHARLES DUHIGG | JANUARY / FEBRUARY 2013](#)

<https://experiencelife.com/article/the-power-of-habit/>

***New York Times* reporter Charles Duhigg explores the scientific research about habitual behaviors and what it reveals about how to change them.**

This article was adapted from Duhigg's New York Times bestseller, *The Power of Habit: Why We Do What We Do in Life and Business* (Random House, 2012).

In 2005, the late writer David Foster Wallace shared the following cautionary tale with a group of graduating college students:

“There are these two young fish swimming along and they happen to meet an older fish swimming the other way, who nods at them and says, ‘Morning boys, how’s the water?’ The two young fish swim on for a bit, and then eventually one of them looks over at the other and goes, ‘What the hell is water?’”

Foster Wallace was reminding the students that, just like those fish, our lives are largely determined by factors we never fully notice: our habits, those unthinking, automatic choices that surround us each day. They guide how we get dressed in the morning and fall asleep at night. They affect what we eat, how we do business, and whether we exercise or have a beer after work.

Each of our habits has a different catalyst and offers a unique payoff. Some are simple and others are complex, drawing upon emotional triggers and offering subtle neurochemical prizes. But every habit, no matter its complexity, is malleable. The most addicted alcoholic can become sober. The most dysfunctional families can transform themselves. A high school dropout can become a successful executive.

Changing habits is not just a matter of willpower, despite what you’ve probably learned. Sure, we all have habits we’ve tried to break and failed. And good habits we’ve tried to acquire and dropped. But the real [obstacle](#) to change for most people is not a lack of determination — it’s a lack of understanding how habit works.

As it happens, habits all get modified in somewhat the same way. When an individual successfully quits smoking or an organization changes collective behavior to improve its safety standards, there are certain universal patterns at work.

During their extensive studies of the underpinnings of habit in the 1990s, researchers at the Massachusetts Institute of Technology discovered a simple neurological loop at the core of every habit. All habits, it turns out, consist of three parts: a routine, a reward and a cue. The researchers dubbed this the “habit loop.”

As they studied people and organizations who had successfully changed stubborn, pernicious behaviors, they learned that they all followed more or less the same steps: They had identified the routine around the habit, experimented with different rewards to satisfy the craving the behavior was trying to fulfill, and isolated the cue that triggered the behavior in the first place. Finally, those who successfully executed habit change had put a plan in place that would help them respond differently to the cue (whether it was fatigue driving them to caffeine or loneliness driving them to the bar) and nudge them in the direction of the new habit, thus preventing an unconscious return to the old behavior.

If you have a problem behavior with which you’re ready to part ways (and who doesn’t?), the following steps will show you how to deploy this framework so you can manifest the change you want to embrace.

Step One: Identify the Routine

Let’s say you have a bad habit. Maybe it’s a habit like my chocolate chip cookie routine. (I work at the *New York Times*, and for a long time every afternoon I’d head for the cafeteria for a cookie and a little socializing.)

Let’s say your habit has caused you to gain a few pounds. In fact, let’s say this habit has caused you to gain exactly 8 pounds, and that your wife has made a few pointed comments. You’ve tried to force yourself to stop — you even went so far as to put a Post-it on your computer that reads NO MORE COOKIES.

But every afternoon you manage to ignore that note, get up, wander toward the cafeteria, buy a cookie, and, while chatting with colleagues around the cash register, eat it. It feels good. Then it feels bad. Tomorrow, you promise yourself, you’ll muster the willpower to resist. Tomorrow will be different.

But tomorrow the habit takes hold again.

How do you ever hope to change this behavior, especially if the cookies are good?

The first step is to identify the routine. With most habits, the routine is the most obvious aspect: It’s the behavior you want to change. Let’s say your routine, like mine, is that you get up from your desk in the afternoon, walk to the cafeteria, buy a cookie, and eat it while chatting with friends.

Next, some less obvious questions: What’s the cue for this routine? Is it hunger? Boredom? Low blood sugar? That you need a [break](#) before plunging into another task?

And what's the reward? The cookie itself? The change of scenery? The temporary distraction? Socializing with colleagues? Or the burst of energy that comes with that blast of sugar?

To figure this out, you'll need to do a little experimentation.

Step Two: Experiment With Rewards

Rewards are powerful because they satisfy cravings. We're often not conscious of the cravings that actually drive our behaviors, though. We might think we're craving a little online shopping, but it's really something else we're after — distraction from an odious task, or the chance to daydream a little.

To figure out which cravings are driving particular habits, it's useful to experiment with different rewards. This might take a few days, or a week or sometimes even longer. No matter how long it takes, you shouldn't feel any pressure to make a real change yet. At this point, just think of yourself as a scientist collecting data.

On the first day of the experiment, when you feel the urge to submit to a habit you want to change, adjust your routine so it delivers a different reward.

For instance, if it involves getting a cookie, you can still get up from your desk, but instead of walking to the cafeteria, walk around the block and go back to your desk without eating anything.

The next day, go to the cafeteria and buy a doughnut or a candy bar, and eat it at your desk. The day after that, go to the cafeteria, buy an apple, and eat it while chatting with your friends. Then, try a cup of coffee. Then, instead of going to the cafeteria, walk over to your not-too-busy friend's office and gossip for a few minutes before going back to your desk.

You get the idea. What you choose to do instead of buying a cookie isn't important. The point is to test different hypotheses to see which craving is driving your routine.

Addicts in recovery learn early that they almost never drink for the intoxication, but because it helps them access certain rewards: relief from work stress, escape from worries, or freedom from social anxiety.

So are you really craving the cookie, or is it a break from work? If it's the cookie, is it because you're hungry? (In which case, the apple should work just as well.) Or is it because you want the burst of energy the cookie provides? (If so, the coffee or apple might suffice.) Or are you wandering up to the cafeteria as an excuse to socialize, and the cookie is just a convenient excuse? (If so, walking to someone's desk and gossiping for a few minutes may satisfy the urge.)

As you test four or five different rewards, you can use an old trick to look for patterns: After each activity, jot down on a piece of paper the first three things that come to mind. They can be emotions, random thoughts, reflections on your feelings or just the first three words that pop into your head.

The reason why it's important to write down three things (even if they are meaningless words) is twofold. It forces a momentary awareness of what you are thinking or feeling. And studies show that writing down a few words helps you recall later what you were thinking at that moment.

At the end of the experiment, when you review your notes, it will be much easier to remember what you were thinking and feeling after you got the reward. This will help you figure out what it is.

After you've scribbled down a few words, set an alarm on your watch or computer for 15 minutes. When it goes off, ask yourself: Do you still feel the urge for that cookie?

The purpose of this exercise is to determine the reward you're [craving](#). If, 15 minutes after eating a doughnut at your desk instead of a cookie by the cash register, you still feel an urge to get up and go to the cafeteria, then your habit isn't motivated by a sugar craving. If, after gossiping at your colleague's desk, you still want a cookie, then the need for human contact isn't driving your behavior.

On the other hand, if 15 minutes after chatting with a friend you find it easy to get back to work, then you've identified the desired reward — temporary distraction and socializing — that your habit sought to satisfy.

By experimenting with different rewards, you can isolate what you are actually craving, which is essential in redesigning the habit.

Once you've figured out the routine and the reward, the next step involves identifying the cue — which is the last component of the habit loop. After that, you'll be ready to make a plan.

Step Three: Isolate the Cue

Cues are the triggers for our habitual behaviors. They are often the most difficult part of habits to identify, because there is so much information bombarding us as our behaviors unfold. Do you eat at a certain time of day because you are hungry? Or because the clock says 7:30? Or because your kids have started eating?

To identify a cue amid the noise, we can use the same system as researchers in the field: Identify categories of behavior ahead of time to scrutinize them for patterns. Experiments have shown that almost all habitual cues fall into one of five categories: location, time, emotional state, other people, immediately preceding action.

Write down the information for these five things the moment an urge hits. (These are my actual notes from when I was trying to diagnose my cookie habit):

- Where are you? (Sitting at my desk)
- What time is it? (3:36 p.m.)
- What's your emotional state? (Bored)
- Who else is around? (No one)

- What action preceded the urge? (Answered an email)

I did this for three days, and it became pretty clear which cue was triggering my cookie habit: time. I felt an urge to snack around 3:30 each day. I had already figured out, in step two, that it wasn't hunger driving my behavior. The reward I was seeking was temporary distraction — the kind that comes from gossiping with a friend.

My habit loop was completed.

Once you've identified your own habit loop, you can begin to shift the behavior. You can develop a better routine by planning for the cue and choosing a behavior that more constructively delivers the real rewards you are craving.

Step Four: Have a Plan

A habit is a choice we make at some point, and then stop thinking about, but continue doing. Often we do it every day. Put another way, a habit is a formula our brain automatically follows: When I see this cue, I will do this routine in order to get that reward.

To reengineer that formula, we need to begin making conscious choices again. And the easiest way to do this, according to study after study, is to have a [plan](#). Within psychology, these plans are known as “implementation intentions.”

I learned that my cue was time — roughly 3:30 in the afternoon. I knew my routine was to go to the cafeteria, buy a cookie and chat with friends. And, through experimentation, I had learned it wasn't really the cookie I craved; rather, it was a moment of distraction and an opportunity to socialize.

So I wrote a plan: At 3:30, every day, I will walk to a friend's desk and talk for 10 minutes.

It didn't work immediately. There were some days I was too busy and ignored the alarm, and then fell off the wagon. Other times it seemed like too much work to find a friend willing to chat, so it was easier to get a cookie in the cafeteria, where someone to gossip with is also easier to come by.

But on those days I abided by my plan, I found I ended the workday feeling better. Eventually, it got to be automatic: When my alarm rang, I found a friend and ended the day feeling a small, but real, sense of accomplishment. After a few weeks, I hardly thought about the routine anymore.

I no longer have my watch — I lost it at some point. But at about 3:30 every day, I absent-mindedly stand up, look around the newsroom for someone to talk to, spend 10 minutes gossiping about the news and then go back to my desk. It occurs almost without me thinking about it. It has become a habit.

Obviously, changing certain habits can be more difficult. Quitting a habit of texting while driving asks less of you than renouncing an addiction to cigarettes or alcohol. Sometimes change

takes a long time. Sometimes it requires repeated experiments and failures. And sometimes it is incredibly hard. But this framework is a place to start. Once you understand how a habit operates, you gain power over it. And then you're on your way.

Keystone Habits

When Lisa Allen decided to quit smoking, she was borderline obese with \$10,000 in debt and creditors hounding her. Four years later, she had lost 60 pounds, run a marathon, started a master's degree and bought a home. The conviction that she had to quit smoking to accomplish her goals touched off a series of changes that would ultimately radiate out to other parts of her life.

There are certain habits that, once broken or adopted, tend to produce a landslide of other positive changes. These are known as “keystone habits.” They reveal that successful change doesn't depend on getting every single thing right, but instead relies on identifying a few key priorities and fashioning them into powerful levers.

Studies from the past decade examining the impact of fitness on people's daily routines have found that when people start exercising even as infrequently as once a week, they start changing other unrelated patterns in their lives, often unknowingly.

Typically, people who exercise start eating better and become more productive at work. They smoke less and show more patience with colleagues and family. They use their credit cards less frequently and feel less stressed. It's not completely clear why. But for many people, taking time for fitness is a keystone habit that triggers widespread change.

“Exercise spills over,” says James Prochaska, a University of Rhode Island researcher. “There's something about it that makes other good habits easier.”

Here are some other keystone habits:

Eating family meals. Studies have documented that families that habitually eat dinner together seem to raise children with better homework skills, higher grades, greater emotional control and more confidence.

Making your bed each morning. This behavior is correlated with better productivity, a greater sense of well-being and greater facility with following a budget.

Keeping a food journal. A 2009 study funded by the National Institutes of Health assembled a group of 1,600 obese people and asked them to write down everything they ate at least one day per week. This one habit — food journaling — created a structure that helped other good habits flourish by allowing subjects to identify their patterns and set up plans for healthy alternatives. Six months into the study, the people who kept daily food records had lost twice as much weight as everyone else.

[Charles Duhigg](#) Charles Duhigg is an investigative reporter for the *New York Times*. He is a winner of the National Academy of Sciences, Scripps Howard National Journalism, and George Polk awards, and was a finalist for the Pulitzer Prize in 2009. He lives in Brooklyn, N.Y., with his family.