

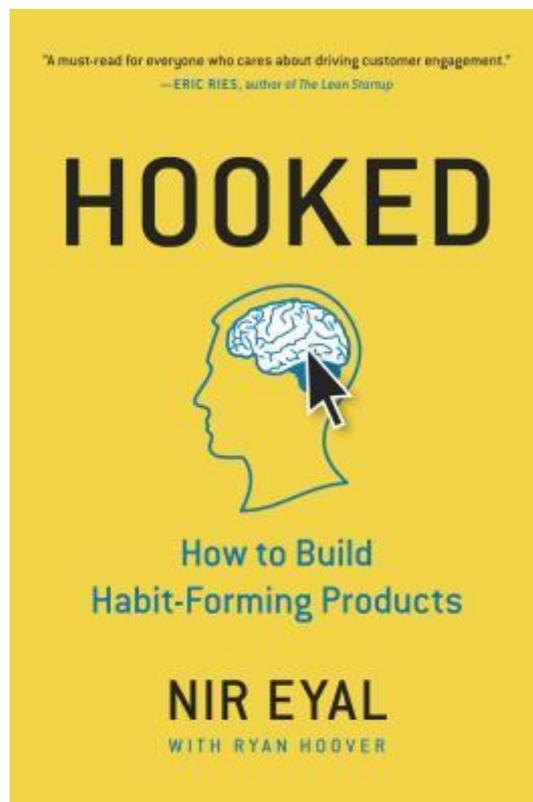
A summary of the book

Hooked

How to build habit-forming products

By Nir Eyal

Summary by Kim Hartman



This is a summary of what I think is the most important and insightful parts of the book. I can't speak for anyone else and I strongly recommend you to read the book in order to fully grasp the concepts written here. My notes should only be seen as an addition that can be used to refresh your memory after you've read the book. Use the words in this summary as anchors to remember the vitals parts of the book.

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Description from amazon

Why do some products capture our attention, while others flop?

What makes us engage with certain products out of habit?

Is there a pattern underlying how technologies hook us?

This book introduces readers to the "Hook Model," a four steps process companies use to build customer habits. Through consecutive hook cycles, successful products reach their ultimate goal of bringing users back repeatedly -- without depending on costly advertising or aggressive messaging. *Hooked* is a guide to building products people can't put down.

Written for product managers, designers, marketers, startup founders, and people eager to learn more about the things that control our behaviors, this book gives readers:

- Practical insights to create user habits that stick.
- Actionable steps for building products people love.
- Behavioral techniques used by Twitter, Instagram, Pinterest, and other habit-forming products.

Nir Eyal distilled years of research, consulting and practical experience to write a manual for creating habit-forming products. Nir has taught at the Stanford Graduate School of Business and Hasso Plattner Institute of Design. His writing on technology, psychology and business appears in the *Harvard Business Review*, *The Atlantic*, *TechCrunch*, and *Psychology Today*.

INTRODUCTION

Habit: Cognitive psychologists define habits as, “automatic behaviors triggered by situational cues:” things we do with little or no conscious thought.

Instead of relying on expensive marketing, habit-forming companies link their services to the users’ daily routines and emotions.

Hooks: Today, small startup teams can profoundly change behavior by guiding users through a series of experiences I call “hooks.” The more often users run through these hooks, the more likely they are to form habits

The Hook Model: a four-phase process companies use to form habits. Through consecutive hook cycles, successful products reach their ultimate goal of unprompted user engagement, bringing users back repeatedly.

1. Trigger

A trigger is the actuator of behavior — the spark plug in the engine. Triggers come in two types: external and internal.

Habit-forming products start by alerting users with external triggers like an email, a website link, or the app icon on a phone.

By cycling through successive hooks, users begin to form associations with internal triggers, which attach to existing behaviors and emotions.

When users start to automatically cue their next behavior, the new habit becomes part of their everyday routine.

2. Action

Following the trigger comes the action: the behavior done in anticipation of a reward.

3. Variable Reward

What distinguishes the Hook Model from a plain vanilla feedback loop is the hook’s ability to create a craving. Feedback loops are all around us, but predictable ones don’t create desire.

The unsurprising response of your fridge light turning on when you open the door doesn't drive you to keep opening it again and again. However, add some variability to the mix — say a different treat magically appears in your fridge every time you open it — and voila, intrigue is created.

Research shows that levels of the neurotransmitter dopamine surge when the brain is expecting a reward.

Introducing variability multiplies the effect, creating a focused state, which suppresses the areas of the brain associated with judgment and reason while activating the parts associated with wanting and desire.

4. Investment

The investment phase increases the odds that the user will make another pass through the hook cycle in the future. The investment occurs when the user puts something into the product of service such as time, data, effort, social capital, or money.

The investment implies an action that improves the service for the next go-around.

Commitments can be leveraged to make the trigger more engaging, the action easier, and the reward more exciting with every pass through the hook cycle.

Hooks connect the user's problem with a company's solution frequently enough to form a habit.

Chapter Summary

- Habits are defined as behaviors done with little or no conscious thought.
- The convergence of access, data, and speed is making the world a more habit-forming place.
- Businesses that create customer habits gain a significant competitive advantage.
- The Hook Model describes an experience designed to connect the user's problem to a solution frequently enough to form a habit.
- The Hook Model has four phases: trigger, action, variable reward, and investment"

Chapter 1: THE HABIT ZONE

Habits are one of the ways the brain learns complex behaviors. Neuroscientists believe habits give us the ability to focus our attention on other things by storing automatic responses in the basal ganglia, an area of the brain associated with involuntary actions.

The brain quickly learns to codify behaviors that provide a solution to whatever situation it encounters.

Goal: The aim is to influence customers to use your product on their own, again and again, without relying on overt calls-to-action such as ads or promotions. Once a habit is formed, the user is automatically triggered to use the product during routine events such as wanting to kill time while waiting in line.

Future profits: A business is worth the sum of its future profits. This benchmark is how investors calculate the fair price of a company's shares.

Customer Lifetime Value: Fostering consumer habits is an effective way to increase the value of a company by driving higher customer lifetime value (CLTV). CLTV is the amount of money made from a customer before she switches to a competitor, stops using the product, or dies. User habits increase how long and how frequently customers use a product, resulting in higher CLTV.

Less price-sensitive: As customers form routines around a product, they come to depend upon it and become less price-sensitive. Habits give companies greater flexibility to increase prices.

Brand evangelists: Hooked users become brand evangelists - megaphones for your company, bringing in new users at little or no cost.

More is more principle: Facebook's success was, in part, a result of what I call the more is more principle — more frequent usage drives more viral growth.

Viral Cycle Time is the amount of time it takes a user to invite another user. Having a greater proportion of users returning to a service daily, dramatically increases Viral Cycle Time for two reasons: First, daily users initiate loops more often (think tagging a friend in a Facebook photo); second, more daily active users means more people to respond and react to each invitation.

The old vs new: Many innovations fail because consumers irrationally overvalue the old while companies irrationally overvalue the new. For new entrants to stand a chance, they can't just be better, they must be nine times better.

High degree of behavior change: Products that require a high degree of behavior change are doomed to fail even if the benefits of using the new product are clear and substantial.

Example: QWERTY survives due to the high costs of changing user behavior.

Storing value in products: Users also increase their dependency on habit-forming products by storing value in them — further reducing the likelihood of switching to an alternative. The non-transferrable value created and stored inside these services discourages users from leaving.

Successfully changing long-term user habits is exceptionally rare. New behaviors have a short half-life, as our minds tend to revert to our old ways of thinking and doing.

Behaviors are LIFO - “last in, first out.” In other words, the habits you’ve most recently acquired are also the ones most likely to go soonest.

From action to habit: Even when we change our routines, neural pathways remain etched in our brains, ready to be reactivated when we lose focus. For new behaviors to really take hold, they must occur often. For an infrequent action to become a habit, the user must perceive a high degree of utility, either from gaining pleasure or avoiding pain.

Habit-forming potential: A company can begin to determine its product’s habit-forming potential by plotting two factors:

- **Frequency** - how often the behavior occurs.
- **Perceived utility** - how useful and rewarding the behavior is in the user’s mind over alternative solutions.

The habit zone: Behavior that occurs with enough frequency and perceived utility enters the Habit Zone, helping to make it a default behavior. If either of these factors falls short and the behavior lies below the threshold, it is less likely that the desired behavior will become a habit.

Pain and pleasure: A habit is when not doing an action causes a bit of pain. Seeking pleasure and avoiding pain are two key motivators in all species.

Habits vs addictions: Habits are not the same things as addictions. Addictions are persistent, compulsive dependencies on a behavior or substance. Addictions, by definition, are self-destructive.

Chapter Summary

- For some businesses, forming habits is a critical component to success, but not every business requires habitual user engagement.
- When successful, forming strong user habits can have several business benefits including: higher customer lifetime value, greater pricing flexibility, supercharged growth, and a sharper competitive edge.
- Habits can not form outside the “Habit Zone,” where the behavior occurs with enough frequency and perceived utility.
- Habit-forming products often start as nice-to-haves (vitamins) but once the habit is formed, they become must-haves (painkillers)."
- "Habit-forming products alleviate users' pain by relieving a pronounced itch.
- Designing habit-forming products is a form of manipulation. Product builders would benefit from a bit of introspection before attempting to hook users to make sure they are building healthy habits, not unhealthy addictions (more to come on this topic in chapter eight).

2. TRIGGER

Trigger: The chain reaction that forms a habit always starts with a trigger.

Habits are like pearls. Oysters create natural pearls by accumulating layer upon layer of a nacre called mother-of-pearl, eventually forming the smooth treasure over several years. But what causes the nacre to begin forming a pearl? The arrival of a tiny irritant, such as a piece of grit or an unwelcome parasite, triggers the oyster's system to begin blanketing the invader with layers of shimmery coating.

Similarly, new habits need a foundation upon which to build. Triggers provide the basis for sustained behavior change.

Extrenal and internal: Triggers come in two types: external and internal.

Reducing thinking: More choices require the user to evaluate multiple options. Too many choices or irrelevant options can cause hesitation, confusion, or worse, abandonment. Reducing the thinking required to take the next action increases the likelihood of the desired behavior occurring unconsciously.

External triggers

Paid triggers: Since paying for re-engagement is unsustainable for most business models, companies generally use paid triggers to acquire new users and then leverage other triggers to bring them back.

Earned triggers: are free in that they can not be bought directly, but they often require investment in the form of time spent on public and media relations.

Paypal example: PayPal knew that once users started sending each other money online they would realize the tremendous value of the service. The allure that someone just sent you money was a huge incentive to open an account, and PayPal's growth spread because it was both viral and useful.

Relationship triggers: Proper use of relationship triggers requires building an engaged user base that is enthusiastic about sharing the benefits of the product with others.

Owned Triggers: As long as the user agrees to receive a trigger, the company that sets the trigger owns a share of the user's attention.

While paid, earned, and relationship triggers drive new user acquisition, owned triggers prompt repeat engagement until a habit is formed. Without owned triggers and users' tacit permission to enter their attentional space, it is difficult to cue users frequently enough to change their behavior.

Goal of external triggers: The ultimate goal of all external triggers is to propel users into and through the Hook Model so that, after successive cycles, they do not need further prompting from external triggers. When users form habits, they are cued by a different kind of trigger: internal triggers.

Internal triggers

When a product becomes tightly coupled with a thought, an emotion, or a pre-existing routine, it leverages an internal trigger. Unlike external triggers, which use sensory stimuli like a morning alarm clock or giant "Log-In Now" button, you can't see, touch, or hear an internal trigger. Internal triggers manifest automatically in your mind. Connecting internal triggers with a product is the brass ring of consumer technology.

Emotions, particularly negative ones, are powerful internal triggers and greatly influence our daily routines. Feelings of boredom, loneliness, frustration, confusion, and indecisiveness often instigate a slight pain or irritation and prompt an almost instantaneous and often mindless action to quell the negative sensation.

Habitual reactions: Our life is filled with tiny stressors and we're usually unaware of our habitual reactions to these nagging issues.

From external to internal: Once hooked, using these products does not always require an explicit call-to-action. Instead, they rely upon our automatic responses to feelings that precipitate the desired behavior.

Products that attach to these internal triggers provide users with quick relief. Once a technology has created an association in users' minds that the product is the solution of choice, they return on their own, no longer needing prompts from external.

New habits are sparked by external triggers, but associations with internal triggers are what keeps users hooked.

Encoded in memory: In the case of internal triggers, the information about what to do next is encoded as a learned association in the user's memory.

The ultimate goal of a habit-forming product is to solve the user's pain by creating an association so that the user identifies the company's product or service as the source of relief.

The 5 why's method

One method is to try asking the question "why" as many times as it takes to get to an emotion.

The "5 Whys Method: Was "the basis of Toyota's scientific approach. By repeating 'why?' five times, the nature of the problem as well as its solution becomes clear.

When it comes to figuring out why people use habit-forming products, internal triggers are the root cause, and "why?" is a question that can help drill right to the core.

Instagram example: "Yin's habitual use of the service started with an external trigger - a recommendation from a friend and weeks of repetitious use before she became a regular user.

Every time Yin snaps a picture, she shares it with her friends on Facebook and Twitter. Consider the first time you saw an Instagram photo. Did it catch your attention? Did it make you curious? Did it call you to action?

These photos serve as a relationship external trigger, raising awareness and serving as a cue for others to install and use the app. But Instagram photos shared on Facebook and Twitter were not the only external triggers driving new users. Others learned of the app from the media and bloggers, or through the featured placement Apple granted.

Instagram and external triggers: Once installed, Instagram benefited from owned external triggers. The app icon on users' phone screens and push notifications about their friends' postings served to call them back"

FOMO: Fear of missing out.

Chapter Summary

- Triggers cue the user to take action and are the first step in the Hook Model.
- Triggers come in two types — external and internal.
- External triggers tell the user what to do next by placing information within the user's environment.

- Internal triggers tell the user what to do next through associations stored in the user's memory.
- Negative emotions frequently serve as internal triggers.
- To build a habit-forming product, makers need to understand which user emotions may be tied to internal triggers and know how to leverage external triggers to drive the user to action.

3. ACTION

To initiate action, doing must be easier than thinking.

Behavior initiators

There are three ingredients required to initiate any and all behaviors:

- (1) The user must have sufficient motivation
- (2) The user must have the ability to complete the desired action
- (3) A trigger must be present to activate the behavior.

The Fogg Behavior Model

The Fogg Behavior Model is represented in a formula, $B = MAT$, which represents that a given behavior will occur when motivation, ability, and a trigger are present at the same time and in sufficient degrees.

If any component of this formula is missing or inadequate, the user will not cross the “Action Line” and the behavior will not occur.

All three parts of $B=MAT$ must be present for a singular user action to occur; without a clear trigger and sufficient motivation, there will be no behavior. But for companies building technology solutions, the greatest return on investment will generally come from increasing a product’s ease-of-use.

Motivation defines the level of desire to take that action.

Three Core Motivators

All humans are motivated:

- to seek pleasure and avoid pain
- to seek hope and avoid fear, and finally
- to seek social acceptance and avoid rejection

The process of innovation: Denis J. Hauptly deconstructs the process of innovation into its most fundamental steps. First, Hauptly says, understand the reason people use a product or service. Next, lay out the steps the customer must take to get the job done. Finally, once

the series of tasks from intention to outcome is understood, simply start removing steps until you reach the simplest possible process.

Take a human desire, preferably one that has been around for a really long time... Identify that desire and use modern technology to take out steps.

Elements of simplicity

Fogg describes six “elements of simplicity” — the factors that influence a task’s difficulty.

- **Time** - How long it takes to complete an action.
- **Money** - The fiscal cost of taking an action.
- **Physical Effort** - The amount of labor involved in taking the action.
- **Brain Cycles** - The level of mental effort and focus required to take an action.
- **Social Deviance** - How accepted the behavior is by others.
- **Non-Routine** - According to Fogg, “How much the action matches or disrupts existing routines”

Identify what the user is missing. What is making it difficult for the user to accomplish the desired action.

Easy: The easier an action, the more likely the user is to do it and to continue the cycle through the next phase of the Hook Model. Influencing behavior by reducing the effort required to perform an action is more effective than increasing someone’s desire to do it.

Google example: Google’s clean and simple homepage and search results pages were solely focused on streamlining the act of searching and getting relevant results.

Google reduced the amount of time and the cognitive effort required to find what the user was looking for.

Heuristics: There are many counterintuitive and surprising ways companies can boost users’ motivation or increase their ability by understanding heuristics — the mental shortcuts we take to make decisions and form opinions.

Even though users are often unaware of these influences on their behavior, heuristics can predict their actions.

The scarcity heuristic: a product can decrease in perceived value if it starts off as scarce and becomes abundant.

Scarcity may signal something about the product. If there are fewer of an item, the thinking goes, it might be because other people know something you don't.

Perception can form a personal reality based on how a product is framed, even when there is little relationship with objective quality.

The Endowed Progress Effect

Two groups of customers were given punch cards awarding a free car wash once the cards were fully punched. One group was given a blank punch card with 8 squares and the other given a punch card with 10 squares but with two free punches. Both groups still had to purchase 8 car washes to receive a free wash; however, the second group of customers — those that were given two free punches — had a staggering 82 percent higher completion rate. The study demonstrates the endowed progress effect, a phenomenon that increases motivation as people believe they are nearing a goal.

Most people remain unaware of how heuristics help us make split-second decisions multiple times per day. Psychologists believe there are hundreds of cognitive biases that influence our behaviors.

Mental notes: There is a tool called Mental Notes to help designers build better products through heuristics.

Chapter Summary

- Action is the second step in The Hook.
- The action is the simplest behavior in anticipation of reward.
- As described by the Dr. BJ Fogg's Behavior Model:
 - For any behavior to occur, a trigger must be present at the same time as the user has sufficient ability and motivation to take action.
 - To increase the desired behavior, ensure a clear trigger is present, then increase ability by making the action easier to do, and finally align with the right motivator.
 - Every behavior is driven by one of three Core Motivators: seeking pleasure or avoiding pain, seeking hope and avoiding fear, seeking social acceptance while avoiding social rejection.

- Ability is influenced by the six factors of time, money, physical effort, brain cycles, social deviance, and non-routineness. Ability is dependent on users and their context at that moment.
- Heuristics are cognitive shortcuts we take to make quick decisions. Product designers can utilize many of the hundreds of heuristics to increase the likelihood of their desired action. "

4. VARIABLE REWARD

The third step in the Hook Model is the Variable Reward phase. In this phase, you reward your users by solving a problem, reinforcing their motivation for the action taken in the previous phase.

Feeling good: Other things that feel good also activate the same neural region. Sex, delicious food, a bargain, and even our digital devices all tap into this deep recess of the brain, providing the impetus for many of our behaviors.

What draws us to act is not the sensation we receive from the reward itself, but the need to alleviate the craving for that reward. The stress of desire in the brain appears to compel us.

Laughter: Researchers believe laughter may in fact be a release valve when we experience the discomfort and excitement of uncertainty, but without fear of harm.

Variability: Without variability, we are like children in that once we figure out what will happen next, we become less excited by the experience. To hold our attention, products must have an ongoing degree of novelty

Behavioral response: Our habits are simply the brain's ability to quickly retrieve the appropriate behavioral response to a routine or process we have already learned. Habits help us conserve our attention for other things while we go about the tasks we perform with little or no conscious thought.

Novelty: However, when something breaks the cause-and-effect pattern we've come to expect — when we encounter something outside the norm — we suddenly become aware of it again. Novelty sparks our interest, makes us pay attention.

Search for rewards: Variability increases activity in the nucleus accumbens and spikes levels of the neurotransmitter dopamine, driving our hungry search for rewards.

Variable rewards come in three types:

- Tribe
- Hunt
- Self

Habit-forming products utilize one or more of these variable reward types.

"

Rewards of the Tribe

Rewards of the tribe, or social rewards, are driven by our connectedness with other people. Our brains are adapted to seek rewards that make us feel accepted, attractive, important, and included.

With every post, tweet, or pin, users anticipate social validation. Rewards.

Sites that leverage tribal rewards benefit from what psychologist Albert Bandura called “social learning theory.

People who observe someone being rewarded for a particular behavior are more likely to alter their own beliefs and subsequent actions. Notably, Bandura also showed that this technique works particularly well when people observe the behavior of people most like themselves, or those who are slightly more experienced (and, therefore, role models.

Stack Overflow example: On Stack Overflow, points are not just an empty game mechanic, they confer special value by representing how much someone has contributed to their tribe. Users enjoy the feeling of helping their fellow programmers and earning the respect of people whose opinions they value.

Rewards of the Hunt

The search for resources defines the next type of variable reward — the rewards of hunt. The need to acquire physical objects, such as food and other supplies that aid our survival, is part of our brain’s operating system. But where we once hunted for food, today we hunt for other things. In modern society, food can be bought with cash, and more recently by extension, information translates into money.

Pinterest example: As the user scrolls to the bottom of the page, some images appear to be cut-off. Often, images appear out of view below the browser fold. However, these images offer a glimpse of what’s ahead, even if just barely visible. To relieve their curiosity, all users have to do is scroll to reveal the full picture (figure 25). As more images load on the page, the endless search for variable rewards of the hunt continues.

Rewards of the Self

Finally, there are the variable rewards we seek for a more personal form of gratification.

We are driven to conquer obstacles, even if just for the satisfaction of doing so. Pursuing a task to completion can influence people to continue all sorts of behaviors.

Surprisingly, we even pursue these rewards when we don't outwardly appear to enjoy them.

Their self-determination theory espouses that people desire, among other things, to gain a sense of competency. Adding an element of mystery to this goal makes the pursuit all the more enticing.

The right variable: Variable rewards are not magic fairy dust that a product designer can sprinkle onto a product to make it instantly more attractive. Rewards must fit into the narrative of why the product is used and align with the user's internal triggers and motivations.

Only by understanding what truly matters to users can a company correctly match the right variable reward to their intended behavior.

“But you are free to accept or refuse”: The “but you are free” technique demonstrates how we are more likely to be persuaded when our ability to choose is reaffirmed. Not only was the effect observed during face-to-face interactions, but also over email.

The researchers believe the phrase “but you are free” disarms our instinctive rejection of being told what to do.

Reactance: the hair-trigger response to threats to your autonomy.

Users freedom to choose: Companies that successfully change behaviors present users with an implicit choice between their old way of doing things and a new, more convenient way to fulfill existing needs. By maintaining the users' freedom to choose, products can facilitate the adoption of new habits and change behavior for good.

Experience-taking: At the heart of every good tale is variability. The unknown is fascinating and strong stories hold our attention by waiting to reveal what happens next. In a phenomenon called “experience-taking,” researchers have shown that people who read a story about a character actually feel what the protagonist is feeling.

As we step into the character's shoes we experience his or her motivations — including the search for rewards of the tribe, hunt and self. We empathize with characters because they are driven by the same things that drive us.

Finite variability: Experiences with finite variability become less engaging because they eventually become predictable.

Infinite variability: Products utilizing infinite variability stand a better chance of holding onto users' attention, while those with finite variability must constantly reinvent themselves just to keep pace.

Variable reward systems: Fundamentally, variable reward systems must satisfy users' needs, while leaving them wanting to re-engage. The most habit-forming products and services utilize one or more of the three variable rewards types of tribe, hunt and self. In fact, many habit-forming products offer multiple variable rewards.

Email example: Email, for example, utilizes all three variable reward types. What subconsciously compels us to check our email? First, there is uncertainty surrounding who might be sending us a message. We have a social obligation to respond to emails and a desire to be seen as agreeable (rewards of the tribe). We may also be curious about what information is in the email. Perhaps something related to our career or business awaits us? Checking email informs us of opportunities or threats to our material possessions and livelihood (rewards of the hunt). Lastly, email is in itself a task — challenging us to sort, categorize and act to eliminate unread messages. We are motivated by the uncertain nature of our fluctuating email count and feel compelled to gain control of our inbox (rewards of the self).

Chapter Summary

- Variable Reward is the third phase of the Hook Model, and there are three types of variable rewards: tribe, hunt and self.
- Rewards of the tribe is the search for social rewards fueled by connectedness with other people.
- Rewards of the hunt is the search for material resources and information.
- Rewards of the self is the search for intrinsic rewards of mastery, competence, and completion.
- When our autonomy is threatened, we feel constrained by our lack of choices and often rebel against doing a new behavior. Psychologists call this “reactance.” Maintaining a sense of user autonomy is a requirement for repeat engagement.
- Experiences with finite variability become increasingly predictable with use and lose their appeal over time. Experiences that maintain user interest by sustaining variability with use exhibit infinite variability.
- Variable rewards must satisfy users' needs, while leaving them wanting to re-engage with the product"

Chapter 5. INVESTMENT

Before users create the mental associations that activate their automatic behaviors, they must first invest in the product.

Change in perception of behavior: In order for a change in attitude to occur, there must be a change in how users perceive the behavior. Small investments change our perception, turning unfamiliar actions into everyday habits.

The more users invest time and effort into a product or service, the more they value it.

Three tendencies influence our future actions:

- The more effort we put into something, the more likely we are to value it.
- We are more likely to be consistent with our past behaviors.
- We change our preferences to avoid cognitive dissonance.

Rationalization: In sum, our tendencies lead to a mental process known as rationalization whereby we change our attitudes and beliefs to psychologically adapt. Rationalization helps us give reasons for our behaviors, even when those reasons might have been designed by others.

Standard feedback loop vs hook model: In a standard feedback loop, the cue, action, and reward cycle can change our immediate behavior. For example, a radar-equipped sign is an effective way to make drivers immediately slow down by showing them their car's speed relative to the posted speed limit.

But this pattern differs when it comes to how we form habits with products. The Hook Model is not just a framework for changing one-time behaviors, it is a design pattern to create unprompted engagement in order to connect the user's problem to the designer's solution. To form the associations needed to create unprompted user engagement, something more than the three-step feedback loop is required.

The investment phase: The last step of the Hook Model is the Investment Phase, the point at which users are asked to do a bit of work. Here, users are prompted to put something of value into the system, which increases the likelihood of them using the product and of successive passes through the hook cycle.

Investments are about the anticipation of longer-term rewards, not immediate gratification.

Timing: The timing of asking for user investment is critically important. By asking for the investment after the reward, the company has an opportunity to leverage a central trait of human behavior.

Reciprocation is not just a characteristic expressed between people, but also a trait observed when humans interact with machines. We invest in products and services for the same reasons we put effort into our relationships.

The idea: The big idea behind the Investment Phase is to leverage the user's understanding that the service will get better with use.

Twitter example: The more Twitter users curate the list of people they follow, the better the service will be at delivering interesting content. Investing in following the right people increases the value of the product by displaying more relevant and interesting content in each user's Twitter feed.

Reputation is a form of stored value that increases the likelihood of using a service. Whether a buyer or seller, reputation makes users more likely to stick with whichever service they have invested their efforts in to maintain a high quality score.

Time and effort: Investing time and effort into learning to use a product is a form of investment and stored value. Once users have invested the effort to acquire a skill, they are less likely to switch to a competing product.

A mental association with an internal trigger: Ultimately, habit-forming products create a mental association with an internal trigger. But to create the habit, users must first use the product through multiple cycles of the Hook Model. Therefore, external triggers must be used to bring users back around again to start another cycle.

Future triggers: Habit-forming technologies leverage the user's past behavior to initiate an external trigger in the future. Users set future triggers during the Investment Phase, providing companies with an opportunity to re-engage the user.

Pinterest example: Pinterest clearly demonstrates the four stages of the Hook Model. It is a seamless flow, from the itch of the internal trigger that moves users to the intended action, through the variable reward, and finally to the investment, which also loads the next external trigger. Pinterest users move through the Hook cycle from beginning to end, and then happily return to the starting point for another go 'round.

How the habit is formed: An investment in the product serves as the string that pulls the user back. To do this, the habit-forming technology increases the value of the product with each pass through the Hook. Through successive cycles of the Hook Model, users increase their affinity for the experience. They increasingly come to rely on the product as the solution to their problems until finally, the new habit — and routine — is formed.

Chapter summary

- The Investment Phase is the fourth step in the Hook Model.
- Unlike the Action Phase, which delivers immediate gratification, the Investment Phase is about the anticipation of rewards in the future.
- Investments in a product create preference because of our tendency to overvalue our work, be consistent with past behaviors, and avoid cognitive dissonance"
- Investment comes after the variable reward phase when users are primed to reciprocate.
- Investments increase the likelihood of users returning by improving the service the more it is used. They enable the accrual of stored value in the form of content, data, followers, reputation or skill.
- Investments increase the likelihood of users passing through the Hook again by loading the next trigger to start the cycle all over again"

Chapter 6. WHAT ARE YOU GOING TO DO WITH THIS?

The Hook Model is designed to connect the user's problem with the designer's solution frequently enough to form a habit. It is a framework for building products that solve user needs through long-term engagement.

Effective hooks transition users from relying upon external triggers to cueing mental associations with internal triggers.

Five fundamental questions

Five fundamental questions for building effective hooks:

1. What do users really want? What pain is your product relieving? (Internal Trigger)
2. What brings users to your service? (External Trigger)
3. What is the simplest action users take in anticipation of reward, and how can you simplify your product to make this action easier? (Action)
4. Are users fulfilled by the reward, yet left wanting more? (Variable Reward)
5. What "bit of work" do users invest in your product? Does it load the next trigger and store value to improve the product with use? (Investment)

Know your customer: The odds of successfully designing products for a customer you don't know extremely well are depressingly low.

Entertainment is art and is important for its own sake. Art provides joy, helps us see the world differently, and connects us with the human condition. Products that form habits around entertainment tend to fade quickly from users' lives.

Chapter summary

- To help designers of habit-forming technology assess the morality behind how they manipulate users, it is helpful to determine which of the four categories their work fits into. Are you a facilitator, peddler, entertainer, or dealer?
- Facilitators use their own product and believe it can materially improve people's lives. They have the highest chance of success because they most closely understand the needs of their users.

- Peddlers believe their product can materially improve people's lives, but do not use it themselves. They must beware of the hubris and inauthenticity that comes from building solutions for people they do not understand.
- Entertainers use their product, but do not believe it can improve people's lives. They can be successful, but without making the lives of others better in some way, the entertainer's products often lack staying power.
- Dealers neither use the product nor believe it can improve people's lives. They have the lowest chance of finding long-term success and often find themselves in morally precarious positions.

Chapter 7. CASE STUDY: THE BIBLE AP

Placing the more interesting sections up-front and saving the boring bits for later increased completion rates.

When people see a verse, they see wisdom or truth they can apply to their lives or a situation they're going through." Skeptics might call this "subjective validation," and psychologists call it the "Forer Effect."

Chapter summary

- The Bible app was far less engaging as a desktop website. The mobile interface increased accessibility and usage by providing frequent triggers.
- The Bible app increases users' ability to take action by front-loading interesting content and providing an alternative audio version.
- By separating the verses into small chunks, users find the Bible easier to read on a daily basis. Not knowing what the next verse will be adds a variable reward.
- Every annotation, bookmark and highlight stores data (and value) in the app, further committing users.

8. HABIT TESTING AND WHERE TO LOOK FOR HABIT-FORMING OPPORTUNITIES

By identifying where your technology is lacking, you can focus on developing improvements to your product where it matters most.

- Does your users' internal trigger frequently prompt them to action?
- Is your external trigger cueing them when they are most likely to act?
- Is your design simple enough to make taking the action easy?
- Does the reward satisfy your users' need while leaving them wanting more?
- Do your users invest a bit of work in the product, storing value to improve the experience with use and loading the next trigger?

An iterative process: Building a habit-forming product is an iterative process and requires user behavior analysis and continuous experimentation.

Habit Testing

Habit Testing offers insights and actionable data to inform the design of habit-forming products. It helps clarify who your devotees are, what parts of your product are habit-forming (if any), and why those aspects of your product are changing user behavior.

Step 1: Identify

The initial question for Habit Testing is "Who are the product's habitual users."

First, define what it means to be a devoted user. How often "should" one use your product.

You are looking for a realistic guess to calibrate how often typical users will interact with your product.

As a best practice, use cohort analysis to measure changes in user behavior through future product iterations.

Step 2: Codify

Hopefully you've identified a few users who meet the criteria of habitual users. But how many users are enough? My rule of thumb is five percent. Though your rate of active users will need to be much higher to sustain your business, this is a good initial benchmark.

The next step is to codify the steps they took using your product to understand what hooked them.

Using your product to understand what hooked them.

Sift through the data to determine if similarities emerge. You're looking for a "Habit Path," — a series of similar actions shared by your most loyal users.

Every product has a different set of actions that devoted users take; the goal of finding the Habit Path is to determine which of these steps is critical for creating devoted users so that you can modify the experience to encourage this behavior.

Step 3: Modify

Armed with new insights, it is time to revisit your product and identify ways to nudge new users down the same Habit Path taken by devotees.

Tracking users by cohort and comparing their activity to habitual users should guide how products evolve and improve.

Instead of asking 'what problem should I solve?' ask 'what problem do I wish someone else would solve for me?'

Early adopters: When technologies are new, people are often skeptical. Old habits die hard and few people have the foresight to see how new innovations will eventually change their routines. However, by looking to early adopters who have already developed nascent behaviors, entrepreneurs and designers can identify niche use cases, which can be taken mainstream.

Technology waves: Maples believes technology waves follow a three-phase pattern, "They start with infrastructure. Advances in infrastructure are the preliminary forces that enable a large wave to gather. As the wave begins to gather, enabling technologies and platforms create the basis for new types of applications that cause a gathering wave to achieve massive penetration and customer adoption. Eventually, these waves crest and subside, making way for the next gathering wave to take shape.

Changing user interactions: Wherever new technologies suddenly make a behavior easier, new possibilities are born. Many companies have found success in driving new habit formation by identifying how changing user interactions can create new routines.

Subsequently, when the effort required to accomplish an action decreases, usage tends to explode.

Discovering behavioral secrets: A long history of technology businesses made their fortunes discovering behavioral secrets made visible because of a change in the interface. Apple and Microsoft succeeded by turning clunky terminals into graphical user interfaces accessible by mainstream consumers. Google simplified the search interface as compared to those of ad-heavy and difficult-to-use competitors such as Yahoo! and Lycos. Facebook and Twitter turned new behavioral

insights into interfaces that simplified social interactions online. In each case, a new interface made an action easier and uncovered surprising truths about user behaviors.

Chapter summary

- The Hook Model helps the product designer generate an initial prototype for a habit-forming technology. It also helps uncover potential weaknesses in an existing product's habit-forming potential.
- Once a product is built, Habit Testing helps uncover product devotees, discover which product elements are habit forming (if any), and why those aspects of your product change user behavior. Habit Testing includes three steps: identify, codify, and modify.
- First, dig into the data to identify how people are behaving and using the product.
- Next, codify these findings in search of habitual users. To generate new hypotheses, study the actions and paths taken by devoted users.
- Lastly, modify the product to influence more users to follow the same path as your habitual users, and then evaluate results and continue to modify as needed.
- Keen observation of one's own behavior can lead to new insights and habit-forming product opportunities.
- Identifying areas where a new technology makes cycling through the Hook Model faster, more frequent or more rewarding provides fertile ground for developing new habit-forming products"
- Nascent behaviors — new behaviors that few people see or do, and yet ultimately fulfill a mass-market need — can inform future breakthrough habit-forming opportunities.
- New interfaces lead to transformative behavior change and business opportunities.

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