The Mountain Meadows massacre of 120 people was a number of attacks on the Baker–Fancher emigrant wagon train in Southern Utah during the Mormon Reformation (1856-1857). The attacks were committed by the Nauvoo Legion, a militia composed largely of Mormon settlers, and resulted in the emigrants eventually running out of supplies and food. This led them to let down their defenses out of desperation and allow militia members, who claimed to be surrendering, to enter their camp. After gaining access, the militiamen, along with outside forces, attacked the emigrants and killed all who were old enough to act as witnesses.

Today, many speculate that a combination of war hysteria caused by a fear of the invasion of Mormon territory as well as exclusionary Mormon doctrine are both to blame for contributing toward a climate which caused the massacre. This installation uses a deconstructed Book of Mormon to explore the idea that the doctrine itself separates Mormons from others and was easily used to justify historical acts. The pages create a wall that appears thin and fragile, but inhibits sight and creates a strong separation despite its inconsequential appearance.

Silas

The Life of a Habit

Silas

This paper explores what qualifies an action as a habit, the anatomy of a habit, how to form and break new habits, how to tell if a habit is positive or detrimental, and the benefits and drains of those habits. It also looks at how long it takes for an action to become a habit, as well as debunking some common myths, such as "the 21 day rule". The goal is to find practical ways to apply scientific data for more control over one's daily actions.

When I was a child my family lived in Georgia, where my Father worked as a lawyer. One day he came home and told us we were moving so he could join the military. In a whirlwind of sorting through our belongings and packing, we moved to North Dakota.

It turns out that our move from Georgia was just the start. For the next decade my family followed my Father wherever he wanted to go. He would decide on a new job or lifestyle and within a few weeks we would pack up our home and move again.

We became very proficient at packing, and could pack up our whole house very quickly, with an amazing dishware to packing paper breakage rate. Sometimes, we left a lot of our things behind because we were moving somewhere smaller or too far away. We also left people behind. We didn't necessarily have the time to maintain handfuls of long distance friendships, so inevitably there was high turnover rate in relationships as well.

I was mostly okay with all of this moving. It provided a lot of excitement and new experiences. Having new environments all the time gave me perspective I wouldn't have had otherwise. Moving often also gave me some of my habits, like being adaptable to my environment and being mindful of the amount of things I own.

This got me thinking about habits. They seemed to be either impossible to break nuisances, or the small secrets to success no one can quite pin down. People seemed to be born with their habits, either good or bad, and have little to no control over what they do. I wanted to know what my habits meant to my life, and how much control we really have over our actions.

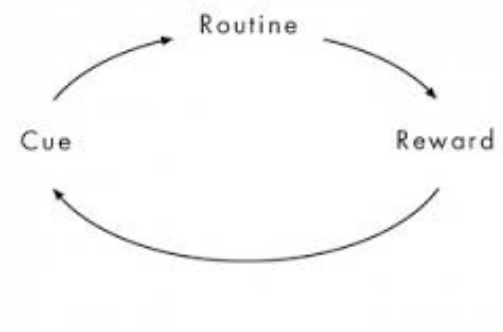
What is a habit? The article, "How Long Does it Take to Form a Habit?" defines a habit a behavior…

> *"…performed automatically because they have been performed frequently in the past. This repetition creates a mental association between the situation (cue) and action (behavior) which means that when the cue is encountered the behavior is performed automatically. Automaticity has a number of components, one of which is lack of thought."*

This means that a habit is something done so often that it becomes almost involuntary. Putting keys in a dish by the door every evening, brushing teeth in the morning, and getting coffee on the way to work are all examples of things we do automatically and regularly. Habits make up a significant part of what we do every day. Wendy Wood, a psychology professor at USC, who conducts research on habits and how they influence social behavior. She observes that 40-45% of our actions are habits. Habits are repeated actions that don't have thinking behind them.

If habits aren't conscious choices, what goes on beneath the surface? I want to know what exactly is involved in the process of making something so automatic we don't even notice that we're doing it. An essential part of understanding habits is understanding how and why they first developed. I found the answer looking at a study done at MIT in 2012 by researchers Arti Virkud, et al. The study experiments with rat's brains while running mazes. They found that the rats brains are full of activity in the cerebral cortex when they are first placed in the maze. However, the more these rats run the maze, the more the brain activity goes down. Not only did the general activity go down, eventually the majority of the brain activity moved away from the cerebral cortex to the basal ganglia, a more primitive part of the brain. This shows that the rats actually began to think about their actions less.

This shift was due to a process called chunking, a term that refers to taking individual pieces of information and "chunking" them with other pieces of information into increasingly larger units in order to increase the amount of information that can be remembered. An example of this is phone numbers, which are naturally formatted in a way which makes them easy to group. The phone number 8022823345 is made easier to remember because it's written like this: 802-282-3345. By joining pieces of information into larger sections the amount of information we can retain increases. This means the rats are able to expend less energy going through the maze, and pay less attention. This is the same process which enables humans to perform an action, such as walking to work or washing dishes, while on autopilot. From this research, they created something called "the habit loop", which involves a cue, a routine, and a reward.



The cue is the thing that triggers the reaction. In the case of the rats, this is being placed in the maze. Next is the action itself, running the maze, which goes on to earn the reward. The reward is important because it causes the brain to associate the action or habit with a positive outcome. This strengthens the desire to perform this action, and creates a habit. Which is why things like driving become easier the longer it is done. When first learning to back out of a driveway, it takes a lot of focus, but eventually it becomes an easy task. In this example, getting in the car or having the need to go somewhere is the cue, actually backing out of the driveway is the routine, and driving away without an accident is the reward. This gives us a cohesive framework to think in, so we can analyze how habits function in the real world.

I wanted to apply this to my specific situation, so I made a list of all of my habits and identified my own cues and rewards. It was simple enough to find an answer; given the amount of time I had already spent thinking about my habits. In the case of cleaning my room before bed every night I found that my cue was getting all of my homework done, which is when I start preparing for bed. Then I perform the action (cleaning) and the reward is feeling less stressed out about the following day. Another one of my habits is filling up my thermos with hot water, for tea, at every meal. The cue is seeing the hot water pot, the action is filling it up, and the reward is getting to drink tea later on after the water cools.

All of these actions, like cleaning a room or drinking tea, can just be normal, non-habitual, actions. What makes them habits is that they don't require thought beforehand, and they are performed regularly. If I don't take time to think about what I am going to eat for dinner because I am tired, the lack of thought in this action does not make it a habit. Habits also require repetition in performance.

What can I do with this knowledge? I separated my habits into two different categories: Ones I want to keep and ones I do not (or positive and negative habits). Positive habits are healthy and help work towards goals. This may mean brushing teeth every morning, turning off email while at home with family, getting regular exercise, or practicing a skill often. They help create a more streamlined, fulfilling life. Negative habits, however, can be ones we really didn't mean to form, but that were involuntarily developed, like nail biting, skipping breakfast, or eating fast food. Those negative habits can drain us of our energy, offend others, and be unhealthy for our bodies.

Next, I wanted to figure out which of my own habits were positive and negative, in order to figure out which ones to grow, and which ones to work towards getting rid of. I know that studying often, and drinking a lot of water are both good habits because they help me do well in school and feel healthier. I know that my habit of staying up too late and not getting enough sleep isn't a great thing to do, because it made me feel tired the next day. I chose a couple of habits that I wanted to work to get rid of, using the theory of the habit loop.

Next, I researched how to break habits. A possible answer was found in the habit loop discussed earlier. Charles Duhigg, the author of "The Power of Habit: Why we do What we do in Life and Business", a book which focuses on how the science of habits, proposes that instead of focusing on the habit itself, we should look at the cues and rewards as the roots and the motivators to control and examine habits. He argues "But to change an old habit, you must address an old craving. You have to keep the same cues and rewards as before, and feed the craving by inserting a new routine", meaning it's easier to change a habit when you've identified the cues and rewards of an old habit, and put a new action in place. The paper "Habits- a repeat performance" says,

> *"People often fail in their attempts at changing everyday lifestyle habits such as their diet and level of exercise. Such failures are understandable given that cues such as time of day and location trigger repetition of past responses."*

This supports the idea that failing to identify the correct cues to a habit can kill any attempt to get rid of it. Identifying the proper cues and rewards can make the process of changing habits easier and also give insight into why it formed in the first place. In the instance of trying to break a nail biting habit, it may be more successful to identify cues and rewards and insert a new action than to simply make a resolution to stop. For example, if the cue for nail biting is anxiety, rather than getting rid of the anxiety, which is a much bigger task, a replacement action can be inserted, such as taking a walk. Another example would be drinking too much coffee. A possible cue could be drowsiness in the morning, caffeine headaches, or seeing co-workers drinking coffee, and the reward is feeling energized. To break a coffee habit focusing on the possible cues and finding new ways to get the same reward can make the transition to better habits and a healthier lifestyle easier.

Since I learned ways to break the negative habits, I want to know how to foster and form positive habits. We already know about the habit loop, but what about before that even forms? BJ Fogg, a professor at Stanford, says that the easiest way to build a new habit, is to anchor it to an old one. He teaches that to build a habit we have to have the motivation to perform it, the ability to perform it, and an anchor. Flossing every day that requires the desire to floss, owning floss to floss with, and a pre existing habit to anchor it to. Fogg says there is a format to habits that looks like this: After I (insert a pre existing habit), I will (insert the new habit). So in the example of flossing the sentence could be, after I get dressed I will floss. Without an anchor a wish to become someone who flosses, or to perform any new habit, is directionless. By anchoring the goal down, it creates an easy to follow plan, given the proper motivation.

Now that we know a strategy to form new habits, how long should that take us? A number that comes to mind is the 21 day statistic. The number seems to be everywhere on social media, especially when it comes to fitness goals, but where did it come from? The person who first came up with the idea was Maxwell Maltz, a plastic surgeon in the 50's when he noticed a

pattern among his patients, where many of them would not report being used to their "new" situation for at least 21 days. In his book he writes,

> *"It usually requires a minimum of about 21 days to effect any perceptible change in a mental image. Following plastic surgery it takes about 21 days for the average patient to get used to his new face. When an arm or leg is amputated the "phantom limb" persists for about 21 days. People must live in a new house for about three weeks before it begins to "seem like home". These, and many other commonly observed phenomena tend to show that it requires a minimum of about 21 days for an old mental image to dissolve and a new one to jell."*

The problems started when Maltz later wrote a book called Psycho Cybernetics in which he published this finding. The book became very popular, and the audience took it to mean that 21 was the magic number of habits, instead of Maltz's actual finding, that it takes *at least* 21 days to become used to a new action to the point where it becomes automatic. People want to believe that they can change their habits reliably in three weeks, a number low enough to appeal to our results-oriented culture, but high enough to seem realistic. Years later Maltz's findings have entered the realm of pop psychology, and most people forgot where this statistic actually comes from.

To figure out how long it really takes to form a habit, Phillippa Lally, a psychology researcher at University College London, did a study which examined 96 people over a period of 12-weeks. Each person chose one new habit to try to acquire and reported each day on whether or not they remembered to perform the behavior and how automatic the behavior felt. At the end of the 12 weeks, the researchers analyzed the data to determine how long it took each person to go from starting a new behavior to automatically doing it. On average, it took 66 days for the behavior to become a habit. However, the numbers varied so widely, from 18 days to 254 days, the number 66 becomes almost irrelevant. They found someone's habit formation patterns could be affected depending on multiple external factors such as the habit itself, the willpower of the person.

The same study, which was eventually published in the European Journal of Social Psychology, also found that "missing one opportunity to perform the behavior did not materially affect the habit formation process."This means that already established habits, as well as newly formed ones, aren't hindered by occasionally forgetting them. Habits don't require regimented regularity, only repetitive performance.

What are the benefits of having power over habits? It can be hard to practice discipline. But to get to the involuntary stage of an action where it becomes easy, it must be voluntarily performed. Understanding how to form, keep, and break habits can make life easier. Good daily habits can increase chances of success. As a teenager, Serena williams would get up at 6 am every morning before school to practice tennis. The 19-year-old Olympic gymnast, Simone Biles, spends 32 hours a week training. Frank Lloyd Wright drafted most of the sketches for his buildings between four and seven o'clock in the morning. Sylvia Plath wrote nearly all of the poems in *Ariel* by waking up at five a.m. before her children woke up. As Jason Selk, author of the article, "Habit formation: 21 day myth", said, "Highly successful people have learned to develop good habits, and it takes discipline, courage and hard work *on a daily basis* to keep those habits in place."

Whether or not we notice, our habits make up a large part of our lives, and they can either contribute to happiness or create frustration and a lack of efficiency. As found with the lab rats at MIT, habits start from a simple cue or trigger, and can turn into actions that breed success. Habits, no matter positive or negative, are everywhere. Habits are tremendously impactful. Everyone has their own habits that will form the type of life they will live. This is why we should all examine our habits, learn about how to change them, and harness the power of the small actions that make up our daily lives in order to achieve our goals.

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