

# Finding the root causes of healthy behaviors

September 28 2017, by Elliot Berkman

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Credit: AI-generated image ([disclaimer](#))

Doing healthy things can feel like a battle between the angel on one shoulder and the devil on the other. The devil impels me to order the bacon burger for lunch, but the angel nudges my hand toward the salad.

This dichotomy goes way back in Western thought. Plato likened the process of making such choices to the [charioteer of the soul](#) commanding two horses, one "noble" and the other wicked. This allegory

echoes throughout history in various forms. Other ready examples include reason versus passion as described by the Greeks, the Judeo-Christian battle between sin and redemption, and Freud's account of the psyche's superego and id. Our intuitions about healthy behaviors are deeply shaped by this history. Plus, hard choices simply feel like we are being pulled in two directions.

Getting to the root causes of healthy behaviors is important to science because they are a big part of individual and public [health](#). The leading causes of death in the United States – cancer, heart disease and respiratory illness, among others – are all caused at least in part [by our behavior](#). As a society, we could reduce the onset of these afflictions by [learning new ways](#) to change our [behavior](#).

Despite the intuition, [health behaviors](#) are not the result of a battle between two opposing forces. So what are they? My colleagues and I recently suggested that they are [the same as any other choice](#). Instead of a battle between two forces, self-control of unhealthy impulses is more like a many-sided negotiation. Various features of each option in a [choice](#) get combined, then the total values of the options are compared. This is kind of a fancy version of a "compare the pros and cons" model.

## Problems with the battle analogy

These days, psychologists refer to the dichotomy in Western thought as "[dual-process](#)" models of health behavior. Such models come in many varieties, but they share two notable features. First, they describe behavior as a winner-take-all battle between two [opposing forces](#). There is no compromise. Whichever force is stronger dictates behavior.

Second, beyond being in opposition to one another, the forces are also inflected with a moral tone, with one being good and the other wicked. The devil impels you to do bad things, the angel advises toward virtuous

ones. Psychologists call the warring parties impulse and control, or [hot and cold processes](#).

Casting behavior in the stark terms of pros versus cons is intuitive but might not be accurate. After all, our minds contain many [more than just two systems](#) for making decisions. As Walt Whitman [said](#), "I contain multitudes."

Plus, people have [many ways](#) to choose healthy options that [don't involve a battle](#). [Avoiding a temptation](#) in the first place is effective. If I know that I have trouble not ordering the bacon burger, then I can choose to go to a restaurant that doesn't have one on the menu.

Also effective is fighting fire with fire by [getting excited](#) about a healthy option. And being healthy doesn't need to be moralized. Indulgence can be a good thing, such as when it serves as a reward. Some people even [plan indulgence in advance](#) to give themselves a break. In studying healthy choices, scientists have learned that they are more complex than we previously thought.



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## **Advantages of thinking of many choices**

Let's revisit the burger-vs.-salad example. Sure, the burger tastes good (a "hot" feature) and you know that the salad is healthy (a "cold" feature). But many other features could be relevant, too. Not all of them will fall clearly into the hot-cold dichotomy. The salad will seem more attractive if you want to impress the friends you're with if you think they value health. Or maybe I think of myself as a "bacon person," so I know ordering the burger with that topping will [affirm that part of my self-concept](#).

The key point here is that people can have many reasons for making the healthy or unhealthy choice. A good psychological theory will be able to account for that diversity of motives.



Beyond being more realistic than hot-cold models, there are several ways that thinking of health as a choice can help us better understand it. Researchers working across a variety of disciplines have uncovered what they call "[anomalies](#)" in choice. These anomalies are quirks where choice differs – predictably – from what would be optimal. If health is a choice, then [these anomalies apply to health](#), too.

One of my favorites is the [decoy effect](#). There are cases where having a third option in a choice, even one that someone would never choose, can change behavior. Suppose I always prefer a burger to a moderately healthy salad. A restaurant owner could add a decoy choice to the menu, such as an Extremely Healthy SuperFood Salad, that would nudge me to choose the moderately healthy salad over the burger when I considered all three options. This behavior is anomalous – why would an option that I never choose influence my choice between two others? – but it is also useful in helping change health behaviors.

Another anomaly that can be useful for changing health behaviors is realizing that the value of something good is not constant. This is called the law of [diminishing marginal utility](#). The value of something good depends on how much of that thing you've already consumed.

This is intuitive, but technically irrational. If I like M&M's, eating the first one (going from 0 to 1 M&M's) should feel just as good as eating my 104th one (going from 103 to 104 M&M's). But we all know that is not the case. The deliciousness of things like M&M's wears off as you keep eating them – their utility diminishes. In a [clever series of studies](#), researchers found that merely imagining eating tasty treats before being served them reduced the amount people ate. Imagined eating, it seems, caused their utility to diminish.

Casting health behaviors as choice also helps clarify their neural underpinnings. The brain systems involved in simple choice are

[increasingly well-understood](#). The science has even progressed to the point that researchers can use computers to [predict what people will choose](#) and precisely how long it will take them in specific conditions. This improved understanding will eventually lead to more effective interventions for behavior change.

But wait – if healthy is just like any other choice, why does it feel like being pulled in two directions? We tend to [moralize health behaviors](#) in our society. Part of that feeling is probably related to the [anticipated guilt](#) of choosing the "bad" option.

And, morality aside, choice models show that people will feel torn [when their preferences vacillate](#) between options.

Just because there are two competing options doesn't imply there are two competing systems. Feelings of conflict and indecision can arise even in a [simple choice system](#) such as the one described here.

Remember that your health is not helpless amidst a battle between temptation and grace. It's your choice, and science offers solutions to making a better one.

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