SECRETS FROM THE EATING LAB

The Myth of Self-Control, Why Diets Fail You,

and the Surprising Strategies that Really Work

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Sample Chapter

Chapter 3: The Myth of Self-Control

Life would be a lot easier if I liked sorbet. I am constantly finding myself in ice cream shops with my two sons, and if I actually liked sorbet, I could eat that. Healthy, fruity, low-calorie, low-fat sorbet. Instead, I have to try to resist ice cream, and I inevitably fail. Because I don't have enough willpower. Neither do you. Even without meeting you, I know this is true, because very few people do (and those people are probably not reading this book). The unfortunate fact is that hardly anybody has enough willpower to resist tempting foods if they are routinely confronted with them. And we *are* routinely confronted with them, because we live in an environment[i] in which the most tempting, most difficult to resist[ii] foods (those with lots of fat and sugar) are inexpensive and readily accessible.

Dieting requires you to resist temptation every time. No exceptions. Esteemed obesity researcher John Foreyt said in *Living without Dieting*[iii] that dieting is like holding your breath. At some point, you have to breathe. When a food is present, you don't have to resist it just one time to be successful. You have to resist it an hour from now and ten minutes from now and one minute from now and one second from now. As long as the food is there, you have to resist it is as often as you take a breath. And there is the problem.

Imagine you are a genius at self-control. Nobody's perfect at anything, but suppose you are so good at self-control that you can successfully resist temptation 99 percent of the time. If a cookie is next to your desk while you are working, you have to resist that cookie every time you

notice it—every time you look up from your computer. I don't know about you, but I look up after nearly every sentence I type. At least every minute. Assuming that I am at least in the neighborhood of normal, you do too. Even with your amazing 99 percent self-control powers, on that 100th time you look up (on average), your resistance will fail and you will eat the cookie. It won't matter one bit that you resisted it successfully 99 times already. You get no credit for that. You won't be one bit different from people—like my 9-year-old son—who succumb the first time they see the cookie. You will have eaten the cookie; they will have eaten the cookie. Your amazing powers of self-control got you nowhere.

Some People Have Great Self-Control, Right?

It's not that people don't differ from each other in how much self-control they have. Of course they do. To take an extreme and unpleasant example, people with anorexia nervosa, an eating disorder characterized by an obsessive desire to lose weight by severely limiting food intake, display near-perfect self-control. This is not a good thing. Nevertheless, people with this serious psychological disorder do successfully resist temptation practically constantly. So it's not that self-control ability doesn't matter ever, for anyone. But for most people, at least when it comes to eating, it matters a lot less than you would think.

Psychologists can measure your self-control ability. One way they do this is by using questionnaires[iv] that have items on them such as "People would describe me as impulsive," "I have a hard time breaking bad habits," and "I do many things on the spur of the moment." If these items (and others on the questionnaire) describe you very well, your score would indicate that your self-control ability is low. And perhaps it is. But it still may not make much difference.

I say this based on scientific evidence. A few years ago, I stuck the twenty research assistants in my lab with a tedious task: I had them hunt down every study that included one of those self-control questionnaires. There were over 500 studies. Then I had them read those 500 articles to find every study in which researchers not only had participants complete the self-control questionnaire, but also put the participants in some situation where they needed to use self-control. We found a grand total of twenty-six studies that fit the bill.

In one of the studies,[v] psychologists Malte Friese and Wilhelm Hofmann asked people to try to resist some potato chips, and then they looked at whether people who got high scores for self-control on the self-control questionnaire did a better job at resisting the potato chips than people who got low scores for self-control on that questionnaire. They didn't. In that case, self-control ability didn't matter much.

We looked at this sort of thing in all twenty-six of those studies, and we generally found the same thing we found with potato chip eating: People's scores on the self-control questionnaires did not do a very good job of predicting who would successfully control themselves on the tasks the researchers had them do. On average, 6 percent of people's self-control is explained by the questionnaire scores, and 94 percent of their self-control is explained by other things, not their self-control ability. There were some exceptions to this pattern, but they didn't have to do with controlling one's eating. They had to do with, for example, trying not to blink your eyes, or holding your hand in cold water for as long as possible.[vi]

Maybe you are not persuaded by this. Perhaps you think those questionnaires are silly. People are not necessarily willing to admit on a questionnaire that they are impulsive or that they have trouble breaking bad habits. Or maybe people are not able to admit these things to

themselves, let alone write them on a questionnaire. Then it wouldn't be so surprising that these questionnaires don't explain people's actual self-control.

Psychologists have these same concerns about questionnaires, so whenever possible, we try to learn things about people without asking them about themselves. With self-control, this is possible with a clever test called the delay of gratification test.[vii] Instead of asking children how good they are at controlling themselves, researchers leave them alone in a room with a marshmallow. The children are told that they will be given a second marshmallow if they can resist the first one until the researcher returns. Otherwise they only get the one. The longer the children can resist the first marshmallow, the better their self-control.

One occupational hazard of being a psychologist is that we sometimes try these tests out on our friends and family members. I made the grave error of testing each of my young sons on this marshmallow test. They each grabbed and ate the first marshmallow before I even got out of the room. About as clear a fail as you can get.

This measure of self-control ends up predicting a bunch of things about how kids will do later in life. For instance, the longer they resist the marshmallow, the better they are at dealing with stress and frustration ten years later.[viii] This measure of self-control also relates to their adult body mass index thirty years later,[ix] but importantly, the relationship is very small—even *smaller* than the relationship between scores on those questionnaires and self-control. So while the fact that there is any relationship whatsoever with something that happens thirty years later is remarkable, the delay of gratification test explains only about 4 percent of the differences between people's weights, leaving the other 96 percent to be accounted for by other things.

So forget about the idea that your self-control ability in any way explains how well you actually control your eating. It just doesn't. There is hope for my sons yet.

Self-Control Depends on Your Circumstances, Not Your Ability

If you are still convinced that you know people who have impressive abilities to resist temptation, consider that some of the time, it may look like people are doing an impressive job resisting something, when really they don't happen to be tempted by it. Maybe your friends who are so good at resisting cookies are just not that into cookies. People like that are alleged to exist. It doesn't count as self-control if you didn't want the thing in the first place. My collaborator Joe Redden calls this "apparent self-control,"[x] because you look like you are controlling yourself, but you either never wanted the thing, or, you are sick of the thing. Joe is an expert on getting sick of things (yes, it's possible to be an expert on that). He does studies in which he has people listen to a song they love twenty times in a row, or eat seventeen of one flavor jellybean, so that they get sick of it, and then he makes them like it again.

Perhaps this is obvious, but food preferences and desires are powerful. Like many women, I have experienced what it would be like to live with an entirely different set of preferences. It's a common part of being pregnant. When I was pregnant with my older son, I had no interest in the kinds of foods I am normally tempted by, things like ice cream, brownies, and marshmallows. Instead, I wanted cucumbers, salads, and most of all, apples. Normally I have no feelings whatsoever about apples. They exist. I see them in stores. I see them representing the letter "A" in picture books. They didn't have a lot to do with me. But when I was pregnant, they were objects of utter joy and deliciousness. I'm sure it's no coincidence that my son absolutely adores apples. I ate *a lot* of apples during that pregnancy. If there was ice cream nearby, I would not eat it. Not because I was exercising impressive self-control of my eating (which believe me, was not something I intended to bother with while pregnant), but because I had absolutely no

desire for it. It was like being plopped into someone else's mind and body for several months, and it was eye-opening. It made it easy to see how some people would have no trouble resisting certain foods, while for other people it would be a struggle. It would have nothing to do with their self-control ability, and everything to do with their physiologically based preferences.

What Causes Self-Control to Fail?

Whenever I tell people that I study self-control, the first thing they do is ask for advice on how to control themselves. Actually, that's the second thing they do. The first thing they do is say something like, "Boy, I sure wish I had some of *that.*" And then they ask for advice. For years, I had no advice to offer. All I had was bad news. It slowly dawned on me that nearly every study on self-control (including many of my own, for a while) was a demonstration of something that causes self-control failures. It's true. There are many things that cause people to lose control if they are relying on willpower to save them.

So what explains whether people succeed or fail at controlling themselves when they want something, if their own self-control ability doesn't? A whole bunch of things do, and they can all be lumped into a category that I will call your *circumstances*. For example, are you distracted? Stressed? In a bad mood? In a good mood? Have you been controlling yourself all day and now you are tired? These things matter more than your abilities, and this is good news, because as we will talk about in Part III, your circumstances are things you can change.

Distraction

One thing that causes people to fail at self-control is distraction—regular, ordinary distraction, such as happens when watching TV or having a conversation. This doesn't sound like a big deal

until you take a moment to think about how often you are distracted. Multitasking is the normal state of work for most people, rather than the occasional hurried exception. Can you even remember a time when you didn't know that word? In his book *The Shallows*,[xi] Nicholas Carr argues that the internet is slowly destroying our "capacity for concentration." And in recent research, psychologists found that students studying in their homes only lasted about six minutes before getting distracted by their phones or computers.[xii]

Long before I started the Health and Eating Lab, I did a study[xiii] on distraction and the self-control of eating. In fact, it was the first eating study I ever did, and I did it in graduate school with my classmate (and close friend) Andrew Ward. The lab rooms they let us use for the study were in the dingy basement of Franz Hall, the psychology building at Stanford. These rooms were so gloomy; it didn't surprise us at all that they had previously been used as prison cells in the well-known (and controversial) Stanford Prison Experiment.[xiv]

Our study came about because we heard about some work showing that drinking alcohol causes dieters to overeat.[xv] Many college students can think of a time when they ate some crazy food after a long night of drinking. At my alma mater, the University of Virginia, there is a diner called The White Spot that is famous for serving a greasy burger with a fried egg on top and a sandwich made from two glazed donuts, slapped around a scoop of ice cream, and then fried on the grill. These were (and are) notoriously eaten late at night while drunk, so it definitely seemed possible to us that overeating while intoxicated is something that happens. But we wanted to know *why* it happens.

We thought that maybe alcohol clouds your thinking[xvi] and keeps you from noticing that you are overeating. If that's true, then perhaps dieters would overeat if we clouded their thinking another way, say by simply distracting them.

So our study was born. We brought subjects into the lab, one at a time, and asked them to eat cookies, M&Ms, and Dorito's while watching a slide show of dozens of famous paintings. We told them that later there would be a memory test on the paintings, and that we gave them the food to put them in a good mood so that we could study the effects of their mood on their memory. None of this was true.

In social psychology we call that a "cover story." In the regular world they call it a "lie," but we believe this to be a harmless lie and that subjects don't much care if we are studying the effects of mood on memory or the effects of distraction on eating. When we use deception like this in our studies, we have to justify it to the university before we do it, we have to make every effort to minimize it, and we have to carefully and sensitively explain it all to our research participants at the end of the study. They tend to find it intriguing, and in twenty years of conducting eating studies, we have not had a subject who expressed being particularly bothered by this deception. Being deceptive this way is necessary in most eating research because you can't learn about eating if your subjects know you are observing their eating, or if they even think you might *notice* how much they are eating. They'll get all self-conscious, act unnaturally, and probably not eat much of anything. We have to be a little sneaky. We pile their bowls extremely high with food so that they can eat quite a lot without making a noticeable dent in it. And we use a cover story to explain why there happens to be an impressive spread of food there in the first place.

In this study, we were interested in how much our subjects ate, depending on how distracted they were. We could tell how much they ate because we secretly weighed the food before we gave it to them, and then weighed it again after they were done. To make sure we distracted them enough, we had them look at the slide show of paintings while at the same time

listening for a tone from the computer. Every time they heard the tone, they had to press a button on the floor as fast as they could. With their foot. They had to hit the button with their foot because we wanted their hands free to do what we really cared about: eat. For comparison, we also had some subjects who didn't watch the slides. They only had to listen for the tone and then hit the floor button when they heard it. So these subjects should not be distracted very much at all. They're mostly just sitting there.

The research participants thought the whole setup was pretty odd. They were trying to remember slides of paintings, hitting a button with their foot, and eating from three enormous containers of food. The important thing is that they had no idea we were studying how much they ate. I know these methods sound silly from the outside. People are always surprised to learn that this is what I do in my lab. It's not what people think of when they hear the word "science." But it is. And these methods are actually a rigorous way to study the self-control of eating in a controlled laboratory setting. It's also a lot of fun.

What we found in our study is that regular distraction causes dieters to lose control of their eating. Dieters eat more when they are distracted than when they aren't. Non-dieters, on the other hand, control their eating just fine when they are distracted, and sometimes even eat less while distracted than when they aren't. Non-dieters' eating habits are pretty sensible, if you think about it. They are busy with whatever is distracting them, so they don't have the time or inclination to do anything else, including eat.

On the other hand, this also seems a little unfair. The people trying *not* to overeat are the ones that do overeat when they are distracted. And the people who aren't trying to control their eating are the ones who don't eat much when they are distracted. This is a pattern that we notice

time and time again, not just in our own work, but in that of other researchers too.[xvii] Lots of everyday events cause dieters to overeat, but don't have the same effect on non-dieters.

It turned out that Andrew and I were correct in our intuition that clouding dieters' thoughts would lead them to overeat, but we were wrong about why it happened. We thought dieters would be so distracted that they would lose track of how much they had eaten and then inadvertently eat more than they intended. But at the end of the study, we asked dieters how much they had eaten, and they were perfectly accurate in their estimates. They hadn't lost track of their eating. We see this in lots of our studies. Dieters *always* know how much they ate. Are they worse at multitasking? Are they using the task as an excuse? Is the task stressing them out? We still aren't quite sure why distraction causes them to overeat. We just know that it does.

Stress and Your Mood, Both Good and Bad

As I discussed in Chapter 2, stress is a major cause of dieting failure. Everyone knows that stress causes people to overeat. Stress eating, they call it. And people do indeed stress eat. Well, dieters do. Non-dieters don't. There's lots of evidence[xviii] for this, starting from as far back as 1975, in a study[xix] conducted by eating research pioneers Peter Herman and Janet Polivy. They used a complicated cover story in which subjects were somehow convinced that they were about to receive either a painful electric shock or a very mild one. The researchers never shocked them, of course. Even back in 1975, shocking one's research subjects was frowned upon. But the subjects believed they were about to be shocked, so those expecting the painful shock became quite stressed. The mild shock subjects did not. To examine stress eating, the researchers simply measured how much ice cream the subjects ate while waiting for their shocks. Dieters who were stressed ate more ice cream than the dieters who were not stressed. As you no doubt expected,

stress caused overeating, but only for dieters. Non-dieters ate *less* when they were stressed. Yet again, a normal, daily occurrence (this time stress) causes dieters to overeat but does not do so to non-dieters.

Not only do dieters tend to overeat when they are stressed, but they tend to choose foods that are particularly high in calories or fat.[xx] We think of these foods as comfort foods, but as we'll talk about in Chapter 10, it's not likely that eating those foods actually provides comfort.

The amount of stress that causes dieters to lose control of their eating does not have to be as extreme as the stress of waiting to receive a painful electric shock. Much milder stressors—like watching an unpleasant movie[xxi]—cause dieters to overeat. In fact, just being in a generally bad mood is enough. My student Janet Tomiyama and I learned about bad moods and eating many years ago, when we went outside the lab[xxii] to study students as they went about their daily lives. We loaned them each a Palm Pilot (remember those?) and set it to beep once every waking hour for four days. When it beeped, they had to answer questions about their current moods and eating. We were surprised to find that bad moods triggered eating for dieters *and* for non-dieters. But get this: so did good moods! That also surprised us at first, but once we thought about it, it didn't seem so odd. Maybe you've done this. You are in a terrible mood and having a lousy day, so you decide to treat yourself to a bowl of ice cream. Why not? Ice cream will cheer you up! Conversely, you are in a wonderful mood and having a great day, and so you decide to treat yourself to a bowl of ice cream. Why not? What better way to celebrate than ice cream!

Controlling One Thing Makes It Hard to Control Another

One reason self-control ability matters so little, and circumstances matter so much, is that no matter how strong your ability is, you can only use it for a little while before you tire it out. Once

that happens, it takes some time for it to replenish. It's sort of like when you work a muscle. If you do as many pushups as you can until your arms start to shake and won't push you up anymore, those muscles are depleted. It's just for a while though. After you rest them you can continue. Self-control isn't really a muscle, but it does seem to temporarily wear out like one. Because of that, once you control one thing, it is harder to control another thing soon after.

This wearing out or depletion of self-control has been extensively documented[xxiii] in the research literature, probably more than any other source of self-control failure. To fully appreciate it, it helps to consider an example.[xxiv] Imagine you show up for a study and you are seated in a small room, with a bowl of radishes and a plate of chocolate chip cookies in front of you. The cookies are still warm and have that wonderful smell that only freshly baked cookies have. Now imagine that the researcher tells you that you are participating in an experiment about taste perception, and that you have been assigned to taste radishes. He leaves you alone, and you have to resist the cookies and only eat radishes. This takes some self-control. Luckily, you only have to face the cookies for a few minutes, and with effort, you do manage to resist them for this short amount of time. Still, this was an act of self-control. It took willpower. When the researcher comes back in the room, he takes away the food and asks you to help him out with a puzzle that is completely unrelated to the taste perception study. Or so he says.

Since you've already heard about some sneaky eating studies, I imagine that you are suspicious about this whole set-up, and rightly so. Not only is this "unrelated" puzzle related to the study, it is also cleverly designed so that it looks reasonably easy, but is in fact unsolvable. Persisting at trying to solve this puzzle is an activity that requires self-control. If you had just resisted eating the warm cookies, your self-control ability was used up for a while. And so you gave up on the puzzle very quickly. Other participants, however, had been allowed to eat the

cookies during the first part of the study, so they didn't deplete their self-control resources. Those participants persisted for longer at trying to solve the puzzle. As you can see, controlling the first thing made you fail at controlling the second thing.

It is quite common to try to control two things in a row. Practically everything that you do can be considered an act of self-control, at least when it comes to the effect it has on controlling something else afterward. Hiding your emotions while watching a violent movie counts as self-control, as does trying not to think about a white bear, or crossing out all the letter E's in a paragraph.[xxv] Even such trivial (and relatively simple) acts of self-control like those led research participants to fail at controlling themselves at something else afterward.

Of course, those are not things that you ever *do* in your life (unless you happen to be a subject in one of these studies or have some very odd hobbies). But plenty of things that you do engage in regularly also mess up your ability to control something else. One of the most common of these activities is making choices. While nobody wants to have no choices in their lives, there is a downside to having too much choice.[xxvi] My former graduate school classmate and social psychologist Sheena Iyengar, showed that if people chose a piece of candy from a display of thirty different chocolates, they were less satisfied with the one they chose than if they had chosen from a display of only six chocolates.[xxvii] The more choices, it seems, the greater the pressure and the greater the possibility of feeling regret later.

Making choices has been shown to deplete self-control resources, leading to worse self-control on a subsequent task.[xxviii] This is truly unfortunate, because we do make choices regularly, not just between products, but between activities to engage in, friends to call, and recipes to make for dinner tonight. We channel surf among 800 cable channels to select a show to watch, scroll though 1200 songs on our iPods to select one to listen to, and choose among

millions of blogs to read and Twitter feeds to follow. Most of the time we are making a choice about something. If making a choice causes us to fail at self-control, which it does, then we are in trouble.

Apparently even President Barack Obama knows about this relationship between making choices and self-control. In an interview[xxix] in *Vanity Fair*, he mentioned this research and said: "You'll see I wear only gray or blue suits. I'm trying to pare down decisions. I don't want to make decisions about what I'm eating or wearing. Because I have too many other decisions to make." By limiting the number of decisions he makes, he may be helping to protect himself from making impulsive decisions. At a minimum, it keeps him from depleting his self-control resources before breakfast.

Although we know that self-control can become depleted quite easily, we still do not know why this happens. It could be that self-control makes you tired, and once tired, you lack the energy to control something else. It could be that you just get sick of controlling things, and so after controlling one thing, you can't be bothered to try again right away. It could be that controlling one thing is distracting, and as we talked about earlier, this distraction keeps you from controlling another thing.

Not knowing why self-control becomes depleted makes it hard to come up with solutions for it. It seems that one way in which self-control is *not* like a muscle is that we can train our muscles to get stronger and work better, but we can't really train ourselves to get better at self-control. I know some authors claim you can harness your willpower abilities or learn to control yourself better, but I've never seen any convincing evidence that this is possible. If you think about it, any self-control act that you used for training would be depleting and should cause you to fail at your next self-control act.

People were simply not made to willfully resist food. We evolved through famines, hunting and gathering, eating whatever we could get, when we could get it. We evolved to keep fat on our bones by seeking out high calorie, high fat foods. We evolved to eat the foods that we see, not to resist them. It is impossible to imagine how any species could evolve to be successful at resisting the foods that keep it alive. I am not saying there are not times when you would be better off resisting tempting food. Of course there are. I am simply saying that you will not be good at it. You were not meant to be. You have enough conflicts to handle in your life, why fight evolution too?

The solution to the willpower problem is not to train yourself to harness it. The real secret to willpower is to not have to use it at all. In Part III, I'll show you how to make sure you never need to.

[i] KD Brownell and KB Horgen, *Food Fight: The Inside Story of the Food Industry, America's Obesity Crisis, and What We Can Do About It*, 2004. Brownell refers to this environment as a "toxic food environment."

[ii] For the argument that fats and sugars cause cravings for more fats and sugars, and that the food industry has taken advantage of this, see DA Kessler, *The End of Overeating: Taking Control of the Insatiable American Appetite* (Rodale, 2009).

[iii] John P. Foreyt and G. Ken Goodrick, *Living Without Dieting* (Grand Central Publishing, 1994).

[iv] The most commonly used questionnaire for measuring self-control can be found in J Tangney, R Baumeister, and A Boone, "High Self-control Predicts Good Adjustment, Less Pathology, Better Grades, and Interpersonal Success," *Journal of Personality* 72, no. 2 (2004): 271–324.

[v] M Friese and W Hofmann, "Control Me or I Will Control You: Impulses, Trait Self-control, and the Guidance of Behavior," *Journal of Research in Personality* (2009).

[vi] Both appeared in: Brandon J Schmeichel and Anne Zell, "Trait Self-control Predicts Performance on Behavioral Tests of Self-control.," *Journal of Personality* 75, no. 4 (August 2007): 743–55.

[vii] Walter Mischel and Ebbe Ebbesen, "Attention in Delay of Gratification," *Journal of Personality and Social Psychology* 16, no. 2 (1970): 329–337.

[viii] The stress and frustration findings are in W Mischel, Y Shoda, and P K Peake, "The Nature of Adolescent Competencies Predicted by Preschool Delay of Gratification.," *Journal of Personality and Social Psychology* 54, no. 4 (April 1988): 687–96. A review of many findings from that line of research is in W Mischel, Y Shoda, and M Rodriguez, "Delay of Gratification in Children," *Choice over Time* (1992): 147–164.

[ix] Tanya R Schlam et al., "Preschoolers' Delay of Gratification Predicts Their Body Mass 30 Years Later.," *The Journal of Pediatrics* 162, no. 1 (January 2013): 90–3.

[x] Joseph P. Redden and Kelly Haws, "Healthy Satiation: The Role of Decreasing Desire in Effective Self-Control" (October 25, 2012).

[xi] Nicholas Carr, *The Shallows: What the Internet Is Doing to Our Brains* (W. W. Norton & Company, 2011).

[xii] Larry D. Rosen, L. Mark Carrier, and Nancy A. Cheever, "Facebook and Texting Made Me Do It: Media-induced Task-switching While Studying," *Computers in Human Behavior* 29, no. 3 (May 2013): 948–958.

[xiii] Andrew Ward and Traci Mann, "Don't Mind If I Do: Disinhibited Eating Under Cognitive Load.," *Journal of Personality and Social Psychology* 78, no. 4 (April 1, 2000): 753–763.

[xiv] Philip G Zimbardo, "On the Ethics of Intervention in Human Psychological Research: With Special Reference to the Stanford Prison Experiment.," *Cognition* 2, no. 2 (January 1973): 243–56.

[xv] J Polivy and C P Herman, "Effects of Alcohol on Eating Behavior: Influence of Mood and Perceived Intoxication.," *Journal of Abnormal Psychology* 85, no. 6 (December 1976): 601–6.

[xvi] This idea comes from our professor Claude Steele's work on alcohol myopia, described in C M Steele and R a Josephs, "Alcohol Myopia. Its Prized and Dangerous Effects.," *The American Psychologist* 45, no. 8 (August 1990): 921–33.

[xvii] This is the classic example: C. Peter Herman and Deborah Mack, "Restrained and Unrestrained Eating," *Journal of Personality* 43, no. 4 (December 1975): 647–660.

[xviii] Seven studies of this are shown in C Greeno and R Wing, "Stress-induced Eating," *Psychological Bulletin* 115 (1994): 444. And there have been many more since then.

[xix] C. Peter Herman and Janet Polivy, "Anxiety, Restraint, and Eating Behavior.," *Journal of Abnormal Psychology* 84, no. 6 (1975): 666–672.

[xx] Two examples are: Elissa Epel et al., "Stress May Add Bite to Appetite in Women: a Laboratory Study of Stress-induced Cortisol and Eating Behavior," *Psychoneuroendocrinology* 26, no. 1 (January 2001): 37–49; Summar Habhab, Jane P Sheldon, and Roger C Loeb, "The Relationship Between Stress, Dietary Restraint, and Food Preferences in Women.," *Appetite* 52, no. 2 (April 2009): 437–44.

[xxi] J Cools, D E Schotte, and R J McNally, "Emotional Arousal and Overeating in Restrained Eaters.," *Journal of Abnormal Psychology* 101, no. 2 (May 1992): 348–51.

[xxii] A Janet Tomiyama, Traci Mann, and Lisa Comer, "Triggers of Eating in Everyday Life.," *Appetite* 52, no. 1 (2009): 72–82.

[xxiii] Eighty-three separate studies are cited in Martin S Hagger et al., "Ego Depletion and the Strength Model of Self-control: a Meta-analysis.," *Psychological Bulletin* 136, no. 4 (July 2010): 495–525.

[xxiv] This is the original study of this phenomenon: Roy F. Baumeister et al., "Ego Depletion: Is the Active Self a Limited Resource?," *Journal of Personality and Social Psychology* 74, no. 5 (1998): 1252–1265.

[xxv] All of these are cited in Hagger et al., "Ego Depletion and the Strength Model of Self-control: a Meta-analysis."

[xxvi] The many downsides of having too much choice are covered beautifully in Barry Schwartz, *The Paradox of Choice (Google eBook)* (HarperCollins, 2009).

[xxvii] S S Iyengar and M R Lepper, "When Choice Is Demotivating: Can One Desire Too Much of a Good Thing?," *Journal of Personality and Social Psychology* 79, no. 6 (December 2000): 995–1006.

[xxviii] Kathleen D Vohs et al., "Making Choices Impairs Subsequent Self-control: a Limited-resource Account of Decision Making, Self-regulation, and Active Initiative.," *Journal of Personality and Social Psychology* 94, no. 5 (May 2008): 883–98.

[xxix] Michael Lewis, "Obama's Way," *Vanity Fair*, 2012.