For continuing Self-Reg updates, to follow Dr. Stuart Shanker’s blog, *The Self-Reg View*, or to access parenting, educator, and media resources, visit the MEHRIT Centre at [http://www.self-reg.ca/](http://www.self-reg.ca/).

前言
1. **Yet we react as if**: The scientific understanding of “temperament” has advanced dramatically in recent years, largely as the result of Mary Rothbart’s research on the influence of physiology. See M. K. Rothbart, *Becoming Who We Are: Temperament and Personality in Development* (Guilford Press, 2011).

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3. **In times past it was initially**: S. T. von Sommerring, *Vom Baue des menschlichen Korpers*, vol. 1 (Varrentrapp und Wenner, 1791).
4. **The ancient and unchallenged idea:** The source for this classical view of “selfcontrol” was Plato’s reading of the Iliad; see S. Shanker, “Emotion Regulation Through the Ages” (2012), in *Moving Ourselves, Moving Others: Motion and Emotion in Intersubjectivity, Consciousness and Language*, vol. 6, ed. A. Foolen et al. (John Benjamins, 2012).

5. **The capacity of the prefrontal cortex:** Nora Volkow has done groundbreaking research on this “dampening” of the DLPFC; see, for example, Volkow and Ruben Baler, “Addiction: A Disease of Self-Control.”


9. **Some of the other metabolic functions:** Gabor Mate, *When the Body Says No: The Hidden Costs of Stress* (Vintage Canada, 2004).


12. **All day every day:** To speed up or ascend a hill you press on the gas (SNS activation—think S for “speed”); to slow down or come to a stop you press on the brake (PNS inhibition—think P for “pause”). In heavy traffic you’re constantly pressing on the gas and the brake without too many starts or stops. So too in highly challenging situations: The brain shifts unconsciously and seamlessly between SNS and PNS. In fact, these two systems are operating with every single breath we take: The SNS raises our heart rate and blood pressure, expands our lungs, and suffuses them with oxygen; we pause ever so slightly at the height of the breath, and then the PNS sets in train the recovery process, lowering our heart rate and blood pressure as our lungs deflate and CO2 is discharged.


17. **The 2,500-year-old idea:** Shanker, “Emotion Regulation Through the Ages.” Both of Marc Lewis’s recent books, *Memoirs of an Addicted Brain* and *The Biology of Desire*, are
a must read on this topic.


22. **This starts close to home**: The idea of “reframing behavior” was inspired by Ludwig Wittgenstein’s *Philosophical Investigations* (Oxford: Blackwell, 1958). Wittgenstein uses an image from Gestalt psychology to convey the “aspect-shift” required to see an intractable logical problem in a different light: A similar point applies here: Seen from one perspective, a child’s behavior appears “problematic,” something that needs to be “managed” or “suppressed.” But seen from a different perspective, the child’s behavior is recognized as a sign of an overloaded nervous system. L. Wittgenstein, *Philosophical Investigations* (1958).

23. **And those systems in your PFC**: Reappraisal is as much about realizing that something you initially thought was benign is actually a danger as it is about recognizing that what you initially thought was a danger is actually benign. Reappraisal is profoundly influenced by the messages coming in from the body. In chronic anxiety the PFC is bombarded by alarm signals, leading to a reappraisal system that is primed to see everything as a threat. The reason why this happens lies in the biology of the flight-or-fight system. When the hypothalamus and ventral striatum process signals associated with danger, they activate the sympathetic nervous system, which releases adrenaline and noradrenaline, causing a cascade of cardiovascular, respiratory, digestive, excretory, and endocrine changes that prepare us for protective action. The hippocampus then sets out to identify the danger by searching through its storehouse of previous experiences associated with those internal sensations, while the amygdala continues to sound the danger alarm. If the alarm does not shut off, the PFC starts searching for threats, and if it can’t find any, then the sensations themselves become the threat; for if the alarm is ringing, there must be a fire.


5. **This is a stress test:** This is one of my favorite depictions of the test: ppproductions1000, “Very Tempting Marshmallow Test,” September 19, 2009, https://youtu.be/x3S0xS2hdi4.


7. **The recovery system loses:** Bruce S. McEwen and Elizabeth Norton Lasley, *The End of Stress as We Know It* (Joseph Henry Press, 2002).


9. **Further, if you focus:** Jennifer Lansford, from the Center for Child and Family Policy at Duke, and a team she put together from around the world compared the attitudes and effects of physical discipline in six different countries, ranging from Thailand, which reported the lowest levels of corporal punishment, to Kenya, which had the highest. They found that the harsher the discipline, the more aggression and anxiety seen in the children and youth. J. E. Lansford, et al., “Ethnic Differences in the Link Between Physical Discipline and Later Adolescent Externalizing Behaviors,” *Journal of Child Psychology and Psychiatry*, 45 (2004), 801–12.


11. **The behaviorist view, as it is:** J. B. Watson, “Psychology as the Behaviorist Views It,” *Psychological Review* 20, no. 2 (1913): 158.

12. **The epidemic levels of childhood obesity:** Scattered about my office are dozens of articles reporting on epidemics in obesity, diabetes, allergies, asthma, tooth decay, heart disease, gastrointestinal disorders, and sleep deprivation; autism, ADHD, developmental disorders, depression, self-harm, and eating disorders; violence, anger, oppositional defiance, bullying, narcissism, and selfishness; illiteracy, learning disorders, dyslexia, and truancy. An epidemic of physical inactivity and what goes hand in hand with this: video-game addiction. That’s a lot of epidemics. And by no means is this a complete list. “Epidemic” has become the new buzzword. But the ubiquity of the term is more than just a way of grabbing readers’ attention: It’s a manifestation of a pervasive societal anxiety about the state of children and most certainly a cause of an “epidemic of stressed parents raising stressed kids” K. Race, “The Epidemic of Stressed Parents Raising Stressed Kids,” *Huffington Post*, February 21, 2014, www.huffingtonpost.com/kristen-race-phd/the-epidemic-of-stressed-parents-raising-stressed-kids_b_4790658.html.

13. **Or the test might be timed:** Over the years Roy Baumeister and his colleagues have
performed a number of elegant experiments demonstrating the effects of “ego depletion.”
Baumeister and Tierney’s Willpower is a wonderful introduction to this exciting and
important field of research. R. F. Baumeister and J. Tierney, Willpower: Rediscovering the
Greatest Human Strength (Penguin, 2011).
14. **I'm not even sure that the little guy:** S. W. Porges, The Polyvagal Theory: Neurophysi-
o logical Foundations of Emotions, Attachment, Communication, and Self-Regulation,
15. **Overwhelmed, the response system:** R. M. Sapolsky, Why Zebras Don’t Get Ulcers: The
16. **The foundation of Self-Reg:** See D. Tantam, Can the World Afford Autistic Spectrum
Disorder? Nonverbal Communication, Asperger Syndrome and the Interbrain (Jessica
Kingsley, 2009).
第三章
1. **The great American biologist:** Stephen J. Gould, “Human Babies as Embryos,” in Ever
2. **But compared with the rest:** Gould, Ever Since Darwin. Gould was drawing on the work
of the Dutch biologist Adolf Portmann, who first raised the idea. See H.M.N. McCain, J. F.
Mustard, and S. Shanker, Early Years Study 2 (2007).
3. **Nature’s ingenious solution:** K. Rosenberg and W. Trevathan, “Bipedalism and Human
Birth: The Obstetrical Dilemma Revisited,” Evolutionary Anthropology: Issues, News,
4. **Axons and dendrites—the roots:** P. R. Huttenlocher, Neural Plasticity (Harvard
University Press, 2002); C. A. Nelson, K. M. Thomas, and M. De Haan, Neuroscience of
Cognitive Development: The Role of Experience and the Developing Brain (John Wiley &
Sons, 2012).
5. **A child’s stress reactivity:** Martha Bronson, Self-Regulation in Early Childhood (New
York: Guilford Press, 2001); S. J. Bradley, Affect Regulation and the Development of
6. **The neural systems and connections:** J. F. Mustard, “Experience-Based Brain
Development: Scientific Underpinnings of the Importance of Early Child Development
Herschkowitz, A Young Mind in a Growing Brain (Psychology Press, 2006).
7. **Talk about a shock:** D. Maurer and C. Maurer, The World of the Newborn (Basic Books,
8. **Arousal in the physiological context:** Porges’s work with neonates, summarized in
The Polyvagal Theory, was groundbreaking. See also H. J. Polan and M. A. Hofer,
“Psychobiological Origins of Infant Attachment and Separation Responses,” in Handbook
of Attachment: Theory, Research, and Clinical Application, ed. J. Cassidy and P. R. Shaver
(New York: Guildford Press, 1999), 162–80; J. Kagan, Unstable Ideas: Temperament,
Cognition and Self (Boston: Harvard University Press, 1989); M. K. Rothbart, L. K. Ellis,
and M. I. Posner, “Temperament and Self-Regulation,” in Handbook of Self-Regulation:
Research, Theory, and Applications, ed. R. F. Baumeister and K. D. Vohs (New York:


12. **The challenge here is that:** S. I. Greenspan and N. Lewis, *Building Healthy Minds: The Six Experiences That Create Intelligence and Emotional Growth in Babies and Young Children* (Da Capo Press, 2000).


16. **Melanie’s sleeplessness proved to be:** In *Calm, Alert, and Learning* I present a number of techniques for reducing stress in the classroom that parents have also found very useful for the home environment; see especially chapter 1: S. Shanker, *Calm, Alert, and Learning: Classroom Strategies for Self-Regulation* (Pearson, 2012).

17. **The baby’s positive reaction:** Schore reviews this large body of research in *Affect Regulation and the Origin of Self*.


19. **The interbrain serves not just:** Dan Siegel has written several wonderful books about this. One of my favorites is *The Developing Mind* (New York: Guilford Press, 1999; second edition 2012).


### 第四章

1. **The Five Domains of Stress and Self-Regulation:** M. G. Baron and J. Grodon, *Stress and Coping in Autism* (Oxford University Press, 2006). This is an invaluable guide to
understanding the different kinds of stressors all children deal with, not just those on the spectrum. The authors’ “Stress Inventory” is particularly informative.


3. **Signs of stress in the biological domain:** P. Ogden, *Sensorimotor Psychotherapy: Interventions for Trauma and Attachment* (W. W. Norton, 2015).

第五章

1. **Misbehavior is fundamentally tied:** See S. Shanker and D. Casenhiser, *Reducing the Effort in Effortful Control: A Wittgensteinian Perspective on the Use of Conceptual Analysis in Psychology.* (Palgrave Macmillan, 2013).


9. **master mindfulness techniques:** Our clinical director, Chris Robinson, was instrumental in the development of this method. See also S. K. Greenland, *The Mindful Child: How to Help Your Kid Manage Stress and Become Happier, Kinder, and More Compassionate* (Simon & Schuster, 2010).

10. **Self-awareness is central to your child’s:** This point was central to the work of the great “somatic educators” of the last century, e.g., Jean Ayres, Moshe Feldenkrais, Elsa Gindler, Alexander Lowen, Wilhelm Reich, and Ida Rolf. In Self-Reg the very thing that we want the child or youth to become aware of (her low energy and high tension) is what is blocking such awareness. The somatic educators all developed powerful therapeutic techniques for breaking this logjam and thereby releasing what Lowen called the body’s “bioenergy.”

11. **It was essential that Rosie:** See Robin Alter, *Anxiety and the Gift of Imagination: A New Model for Helping Parents and Children Manage Anxiety* (Createspace, 2011);


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6. **Important here is how these reflexes:** S. I. Greenspan and J. I. Downey, *Developmentally Based Psychotherapy* (Madison, CT: International Universities Press, 1997).


8. **“Emotion regulation” is standardly defined:** James J. Gross, *Handbook of Emotion Regulation*, 2nd ed. (Guilford Press, 2015).

9. **Her approach was like many:** There have been hundreds of studies evaluating the outcomes of programs designed to foster SEL. A full listing, with reviews, can be found at www.casel.org/guide. See also Shanker, “Broader Measures of Success: Social/Emotional Learning,” Toronto, *People for Education*, 2015.

10. **As it turned out:** This point is central to the field of “bioenergetics” (see note
“Selfawareness is central to your child’s” in chapter 5 above). Bessel van der Kolk is a major contributor to this field. B. van der Kolk, *The Body Keeps the Score: Brain, Mind, and Body in the Healing of Trauma* (Penguin, 2014).


第七章
1. **But our research focus:** We have been highly influenced in our clinical work with
3. **What can I do to strengthen:** I have been profoundly influenced here by S. I. Greenspan and N. T. Greenspan, *The Learning Tree: Overcoming Learning Disabilities from the Ground Up* (Da Capo Press, 2010).
4. **EF coaching works on things:** There are several excellent guides; I have found
6. **There are a number of reasons:** J. T. Nigg, *What Causes ADHD? Understanding What Goes Wrong and Why* (Guilford Press, 2006).


10. **A colleague once told me:** The colleague in question was Chris Robinson. So much of this chapter is the result of going back and forth with her as we worked on individual cases.

11. **Ordinarily we are so used:** One of the better books I’ve read on self-regulation, even though the term is never mentioned, is Chris Hadfield’s An Astronaut’s Guide to Life on Earth (Pan Macmillan, 2013).


16. **This is not simply a matter:** B. J. Zimmerman and D. H. Schunk, eds., *Self-Regulated Learning and Academic Achievement: Theoretical Perspectives* (Routledge, 2001).

17. **It has also been discovered:** Terje Sagvolden reported that children with ADHD often have an abnormal sense of time. Scientists at the Gilden Lab of the University of Texas at Austin have been able to show that many children with ADHD operate on a faster time scale than typically developing children. T. Sagvolden et al., “A Dynamic Developmental Theory of Attention-Deficit/Hyperactivity Disorder (ADHD) Predominantly Hyperactive/Impulsive and Combined Subtypes,” *Behavioral and Brain Sciences* 28, no. 3 (2005): 397–418.


20. **Our intention had never been:** But see S. Olfman and B. D. Robbins, eds., *Drugging Our Children: How Profiteers Are Pushing Antipsychotics on Our Youngest, and What We Can Do to Stop It* (ABC-CLIO, 2012).

### 第八章

2. **This remarkable micromanaged dance:** A. Fogel, *Developing Through Relationships* (University of Chicago Press, 1993).

### 第九章

1. **Every single child is born:** See the quite remarkable research by Jason Cowell and Jean Decety, “Precursors to Morality in Development as a Complex Interplay Between Neural, Socioenvironmental, and Behavioral Facets,” *Proceedings of the National Academy of Science*, University of Chicago, May 2015.
4. **The crux of Self-Reg is that:** In 2005 Jorge Moll discovered that the act of giving activates the same part of the brain that releases affiliative neurotransmitters in bonding: the phenomenon now referred to as “helper’s high.” See J. Moll et al., “The Neural Basis


9. **A large body of scientific literature:** Arthur Brooks found that givers are 42 percent more likely to describe themselves as being “very happy” and 25 percent more likely to describe themselves as being “in excellent health.” See A. Brooks, *Who Really Cares* (New York: Basic Books, 2006); Canadian Institute for Health Information, *The Role of Social Support in Reducing Psychological Distress* (Canadian Institute for Health Information, 2012).


15. **But intuitively we all know:** This knowledge is “intuitive” because, as one of the greatest of all my professors, Northrop Frye, explained, our thinking is grounded in the Bible, in this particular case Psalm 15. David starts off by asking: “Lord, who may dwell in your tent?” He then rather brazenly proceeds to answer this question himself: “Only those,” he argues, “who are blameless and righteous”; “who only speak the truth, and speak it from the heart”; “who never harm another, neither in words nor actions”; “who keep their word, regardless of how hard this might be”; “who hate those who are evil and embrace those who are noble.” “Whoever does these things,” David concludes, “will never be shaken.” His point in the first part of this verse is that it’s just not saying these things that matters
but living this way. And his point in the second part is that the reason to do these things is not simply to gain entrance to the kingdom of heaven; if you live this way, the benefits are here and now, in this life, for only in this way will you be able to enjoy moments of true peace and calmness.

第十章
1. **As I’ll explain in this chapter:** G. E. Weisfeld, *Evolutionary Principles of Human Adolescence* (Basic Books, 1999).
2. **Kids often don’t know:** Yet another “epidemic” that we are seeing today is what the National Institute on Drug Abuse calls the “Rx Generation.” An unbelievable number of teens are using pain relievers or cough and cold medications to suppress what are in fact symptoms of anxiety. Over time this exacerbates the anxiety and often leads to more serious forms of prescription drug abuse.
4. **It’s as if what the German Romantics:** Dan Siegel’s *Brainstorm* is not just extremely insightful on this topic but also a great help to parents and teens. D. J. Siegel, *Brainstorm: The Power and Purpose of the Teenage Brain* (Hachette UK, 2014).
6. **In other words, a major:** See anything and everything by Jay Giedd, starting with
8. **This is not the only:** L. Steinberg, “A Dual Systems Model of Adolescent Risk-Taking,” *Developmental Psychobiology* 52, no. 3 (2010): 216–24.
10. **There is heightened sensitivity:** Steinberg, “Dual Systems Model of Adolescent Risk-Taking.”
11. **What sorts of things can your teen do:** Walter Hess introduced the terms “ergotropic” and “tropotrophic,” based on his research on the effects of stimulating different parts of the hypothalamus, to distinguish between the energy that an organism expends when exposed to a threat (ergotropic) and the mechanisms that promote recovery and the restoration of energy (tropotrophic).


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2. **That’s a major finding**: There has been so much research over the past decade on the neurobiology of the reward system, wonderfully summarized in Marc Lewis, *The Biology of Desire: Why Addiction Is Not a Disease* (Penguin Random House Canada, 2015). See also G. Wilson, *Your Brain on Porn: Internet Pornography and the Emerging Science of Addiction* (Commonwealth, 2014).


9. **What’s more, studies show**: Clinicians refer to this state as “allostatic overload.” As we saw in chapter 1, the autonomic nervous system (ANS) responds to stress with metabolic processes that consume energy and then sets in motion compensating processes that promote recovery and growth. The demands on this homeostatic system is called allostatic load. Allostatic overload occurs when the recovery mechanisms are overstretched and become compromised.


12. **An estimated 50 percent of children**: Based on the UNICEF study “An Urban World”
published March 7, 2012 (see www.urbanizationproject.org); and the 2010 U.S. census data released March 26, 2012 (see www.census.gov).

16. **A flurry of scientific papers:** The concern that city living might be a significant factor in the rise of mental illness dates back to a study done in Camberwell, UK, between 1965 and 1984. The number of people in the borough diagnosed with schizophrenia doubled during that period while there was virtually no rise in rural areas. We know that stress is a critical factor in the expression of schizophrenia, so the study naturally led to the worry that, as one of the lead authors Jane Boydell put it, “cities may be making us sick.” Of course, it might simply be that affected individuals living in cities are more likely to receive a diagnosis than their rural counterparts. Or maybe there was a “migration” effect operating here: That is, people with psychological disorders move to the city in order to secure better services. Or maybe the Camberwell study reveals something about the stress involved in uprooting yourself: e.g., leaving a strong social support network for the isolation of a big city. Or perhaps what was missing was walking in the woods or going down to the creek for a spot of fishing. Maybe the big culprit here was the increase in domestic and child abuse that seems to go hand in hand with urbanization. Or maybe there was just something particularly stressful about living in Camberwell. Noel Kennedy et al., “Gender Differences in Incidence and Age at Onset of Mania and Bipolar Disorder Over a 35-Year Period in Camberwell, England,” *American Journal of Psychiatry*, 162 (2005): 257–62.


第十二章
1. **Parents are under extraordinary pressure:** Of the many recent books addressing this issue, I have found especially helpful *Parenting Through the Storm* by Ann Douglas (HarperCollins, 2015); *The Parents We Mean to Be* by R. Weissbourd (Houghton Mifflin Harcourt, 2009); and the deeply inspiring *Child Honouring: How to Turn This World Around* by Sharna Olfman and Raffi Cavoukian (APG Books, 2015).


16
Canadian Institute for Health Information. The Role of Social Support in Reducing Psychological Distress. Ottawa, Canada: Canadian Institute for Health Information, 2012.


———, and Stuart Shanker. *Toward a Psychology of Global Interdependency: A Framework for*


Watson, J. B. “Psychology as the Behaviorist Views It.” *Psychological Review* 20, no. 2 (1913): 158.


