

Noten

Hoofstuk 1: De noodzakelijke wending naar psychologische flexibiliteit

That computer in your pocket: <https://www.quora.com/How-much-more-computing-power-does-an-iPhone-6-have-than-Apollo-11-What-is-another-modern-object-I-can-relate-the-same-computing-power-to>.

Leukemia killed: Centers for Disease Control. "Trends in Childhood Cancer Mortality—United States, 1990–2004." <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5648a1.htm>.

Deaths from malaria all declined: National Cancer Institute, *SEER (Statistics, Epidemiology, and End Results) Cancer Statistics Review 1975–2011*, 2014. https://seer.cancer.gov/archive/csr/1975_2011/

the World Health Organization (WHO) rated it number one: <http://www.who.int/mediacentre/factsheets/fs369/en/>. A good summary of the current level of burden worldwide of mental health struggles can be found in Steel, Z., Marnane, C., Iranpour, C., Chey, T., Jackson, J. W., Patel, V., & Silove, D. (2014). The global prevalence of common mental disorders: A systematic review and meta-analysis 1980–2013. *International Journal of Epidemiology*, 43, 476–493. DOI: 10.1093/ije/dyu038.

having an anxiety disorder: Kessler, R. C., Aguilar-Gaxiola, S., Alonso, J., Chatterji, S., Lee, S., Ormel, J., Ustün, T. B., & Wang, P. S. (2009). The global burden of mental disorders: An update from the WHO World Mental Health (WMH) surveys. *Epidemiology and Psychiatric Sciences*, 18, 23–33.

frequent mental distress: Moriarty, D. G., Zack, M. M., Holt, J. B., Chapman, D.

P., & Safran, M. A. (2009). Geographic patterns of frequent mental distress: U.S. adults, 1993–2001 and 2003–2006. *American Journal of Preventive Medicine*, 46, 497–505.

actually becoming more dangerous: Pinker, S. (2012). *Better angels of our nature: Why violence has declined*. New York: Penguin.

These skills predict: These claims will be extensively documented in the chapters to come, so rather than add a long list of studies here, an easy way to assess the general truth of what I am saying is to go to Google Scholar and enter the term [“psychological flexibility” OR “experiential avoidance” OR “acceptance and commitment”]. Leafing through the nearly 18,000 results this search will pull up will quickly link you to hundreds of good examples of this work. If you have access to an academic library, the same search on the Web of Science will pull up around 2,200 scholarly journal articles, and several more are added eachweek.

books such as this one: See the preceding note, but for studies showing that just reading an ACT book can be helpful, see, for example, Muto, T., Hayes, S. C., & Jeffcoat, T. (2011). The effectiveness of acceptance and commitment therapy bibliotherapy for enhancing the psychological health of Japanese college students living abroad. *Behavior Therapy*, 42, 323–335. You can find a list of the growing number of such studies at <http://www.contextualscience.org> (search for “state of the evidence”).

affirmations make us both feel and doworse: Wood, J. V., Perunovic, W. Q. E., & Lee, J. W. (2009). Positive self-statements: Power for some, peril for others. *Psychological Science*, 20, 860–866.

Psychological rigidity predicts: If you’ve turned here looking for references to support the bold claims made in this paragraph, congratulations. You have healthy skepticism and that will serve you well in considering the arguments in this book. That being said, it is too early to dump scores of references into the endnotes. So be patient just a little while and all of these claims will be addressed one by one later in the book.

It’s the latter: Farach, F. J., Mennin, D. S., Smith, R. L., et al. (2008). The impact of pretrauma analogue GAD and posttraumatic emotional reactivity following exposure to the September 11 terrorist attacks: A longitudinal study. *Behavior Therapy*, 39, 262–276.

you have to avoid joy as well: Kashdan, T.B., & Steger, M. F. (2006). Expanding the topography of social anxiety: An experience-sampling assessment of positive emotions, positive events, and emotion suppression. *Psychological Science*, 17, 120–128. DOI:10.1111/j.1467-9280.2006.01674.x.

horrible outcomes follow: Panayiotou, G., Leonidou, C., Constantinou, E., et al. (2015). Do alexithymic individuals avoid their feelings? Experiential avoidance mediates the association between alexithymia, psychosomatic, and depressive

symptoms in a community and a clinical sample. *Comprehensive Psychiatry*, 56, 206–216.

I call this aspect of our minds the Dictator Within: I am a behavioral psychologist so perhaps it may seem odd for me to be talking so much about “minds,” but all I mean by that word is the collection of higher relational learning abilities we have that allow the generation and following of symbolic rules. A “mind” is a relational framing repertoire; a “mode of mind” is a way of applying that repertoire. I will explain what relational learning is later in the book.

what they “have” hidden inside: Frances, A. (2013). Saving normal: An insider’s revolt against out-of-control psychiatric diagnosis, DSM-5, big pharma and the medicalization of ordinary life. *Psychotherapy in Australia*, 19, 14–18.

it has only gotten worse since: You can piece together these statistics from sources such as Olfson, M., & Marcus, S. C. (2010). National trends in outpatient psychotherapy. *American Journal of Psychiatry*, 167(12), 1456–1463. DOI: 10.1176/appi.ajp.2010.10040570.

incidence of mental health problems has risen: Robert Whitaker’s website Mad in America has a wealth of information on this issue that I think is fairly responsible. His book of the same name is a bit dated now but is also a good place to start.

Friends and family feel less hopeful: This is a very large literature now, and without question mental illness diagnoses are stigmatizing even if they provide initial relief. I find the work of Pat Corrigan and colleagues persuasive. For example, see Ben-Zeev, D., Young, M. A., & Corrigan, P. W. (2010). DSM-V and the stigma of mental illness. *Journal of Mental Health*, 19, 318–327. DOI: 10.3109/09638237.2010.492484. Experimental studies make the same point, not just correlational ones. For example, see Eisma, M. C. (2018). Public stigma of prolonged grief disorder: An experimental study. *Psychiatry Research*, 261, 173–177. DOI:10.1016/j.psychres.2017.12.064.

They promote prosperity: Bohlmeijer, E. T., Lamers, S. M. A., & Fledderus, M. (2015). Flourishing in people with depressive symptomatology increases with Acceptance and Commitment Therapy. Post-hoc analyses of a randomized controlled trial. *Behaviour Research and Therapy*, 65, 101–106. DOI:10.1016/j.brat.2014.12.014.

turned their recovery from cancer into an asset: Hawkes, A. L., Chambers, S. K., Pakenham, K. I., Patrao, T. A., Baade, P. D., Lynch, B. M., Aitken, J. F., Meng, X. Q., & Courneya, K. S. (2013). Effects of a telephone-delivered multiple health behavior change intervention (CanChange) on health and behavioral outcomes in survivors of colorectal cancer: A randomized controlled trial. *Journal of Clinical Oncology*, 31, 2313–2321. See also Hawkes, A. L., Pakenham, K. I., Chambers, S. K., Patrao, T. A., & Courneya, K. S. (2014). Effects of a multiple health behavior change intervention for colorectal cancer survivors on psychosocial outcomes and quality of

life: A randomized controlled trial. *Annals of Behavioral Medicine*, 48, 359–370. DOI:10.1007/s12160-014-9610-2).

poly-drug users: Hayes, S. C., Wilson, K.G., Gifford, E. V., Bissett, R., Piasecki, M., Batten, S. V., Byrd, M., & Gregg, J. (2004). A randomized controlled trial of twelve-step facilitation and acceptance and commitment therapy with poly-substance abusing methadone maintained opiate addicts. *Behavior Therapy*, 35, 667–688.

dozens of studies on substance use: A recent summary of that area of work can be found in Lee, E. B., An, W., Levin, M. E., & Twohig, M. P. (2015). An initial meta-analysis of Acceptance and Commitment Therapy for treating substance use disorders. *Drug and Alcohol Dependence*, 155, 1–7. DOI: 10.1016/j.drugalcdep.2015.08.004.

flexibility measures can predict: Again, I will document this throughout the book. Chapter One is not the time for a detailed dive into findings like this, but a list of ACT meta-analyses (summaries of the ACT literature) can be found at <http://bit.ly/ACTmetas> (type carefully—capitalization matters). Perhaps the wildest idea in this paragraph deserves documentation: psychologically flexible hockey professionals are more worthwhile to team performance. It's true, they are; see Lundgren, T., Reinebo, G., Löf, P.-O., Näslund, M., Svartvadet, P., & Parling, T. (2018). The Values, Acceptance, and Mindfulness Scale for Ice Hockey: A psychometric evaluation. *Frontiers in Psychology*, 9, 1794. DOI: 10.3389/fpsyg.2018.01794. Why? If an inflexible player makes a mistake, they get all wrapped up in their emotional response and self-criticism. Guess what? While they are doing that, they are not fully in the game, supporting their teammates properly. In other words, another mistake! Counterintuitive findings like that are all over this book.

randomized controlled trials: You can see the current list by going to <http://www.contextualscience.org> and searching for “randomized trials,” or go to <http://bit.ly/ACTRCTs>.

the level of psychological flexibility overweight people exhibit: Lillis, J., Hayes, S. C., Bunting, K., & Masuda, A. (2009). Teaching acceptance and mindfulness to improve the lives of the obese: A preliminary test of a theoretical model. *Annals of Behavioral Medicine*, 37, 58–69.

fall a hundred times in a single day: Adolph, K. et al. (2012). How do you learn to walk? Thousands of steps and dozens of falls per day. *Psychological Science*, 23, 1387–1394.

it has been shown again and again: Some science skeptics will properly note that this very book has not been tested for its ability to produce such changes. That is fair, but it does not tell the whole story because there are dozens of trials of ACT books, tapes, apps, and websites, and most have shown helpful outcomes. You can find the list here: https://contextualscience.org/act_studies_based_on_comput-

ers_phones_smartphones_and_books. Furthermore, readers will be more likely to seek out an ACT therapist once the central importance of flexibility processes are understood. Thus, I do not hold this book out as itself being therapy, but I do hold it out as an accurate science-based story that is likely to open up positive ways forward to help you advance your life if you apply yourself to learning and using the flexibility skills and explore the many free resources available on line to help you deepen your learning and getting over rough spots. I particularly recommend the ACT for the Public discussion list in Yahoo Groups as a good place to begin when you need additional ideas and support.

Hoofstuk 2: De innerlijke dictator

Automatic Thoughts Questionnaire: The ATQ was developed by Steve Hollon and Phil Kendall (Hollon, S. D., & Kendall, P. C. [1980]. Cognitive self-statements in depression: Development of an Automatic Thoughts Questionnaire. *Cognitive Therapy and Research*, 4, 383–395.). ACT researchers tweaked the ATQ by asking how believable the thoughts were, rather than how often they occurred. For some purposes that turns out to be a better question. For example, see Zettle, R. D., Rains, J. C., & Hayes, S. C. (2011). Processes of change in Acceptance and Commitment Therapy and Cognitive Therapy for depression: A mediational re-analysis of Zettle and Rains (1989). *Behavior Modification*, 35, 265–283. DOI: 10.1177/0145445511398344.

poor mental and physical outcomes: For example, they correlate with lower levels of well-being and satisfaction with work. See Judge, T. A., & Locke, E. A. (1993). Effect of dysfunctional thought processes on subjective well-being and job-satisfaction. *Journal of Applied Psychology*, 78, 475–490. DOI: 10.1037/0021-9010.78.3.475; for lower life satisfaction, see Netemeyer, R. G., Williamson, D. A., Burton, S., Biswas, D., Jindal, S., Landreth, S., Mills, G., & Primeaux, S. (2002). Psychometric properties of shortened versions of the Automatic Thoughts Questionnaire. *Educational and Psychological Measurement*, 62, 111–129. DOI: 10.1177/0013164402062001008.

These discoveries: I cover all of these matters later in the book, where I will provide extensive references to document these claims.

last three pivots: The linear requirements of a book make this seem more sequential than it really was—it was more a matter of emphasis. For example, committed action was there at the beginning but we assumed it more than studied it. Similarly, flexible attention to the now was implicit in the use of mindfulness exercises but gradually became more an object of research. The same point applies to values.

Hoofstuk 3: Op zoek naar een weg vooruit

among the most cited scholars: You can see who is on the top of the list here: <http://www.webometrics.info/en/node/58>. Freud was number three in December 2018 when I last checked. I am on that list too, but at a lowly 1,740 and sinking fast as so many young people push ahead. My mentor David Barlow is at 695 — I doubt if I will ever catch him. That wonderful rascal is one tough act to follow!

subsequent work done by other researchers: Baumeister, R. F., Dale, K., & Sommer, K. L. (1998). Freudian defense mechanisms and empirical findings in modern social psychology: Reaction formation, projection, displacement, undoing, isolation, sublimation, and denial. *Journal of Personality*, *66*, 1081–1124. DOI: 10.1111/1467-6494.00043.

Most of the new methods have emphasized: You can find these data in resources such as the following: Blagys, M., & Hilsenroth, M. (2000). Distinctive features of short-term psychodynamic interpersonal psychotherapy: A review of the comparative psychotherapy process literature. *Clinical Psychology: Science and Practice*, *7*, 167–188; Weissman, M. M., Markowitz, J. C., & Klerman, G. L. (2007). *Clinician's quick guide to interpersonal psychotherapy*. New York: Oxford University Press; Allen, J. G., Fonagy, P., & Bateman, A. W. (2008). *Mentalizing in clinical practice*. Arlington, VA: American Psychiatric.

Maslow argued that traditional: Maslow, A. H. (1970). *The psychology of science: A reconnaissance*. Chicago: Henry Regnery.

Rogers argued that research: Rogers, C. R. (1955). Persons or science? A philosophical question. *American Psychologist*, *10*, 267–278. The quote I cite is on page 273.

ACT is sometimes covered in books on humanistic therapy: For example, see Schneider, K. J., Pierson, J. F., & Bugental, J. F. T. (Eds.). (2014). *The handbook of humanistic psychology: Theory, research, and practice* (2nd ed.). Los Angeles: Sage.

part of the treatment did not matter: There were scores of studies on the “why” of desensitization, which is one reason it is so important in the history of psychotherapy. Careful research such as that of the late, great Gordon Paul showed that desensitization was not effective because it was a placebo, but as research went ahead it turned out that the hierarchy of scenes to imagine could be done top down versus bottom up—Jon Krapfl and Mike Nawas showed that in the 1970 (DOI: 10.1037/h0029351), and relaxation did not matter provided there was a good rationale. The “why” studies happened because the developer of desensitization, Joseph Wolpe, was so specific about how the method should be done and why it worked. I knew Joe Wolpe, and my undergraduate mentor, Irving Kessler, was a huge fan of his. Joe thought desensitization worked through what he called *reciprocal inhibition*—even doing clever animal studies to test the principle. It turns out

he was wrong, but all scientific theories are somewhat wrong if you have enough time, and it is enormously to his credit that he tried to answer the “why” question, not just the “what” question.

this era of behaviorism: I first used the term in Hayes, S. C. (2004). Acceptance and Commitment Therapy, Relational Frame Theory, and the third wave of behavioral and cognitivetherapies. *Behavior Therapy*, 35, 639–665. DOI: 10.1016/S0005-7894(04)80013-3.

the topic of my dissertation: It was published in Hayes, S. C., & Cone, J. D. (1981). Reduction in residential consumption of electricity through simple monthly feedback. *Journal of Applied Behavior Analysis*, 14, 81–88. DOI: 10.1901/jaba.1981.14-81.

which CBT could not readily explain: Careful reviews of this issue concluded “that there was “little evidence that specific cognitive interventions significantly increase the effectiveness of the therapy” (p. 173). Longmore, R. J., & Worrell, M. (2007). Do we need to challenge thoughts in cognitive behavior therapy? *Clinical Psychology Review*, 27, 173–187. Large dismantling studies reached the same conclusion; see Dimidjian, S., Hollon, S. D., Dobson, K. S., Schmaling, K. B., Kohlenberg, R. J., Addis, M. E., et al. (2006). Randomized trial of behavioral activation, cognitive therapy, and antidepressant medication in the acute treatment of adults with major depression. *Journal of Consulting and Clinical Psychology*, 74(4), 658–670. DOI: 10.1037/0022-006X.74.4.658.

I can stay in the dark: Kanfer, F. H., & Karoly, P. (1972). Self-control: A behavioristic excursion into the lion’s den. *Behavior Therapy*, 3, 398–416.

CBT generally does not work in the way that was originally postulated: Chawla, N., & Ostafin, B. D. (2007). Experiential avoidance as a functional dimensional approach to psychopathology: An empirical review. *Journal of Clinical Psychology*, 63, 871–890.

canevenabstract: Jacobson, N. S., Dobson, K. S., Truax, P. A., Addis, M. E., Koerner, K., Gollan, J. K., Gortner, E., & Prince, S. E. (1996). A component analysis of cognitive-behavioral treatment for depression. *Journal of Consulting and Clinical Psychology*, 64, 295–304. DOI: 10.1037/0022-006X.64.2.295; Dimidjian, S., et al. (2006). Randomized trial of behavioral activation, cognitive therapy, and antidepressant medication in the acute treatment of adults with major depression. *Journal of Consulting and Clinical Psychology*, 74, 658–670. DOI: 10.1037/0022-006X.74.4.658.

a major transition is under way: You can find the first full presentation of what led to this change in the article that was my presidential address for the Association for Behavioral and Cognitive Therapies (good thing it was my presidential paper because it would have been hellacious to publish it otherwise; even as it was, some reviewers did their best to change it). The reference is in the preceding endnote labeled “this era of behaviorism.”

the 1960s and 1970s: Paul Emmelkamp, a brilliant CBT researcher in Belgium who is about my age, says with good humor that the “third wave” just means that the hippies grew up and the crazies are now driving the bus. I laugh, but there is more than a grain of truth in it.

their epigenome is different: An excellent and accessible book on epigenetic processes that reviews the Dutch winter cohort findings is *Evolution in Four Dimensions* by Eva Jablonka and Marian Lamb. (2nd ed, 2014, Cambridge, MA: Bradford)

serotonin in the brain: Caspi, A., et al. (2003). Influence of life stress on depression: Moderation by a polymorphism in the 5-HTT gene. *Science*, 301, 386–389.

After the initial “Eureka!”: Brown, G. W., & Harris, T. O. (2008). Depression and the serotonin transporter 5-HTTLPR polymorphism: a review and a hypothesis concerning gene-environment interaction. *Journal of Affective Disorders*, 111, 1–12.

several other factors influenced: This is now a fairly large literature, but examples include Barr, C. S., et al. (2004). Rearing condition and rh5-HTTLPR interact to influence limbic-hypothalamic-pituitary-adrenal axis response to stress in infant macaques. *Biological Psychiatry*, 55, 733–738. Other studies include Neumeister, A., et al. (2002). Association between serotonin transporter gene promoter polymorphism (5HTTLPR) and behavioral responses to tryptophan depletion in healthy women with and without family history of depression. *Archives of General Psychiatry*, 59, 613–620.

changing methylation: Dusek, J. A., Otu, H. H., Wohlhueter, A. L., Bhasin, M., Zerbini, L. F., Joseph, M. G., Benson, H., & Libermann, T. A. (2008). Genomic counter-stress changes induced by the relaxation response. *PLoS ONE*, 3, 1–8.

hurt is just less central: This has been shown in a couple studies. An example is Smallwood, R. F., Potter, J. S., & Robin, D. A. (2016). Neurophysiological mechanisms in acceptance and commitment therapy in opioid-addicted patients with chronic pain. *Psychiatry Research: Neuroimaging*, 250, 12–14.

Hoofstuk 4: Waarom onze gedachten zo automatisch en overtuigend zijn

my lab was among the first to show this: Lipkens, G., Hayes, S. C., & Hayes, L. J. (1993). Longitudinal study of derived stimulus relations in an infant. *Journal of Experimental Child Psychology*, 56, 201–239. DOI: 10.1006/jecp.1993.1032.

doing research with a senior colleague: It was Aaron who first exposed me to the seed from which RFT sprang: a phenomenon known as stimulus equivalence, which was first identified by one of the giants in behavioral psychology and a personal hero, Murray Sidman. If young children learn to pick stimulus B when shown A, and C when shown A, they will pick all of the combinations (A given B, B given C, etc.). That outcome does not make behavioral sense—contingencies

move in one direction, not two. The wonderful week that led to RFT was based on contemplating that finding and realizing that it was just an example of a much larger behavioral phenomenon of relational learning. The idea that relating was an operant was just a guess—but it had that “click” of everything fitting. Aaron’s approval of the idea was key to me, and he would have been on all of the early RFT work except that he died before the first paper appeared. He was a lovely man and one of the best behavioral psychologists I ever met. Behavior analysts in general did not warm to RFT as quickly as Aaron—he took just a few minutes but the field of behavior analysis took four decades. Thankfully as this is being written in 2018, that tipping point has been reached. RFT is fast becoming the most studied behavioral theory of cognition in history.

Children usually learn them in that order: McHugh, L., Barnes-Holmes, Y., & Barnes-Holmes, D. (2004). Perspective-taking as relational responding: A developmental profile. *Psychological Record*, *54*, 115–144.

we lived in small groups, in which cooperation paid off: Wilson, D. S., & Wilson, E. O. (2008). Evolution “for the good of the group.” *American Scientist*, *96*, 380–389.

the baby will put the toy in the cleanup box: Liebal, K., Behne, T., Carpenter, M., & Tomasello, M. (2009). Infants use shared experience to interpret a pointing gesture. *Developmental Science*, *12*, 264–271.

Most people are not prolific liars: For examples of the literature that back up the claims made in this paragraph and the next, see Halevy, R., Shalvi, S., & Verschuere, B. (2014). Being honest about dishonesty: Correlating self-reports and actual lying. *Human Communication Research*, *40*, 54–72. DOI: 10.1111/hcre.12019; and DePaulo, B., et al. (1996). Lying in everyday life. *Journal of Personality and Social Psychology*, *70*, 984. See also Levine, T. R., Serota, K. B., Carey, F., & Messer, D. (2013). Teenagers lie a lot: A further investigation into the prevalence of lying. *Communication Research Reports*, *30*, 211–220. DOI: 10.1080/08824096.2013.806254. And see Panasiti, M. S., et al. (2014). The motor cost of telling lies: Electrocortical signatures and personality foundations of spontaneous deception. *Social Neuroscience*, *9*, 573–589. DOI: 10.1080/17470919.2014.934394.

As an expert in this area points out: Bouton, M. E. (2004). Context and behavioural processes in extinction. *Learning and Memory*, *11*, 485–494. DOI: 10.1101/lm.78804. The quote can be found on page 485.

A classic study done years ago: Nisbett, R. E., & Wilson, T. D. (1977). Telling more than we can know: Verbal reports on mental processes. *Psychological Review*, *84*(3), 231–259. DOI: 10.1037/0033-295X.84.3.231.

Research using IRAP tests: There are studies showing that the IRAP version of measuring experiential avoidance with statements like “anxiety is bad” predicts how arousal impacts behavior better than overt measures. Levin, M. E., Haeger, J., & Smith, G. S. (2017). Examining the role of implicit emotional judgments in social

anxiety and experiential avoidance. *Journal of Psychopathology and Behavioral Assessment*, 39, 264–278. DOI: 10.1007/s10862-016-9583-5. The best-known example of traditional implicit measures is Tony Greenwald’s Implicit Association Test (IAT). In head-to-head competition, the data show that the IRAP is a far better test than the IAT, as it should be if RFT is correct. The IRAP does very well as an implicit measure; see Carpenter, K. M., et al. (2012). Measures of attentional bias and relational responding are associated with behavioral treatment outcome for cocaine dependence. *American Journal of Drug and Alcohol Abuse*, 38, 146–154.

people struggling with drug problems: It turns out, however, that people who are more defused and mindful show a psychological weaker impact of implicit cognition; see Ostafin, B. D., Kassman, K. T., & Wessel, I. (2013). Breaking the cycle of desire: Mindfulness and executive control weaken the relation between an implicit measure of alcohol valence and preoccupation with alcohol-related thoughts. *Psychology of Addictive Behaviors*, 27, 1153–1158. DOI:10.1037/a0032621.

introduced about a century ago by Edward Titchener: Titchener, E. B. (1916). *A text-book of psychology*. New York: Macmillan. The word repetition exercise is on page 425.

Say the word fish over and over again: Tyndall, I., Papworth, R., Roche, B., & Bennett, M. (2017). Differential effects of word-repetition rate on cognitive defusion of believability and discomfort of negative self-referential thoughts postintervention and at one-month follow-up. *Psychological Record*, 67(10), 377–386. DOI:10.1007/s40732-017-0227-2.

shame at an in-patient unit for substance abusers: Luoma, J. B., Kohlenberg, B. S., Hayes, S. C., & Fletcher, L. (2012). Slow and steady wins the race: A randomized clinical trial of Acceptance and Commitment Therapy targeting shame in substance use disorders. *Journal of Consulting and Clinical Psychology*, 80, 43–53. DOI: 10.1037/a0026070.

Hoofstuk 5: Het probleem met probleemoplossing

In these studies: A book-length review of this entire line of research can be found in Hayes, S. C. (Ed.). (1989). *Rule-governed behavior: Cognition, contingencies, and instructional control*. New York: Plenum Press. I am deliberately changing some of the details of these experiments to make them easier to understand. For example, usually the “consequences” are points on a counter that are worth money or chances for money, not actual coins. The tasks are often more complicated than just pushing a button—for example, in our lab we usually had participants move a light through a maze by pushing buttons. The geek reader can learn all of this by reading the original studies—I am trying to get to the essence here.

Behavioral researchers gradually narrowed down: An early example of studies like that is Matthews, B. A., Shimoff, E., Catania, A. C., & Sagvolden, T. (1977). Uninstructed human responding: Sensitivity to ratio and interval contingencies. *Journal of the Experimental Analysis of Behavior*, 27, 453–467. DOI: 10.1901/jeab.1977.27-453.

In my lab: See the book in the preceding endnote labeled “In these studies.”

Most people still kept charging ahead: Hayes, S. C., Brownstein, A. J., Zettle, R. D., Rosenfarb, I., & Korn, Z. (1986). Rule-governed behavior and sensitivity to changing consequences of responding. *Journal of the Experimental Analysis of Behavior*, 45, 237–256. DOI:10.1901/jeab.1986.45-237.

A wonderful study done over sixty years ago: Hefferline, R., Keenan, B., & Harford, R. (1959). Escape and avoidance conditioning in human subjects without their observation of the response. *Science*, 130(3385), 1338–1339. By the way, if you are interested in Gestalt therapy, you might recognize the name. You should since Ralph helped create it and was a co-author of the first major text in the area: Perls, F., Hefferline, R. F., & Goodman, P. (1951). *Gestalt therapy: Excitement and growth in the human personality*. New York: Delta. That is an irony: a behavior analyst actually helped create Gestalt therapy but 99 percent of the Gestalt folks think behaviorists are the enemy.

as an adult, pliance is another issue: It is not that people with clinical disorders follow rules and others do not. It is more subtle than that. The reason people follow rules is key . . . but the diagnostic label confuses the issue because it gathers different kinds of processes under a loose label. With that caution, here is an example of the kinds of studies that are out there: McAuliffe, D., Hughes, S., & Barnes-Holmes, D. (2014). The dark-side of rule governed behavior: An experimental analysis of problematic rule-following in an adolescent population with depressive symptomatology. *Behavior Modification*, 38, 587–613.

they become so entrenched that we cannot see: We found that rule-based insensitivity is associated with measures of psychological rigidity that are known to predict psychopathology. Wulfert, E., Greenway, D. E., Farkas, P., Hayes, S. C., & Dougher, M. J. (1994). Correlation between a personality test for rigidity and rule-governed insensitivity to operant contingencies. *Journal of Applied Behavior Analysis*, 27, 659–671. DOI: 10.1901/jaba.1994.27-659.

One was a brief exercise: Hayes, S. C., Bissett, R., Korn, Z., Zettle, R. D., Rosenfarb, I., Cooper, L., & Grundt, A. (1999). The impact of acceptance versus control rationales on paintolerance. *Psychological Record*, 49, 33–47.

the more people believed in their own mental reasons: Addis, M. E., & Carpenter, K. M. (1999). Why, why, why?: Reason-giving and rumination as predictors of response to activation-and insight-oriented treatment rationales. *Journal of Clinical Psychology*, 55, 881–894.

Hoofstuk 6: Oog in oog met je dinosaurus

the brain activates the same areas: For an example of a study of that kind, see Kim, H., Shimojo, S., & O’Doherty, J. P. (2006). Is avoiding an aversive outcome rewarding? Neural substrates of avoidance learning in the human brain. *PLoS Biology* 4(8): e233. DOI: 10.1371/journal.pbio.0040233.

willing to go through the experience again: Eifert, G. H., & Heffner, M. (2003). The effects of acceptance versus control contexts on avoidance of panic-related symptoms. *Journal of Behavior Therapy and Experimental Psychiatry*, 34, 293–312. DOI: 10.1016/j.jbtep.2003.11.001.

David Barlow’s student Jill Levitt: Levitt, J. T., Brown, T. A., Orsillo, S. M., & Barlow, D. H. (2004). The effects of acceptance versus suppression of emotion on subjective and psychophysiological response to carbon dioxide challenge in patients with panic disorder. *Behavior Therapy*, 35, 747–766. DOI: 10.1016/S0005-7894(04)80018-2.

The findings were confirmed: For example, see Arch, J. J., Eifert, G. H., Davies, C., Vilardaga, J., Rose, R. D., & Craske, M. G. (2012). Randomized clinical trial of cognitive behavioral therapy (CBT) versus acceptance and commitment therapy (ACT) for mixed anxiety disorders. *Journal of Consulting and Clinical Psychology*, 80, 750–765. DOI:10.1037/a0028310.

Hoofstuk 7: Gaan voor een nieuwe koers

our thinking often wanders: Research shows that our mind is wandering about a third of the time, but in these studies some participants are off somewhere else mentally over 95 percent of the time. See McVay, J. C., Kane, M. J., & Kwapil, T. R. (2009). Tracking the train of thought from the laboratory into everyday life: An experience-sampling study of mind wandering across controlled and ecological contexts. *Psychonomic Bulletin & Review*, 16, 857–863. Another similar study is Poerio, G. L., Totterdell, P., & Miles, R. (2013). Mind-wandering and negative mood: Does one thing really lead to another? *Consciousness and Cognition*, 22, 1412–1421. DOI: 10.1016/j.concog.2013.09.012.

contemplative practice has good effects: For a recent review, see Khoury, B., et al. (2013). Mindfulness-based therapy: A comprehensive meta-analysis. *Clinical Psychology Review*, 33, 763–771.

Changes in brain structure and reactivity: Fletcher, L. B., Schoendorff, B., & Hayes, S. C. (2010). Searching for mindfulness in the brain: A process-oriented approach to examining the neural correlates of mindfulness. *Mindfulness*, 1, 41–63. DOI:10.1007/s12671-010-0006-5.

epigenetic changes that up- and down- regulate: Dusek, J. A., Otu, H. H., Wohlueter, A. L., Bhasin M., Zerbini L. F., Joseph, M. G., Benson, H., & Libermann, T. A. (2008). Genomic counterstress changes induced by the relaxation response. *PLoS ONE*, 3, 1–8.

I thought we could adapt some other classic mindfulness processes: My students and I have written extensively about ways to approach mindfulness as a process instead of just mindfulness as a method of meditation and contemplation. We provided a working RFT-based definition of mindfulness in Fletcher, L., & Hayes, S. C. (2005). Relational Frame Theory, Acceptance and Commitment Therapy, and a functional analytic definition of mindfulness. *Journal of Rational Emotive and Cognitive Behavioral Therapy*, 23, 315–336; and Hayes, S. C., & Plumb, J. C. (2007). Mindfulness from the bottom up: Providing an inductive framework for understanding mindfulness processes and their application to human suffering. *Psychological Inquiry*, 18, 242–248. We worked out some of the details of our process-based approach in these articles: Hayes, S. C., & Shenk, C. (2004). Operationalizing mindfulness without unnecessary attachments. *Clinical Psychology: Science and Practice*, 11, 249–254; Hayes, S. C., & Wilson, K. G. (2003). Mindfulness: Method and process. *Clinical Psychology: Science and Practice*, 10, 161–165; Hayes, S. C. (2002). Acceptance, mindfulness, and science. *Clinical Psychology: Science and Practice*, 9, 101–106; and Hayes, S. C. (2002). Buddhism and Acceptance and Commitment Therapy. *Cognitive and Behavioral Practice*, 9, 58–66.

This exercise and others like it have been studied: Examples of some studies are Takahashi, M., Muto, T., Tada, M., & Sugiyama, M. (2002). Acceptance rationale and increasing pain tolerance: Acceptance-based and FEAR-based practice. *Japanese Journal of Behavior Therapy*, 28, 35–46; Marcks, B. A., & Woods, D. W. (2005). A comparison of thought suppression to an acceptance-based technique in the management of personal intrusive thoughts: A controlled evaluation. *Behaviour Research and Therapy*, 43, 433–445; Marcks, B. A., & Woods, D. W. (2007). Role of thought-related beliefs and coping strategies in the escalation of intrusive thoughts: An analog to obsessive-compulsive disorder. *Behaviour Research and Therapy*, 45, 2640–2651; Forman, E. M., Hoffman, K. L., McGrath, K. B., Herbert, J. D., Brandsma, L. L., & Lowe, M. R. (2007). A comparison of acceptance and control-based strategies for coping with food cravings: An analog study. *Behaviour Research and Therapy*, 45, 2372–2386. It is not enough to give a rationale for this kind of exercise—people have to practice using it to benefit. It appears to help manage intrusive thoughts, to increase pain tolerance, and to reduce the impact of urges, among other benefits.

reconstructed—in the present: Loftus, E. F. (2004). Memories of things unseen. *Current Directions in Psychological Science*, 13(4), 145–147. DOI:10.1111/j.0963-7214.2004.00294.x.

But the group with the short ACT-based values training: Chase, J.A., Housmanfar, R., Hayes, S. C., Ward, T. A., Vildardaga, J. P., & Follette, V. M. (2013). Values are not just goals: Online ACT-based values training adds to goal-setting in improving undergraduate college student performance. *Journal of Contextual Behavioral Science*, 2, 79–84. DOI: 10.1016/j.jcbs.2013.08.002.

incomplete versions of ACT therapy: Villatte, J. L., Vildardaga, R., Villatte, M., Vildardaga, J. C. P., Atkins, D. A., & Hayes, S. C. (2016). Acceptance and Commitment Therapy modules: Differential impact on treatment processes and outcomes. *Behaviour Research & Therapy*, 77, 52–61. DOI: 10.1016/j.brat.2015.12.001.

We have done over seventy studies: Levin, M. E., Hildebrandt, M. J., Lillis, J., & Hayes, S. C. (2012). The impact of treatment components suggested by the psychological flexibility model: A meta-analysis of laboratory-based component studies. *Behavior Therapy*, 43, 741–756. DOI: 10.1016/j.beth.2012.05.003.

Hoofstuk 8: Iedereen kan de wendingen maken

evolutionary scientist David Sloan Wilson agrees: You can explore some of this in Wilson, D. S., & Hayes, S. C. (Eds.). (2018). *Evolution and contextual behavioral science: An integrated framework for understanding, predicting, and influencing human behavior*. Oakland, CA: Context Press.

The process of evolution can be guided: Hersh, M. N., Ponder, R. G., Hastings, P. J., & Rosenberg, S. M. (2004). Adaptive mutation and amplification in *Escherichia coli*: Two pathways of genome adaptation under stress. *Research in Microbiology*, 155, 353–359. DOI: 10.1016/j.resmic.2004.01.020.

This is where flexibility skills come in: If you put my name in quotes (“Steven C. Hayes”) and the word evolution into Google Scholar you will find the kinds of things I’m talking about. The following endnotes also contain some references.

The average public health worker: Dahl, J., Wilson, K. G., & Nilsson, A. (2004). Acceptance and Commitment Therapy and the treatment of persons at risk for long-term disability resulting from stress and pain symptoms: A preliminary randomized trial. *Behavior Therapy*, 35, 785–802.

copies of this figure to fill in: This figure is a modified and expanded version.

look more closely at the self-story they’ve been weaving: Studies have been done on the values revealed in obituaries and on tombstones. See, for example, Alfano, M., Higgins, A., & Levernier, J. (2018). Identifying virtues and values through obituary data-mining. *Journal of Value Inquiry*, 52, 59–79. DOI:10.1007/s10790-017-9602-0. Not surprisingly, issues such as family and character are very dominant.

Three years later the figure was nearly identical: Vowles, K. E., McCracken, L. M., & O’Brien, J. Z. (2011). Acceptance and values-based action in chronic pain: A

three-year follow-up analysis of treatment effectiveness and process. *Behaviour Research and Therapy*, 49, 748–755. DOI: 10.1016/j.brat.2011.08.002. Some of the other measures showed some falloff at three years, but the gains were dominantly still significant and clinically meaningful. Across all measures, reliable change was seen in 46.2 percent of the patients (range: 45.0–46.9 percent) at the three-month follow-up and 35.8 percent (range: 29.1–38.0 percent) at the three-year follow-up. **Another study followed fifty-seven people:** Kohtala, A., Muotka, J., & Lappalainen, R. (2017). What happens after five years? The long-term effects of a four-session Acceptance and Commitment Therapy delivered by student therapists for depressive symptoms. *Journal of Contextual Behavioral Science*, 6, 230–238. DOI: 10.1016/j.jcbs.2017.03.003.

These results may seem startling: There are ACT pain studies with similar outcomes to other treatments, but usually other features need to be looked at more carefully. For example, in this study the outcomes were similar at follow up but ACT treatment stopped and medication treatment continued through follow-up: Wicksell, R. K., Melin, L., Lekander, M., & Olsson, G. L. (2009). Evaluating the effectiveness of exposure and acceptance strategies to improve functioning and quality of life in longstanding pediatric pain—A randomized controlled trial. *Pain*, 141, 248–257. Other studies have shown similar outcomes but at lower cost. It's not in chronic pain per se, but one recent study seemed to show that on a few measures ACT was not as good as a more elaborate model to help reduce absence from work due to mental health issues: Finnes, A., Ghaderi, A., Dahl, J., Nager, A., & Enebrink, P. (in press). Randomized controlled trial of Acceptance and Commitment Therapy and a workplace intervention for sickness absence due to mental disorders. *Journal of Occupational Health Psychology*. DOI: 10.1037/ocp0000097. However, when cost effectiveness was considered later, ACT was declared the clear winner: Finnes, A., Enebrink, P., Sampaio, F., Sorjonen, K., Dahl, J., Ghaderi, A., Nager, A., & Feldman, I. (2017). Cost-effectiveness of Acceptance and Commitment Therapy and a workplace intervention for employees on sickness absence due to mental disorders. *Journal of Occupational and Environmental Medicine*, 59, 1211–1220. DOI: 10.1097/JOM.0000000000001156. In the chronic pain area especially, the ACT model is emerging as a psychosocial model with vigorous overall support. I mention these cautions because while it is still early and we have a lot to learn, I do believe that the central theme of this book—that psychological flexibility is a key to healthy change—is well supported. That does not mean that study by study things won't vary a bit. Science is never that simple.

Hoofstuk 10: De eerste wending: defusie – je geest aan de leiband

The defusion methods the ACT community has developed: The need to consider cognitive flexibility as involving defusion is supported by findings that traditional measures of more flexible thinking, such as Martin, M. M., & Rubin, R. B. (1995). A new measure of cognitive flexibility. *Psychological Reports, 76*, 623–626, is helpful primarily when that is in the service of psychological flexibility more generally. For example, see Palm, K. M., & Follette, V. M. (2011). The roles of cognitive flexibility and experiential avoidance in explaining psychological distress in survivors of interpersonal victimization. *Journal of Psychopathology and Behavioral Assessment, 33*, 79–86.

The parts of the brain involved in mind wandering: These findings can all be seen in Christoff, K., Gordon, A. M., Smallwood, J., Smith, R., & Schooler, J. W. (2009). Experience sampling during fMRI reveals default network and executive system contributions to mind wandering. *Proceedings of the National Academy of Sciences, 106*, 8719–8724. DOI: 10.1073/pnas.0900234106.

defusion exercises weaken the link: Those data are summarized in a review article: Levin, M. E., Luoma, J. B., & Haeger, J. A. (2015). Decoupling as a mechanism of change in mindfulness and acceptance: A literature review. *Behavior Modification, 39*, 870–911. DOI: 10.1177/0145445515603707.

Sue and Liz target cognitive fusion with mindfulness: An example of their research in the area is Roemer, L., Orsillo, S. M., & Salters-Pedneault, K. (2008). Efficacy of an acceptance-based behavior therapy for generalized anxiety disorder: Evaluation in a randomized controlled trial. *Journal of Consulting and Clinical Psychology, 76*, 1083–1089.

She described how it helped this way: This link should take you to her column: <https://www.nbcnews.com/better/health/mental-trick-helped-me-claw-way-back-debilitating-anxiety-ncna834751>.

Cognitive Fusion Questionnaire: Gillanders, D. T., et al. (2014). The development and initial validation of the Cognitive Fusion Questionnaire. *Behavior Therapy, 45*, 83–101. DOI: 10.1016/j.beth.2013.09.001.

one of the most common measures of cognitive flexibility: Guilford, J. P. (1967). Creativity: Yesterday, today and tomorrow. *Journal of Creative Behavior, 1*, 3–14. DOI: 10.1002/j.2162-6057.1967.tb00002.x.

saying one thing while doing the opposite: McMullen, J., Barnes-Holmes, D., Barnes-Holmes, Y., Stewart, I., Luciano, C., & Cochrane, A. (2008). Acceptance versus distraction: Brief instructions, metaphors, and exercises in increasing tolerance for self-delivered electric shocks. *Behaviour Research and Therapy, 46*, 122–129.

Hoofdstuk 11: De tweede wending: zelf – de kunst van perspectief nemen

High self-esteem is a worthy goal: Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest*, 4, 1–44. For more on this issue, see Leary, M. R., & Baumeister, R. F. (2000). The nature and function of self-esteem: Sociometer theory. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 32, pp. 1–62). San Diego, CA: Academic Press.

Research shows that when people focus: A vast amount of research by researchers in self-determination theory shows this, including Deci, E. L., & Ryan, R. M. (1995). Human autonomy: The basis for true self-esteem. In M. H. Kernis (Ed.), *Efficacy, agency, and self-esteem* (pp. 31–49). New York: Plenum Press; and Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227–268. For other matters in this section, see Crocker, J., Karpinski, A., Quinn, D. M., & Chase, S. K. (2003). When grades determine self-worth: Consequences of contingent self-worth for male and female engineering and psychology majors. *Journal of Personality and Social Psychology*, 85, 507–516; and Brown, J. D. (1986). Evaluations of self and others: Self-enhancement biases in social judgments. *Social Cognition*, 4, 353–376.

Advertisers happily sell goods: Escalas, J. E., & Bettman, J. R. (2005). Self-construal, reference groups, and brand meaning. *Journal of Consumer Research*, 32, 378–389. DOI: 10.1086/497549.

We may also try to prove our worth: Baumeister, R. F., Heatherton, T. F., & Tice, D. M. (1993). When ego threats lead to self-regulation failure—negative consequences of high self-esteem. *Journal of Personality and Social Psychology*, 64, 141–156. DOI: 10.1037/0022-3514.64.1.141. See also Crocker, J., & Park, L.E. (2004). The costly pursuit of self-esteem. *Psychological Bulletin*, 130, 392–414. DOI:10.1037/0033-2909.130.3.392.

Entire programs are now being established: If you want to see an example of such programs, enter “PEAK autism” into Google to find Mark Dixon’s version. He also has solid books on ACT and RFT with autistic children. See Belisle, J., Dixon, M.R., Stanley, C.R., Munoz, B., & Daar, J. H. (2016). Teaching foundational perspective-taking skills to children with autism using the PEAK-T curriculum: Single-reversal “I-you” deictic frames. *Journal of Applied Behavior Analysis*, 49, 965–969. DOI: 10.1002/jaba.324.

You will notice an old woman: I have written about a moment exactly like that in this short piece: Hayes, S. C. (2012). The women pushing the grocery cart. In R. Fields (Ed.), *Fifty-two quotes and weekly mindfulness practices: A year of living mindfully* (pp. 18–20). Tucson, AZ: FACES Conferences.

Now read each sentence again, slowly: Some of these ideas come from my work with Matthieu and Jennifer Villatte in Villatte, M. (2016). *Mastering the clinical conversation*. New York: Guilford Press.

Then restate the experience in three forms: This exercise used to include only the first two steps, but RFT research has clearly shown that it is important to include containment or hierarchical relations, not just distinction relations. For example, see Foody, M., Barnes-Holmes, Y., Barnes-Holmes, D., & Luciano, C. (2013). An empirical investigation of hierarchical versus distinction relations in a self-based ACT exercise. *International Journal of Psychology and Psychological Therapy*, 13(3), 373–388. I like the fact that basic research keeps modifying ACT methods. It is how it should be.

Hoofdstuk 12: De derde wending: acceptatie – leren van pijn

Genetics research has revealed that: This literature is growing rapidly. The study showed that the epigenetic impact of abuse was even involved in who would later commit suicide: McGowan, P. O. et al. (2009). Epigenetic regulation of the glucocorticoid receptor in human brain associates with childhood abuse. *Nature Neuroscience*, 12, 342–348. This study shows how it was related to physical disease: Yanh, B.-Z., et al. (2013). Child abuse and epigenetic mechanisms of disease risk. *American Journal of Preventive Medicine*, 44, 101–107. DOI: 10.1016/j.amepre.2012.10.012.

We can also experience emotional instability: Biglan, A. (2015). *The nurture effect*. Oakland, CA: New Harbinger.

One of the horrible outcomes for sexually abused children: Messman-Moore, T. L., Walsh, K. L., & DiLillo, D. (2010). Emotion dysregulation and risky sexual behavior in revictimization. *Child Abuse & Neglect*, 34, 967–976. DOI: 10.1016/j.chiabu.2010.06.004.

What is especially sad: Fiorillo, D., Papa, A., & Follette, V. M. (2013). The relationship between child physical abuse and victimization in dating relationships: The role of experiential avoidance. *Psychological Trauma: Theory, Research, Practice, and Policy*, 5(6), 562–569. DOI:10.1037/a0030968.

When good things happened: Todd and his team have done a whole series of studies like this. This one is a good example: Machell, K. A., Goodman, F. R., & Kashdan, T. B. (2015). Experiential avoidance and well-being: A daily diary analysis. *Cognition and Emotion*, 29, 351–359. DOI: 10.1080/02699931.2014.911143.

The mainstream CBT community has now come around: You can find my claim in my first major write-up about ACT: Hayes, S. C. (1987). A contextual approach to therapeutic change. In Jacobson, N. (Ed.), *Psychotherapists in clinical practice*:

Cognitive and behavioral perspectives (pp. 327–387). New York: Guilford Press. Mainstream CBT arrived at a similar view around 2008. See, for example, the dialogue with Michelle Craske on this point in Hayes, S. C. (2008). Climbing our hills: A beginning conversation on the comparison of ACT and traditional CBT. *Clinical Psychology: Science and Practice*, 15, 286–295.

Hoofdstuk 13: De vierde wending: aanwezigheid – leven in het nu

higher levels of emotional acceptance: Teper, R., & Inzlicht, M. (2013). Meditation, mindfulness and executive control: The importance of emotional acceptance and brain-based performance monitoring. *Social Cognitive and Affective Neuroscience*, 8, 85–92. DOI: 10.1093/scan/nss045. There are other examples of studies of this kind, such as Riley, B. (2014). Experiential avoidance mediates the association between thought suppression and mindfulness with problem gambling. *Journal of Gambling Studies*, 30, 163–171. DOI:10.1007/s10899-012-9342-9.

observing what is present can lead to more rumination: Royuela-Colomer, E., & Calvete, E. (2016). Mindfulness facets and depression in adolescents: Rumination as a mediator. *Mindfulness*, 7, 1092–1102. DOI: 10.1007/s12671-016-0547-3.

The research on meditation: Parsons, C. E., Crane, C., Parsons, L. J., Fjorback, L. O., & Kuyken, W. (2017). Home practice in Mindfulness-Based Cognitive Therapy and Mindfulness-Based Stress Reduction: A systematic review and meta-analysis of participants' mindfulness practice and its association with outcomes. *Behaviour Research and Therapy*, 95, 29–41. DOI: 10.1016/j.brat.2017.05.004.

The quality of the practice is more important: Hafenbrack, A. C., Kinias, Z., & Barsade, S. G. (2013). Debiasing the mind through meditation. *Psychological Science*, 25, 369–376. DOI: 10.1177/0956797613503853. The researcher being quoted in this paragraph is Zoe Kinias, an assistant professor of organizational behavior at INSEAD. The quote can be found here: <https://www.sciencedaily.com/releases/2014/02/140212112745.htm>.

A wonderfully simple method of meditating: Hardy, R. R. (2001). *Zen master: Practical Zen by an American for Americans*. Tucson, AZ: Hats OffBooks.

This is a version of one of the most effective and yet simplest mindfulness exercises: A good description can be found in Singh, N. N., Lancioni, G. E., Manikam, R., Winton, A. W., Singh, A. A., Singh, J., & Singh, A. A. (2011). A mindfulness-based strategy for self-management of aggressive behavior in adolescents with autism. *Research in Autism Spectrum Disorders*, 5, 1153–1158. DOI: 10.1016/j.rasd.2010.12.012. Examples of studies showing the effects I mention here include Singh, N. N., Lancioni, G. E., Winton, A. W., Adkins, A. D., Wahler, R. G., Sabaawi, M., & Singh, J. (2007). Individuals with mental illness can control their

aggressive behavior through mindfulness training. *Behavior Modification*, 31, 313–328. DOI: 10.1177/0145445506293585; Singh, N.N., Lancioni, G. E., Myers, R. E., Karazsia, B. T., Winton, A. W., & Singh, J. (2014). A randomized controlled trial of a mindfulness-based smoking cessation program for individuals with mild intellectual disability. *International Journal of Mental Health and Addiction*, 12, 153–168. DOI: 10.1007/s11469-013-9471-0; and Singh, N. N., Lancioni, G. E., Singh, A. N., Winton, A. W., Singh, J., McAleavey, K. M., & Adkins, A. D. (2008). A mindfulness-based health wellness program for an adolescent with Prader-Willi syndrome. *Behavior Modification*, 32, 167–181. DOI: 10.1177/0145445507308582. As I mention in the next paragraph, attentional training like this is a core of Adrian Wells's Meta-Cognitive Therapy (MCT). I love his work and suggest MCT as a worthwhile set of methods to explore. There is a growing base of support for MCT. See Wells, A. (2011). *Metacognitive therapy for anxiety and depression*. New York: Guilford-Press.

it's just as important to broaden your attention: This approach was developed by Les Fehmi. I have never met Les, but he is why I am a psychologist. I had a bad letter from the chair of my department at Loyola-Marymount — the late Father Ciklic. I was one of the first hippies on campus and the good Father Ciklic was not pleased. Unknown to me, he put in his letter of recommendation for entry to graduate school that I was a drug addict (I wasn't by the way . . . just a normal hippie). Needless to say, I did not get in anywhere. After two years of this, I decided to try one last time. A friend of my brother asked a new faculty member at the State University of New York at Stony Brook (where I had applied for graduate training), to look in my file. He kindly did and passed along the information about the bad letter. I did not ask Father Ciklic for a letter that third time out, and I got into several doctoral programs.

Finally, my education could start. The name of the psychologist at Stony Brook who did that favor? You can guess it by now: Les Fehmi. I wrote him a thank-you letter a few years ago. He did not remember the incident, but it changed my life. Think of it: tiny kindnesses you do today can profoundly alter people's lives, but you may never know it, or remember it if you eventually do! That's cool, no?

my boss told me I would never amount to anything: In fact, that did happen—to me! In the mid-1980s the late Gilbert Gottlieb (a brilliant man who did foundational work on evolution and early experience) told me that. He looked at the breadth of my interests and said point-blank that I was a dilettante. It hurt—a lot—but I did not change course. To be honest in hindsight I was a handful... and I *was* all over the place with my interests. Ironically, were that not the case I never would have amounted to much because that breadth eventually all interlinked, helping to create contextual behavioral science. I did not stay at the University of North Carolina at Greensboro much longer after that conversation. Aaron Brownstein died

and I secretly (and somewhat unfairly) blamed Gottlieb because he did something similar to Aaron, which put him under tremendous stress. I left a year later for the University of Nevada, Reno, where I have been ever since. It is ironic because Gottlieb's work is now an important part of my thinking. I have a book of his in my briefcase as I write this endnote! I wish I could have another conversation with him just to explore interests. At the time, however, all he could see in me was a crazy young man who he thought would never make a difference.

Hoofdstuk 14: De vijfde wending: waarden – aandacht voor wat jij belangrijk vindt

we escape from the freedom life gives us: It may seem strange for a behaviorist to be speaking of “escape from freedom,” but we can use such words without turning them into things that exist as objects—that is, into ontology. Even words like *spirit* have behaviorally sensible meanings; see Hayes, S. C. (1984). Making sense of spirituality. *Behaviorism*, 12, 99–110. Realizing that is part of how ACT research started (I tell the story of this paper later in the book in the chapter on spirituality). But coming back to freedom, I did research long ago that showed that even nonhuman animals will escape from freedom (normally they greatly prefer choice) if you provide them with experiences that lead them to fear their own choices, *even if they did not make the wrong choice*: Hayes, S. C., Kapust, J., Leonard, S. R., & Rosenfarb, I. (1981). Escape from freedom: Choosing not to choose in pigeons. *Journal of the Experimental Analysis of Behavior*, 36, 1–7. DOI: 10.1901/jeab.1981.36-1. Human beings have enormously amplified reasons to fear choices that reside in symbolic language and the cognitive networks it produces.

Consider the effects of materialism: Richins, M. L. (2004). The Material Values Scale: Measurement properties and development of a short form. *Journal of Consumer Research*, 31, 209–219. DOI:10.1086/383436.

Fame, power, sensory gratification: A good summary of that work is in Ryan, R. M., Huta, V., & Deci, E. L. (2008). Living well: A self-determination theory perspective on eudaimonia. *Journal of Happiness Studies*, 9, 139–170. DOI: 10.1007/s10902-006-9023-4.

what it will take to have enough money: John Paul Getty is said to have answered a similar question in exactly that way, despite having more wealth than almost anyone alive.

because I choose to: I'm not arguing for or against “free will” in a literal sense. I'm a behaviorist, and sitting atop Mt. Olympus I presume there are “reasons” we do everything. But we don't live there and the language of freedom puts the ability to respond (in other words, responsibility) back where it belongs. We do what we

do, and based on that we get what we get. That's the knowledge we really need and it is here, inside our experience. If the language of freedom helps us see that, I'm all for it.

Our thirst for chosen meaning and purpose will be unquenched: One study that shows that clearly is Kashdan, T. B., & Breen, W. E. (2007). Materialism and diminished well-being: Experiential avoidance as a mediating mechanism. *Journal of Social and Clinical Psychology, 26*, 521–539. DOI:10.1521/jscp.2007.26.5.521.

Valued Living Questionnaire: Wilson, K. G., Sandoz, E. K., Kitchens, J., & Roberts, M. (2010). The Valued Living Questionnaire: Defining and measuring valued action within a behavioral framework. *Psychological Record, 60*, 249–272. The version I'm using includes aesthetics and the environment, which were added later.

values writing has more impact: Sandoz, E., & Hebert, E. R. (2016). Meaningful, reminiscent, and evocative: An initial examination of four methods of selecting idiographic values-relevant stimuli. *Journal of Contextual Behavioral Science, 4*, 277–280. DOI: 10.1016/j.jcbs.2015.09.001.

making us more receptive to information: Crocker, J., Niiya, Y., & Mischkowski, D. (2008). Why does writing about important values reduce defensiveness? Self-affirmation and the role of positive other-directed feelings. *Psychological Science, 19*, 740–747. DOI: 10.1111/j.1467-9280.2008.02150.x.

Hoofstuk 15: De zesde wending: waardegericht handelen – committeer je aan verandering

they combine into the one skill: One reason I say that is that it is very hard to break them apart in assessment. If you force them apart, statistically there is what is called a *latent variable* (a deep underlying structure) that goes across all of them. I have used the metaphor of six sides of a box to explain it. The sides of a box are aspects of a whole. You would not look at a square piece of wood and say, "That is a side of a box," but once you saw it assembled and then disassembled, that is exactly what you would say, and rightly so. The six pivots are like that.

all of that work begins to come to fruition: There are data in support of that idea. For example, a recent study showed that acceptance of pain predicted positive outcomes for chronic pain patients, but primarily if it was linked to actual behavior change: Jeong, S., & Cho, S. (2017). Acceptance and patient functioning in chronic pain: The mediating role of physical activity. *Quality of Life Research, 26*, 903–911. DOI: 10.1007/s11136-016-1404-5. See also Villatte, J. L., Vilardaga, R., Villatte, M., Vilardaga, J. C. P., Atkins, D. A., & Hayes, S. C. (2016). Acceptance and Commitment Therapy modules: Differential impact on treatment processes and outcomes. *Behaviour Research and Therapy, 77*, 52–61. DOI: 10.1016/j.

brat.2015.12.001, which found that with flexibility skills left out, behavior change methods alone sometimes took people into distressing areas without needed tools.

sit with a marshmallow in close reach: The original study was done in the mid-1970s. It and a long string of subsequent studies that confirmed the effect are summarized in the late Walter Mischel's book: Mischel, M. (2015). *The marshmallow test: Why self-control is the engine of success*. New York: Back Bay Books. I knew Mischel but not well—he was a giant in the field.

some forms of persistence are actually forms of avoidance: Many studies show this. For example, see Shimazu, A., Schaufeli, W. B., & Taris, T. W. (2010). How does workaholism affect worker health and performance? The mediating role of coping. *International Journal of Behavioral Medicine*, 17, 154. DOI: 10.1007/s12529-010-9077-x.

habit reversal is even more powerful: My former student Mike Twohig and Douglas Woods have done a lot of the research work on habit reversal and how to combine it and related behavioral methods with ACT. They have written a book for the public on these methods as applied to hair pulling, for example: Woods, D., & Twohig, M. P. (2008). *Trichotillomania: An ACT-enhanced behavior therapy approach workbook*. New York: Oxford University Press. An example of their research in this area is Twohig, M.P., Woods, D.W., Marcks, B.A., & Teng, E.J. (2003). Evaluating the efficacy of habit reversal: Comparison with a placebo control. *Journal of Clinical Psychiatry*, 64,40–48.

public commitments are more likely to be maintained: For example, see Lyman, R. D. (1984). The effect of private and public goal setting on classroom on-task behavior of emotionally-disturbed children. *Behavior Therapy*, 15,395–402.

a similar behavior change is now more likely in your friends: Christakis, N., & Fowler, J.H. (2009). *Connected: The surprising power of our social networks and how they shape our lives*. New York: Little, Brown.

Hoofdstuk 16: Je ACT-toolkit als hulpmiddel voor een beter leven

Give Difficult Feelings a Color, Weight, Speed, Shape: That one is in a book I co-wrote with Spencer Smith: Hayes, S. C., with Smith, S. (2005). *Get out of your mind and into your life: The new acceptance and commitment therapy*. Oakland, CA: New Harbinger.

Do a Values Card Sort: There are commercially available ACT values card decks and websites to sort your values. You can easily Google them, but I have a list of resources for them at <http://www.stevenchayes.com>.

There is no need for you ever to get bored: I borrowed the toolkit idea from Kirk Strosahl (an ACT for the Public list serve member named Bill helped me see how

useful it was: thanks Bill). For more help, go to <http://www.stevenchayes.com> or to other ACT books I've cited, or just follow the resource guidance I gave right before Chapter One.

We're *Homo pro socialis*: I think this is why Elinor Ostrom won the Nobel Prize in 2009. She showed that there was a “middle path” between command economies and the “invisible hand” of *Homo economicus*—namely the evolution of prosocial groups that protected their common pool resources by cooperation. It takes specific principles to do this. If you want to see how we are combining Ostrom's design principles and ACT, see <http://www.prosocial.world>. I will cover some of this work in the last chapter, but I also have a book that explains it: Atkins, P., Wilson, D. S., & Hayes, S. C. (2019). *Prosocial: Using evolutionary science to build productive, equitable, and collaborative groups*. Oakland, CA: ContextPress.

WHO has created an ACT self-help program: The name of the program is “self-help plus.” It is described here in an open access format you can download: Epping-Jordan, J. E., Harris, R., Brown, F. L., Carswell, K., Foley, C., García-Moreno, C., Kogan, C., & van Ommeren, M. (2016). Self-Help Plus (SH+): A new WHO stress management package. *World Psychiatry, 15*, 295–296. DOI: 10.1002/wps.20355. It is now being tested around the world, especially with refugees. The European Union has a large grant to do so called RE-DEFINE (<http://re-defineproject.eu>) and WHO is testing it with South Sudanese refugees in Uganda: Brown, F., Carswell, K., Augustinavicius, J., Adaku, A., Leku, M., White, R., . . . Tol, W. (2018). Self Help Plus: Study protocol for a cluster-randomised controlled trial of guided self-help with South Sudanese refugee women in Uganda. *Global Mental Health, 5*, E27. DOI: 10.1017/gmh.2018.17.

Hoofstuk 17: Gezond gedrag

Nearly two-thirds of all poor health is due to behavior: You can find those data in Forouzanfar, M. H., et al. (2013). Global, regional, and national comparative risk assessment of 79 behavioural, environmental and occupational, and metabolic risks or clusters of risks in 188 countries, 1990–2013: A systematic analysis for the Global Burden of Disease Study. *Lancet, 386*, 2287–2323. In some ways, this analysis — impressive as it is — actually underestimates how important behavior is to health because such things as exposure to environmental toxins is often due to our behavior as well. For example, air pollution comes from our excessive energy use and policies that encourage it. I started my career as an environmental activist, showing how to change environmentally relevant behavior: Cone, J. D., & Hayes, S. C. (1980). *Environmental problems/behavioral solutions*. Monterey, CA: Brooks/Cole. (Republished in 1986 by Cambridge University Press; Reprinted in 2011.)

I moved out of that area when I realized the data I produced would be ignored unless I became a member of large industrial organizations and worked from the inside. My goals were too broad for that to make sense for me.

just to name a few: There are ACT trials in all of these areas. Yes, even teeth cleaning (in fact there are two!). One I like was done with young adults: Wide, U., Hagman, J., Werner, H., & Hakeberg, M. (2018). Can a brief psychological intervention improve oral health behavior? A randomized controlled trial. *BCM Oral Health, 18(163)*,1-8. DOI:10.1186/s12903-018-0627-y and the ACT group took far better care of their teeth. I think values work is especially important in areas like this, although perspective taking and emotional openness helps too. I have a very progressive dentist, Todd Sala, who tries to help careless adolescent and young adults by asking them (“usually young males need this more” he says) to imagine what it is like to be interested in a person who has body odor or teeth that are not being cleaned. Yipes. A bit of health perspective-taking, that.

this is almost cruel: Of course, the researchers also secretly marked the chocolates to make sure no one cheated, ate one, and then replaced it. The study can be found in Moffitt, R., Brinkworth, G., Noakes, M., & Mohr, P. (2012). A comparison of cognitive restructuring and cognitive defusion as strategies for resisting a craved food. *Psychology of Health, 27*, 77–94. DOI: 10.1080/08870446.2012.694436.

Even the best and most extensive science-based programs: MacLean, P. S., Wing, R. R., Davidson, T., et al. (2015). NIH working group report: Innovative research to improve maintenance of weight loss. *Obesity, 23*,7–15.

277 Consider one of the most effective programs: Brownell, K. D. (2000). *The LEARN program for weight management*. Dallas, TX: American Health.

Shame is also a common problem: Our measure of inflexibility in this area is discussed in Lillis, J., & Hayes, S. C. (2008). Measuring avoidance and inflexibility in weight related problems. *International Journal of Behavioral Consultation and Therapy, 4*, 348–354; our measure of weight-related shame and self-stigma is discussed in Lillis, J., Luoma, J. B., Levin, M. E., & Hayes, S. C. (2010). Measuring weight self-stigma: The weight self-stigma questionnaire. *Obesity, 18*, 971–976. DOI:10.1038/oby.2009.353. Data on body dissatisfaction can be found in Fallon, E. A., Harris, B. S., & Johnson, P. (2014). Prevalence of body dissatisfaction among a United States adult sample. *Eating Behaviors, 15*, 151–158. DOI: 10.1016/j.eatbeh.2013.11.007. Data on physicians shaming overweight clients is in Harris, C. R., & Darby, R. S. (2009). Shame in physician-patient interactions: Patient perspectives. *Basic and Applied Social Psychology, 31*, 325–334. DOI: 10.1080/01973530903316922.

To precisely measure the role of shame: see the immediately preceding endnote for the reference.

Our research team conducted a study: Decreasing distress and shame itself is a

physical benefit, since they tend to lead to physical distress and health problems: Mereish, E.H., & Poteat, V. P. (2015). A relational model of sexual minority mental and physical health: The negative effects of shame on relationships, loneliness, and health. *Journal of Counseling Psychology*, 62,425–437.

athletes can do better work by focusing on their willingness: Emily Leeming found this in her 2016 dissertation on mental toughness, which I describe in Chapter Eighteen: Leeming, E. (2016). *Mental toughness: An investigation of verbal processes on athletic performance*. Unpublished doctoral dissertation. University of Nevada, Reno. I hope it is out in publication form soon. The data on exercise addiction are presented in Alcaraz-Ibanez, M., Aguilar-Parra, J., & Alvarez-Hernandez, J. F. (2018). Exercise addiction: Preliminary evidence on the role of psychological inflexibility. *International Journal of Mental Health and Addiction*, 16, 199–206. DOI: 10.1007/s11469-018-9875-y.

Values work also helps with shame: Vartanian, L. R., & Shaprow, J. G. (2008). Effects of weight stigma on exercise motivation and behavior: A preliminary investigation among college-aged females. *Journal of Health Psychology*, 13, 131–138. DOI:10.1177/1359105307084318.

books devoted to applying ACT to eating and exercise: Some of those books are cited in the following endnote labeled “You can do all of this without acting on the craving.”

what I’ve seen with my own body: Both of these things I mention are now reasonably well supported empirically, but I did them initially more out of trial and error. To find those specific data, search online for studies on “time-restricted eating” as well as “avoiding flour.” I never do risky things by trial and error, however. You need a smart research-oriented physician who is willing to talk to you, or an ability to research the medical literature before venturing out into trial and error. My internist, Dr. Shaheen Ali, is awesome and I can indeed read much of the medical literature— but if you do not have that kind of support, be cautious and do trial-and-error learning within more normal ranges. This is not the place for dumb moves (long, unsupervised fasts; eating nothing but carrots; you name it).

ACT plus (wait for it) walnuts: Tapsell, L. C., Lonergan, M., Batterham, M. J., Neale, E. P., Martin, A., Thorne, R., Deane, F., & Peoples, G. (2017). Effect of interdisciplinary care on weight loss: a randomised controlled trial. *BMJ Open*, 7:e014533.. DOI: 10.1136/bmjopen-2016-014533.

You can do all of this without acting on the craving: There are solid ACT books for help with diet, although I know of none that have been evaluated in book form, so while the theory is known to be helpful you do need to keep your eye on how it plays out more specifically (this book is like that too, as I said earlier). Two good ones are Lillis, J., Dahl, J., & Weineland, S. M. (2014). *The diet trap: Feed your psychological needs and end the weight loss struggle using Acceptance and*

Commitment Therapy. Oakland, CA: New Harbinger; and Bailey, A., Ciarrochi, J., & Harris, R. (2014). *The weight escape: How to stop dieting and start living*. Boulder, CO: Shambala.

slowly do curls or triceps presses: I love the work of Rick Winett, who is a psychologist of my era (and still going strong) who does work on exercise sort of on the side. A reference that explains why a couple of short, properly done sessions of resistance training has great health benefits is Winett, R. A., & Carpinelli, R. N. (2001). Potential health-related benefits of resistance training. *Preventive Medicine*, 33, 503–513. DOI:10.1006/pmed.2001.0909.

pioneering research on applying ACT to work: A book of his that I like in this area is Flaxman, P.E., Bond, F. W., & Livheim, F. (2013). *The mindful and effective employee: An acceptance and commitment therapy training manual for improving well-being and performance*. Oakland, CA: New Harbinger.

the first ACT study done on worksite stress: Bond, F. W., & Bunce, D. (2000). Mediators of change in emotion-focused and problem-focused worksite stress management interventions. *Journal of Occupational Health Psychology*, 5, 156–163.

worry about getting to sleep: Nota, J. A., & Coles, M. E. (2015). Duration and timing of sleep are associated with repetitive negative thinking. *Cognitive Therapy and Research*, 39, 253–261. DOI: 10.1007/s10608-014-9651-7.

People with poor sleep patterns: Kapur, V. K., Redline, S., Nieto, F., Young, T. B., Newman, A. B., & Henderson, J. A. (2002). The relationship between chronically disrupted sleep and healthcare use. *Sleep*, 25, 289–296.

ACT studies in chronic pain and depression: There are several examples of ACT studies with side benefits in sleep, including McCracken, L. M., Williams, J. L., & Tang, N. K. Y. (2011). Psychological flexibility may reduce insomnia in persons with chronic pain: A preliminary retrospective study. *Pain Medicine*, 12, 904–912. DOI: 10.1111/j.1526-4637.2011.01115.x; Westin, V. Z., et al. (2011). Acceptance and Commitment Therapy versus Tinnitus Retraining Therapy in the treatment of tinnitus: A randomised controlled trial. *Behaviour Research and Therapy*, 49, 737–747. DOI: 10.1016/j.brat.2011.08.001; and Kato, T. (2016). Impact of psychological inflexibility on depressive symptoms and sleep difficulty in a Japanese sample. *Springerplus*, 5, 712. DOI: 10.1186/s40064-016-2393-0. An ACT study in this area that directly targeted insomnia (successfully) is Zetterqvist, V., Grudina, R., Rickardsson, J., Wicksell, R. K., & Holmström, L. (in press). Acceptance-based behavioural treatment for insomnia in chronic pain: A clinical pilot study. *Journal of Contextual Behavioral Science*. DOI: 10.1016/j.jcbs.2018.07.003.

a combination of ACT training and a modified form of CBTi: Dalrymple, K. L., Fiorentino, L., Politi, M. C., & Posner, D. (2010). Incorporating principles from Acceptance and Commitment Therapy into Cognitive-Behavioral Therapy for insom-

nia: A case example. *Journal of Contemporary Psychotherapy*, 40, 209–217. DOI: 10.1007/s10879-010-9145-1.

Hoofstuk 18: Geestelijke gezondheid

The group of psychiatrists and psychologists tasked: These quotes come from the work group that developed the strategy for the new *Diagnostic and Statistical Manual of the American Psychiatric Association*: Kupfer, D. J., et al. (2002). *A research agenda for DSM-V*. Washington, DC: American Psychiatric Association.

a shift to a more process-oriented approach: See my text on process-based CBT with my colleague Stefan Hofmann: Hayes, S. C., & Hofmann, S. (2018). *Process-based CBT: The science and core clinical competencies of cognitive behavioral therapy*. Oakland, CA: Context Press /New Harbinger..

genetically primed to react to negative events: Many studies show that genetics interact with environment in ways that can take the same genetic factor in a positive or negative direction. I like this study as a good example: Gloster, A. T., Gerlach, A. L., Hamm, A., Höfler, M., Alpers, G. W., Kircher, T., et al. (2015). 5HTT is associated with the phenotype psychological flexibility: Results from a randomized clinical trial. *European Archives of Psychiatry and Clinical Neuroscience*, 265(5), 399–406.

behavior that may be adaptive in some contexts: The DSM-V workgroup (see Kupfer et al. 2002, cited in the preceding endnote labeled “The group of psychiatrists and psychologists tasked”) said that clearly as well: “many, if not most, conditions and symptoms represent a somewhat arbitrarily defined pathological excess of normal behaviors and cognitive processes.” I agree.

one in five people will experience a common mental health condition: One reason I have some patience with researchers who call these conditions “brain diseases” is that although they may know they are fibbing, they hope that doing so will reduce stigma. Sadly, over the long haul it appears as though it actually *increases* some aspects of stigma. That research has taken a while to get out, but now that it is, I hope this begins to change. Corrigan, P. W. & Watson, A. C. (2004). At issue: Stop the stigma: Call mental illness a brain disease. *Schizophrenia Bulletin*, 30, 477–479.

People with mental illness are tagged: See Corrigan, P. W., & Watson, A. C. (2002). Understanding the impact of stigma on people with mental illness. *World Psychiatry* 1(1), 16–20. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1489832/>; and Corrigan, P. W., Larson, J. E., & Rusch, N. (2009). Self-stigma and the “why try” effect: impact on life goals and evidence-based practices. *World Psychiatry* 8(2), 75–81. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2694098/>.

about one in five will seek assistance: Centers for Disease Control and Prevention et al. (2012). *Attitudes toward mental illness: results from the Behavioral Risk-Factor Surveillance System*. Atlanta: Centers for Disease Control and Prevention. https://www.cdc.gov/hrqol/Mental_Health_Reports/pdf/BRFSS_Full%20Report.pdf.

million people around the globe: MacGill, M. (2017). What is depression and what can I do about it?? *Medical News Today* (last updated November 30). <https://www.medicalnewstoday.com/kc/depression-causes-symptoms-treatments-8933>; see also <https://www.cdc.gov/nchs/fastats/depression.htm>.

long-term or high-dose use carries the risk: A meta-analysis of sexual side effects can be found here: Serretti, A., & Chiesa, A. (2009). Treatment-emergent sexual dysfunction related to antidepressants: A meta-analysis. *Journal of Clinical Psychopharmacology*, *29*, 259–266. DOI: 10.1097/JCP.0b013e3181a5233f. Long-term relapse data are shown in many studies and are significantly higher for medications than for psychotherapy. See, for example, Hollon, S. D., et al. (2005). Prevention of relapse following cognitive therapy vs medications in moderate to severe depression. *Archives of General Psychiatry*, *62*, 417–422. DOI: 10.1001/archpsyc.62.4.417. Both of these are serious problems that the pharmaceutical industry has failed to acknowledge adequately.

the combination for lesser depression is not significantly more effective: Khan, A., Faucett, J., Lichtenberg, P., Kirsch, I., & Brown, W. A. (2012) A systematic review of comparative efficacy of treatments and controls for depression. *PLoS ONE*, *7*(7): e41778. DOI:10.1371/journal.pone.0041778. See also the previous endnote for this broader body of work.

the benefits of CBT are largely due to the behavioral elements: I cited these studies in earlier footnotes. For example, see Chawla, N., & Ostafin, B. D. (2007). Experiential avoidance as a functional dimensional approach to psychopathology: An empirical review. *Journal of Clinical Psychology*, *63*, 871–890.

296 we know more about why it works: There are many successful mediational studies on ACT. A list is available at https://contextualscience.org/act_studies_with_mediational_data. See also the summary article at <http://bit.ly/ACTmediation2018>.

ruminating to avoid difficult emotions: Eisma, M. C., et al. (2013). Avoidance processes mediate the relationship between rumination and symptoms of complicated grief and depression following loss. *Journal of Abnormal Psychology*, *122*, 961–970. DOI:10.1037/a0034051.

one of the best types of therapy for depression, Behavioral Activation: Carlbring, P., et al. (2013). Internet-based behavioral activation and acceptance-based treatment for depression: A randomized controlled trial. *Journal of Affective Disorders*, *148*, 331–337. DOI: 10.1016/j.jad.2012.12.020.

an anxiety condition during the course of our lives: Craske, M. G., & Stein, M. B. (2016). Anxiety. *Lancet*, 388 (10063), 3048–3059. DOI: 10.1016/S0140-6736(16)30381-6.

the ACT group showed much greater improvement: Arch, J. J., Eifert, G. H., Davies, C., Vilardaga, J., Rose, R. D., & Craske, M. G. (2012). Randomized clinical trial of cognitive behavioral therapy (CBT) versus acceptance and commitment therapy (ACT) for mixed anxiety disorders. *Journal of Consulting and Clinical Psychology*, 80, 750–765. DOI:10.1037/a0028310.

over a dozen decent quality studies: Lee, E. B., An, W., Levin, M. E., & Twohig, M. P. (2015). An initial meta-analysis of Acceptance and Commitment Therapy for treating substance use disorders. *Drug and Alcohol Dependence*, 155, 1–7. DOI: 10.1016/j.drugalcdep.2015.08.004.

That internalization is pushed deeper by psychological inflexibility: My colleagues and I have explored this in several studies. See, for example, Luoma, J. B., Rye, A., Kohlenberg, B. S., & Hayes, S. C. (2013). Self-stigma in substance abuse: Development of a new measure. *Journal of Psychopathology and Behavioral Assessment*, 35, 223–234. DOI: 10.1007/s10862-012-9323-4; and Luoma, J. B., Kohlenberg, B. S., Hayes, S. C., Bunting, K., & Rye, A. K. (2008). Reducing the self stigma of substance abuse through acceptance and commitment therapy: Model, manual development, and pilot outcomes. *Addiction Research & Therapy*, 16, 149–165. DOI: 10.1080/16066350701850295.

Acceptance can help stay the course: Hayes, S. C., Wilson, K. G., Gifford, E. V., Bissett, R., Piasecki, M., Batten, S. V., Byrd, M., & Gregg, J. (2004). A randomized controlled trial of twelve-step facilitation and acceptance and commitment therapy with polysubstance abusing methadone maintained opiate addicts. *Behavior Therapy*, 35, 667–688. DOI:10.1016/S0005-7894(04)80014-5.

a release of dopamine into their brains: Volkow, N.D., Fowler, J.S., Wang, G.J., Baler, R., & Telang, F. (2009). Imaging dopamine's role in drug abuse and addiction. *Neuropharmacology*, 56 (Suppl. 1), 3–8. DOI:10.1016/j.neuropharm.2008.05.022.

twice as likely to be substance abusers: Recovery First. "The Connection between Depression and Substance Abuse." <https://www.recoveryfirst.org/co-occurring-disorders/depression-and-substance-abuse/>.

applying ACT training specifically to shame: Luoma, J. B., Kohlenberg, B. S., Hayes, S.C., & Fletcher, L. (2012). Slow and steady wins the race: A randomized clinical trial of Acceptance and Commitment Therapy targeting shame in substance use disorders. *Journal of Consulting and Clinical Psychology*, 80, 43–53. DOI: 10.1037/a0026070.

the ACT message for addiction: That quote is on page 13 of Kelly Wilson and Troy Dufrene's ACT book on addiction: Wilson, K., & Dufrene, T. (2012). *The wisdom to know the difference*. Oakland, CA: New Harbinger.

About twenty million women: Wade, T. D., Keski-Rahkonen, A., & Hudson J.(2011). Epidemiology of eating disorders. In M. Tsuang and M. Tohen (Eds.), *Textbook in psychiatric epidemiology* (3rd ed., pp. 343–360). New York: Wiley. For data on the increase in ED, see Sweeting, H., Walker, L., MacLean, A., Patterson, C., Räisänen, U., & Hunt, K. (2015). Prevalence of eating disorders in males: A review of rates reported in academic research and UK massmedia. *International Journal of Men's Health* 14(2). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4538851/>. For data on etiology, see National Eating Disorders Association. "What Are Eating Disorders? Risk Factors." <https://www.nationaleatingdisorders.org/factors-may-contribute-eating-disorders>.

the desire to avoid difficult thoughts and feelings: A large number of studies support that point and the other points made in this paragraph. As a beginning, you can consult Juarascio, A., Shaw, J., Forman, E., Timko, C. A., Herbert, J., Butryn, M., . . . Lowe, M. (2013). Acceptance and commitment therapy as a novel treatment for eating disorders: An initial test of efficacy and mediation. *Behavior Modification*, 37,459–489. DOI: 10.1177/0145445513478633; and Bluett, E. J., et al. (2016). The role of body image psychological flexibility on the treatment of eating disorders in a residential facility. *Eating Behaviors*, 23, 150–155. DOI: 10.1016/j.eatbeh.2016.10.002. See also Ferreira, C., Palmeira, L., Trindade, I. A., & Catarino, F. (2015). When thought suppression backfires: Its moderator effect on eating psychopathology. *Eating and Weight Disorders— Studies on Anorexia Bulimia and Obesity*, 20, 355–362. DOI: 10.1007/s40519-015-0180-5; and Cowdrey, F. A., & Park, R. J. (2012). The role of experiential avoidance, rumination and mindfulness in eating disorders. *Eating Behavior*, 13, 100–105. DOI: 10.1016/j.eatbeh.2012.01.001. Finally, look at Pearson, A. N., Follette, V. M., & Hayes, S. C. (2012). A pilot study of Acceptance and Commitment Therapy (ACT) as a workshop intervention for body dissatisfaction and disordered eating attitudes. *Cognitive and Behavioral Practice*, 19, 181–197. DOI:0.1016/j.cbpra.2011.03.001.

two-thirds of people with EDs also have an anxiety disorder: Kaye, W. H., Bulik, C.M., Thornton, L., Barbarich, N., & Masters, K. (2004). Comorbidity of anxiety disorders with anorexia and bulimia nervosa. *American Journal of Psychiatry*, 161, 2215–2221.

ACT values work was added: Strandskov, S.W., Ghaderi, A., Andersson, H., Parmaskog, N., Hjort, E., Warn, A.S., Jannert, M., & Andersson, G. (2017). Effects of tailored and ACT-influenced Internet-based CBT for eating disorders and the relation between knowledge acquisition and outcome: A randomized controlled trial. *Behavior Therapy*, 48,624–637.

results from six hundred of his patients: Walden, K., Manwaring, J., Blalock, D. V., Bishop, E., Duffy, A., & Johnson, C. (2018). Acceptance and psychological change at the higher levels of care: A naturalistic outcome study. *Eating Disorders*, 26, 311–325. DOI: 10.1080/10640266.2017.1400862.

determine your own degree of flexibility: Manwaring, J., Hilbert, A., Walden, K., Bishop, E. R. & Johnson, C. (2018). Validation of the acceptance and action questionnaire for weight-related difficulties in an eating disorder population. *Journal of Contextual Behavioral Science*, 7, 1–7. The original scale we developed was Lillis, J., & Hayes, S. C. (2008). Measuring avoidance and inflexibility in weight related problems. *International Journal of Behavioral Consultation and Therapy*, 4, 348–354.

a significant reduction in rehospitalization: Bach, P., Gaudiano, B. A., Hayes, S. C., & Herbert, J. D. (2013). Acceptance and Commitment Therapy for psychosis: Intent to treat hospitalization outcome and mediation by believability. *Psychosis*, 5, 166–174. You can predict who is likely to struggle by how they deal with their hallucinations. We created a measure to do this and it works reasonably well: Shawyer, F., Ratcliff, K., Mackinnon, A., Farhall, J., Hayes, S. C., & Copolov, D. (2007). The Voices Acceptance and Action Scale: Pilot data. *Journal of Clinical Psychology*, 63, 593–606. DOI: 10.1002/jclp.20366. ACT interventions can also deflect the depression that often follows psychotic breaks, especially the first one: Gumley, A., White, R., Briggs, A., Ford, I., Barry, S., Stewart, C., Beedie, S., McTaggart, J., Clarke, C., MacLeod, R., Lidstone, E., Salgado Riveros, B., Young, R., & McLeod, H. (2017). A parallel group randomised open blinded evaluation of acceptance and commitment therapy for depression after psychosis: Pilot trial outcomes (ADAPT). *Schizophrenia Research*, 183, 143–150.

Hoofstuk 19: Koesterende relaties

thoughtful, caring communication: Sprecher, S., & Regan, P. C. (2002). Liking some things (in some people) more than others: Partner preferences in romantic relationships and friendships. *Journal of Social and Personal Relationships*, 19, 463–481. DOI: 10.1177/0265407502019004048.

articulate those feelings to others: Uysal, A., Lin, H.L., Knee, C.R., & Bush, A.L. (2012). The association between self-concealment from one's partner and relationship well-being. *Personality and Social Psychology Bulletin*, 38, 39–51. DOI: 10.1177/0146167211429331.

the capacity for healthy attachment: La Guardia, J. G., Ryan, R. M., Couchman, C. E., Deci, E. L. (2000). Within-person variation in security of attachment: A self-determination theory perspective on attachment, need fulfillment, and well-being. *Journal of Personality and Social Psychology*, 79, 367–384. DOI: 10.1037//0022-3514.79.3.367.

actions that nurture relationships: The bottom line for all of this literature on ACT for couples is small but growing. ACT also has many similarities to integra-

tive behavioral couple therapy and emotional-focused therapy, which are both evidence-based intervention methods. A recent review of IBCT is Christensen, A., & Doss, B. D. (2017). Integrative behavioral couple therapy. *Current Opinion in Psychology*, 13, 111–114. DOI: 10.1016/j.copsyc.2016.04.022. The EFT literature is reviewed in Johnson, S. (2019). *Attachment theory in practice*. New York: Guilford Press. There are several randomized trials of ACT for marital difficulties, but most are small and most have been done in Iran (oddlyenough).

Commitment practice helps with these actions: Vohs, K. D., Finkenauer, C., & Baumeister, R. F. (2011). The sum of friends' and lovers' self-control scores predicts relationship quality. *Social Psychological and Personality Science*, 2, 138–145. DOI: 10.1177/1948550610385710.

By the time little Stevie goes off to college: Not that I didn't have massive help raising these rascals from my three wives, Angle, Linda, and Jacque; Stevie's loving nanny and honorary grandmother, Inge Skeans; and others who have loved and cared for them.

psychological inflexibility makes it hard to interact with our children: There are quite a number of studies of this kind. See Brockman, C., et al. (2016). Relationship of service members' deployment trauma, PTSD symptoms, and experiential avoidance to post-deployment family reengagement. *Journal of Family Psychology*, 30, 52–62. DOI: 10.1037/fam0000152; and Shea, S. E., & Coyne, L. W. (2011). Maternal dysphoric mood, stress, and parenting practices in mothers of head start preschoolers: The role of experiential avoidance. *Child and Family Behavior Therapy*, 33, 231–247. DOI: 10.1080/07317107.2011.596004. Also see these three studies: Brassell, A. A., Rosenberg, E., Parent, J., Rough, J. N., Fondacaro, K., & Seehuus, M. (2016). Parent's psychological flexibility: Associations with parenting and child psychosocial well-being. *Journal of Contextual Behavioral Science*, 5, 111–120. DOI:10.1016/j.jcbs.2016.03.001; Whittingham, K., Sanders, M., McKinlay, L., & Boyd, R. N. (2014). Interventions to reduce behavioral problems in children with cerebral palsy: An RCT. *Pediatrics*, 133, E1249–E1257. DOI: 10.1542/peds.2013-3620; and Brown, F. L., Whittingham, K., Boyd, R. N., McKinlay, L., & Sofronoff, K. (2014). Improving child and parenting outcomes following paediatric acquired brain injury: A randomised controlled trial of Stepping Stones Triple P plus Acceptance and Commitment Therapy. *Journal of Child Psychology and Psychiatry*, 55, 1172–1183. DOI: 10.1111/jcpp.12227.

those with especially inflexible parents: Polusny, M. A., et al. (2011). Effects of parents' experiential avoidance and PTSD on adolescent disaster-related posttraumatic stress symptomatology. *Journal of Family Psychology*, 25, 220–229; Cheron, D. M., Ehrenreich, J. T., & Pincus, D. B. (2009). Assessment of parental experiential avoidance in a clinical sample of children with anxiety disorders. *Child Psychiatry and Human Development*, 40, 383–403. DOI: 10.1007/s10578-009-0135-z.

ACT researchers in Australia followed 750 children: Williams, K. E., Ciarrochi, J., & Heaven, P. C. L. (2012). Inflexible parents, inflexible kids: A 6-year longitudinal study of parenting style and the development of psychological flexibility in adolescents. *Journal of Youth and Adolescence*, *41*, 1053–1066. DOI: 10.1007/s10964-012-9744-0.

most high school students: The data are a bit old now, but a well-known study is Friedman, J.M.H., Asnis, G.M., Boeck, M., & DiFiore, J. (1987). Prevalence of specific suicidal behaviors in a high school sample. *American Journal of Psychiatry*, *144*, 1203–1206. You have to ask the question in a pretty open way to get rates this high, but still it shows that our kids are thinking about it to a degree. Why not? Have you ever had such a thought?

how best to address suicidality: A good summary of those data and guidance about how best to address suicidality based on the evidence is in a book by psychiatrist John Chiles and ACT co-developer Kirk Strosahl: Chiles, J. A., & Strosahl, K. (2005). *Clinical manual for assessment and treatment of suicidal patients*. Washington, DC: American Psychiatric Association. The second edition is now out and has well-known Stanford professor Laura Weiss Roberts as the third author. I consider it the most authoritative book currently available on suicidality, and it is completely compatible with an ACT model. Multiple studies show that ACT helps with suicidality—a good example is Ducasse, D., et al. (2018). Acceptance and Commitment Therapy for the management of suicidal patients: A randomized controlled trial. *Psychotherapy and Psychosomatics*, *87*, 211–222. DOI: 10.1159/000488715.

our partners are more satisfied when we are more accepting: Lenger, K. A., Gordon, C. L., & Nguyen, S. P. (2017). Intra-individual and cross-partner associations between the five facets of mindfulness and relationship satisfaction. *Mindfulness*, *8*, 171–180. DOI: 10.1007/s12671-016-0590-0.

communicating their own emotions and values: Wachs, K., & Cordova, J. V. (2007). Mindful relating: Exploring mindfulness and emotion repertoires in intimate relationships. *Journal of Marital and Family Therapy*, *33*, 464–481. DOI: 10.1111/j.1752-0606.2007.00032.x.

Across the planet, 30 percent of women: Devries, K. M., et al. (2013). The global prevalence of intimate partner violence against women. *Science*, *340*, 1527–1528. DOI: 10.1126/science.1240937. See also Ellsberg, M., et al. (2008). Intimate partner violence and women's physical and mental health in the WHO multi-country study on women's health and domestic violence: An observational study. *Lancet*, *371*, 1165–1172. DOI: 10.1016/S0140-6736(08)60522-X.

using an online program based on a book: The study that evaluated the book was Fiorillo, D., McLean, C., Pistorello, J., Hayes, S. C., & Follette, V. M. (2017). Evaluation of a web-based Acceptance and Commitment Therapy program for women with trauma related problems: A pilot study. *Journal of Contextual Behavioral Sci-*

ence, 6, 104–113. DOI: 10.1016/j.jcbs.2016.11.003. The book itself is Follette, V. M., & Pistorello, J. (2007). *Finding life after trauma*. Oakland, CA: New Harbinger. The website for the online version of the book is at <https://elearning.newharbinger.com>.

WHO concluded: Harvey, A., Garcia-Moreno, C., & Butchart, A. (2007). *Primary prevention of intimate-partner violence and sexual violence*. Geneva: World Health Organization.

both have shown only a minor reduction: Babcock, J. C., Green, C. E., & Robie, C. (2004). Does batterers' treatment work? A meta-analytic review of domestic violence treatment. *Clinical Psychology Review, 23*, 1023–1053. DOI: 10.1016/j.cpr.2002.07.001.

The first study testing this approach: Zaring, A., Lawrence, E., & Marchman, J. (2015). A randomized controlled trial of acceptance and commitment therapy for aggressive behavior. *Journal of Consulting and Clinical Psychology, 83*, 199–212. DOI: 10.1037/a0037946.

In the next study Zaring conducted: Zaring, A., Bannon, S., & Berta, M. (2017). Evaluation of Acceptance and Commitment Therapy for domestic violence offenders. *Psychology of Violence*. DOI: 10.1037/vio0000097. The study was not fully randomized because the men picked their groups based on schedule, not knowing the kind of group they would get. Future research will need to test this finding in a bit more tightly controlled study.

how deeply and completely the same: Posth, C., et al. (2016). Pleistocene mitochondrial genomes suggest a single major dispersal of non-Africans and a late glacial population turnover in Europe. *Current Biology, 26*, 827–833. DOI: 10.1016/j.cub.2016.01.037.

a major study of the impact of diversity: Putnam, R. (2007). E pluribus unum: Diversity and community in the twenty-first century — the 2006 Johan Skytte Prize Lecture. *Scandinavian Political Studies, 30*, 137–174. DOI: 10.1111/j.1467-9477.2007.00176.x.

the world's best tests of people's implicit biases: There are other and more popular measures of implicit cognition but the RFT-based measure, the Implicit Relational Assessment Procedure (IRAP), has been shown empirically to be the best available measure. See, for example, Barnes-Holmes, D., Waldron, D., Barnes-Holmes, Y., & Stewart, I. (2009). Testing the validity of the Implicit Relational Assessment Procedure and the Implicit Association Test: Measuring attitudes toward Dublin and country life in Ireland. *Psychological Record, 59*, 389–406. DOI: 10.1007/BF03395671. That superiority is why I'm referring to RFT almost as if it's the only measure of implicit bias. It's not, and other methods are more popular, but empirically speaking it is the best. An example of how the IRAP is used is Power, P. M., Harte, C., Barnes-Holmes, D., & Barnes-Holmes, Y. (2017). Exploring racial

bias in a European country with a recent history of immigration of black Africans. *Psychological Record*, 67, 365–375. DOI: 10.1007/s40732-017-0223-6.

it was the telltale Ruth Esther: My middle daughter's name is Esther Marlena. She is an artist like her grandmother; her names are the middle names of my mother and my maternal grandmother. My mother, Ruth, said a tear came to her eye when she first heard the baby's name—it was a kind of closing of a painful circle that spanned generations.

if you try to suppress prejudiced thoughts: Hooper, N., Villatte, M., Neofotistou, E., & McHugh, L. (2010). The effects of mindfulness versus thought suppression on implicit and explicit measures of experiential avoidance. *International Journal of Behavioral Consultation and Therapy*, 6(3), 233–244. DOI: 10.1037/h0100910.

what psychological factors lead some people to settle into authoritarian distancing: Levin, M. E., Luoma, J. B., Vilaradaga, R., Lillis, J., Nobles, R., & Hayes, S. C. (2016). Examining the role of psychological inflexibility, perspective taking and empathic concern in generalized prejudice. *Journal of Applied Social Psychology*, 46, 180–191. DOI: 10.1111/jasp.12355.

Hoofstuk 20: Flexibel presteren

procrastination is predicted by psychological inflexibility: Gagnon, J., Dionne, F., & Pychyl, T. A. (2016). Committed action: An initial study on its association to procrastination in academic settings. *Journal of Contextual Behavioral Science*, 5, 97–102. DOI: 10.1016/j.jcbs.2016.04.002. See also Glick, D.M., Millstein, D. J., & Orsillo, S. M. (2014). A preliminary investigation of the role of psychological inflexibility in academic procrastination. *Journal of Contextual Behavioral Science*, 3, 81–88. DOI: 10.1016/j.jcbs.2014.04.002.

ACT programs for procrastination: Scent, C. L., & Boes, S. R. (2014). Acceptance and Commitment Training: A brief intervention to reduce procrastination among college students. *Journal of College Student Psychotherapy*, 28, 144–156. DOI:10.1080/87568225.2014.883887.

this cognitive skill correlates greatly with traditional IQ scores: An example, one of several, is O'Hara, D., et al. (2008). Temporal relations and intelligence: Correlating relational performance with performance on the WAIS-III. *Psychological Record*, 58, 569–583. DOI: 10.1007/BF03395638. A more recent and elaborate study is Colbert, D., Dobutowitsch, M., Roche, B., & Brophy, C. (2017). The proxy-measurement of intelligence quotients using a relational skills abilities index. *Learning and Individual Differences*, 57, 114–122. DOI: 10.1016/j.lindif.2017.03.010. Still another is O'Toole, C., & Barnes-Holmes, D. (2009). Three chronometric indices of relational responding as predictors of performance on a brief intelligence test: The importance of relational flexibility. *Psychological Record*, 59, 119–132.

a rise over several months: This work began with a humble pilot study: Cassidy, S., Roche, B., & Hayes, S. C. (2011). A relational frame training intervention to raise intelligence quotients: A pilot study. *Psychological Record*, *61*, 173–198. More elaborate and controlled studies have since appeared, including Hayes, J., & Stewart, I. (2016). Comparing the effects of derived relational training and computer coding on intellectual potential in school-age children. *British Journal of Educational Psychology*, *86*, 397–411. DOI: 10.1111/bjep.12114.

cognitive functioning improved moderately: Presti, G., Torregrossa, S., Migliore, D., Roche, B., & Cumbo, E. (2017). Relational Training Intervention as add-on therapy to current specific treatments in patients with mild-to-moderate Alzheimer's disease. *International Journal of Psychology and Neuroscience*, *3*(2), 89–97.

Gallup polls show: Examples include Mann, A., & Harter, J. (2016). The worldwide employee engagement crisis. Gallup. <http://news.gallup.com/businessjournal/188033/worldwide-employee-engagement-crisis.aspx>; Zenger, J., & Folkman, J. (2012). How damaging is a bad boss, exactly? *Harvard Business Review*. <https://hbr.org/2012/07/how-damaging-is-a-bad-boss-exa>.

the term job sculpting: A recent online discussion of their work is here: Butler, T., & Waldroop, J. "Job Sculpting: The Art of Retaining Your Best People." Harvard Business School. <https://hbswk.hbs.edu/archive/job-sculpting-the-art-of-retaining-your-best-people>.

leaders who manage with psychological flexibility: Peng, J., Chen, Y. S., Xia, Y., & Ran, Y. X. (2017). Workplace loneliness, leader-member exchange and creativity: The cross-level moderating role of leader compassion. *Personality and Individual Differences*, *104*, 510–515. DOI: 10.1016/j.paid.2016.09.020. Many studies show these kinds of results. See Reb, J., Narayanan, J., & Chaturvedi, S. (2014). Leading mindfully: Two studies on the influence of supervisor trait mindfulness on employee well-being and performance. *Mindfulness*, *5*, 36–45. DOI: 10.1007/s12671-012-0144-z. Also see Leroy, H., Anseel, F., Dimitrova, N. G., & Sels, L. (2013). Mindfulness, authentic functioning, and work engagement: A growth modeling approach. *Journal of Vocational Behavior*, *82*, 238–247. DOI: 10.1016/j.jvb.2013.01.012; Park, R., & Jang, S. J. (2017). Mediating role of perceived supervisor support in the relationship between job autonomy and mental health: moderating role of value-means fit. *International Journal of Human Resource Management*, *28*, 703–723. DOI: 10.1080/09585192.2015.1109536.

When leaders use individual rewards as incentives: A meta-analysis of that kind is provided by Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, *89*, 755–768. A later and larger meta-analysis found the same thing but added that contingent reward especially helped at the level of the person and transformational leadership at the level of the team: Wang, G., Oh, I. S., Courtright,

S. H., & Colbert, A. E. (2011). Transformational leadership and performance across criteria and levels: A meta-analytic review of 25 years of research. *Group and Organization Management*, 36, 223–270. DOI: 10.1177/1059601111401017. See also King, E., and Haar, J. M. (2017). Mindfulness and job performance: A study of Australian leaders. *Asia Pacific Journal of Human Resources*, 55, 298–319. DOI:10.1111/1744-7941.12143.

the Matrix: This is a well-known ACT tool. My version is upside down but Kevin approved it—doing so allows me to use the easy to understand metaphor of head and heart versus hands and feet. I would like to thank Crissa Levin, Mike Levin, and Jacque Pistorello for the thinking behind this change.

being in the flow of the game: Zhang, C. Q., et al. (2016). The effects of mindfulness training on beginners' skill acquisition in dart throwing: A randomized controlled trial. *Psychology of Sport and Exercise*, 22, 279–285. DOI: 10.1016/j.psychsport.2015.09.005. See also Gross, M., et al. (2016) An empirical examination comparing the Mindfulness-Acceptance-Commitment approach and Psychological Skills Training for the mental health and sport performance of female student athletes. *International Journal of Sport and Exercise Psychology*, 16, 431-451. DOI: 10.1080/1612197X.2016.1250802.

not only for physical sports, but other types of sporting competition or performance situations: Some examples are Salazar, M. C. R., & Ballesteros, A. P. V. (2015). Effect of an ACT intervention on aerobic endurance and experiential avoidance in walkers. *Revista Costarricense de Psicología*, 34, 97–111. Also look at Ruiz, F. J., & Luciano, C. (2012). Improving international-level chess players' performance with an acceptance-based protocol: Preliminary findings. *Psychological Record*, 62, 447–461. DOI:10.1007/BF03395813; and Ruiz, F. J., & Luciano, C. (2009). Acceptance and commitment therapy (ACT) and improving chess performance in promising young chess-players. *Psicothema*, 21, 347–352. There are also now beginning studies on ACT for musical performances: Juncos, D. G., & Markman, E. J. (2017). Acceptance and Commitment Therapy for the treatment of music performance anxiety: A single subject design with a university student. *Psychology of Music*, 44, 935–952.

competitive CrossFit athletes: Leeming, E. (2016). *Mental toughness: An investigation of verbal processes on athletic performance*. Unpublished doctoral dissertation. University of Nevada, Reno.

Otherwise they are at risk of injury: Timpka, T., Jacobsson, J., Dahlström, Ö., et al. (2015). The psychological factor "self-blame" predicts overuse injury among top-level Swedish track and field athletes: A 12-month cohort study. *British Journal of Sports Medicine*, 49, 1472–1477. DOI: 10.1136/bjsports-2015-094622. See also Nicholls, A. R., Polman, R. C. J., Levy, A. R., & Backhouse, S. H. (2008). Mental toughness, optimism, pessimism, and coping among athletes. *Personality and In-*

dividual Differences, 44, 1182–1192. DOI: 10.1016/j.paid.2007.11.011.

go through rehabilitation successfully: DeGaetano, J. J., Wolanin, A. T., Marks, D. R., & Eastin, S. M. (2016). The role of psychological flexibility in injury rehabilitation. *Journal of Clinical Sport Psychology*, 10, 192–205. DOI: 10.1123/jcsp.2014-0023.

Hoofstuk 21: Spiritueel welbevinden

Spiritual well-being is an important contributor: This highly cited study is one of many such examples: McClain, C. S., Rosenfeld, B., & Breitbart, W. (2003). Effect of spiritual well-being on end-of-life despair in terminally-ill cancer patients. *Lancet*, 361, 1603–1607. DOI: 10.1016/S0140-6736(03)13310-7. An example in actual physical health is Carmody, J., Reed, G., Kristeller, J., & Merriam, P. (2008). Mindfulness, spirituality, and health-related symptoms. *Journal of Psychosomatic Research*, 64, 393–403. DOI: 10.1016/j.jpsychores.2007.06.015.

no one universally agreed upon definition of spiritual wellness: An example of a measure in this area that fits with this broad definition is the Spiritual Well-Being Scale: Ellison, C.W. (1983). Spiritual well-being: Conceptualization and measurement. *Journal of Psychology and Theology*, 11, 330–340.; Another example is the Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being (FACIT-Sp): Peterman, A. H., Fitchett, G., Brady, M. J., Hernandez, L., & Cella, D. (2002). *Annals of Behavioral Medicine*, 24, 49–58. DOI:10.1207/S15324796ABM2401_06.

between a third and four-fifths of all adults: An example of a whole series of studies like that is Thomas, L. E., Cooper, P. E., & Suscovich, D. J. (1983). Incidence of near-death and intense spiritual experiences in an intergenerational sample: An interpretation. *OMEGA—Journal of Death and Dying*, 13, 35–41. DOI: 10.2190/G260-EWY3-6V4H-EJU3.

it almost seems wrong: Davis, J., Lockwood, L., & Wright, C. (1991). Reasons for not reporting peak experiences. *Journal of Humanistic Psychology*, 31, 86–94. DOI: 10.1177/00221678913111008.

the first article I wrote: Hayes, S. C. (1984). Making sense of spirituality. *Behaviorism*, 12, 99–110.

a more enduring sense of connection to this place of transcendence: There is today an active exploration of psychedelics as a way of achieving such experiences, not in the chaotic way in which that form of self-exploration spread across the world in the 1960's and 1970's, but in a way that fits more with their use as part of a spiritual journey. Michael Poolan's book summarizes this new area of study: Poolan, M. (2018). *How to change your mind: What the new science of psychedelics teaches us about consciousness, dying, addiction, depression, and*

transcendence. New York: Penguin. Properly used, psychedelics may indeed open the “doors of perception” (as Aldous Huxley famously titled his book on the topic), but even here repeated use does not mean repeated transformational experiences. The ACT community has established a special interest group to examine the use of ACT and psychedelics, and a special issue on the topic in the *Journal of Contextual Behavioral Science* is being planned for 2019 under the guidance of Jason Luoma. **divergent both/and thinking is central to these experiences:** The interest in psychedelics is making empirical study of profound spiritual experiences more possible, so that we can see if the relationship of thinking style to spiritual experience is more than a mere correlation. An example that supports the claim I am making here is Kuypers, K., Riba, J., de la Fuente Revenga, M., Barker, S., Theunissen, E., and Ramaekers, J. (2016). Ayahuasca enhances creative divergent thinking while decreasing conventional convergent thinking. *Psychopharmacology* 233, 3395–3403. DOI:10.1007/s00213-016-4377-8.

ACT has been embraced by many religious leaders: The program referred to in the paragraph began in 2013 and has spread across the world. The other specific interventions chaplains are trained in are motivational interviewing, and problem-solving therapy: “Mental Health Integration for Chaplain Services (MHICS).” [https://www.mirecc.va.gov/mentalhealthandchaplaincy/docs/MHICS%20Brochure%20\(2017-18\).pdf](https://www.mirecc.va.gov/mentalhealthandchaplaincy/docs/MHICS%20Brochure%20(2017-18).pdf). You can find a description of the training in the website for the U.S. Department of Veterans Affairs program in Mental Health Integration for Chaplain Services: <https://www.mirecc.va.gov/mentalhealthandchaplaincy/MHICS.asp>.

a book on ACT for use by clergy and pastoral counselors: For a review of this whole area of ACT work, see Nieuwsma, J. A., Walser, R. D., & Hayes, S. C. (Eds.). (2016). *ACT for clergy and pastoral counselors: Using Acceptance and Commitment Therapy to bridge psychological and spiritual care*. Oakland, CA: Context Press.

combine your ACT learning with your religious practice: I have edited a book for clergy and pastoral counselors. It is cited in the preceding endnote. Books on ACT for Christians have appeared, such as Knabb, J. (2016). *Faith-based ACT for Christian clients: An integrative treatment approach*. New York: Routledge; the workbook that goes with it is *Acceptance and commitment therapy for Christian clients: A faith-based workbook*. Another book of that kind is Ord, I. (2014). *ACT with faith*. D.F. Mexico: Compass Publishing. Several others are coming—searching online will find them.

A devotedly Christian Greek-Cypriot woman: Karekla, M., & Constantinou, M. (2010). Religious coping and cancer: Proposing an Acceptance and Commitment Therapy approach. *Cognitive and Behavioral Practice*, 17, 371–381. DOI: 10.1016/j.cbpra.2009.08.003.

Hoofdstuk 22: Ziekte en invaliditeit

Even in expert hands: I'm part of the CBT community, broadly speaking, but ACT comes out of concern for challenging thoughts. Meta-analyses (summaries of entire sets of studies) conclude that it is not very helpful; see Longmore, R. J., & Worrell, M. (2007). Do we need to challenge thoughts in cognitive behavior therapy? *Clinical Psychology Review*, 27, 173–187. Also, when you take out these elements of CBT and leave in only the behavioral elements, outcomes are the same or better. The classic study of that kind was Dimidjian, S., et al. (2006). Randomized trial of behavioral activation, cognitive therapy, and antidepressant medication in the acute treatment of adults with major depression. *Journal of Consulting and Clinical Psychology*, 74(4), 658–670. DOI:10.1037/0022-006X.74.4.658.

But that is not nearly enough: The literature varies, but a meta-analysis of the impact of education on glycosylated hemoglobin has called the improvement “modest”; see Ellis, S. E., Speroff, T., Dittus, R. S., Brown, A., Pichert, J. W., & Elasy, T. A. (2004). Diabetes patient education: A meta-analysis and meta-regression. *Patient Education and Counseling*, 52, 97–105. DOI: 10.1016/S0738-3991(03)00016-8. The benefits of such educational efforts do outweigh the costs of their implementation, however; see Boren, S. A., Fitzner, K. A., Panhalkar, P. S., & Specker, J. E. (2009). Costs and benefits associated with diabetes education: A review of the literature. *Diabetes Educator*, 35, 72–96. DOI:10.1177/0145721708326774.

My good friend Kirk Strosahl: Kirk and Patti have numerous books and articles on this topic. See, for example, Robinson, P. J., Gould, D. A., & Strosahl, K. D. (2011). *Real behavior change in primary care: Improving patient outcomes and increasing job satisfaction*. Oakland, CA: New Harbinger.

survivors of colorectal cancer: This study showed the main outcomes: Hawkes, A. L., Chambers, S. K., Pakenham, K. I., Patrao, T. A., Baade, P. D., Lynch, B. M., Aitken, J. F., Meng, X. Q., & Courneya, K. S. (2013). Effects of a telephone-delivered multiple health behavior change intervention (CanChange) on health and behavioral outcomes in survivors of colorectal cancer: A randomized controlled trial. *Journal of Clinical Oncology*, 31, 2313–2321. A second study reported psychosocial outcomes such as quality of life: Hawkes, A. L., Pakenham, K. I., Chambers, S. K., et al. (2014). Effects of a multiple health behavior change intervention for colorectal cancer survivors on psychosocial outcomes and quality of life: A randomized controlled trial. *Annals of Behavioral Medicine*, 48, 359–370.

Studies have shown similarly promising results: This literature is voluminous. Anyone can test the veracity of my claim by searching for “psychology flexibility” or “psychological inflexibility” and [enter physical health areas here] in Google Scholar. For a recent review, see Graham, C. D., Gouick, J., Krahé, C., & Gillanders, D. (2016). A systematic review of the use of Acceptance and Commitment Therapy

(ACT) in chronic disease and long-term conditions. *Clinical Psychology Review*, 46, 46–58.

a rare representative sample: Gloster, A. T., Meyer, A. H., & Lieb, R. (2017). Psychological flexibility as a malleable public health target: Evidence from a representative sample. *Journal of Contextual Behavioral Science*, 6, 166–171. DOI: 10.1016/j.jcbs.2017.02.003.

Research has shown that elderly people: Davis, E. L., Deane, F. P., Lyons, G. C. B., & Barclay, G. D. (2017). Is higher acceptance associated with less anticipatory grief among patients in palliative care? *Journal of Pain and Symptom Management*, 54, 120–125. DOI: 10.1016/j.jpainsymman.2017.03.012; Romero-Moreno, R., Losada, A., Marquez-Gonzalez, M., & Mausbach, B. T. (2016). Stressors and anxiety in dementia caregiving: Multiple mediation analysis of rumination, experiential avoidance, and leisure. *International Psychogeriatrics*, 28, 1835–1844. DOI: 10.1017/S1041610216001009; and Losada, A., Márquez-González, M., Romero-Moreno, R., & López, J. (2014). Development and validation of the Experiential Avoidance in Caregiving Questionnaire (EACQ). *Aging & Mental Health*, 18, 293.

Scandinavian countries spent: Organisation for Economic Co-operation and Development. “Public Spending on Incapacity.” <https://data.oecd.org/socialexp/public-spending-on-incapacity.htm>.

The medical cost of chronic pain: Reuben, D. B., et al. (2015). National Institutes of Health pathways to prevention workshop: The role of opioids in the treatment of chronic pain. *Annals of Internal Medicine*, 162, 295–300.

over half of the U.S. population experienced pain: Nahin, R. L. (2015). Estimates of pain prevalence and severity in adults: United States, 2012. *Journal of Pain*, 16, 769–780. DOI: 10.1016/j.jpain.2015.05.002.

the fifth vital sign: In January 2018 the Joint Commission, which accredits hospitals, claimed they said no such thing (http://www.jointcommission.org/joint_commission_statement_on_pain_management/)—but that is not correct. A careful reading shows that they *did* use the term and they *did* suggest that all patients be given a pain assessment, and when combined with the marketing of pharmaceutical companies, that was enough for the problematic use of opiate medications to get traction. Everyone wants to run from responsibility for the opiate crisis, but many hands by many players are not clean and the Joint Commission played a key role, even if inadvertently.

persisting aversive memory network: De Ridder, D., Elgoyhen, A. B., Romo, R., & Langguth, B. (2011). Phantom percepts: Tinnitus and pain as persisting aversive memory networks. *Proceedings of the National Academy of Sciences of the United States of America*, 108, 8075–8080. DOI: 10.1073/pnas.1018466108. The case of phantom limb is a powerful demonstration of that network. See Nikolajsen, L., & Christensen, K. F. (2015). Phantom limb pain. In R. S. Tubbs et al. (Eds.), *Nerves*

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the blending of Ostrom's principles and ACT: You can explore this protocol for free and if it applies to groups you care about you can get help in applying it. Visit <http://www.prosocial.world>.

Epiloog

Hold Out Your Hand: This beautiful poem is published by permission of the author. Julia has a book of her poems available called (fittingly for me and for the last page of this book) *On the Other Side of Fear* (Balboa Press, 2012), and you can find her e-books at <http://www.etsy.com/shop/juliafeh>.