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Stress, Resilience and Positive Brain States

If you are distressed by anything external, the pain is not due to the thing itself but to your own estimate of it; and this you have the power to revoke at any moment. (Marcus Aurelius, Roman Emperor)

First, an experiment: Much of what we know about stress is derived from the study of laboratory animals placed in situations of uncontrollable stress. Place a rat in a small container with a metal mesh floor. Give him occasional, but repeated, mild and inescapable electric shocks. His behaviour will change over time; at first, he will be very active and attempt to escape the container. Eventually he will give up and just sit there—engaging in ‘learned helplessness’—in human terms, this is the syndrome characterised by despondency, apathy, anhedonia (or loss of pleasure) and loss of behavioural kinetics that occurs after major life stressors. Next, examine his adrenal glands—these are involved in the secretion of stress hormones, and are located on the kidneys—these will be found to be enlarged. His stomach may show evidence of ulcers, and his immune system may be compromised. Do the experiment again, but place a small piece of wood in the container. Now, the rat will chew the wood; his adrenal glands will be much less enlarged, his stomach will have fewer ulcers, and his immune system will be less compromised. Finally, do the experiment again: place the rat in the container with another rat; shock them as before. Now, they will fight, bite or nip each other and generally be aggressive toward each other; they will not show the learned helplessness characteristic of the lone rat. Now, examine the adrenal

glands and stomach; they will appear normal, and the immune system will also appear normal. What lessons can be drawn from this experiment? The simple but trite lesson is that stress is bad for you; more importantly displacing stress via some other behaviour can moderate or reduce the effects of stress entirely - even if you are a laboratory rat.

Popular media suggest that modern society is afflicted by a stress epidemic: a Google search (January 2017) yields 693,000,000 hits for 'stress' and 17,000,000 hits for 'stress epidemic'. Similarly, a Lexis/Nexis search of 'European News Sources' yields 957 news-stories in a *one-week* period on how stress affects the general population. The European Commission has defined work-related stress 'as a pattern of emotional, cognitive, behavioural and physiological reactions to adverse and harmful aspects of work content, work organisation and the working environment...[it is] characterised by high levels of agitation and distress and often feelings of not coping'. Stress is a major cause of neuropsychiatric disorder in contemporary society: stress-related disorders such as anxiety, depression and post-traumatic stress disorder (prevalent after car crashes and physical assaults) are a major burden on the healthcare systems of western societies and diminish individual quality of life. Current EU estimates suggest work-related stress costs over €20 billion p.a. in time and health bills; it is the second most common occupational health problem (after back pain). Stress also damages animal health: substantial crowding among cattle on farms leads to increases in mortality, for example. Campaigns to relieve sources of stress caused by crowding and housing conditions in farm animals are not without foundation.

Stress is a regrettably pervasive phenomenon in modern society. Occupational stress costs organisations and society at large enormous sums of money on an annual basis as well as markedly affecting the health, quality of life and wellbeing of many individuals. A natural question is to focus on how it is that we can learn to cope with stress, what our response to it should be, and how we should adjust both our organisations and our own individual behaviours to better cope with the stressors that we encounter during everyday life. Two key concepts that we're going to deal with in this chapter are that of resilience and that of reserve. These are distinct but related concepts that focus on how it is that we are able to cope with the stressors that are presented to us. One way of thinking about resilience is that it is our capacity to bounce back when confronted with significant adversity, whereas the reserve is possibly better thought of as being more akin to the resources that we can

draw on that allow us to do that bounce back. In other words, reserve is what we have ‘in the petrol tank’, and resilience is our ability to operate the machinery of the car quickly and adaptively to avoid a crash.

Building cognitive and affective resilience and neuroreserve within individuals and teams is a key component of enhancing performance at work. An allied concept to that of resilience is known as stress management—being able to cope and recover from adversity and stress. There has been recent important research on building resilience in individuals working in high-pressure environments (especially in the military, but also in sports). There are object lessons to draw from this kind of work regarding team building and cohesion that translate to other high-pressure environments. Organisations can take steps to institutionalise supporting and developing resilience against the effects of stress. These in turn can pay off in terms of enhanced staff wellbeing.

What Is Stress?

There are many contemporary definitions of stress, but a particularly useful one is provided by David Diamond and Jeansok Kim, where they emphasise that stress consists of three components. The first is heightened excitability or arousal in the brain and body; the second is a perception that present or future events will be unpleasant; the third is a lack of controllability over these events. Consider the responses of two people who are on a rollercoaster ride. One enjoys the rollercoaster enormously, and the other feels sick at the thought of going on the rollercoaster and indeed gets sick as a result of going on the rollercoaster itself. What is the key difference between these two individuals? Well, where stress is concerned, what we would see is both individuals are in a heightened state of arousal, and both individuals would agree that once you’re strapped into the trolley car on the rollercoaster, you have no control over what’s about to happen to you. At the start of this little experiment it would be very difficult, based just on measures of heart rate, sweating of the palms and stress hormone levels present, to tell which person is going to be the one who will hate the experience and which person will enjoy the experience. The answer here should be clear: it is the second component, how we perceive what it is that is going to happen to us, that makes all the difference. In other words, how we engage in the appraisal of the situation before us is what determines how stressful it is likely to be. One person sees the loop-the-loop as tremendously exciting, and the other person sees the loop-the-loop as a near-death experience. So the evaluation that we

place on what is about to happen to us is the key thing in terms of our response to a stressor.

The point here is that our response to stress (the ‘stress response’) is remarkably similar to a broad range of stressors. And the response itself might be adaptive, because it allows our body and brain to get ready to cope with the stressor that is about to be imposed upon us. The problem arises when the stressor is chronic and inescapable. This may cause problems for general health (in terms of heart problems or immune functions) but also problems for brain function generally, and also for behaviour. And it may well be the case that the stress response itself is more damaging than is the stressor. For example, for someone who is being bullied at work, the anticipation of the conversation, the anticipation of the behaviour of the bully—the shouting, the unreasonableness, the changeability of moods—all of these things may cause a chronic activation of the stress response system, which endures over time, and it is this response that causes problems arising from stress more generally. Damage from the stress response is most likely to arise when the stress itself is unremitting (for example the chronic wear and tear that might be associated with workplace bullying) and an inability to distance oneself from the stressor, and an inability to shut down or quieten down the stress response. It needs to be emphasised, though, that not all stress is bad. In fact, some moderate level of stress that is copeable, and that can be learned from, can be enriching because the stressor can be managed and leads to personal growth and increased effectiveness or enhanced competence at a particular task.

The science of stress is advancing rapidly: it is now known that the stress response is controlled by the hypothalamic-pituitary-adrenal (HPA) axis, a brain circuit shared with all other animals possessing a spinal cord. The HPA axis is also substantially regulated by the hippocampal formation, which is also centrally implicated in the processing of information about memory. Another structure that provides a strong input to the HPA axis is the frontal lobes, where the ‘executive functions’ of the brain are largely housed. Conscious thinking is also largely housed in and integrated and sustained by the frontal lobes. We regularly encounter stressors in life: Tom, the business executive in the prologue manifests several signs of stress. He feels his heart rate has risen and his mouth is dry; he fiddles and fumbles small objects, showing what is called a ‘displacement activity’ in an unconscious effort to relieve stress. His words are hesitant and halting and require some conscious effort to utter. His rehearsed lines have seemingly disappeared and he has some transient deficits in what

should be a fairly normal act of recall. He experiences a tightening of the chest and, eventually, when subjected to a modern form of predator stress (the assault on his carefully-laid plans and the destruction of his future career), he succumbs to a heart attack.

What underlies these widely experienced phenomena? Behavioural stress caused by uncontrollable but mild electric shocks, by public speaking or even watching certain movies, triggers a reliable and straightforward sequence of events. These start with the evaluation of events in the environment, and these is the key point underlying all of the modern stress literature. The experience of stress is evaluative and perception-based—in other words, it relies on cognition, that is, on what you think, on your mental set, and how you consciously or not frame the events occurring in your environment. It follows therefore that controlling the contents and trajectory of thinking is central to controlling the stress response. There are several techniques from cognitive-behaviour therapy (CBT) that can be used, with practice, that have been shown to be effective at blunting or reducing feelings of stress, without the need for drugs or alcohol.

The Effects of Chronic, Unremitting Stress

The stress response is vital, allowing us to respond rapidly to threat. Physiologically, the release of corticotrophin-releasing hormone (CRH) from the hypothalamus into the portal circulation to the anterior pituitary, which releases adrenocorticotrophic releasing hormone (ACTH) into the bloodstream, causes corticosterone (rat) or cortisol (human) release from the adrenal cortices. ACTH initiates ‘fight or flight’ responses, mobilises energy stores, decreases reflex thresholds and increases respiratory rate, muscle tension and gastric motility. These effects, if short-lived, are generally positive; pathogenic consequences for cognitive neurobiological functions ensue, however, from elevated and prolonged increases in corticosterone levels.

The literature on stress in humans and animals is enormous. I propose to here provide some exemplar findings rather than a complete summary of the literature. (Readily accessible sources on the effects of chronic and sustained stressors on the human brain and body include O’Mara 2015). In one study, Sonia Lupien and her colleagues (1998) showed that humans who have persistently high levels of the human stress hormone cortisol in their bloodstream have a shrunken

(or atrophic) hippocampal formation. What does this mean? The hippocampal formation is a key part of the brain's memory system, and these individuals have, in lockstep with their shrunken hippocampi, deficits in memory performance, something that should be extremely concerning to people whose jobs require them to have quick access to information stored in their long-term memories to perform their jobs appropriately. It can't be argued that these results are merely a sampling error, because we know from work conducted by Dominique de Quervain and colleagues (De Quervain et al. 1998) that volunteers who take hydrocortisone tablets at high doses, under medically controlled conditions, suffer from memory problems. They show about a one-third decrease in their capacity to recall previously learned word lists. Even more impressively, we know from work conducted by Charles A. Morgan III and his colleagues at Yale University Medical School that elite combat soldiers who are selected specifically for their exceptional performance are also subject to the effects of severe stressors. In one particularly important paper, Morgan showed that in combat soldiers drawn from the special forces who were subjected to simulated combat, where live ammunition was used and where they were sleep-deprived, undernourished and dehydrated, that all aspects of both cognitive functioning and all aspects of mood that were measured showed a precipitous decline as a result of the severe stressor that they were exposed to.

Everyday Cognitive Wear and Tear

There are many longitudinal studies underway of cognitive function in adults, where it is assessed regularly through the lifespan. Similarly there are many studies underway that do cross-sectional comparisons of cognitive function in people in their 20s, 30s, all the way up to their 90s. As you might expect, depending on the study population, age, educational attainment level, health status of the individuals involved and a variety of other variables, there are dramatic changes in cognitive function across the life course. For example, in studies by Lusardi and colleagues (Lusardi and Mitchell 2007a,b, c), where the following question was asked 'If the chance of getting a disease is 10%, how many people out of 1,000 would be expected to get the disease?', the fraction of people who answer 100 is nearly 90% at the age of 50, but is down to 50% at the age of 90. In a slightly more complicated question, Lusardi and colleagues asked 'If 5 people all have the winning numbers in the lottery, and the prize is \$2 million, how much will each of them get?' The fraction who answer correctly \$400,000 at the age of 50 is only about 55%, but shockingly, is less than 10% at the age of 90. In other

studies, it seems to be the case that there is a relative stability in many cognitive functions (including inductive reasoning, spatial orientation, numeric ability, visual ability, verbal memory) across the middle years of life with what looks like a fairly precipitous decline once people move into the late 60s or early 70s. One problem with cross-sectional studies is that they are comparing the performance of a 50 year old or a 60 year old or a 70 year old now, to a 20 year old or a 30 year old now, which is of course not the best comparison. A 50 year old now has grown up in a qualitatively different environment to a 50 year old at the turn of the 1900s. A 50 year old at the turn of the 1900s had a rather low life expectancy. A 50 year old in 2016 can, depending on the country they live in, comfortably look forward to 30, perhaps 40 years more life, in the absence of life-limiting illnesses such as cancer or heart disease. Furthermore, a 50 year old now, compared to a 50 year old 100 years ago, will be much better educated, on average; will have grown up in a warm, rather than damp, house, on average; will have been better fed, on average; will have benefited from vaccines, antibiotics, and the whole panoply of modern medicine; in addition to all of the other conveniences that modern life has to offer.

It is also the case that there is enormous variability between individuals. A signal example is to compare two Nobel Prize winners, namely Bertrand Russell and Iris Murdoch. Russell was to win the Nobel Prize for literature, although he was a philosopher, and would in the last 20 years of his life (from his mid-70s) produce approximately 20 books and be involved in the founding of the Campaign for Nuclear Disarmament (CND), amongst many other activities. Iris Murdoch was also to win the Nobel Prize for literature. She was principally a novelist who had been trained in philosophy. She was, sadly, to succumb to Alzheimer's disease and die in her early 70s. The contrast between these two individuals is quite remarkable. We can ask what went wrong with Iris. Equally we can ask what went right with Bertrand. One stance is to focus on the negative problem; the other is to focus on the positive outcome. And we are at last starting to understand the components of resilience and reserve. One controversial but suggestive set of studies by Adam et al. (2007) and Rohwedder and Willis (2010) suggest that the earlier a fraction of the population retires, the greater the decline in cognition that can be observed at a country level in the retired fraction of the population. The data appear to show a reasonably strong relationship between countries like the United States and Sweden, with comparatively later ages of retirement, and greater levels of functioning in that fraction of the population, as compared with other countries such as Spain, France and Belgium, which appear to have slightly lower levels of cognitive function in that early retirement fraction of the population. The key hint here, of course,

revolves around the daily challenge and stimulus provided to cognition by continuing to be engaged in the workforce.

Resilience and Reserve: Inoculating Yourself Against the Effects of Toxic Stress

The American Psychological Association defines resilience as ‘the process of adapting well in the face of adversity, trauma, tragedy, threats, or even significant sources of stress’. Thus, the emphasis of this widely accepted definition is to suggest that a resilient individual is somebody who has the skill, capacity or ability to avoid mental and physical outcomes that would be in some sense adverse as the result of the toxic stress that they have been exposed to. How widespread is resilience in the population at large? Estimates vary, but depending on the study type, and the toxic stressor that the person has been exposed to, estimates would suggest that anywhere between about a third and two-thirds of individuals are left without any major psychiatric problems as the result of having been exposed to a major traumatic event or series of events. There are important caveats to this suggestion, however, and we will deal with those further on in this chapter. Resilience also appears to be a multi-dimensional phenomenon. People can show great capacity to cope with adversity or stress in one domain of their lives (for example, with regard to academic functioning) but not in other domains (for example, where social functioning or physical function is concerned). Some people can navigate difficult social situations with aplomb, but would be challenged to run a marathon in full battle dress while live ammunition is being fired at them. Others may show quite the reverse capacity. The good news from recent research is that resilience is a learnable ‘character skill’ that can be acquired, incremented and maintained within the individual. In other words, the level of resilience that you have at a particular point in time is dynamic and subject to development, and it is not simply an enduring and fixed trait of your personality or genetic load.

What Promotes Resilience?

By now, many studies have shown that there are strong positive associations between certain factors and resilience in the individual. These factors are as follows. First, people who are better educated on average tend to have higher

levels of resilience, perhaps because they have greater levels of knowledge to draw upon, which allow them to cope with the adverse or toxic stress that they are being exposed to. Second are high levels of social support. People who are deeply embedded within dense social networks and who can easily answer the question ‘Who have I got to rely on?’ tend to be more resilient, proof of the age-old adage that a burden shared is a burden halved. Third, people who are older tend to show greater levels of resilience than people who are younger. There are many reasons for this possibility. Some revolve around the idea that older people tend to take a more positive view of life; they tend to have great life experience and are able to cope with adversity as a result of that life experience. Fourth, an absence of early life trauma tends to be particularly important, although it is possible to overstate the significance of this factor. It was identified as an important variable in life outcomes for former residents of institutions who were institutionalised in difficult life circumstances early in life and in individuals who have grown up in toxic environments, including difficult inner-city environments, or indeed environments that are subject to the stressors and predation that comes with civil conflicts or war. Fifth, a general optimistic bias in terms of one’s psychological orientation towards life, rather than a pessimistic bias, that is to say, individuals who are able to look on the bright side, who look for the silver lining in every cloud, tend to be more resilient than individuals who don’t. Finally, specific training, focused on, in particular, how it is that we appraise the situation that we are exposed to, can assist markedly with resilience.

Cognitive Flexibility, Need for Control, and Post-Traumatic Growth

Cognitive flexibility and the need for control really come down to the answers that you would give to the following question. How open to learning, to novel experience and change are you? The socially desirable thing to say, of course, is that you’re very open to learning, that you’re comfortable with change and that you’re happy to engage in new experiences. However, an honest answer to the differing dimensions of this question might throw up a very different set of conclusions. Are you happy when your business requires you to learn new processes and procedures? Are you able to adapt quickly and appreciate the need for a new form of organisation within your business? Do you feel that if your role is changed that this involves some loss of control, and this loss of control is in some way very unpleasant? Post-traumatic growth is a

separate concept, and this is really the ability to profit from an unpleasant, stressful or adverse experience.

Control, as a psychological concept, involves several related concepts. The first is how you perceive your ability to handle the challenges of life (how self-confident you are about your ability to manage things). Second, it involves understanding and recognising that certain factors in one's life are external, and how you characteristically respond to these external changes is really the key. This is captured in a concept known as 'locus of control', which refers to the idea that we are all capable of interpreting what happens to us as deriving from our own actions or as visited upon us by an uncaring external world. Locus of control is captured in questions like the following. Do you agree, don't know or disagree with the following contentions? 'Success in life is pretty much determined by forces outside our control.' 'What happens in my life is often beyond my control.' What we see when we look at population responses to questions like this is a really very marked, age-related, income-related and country-related responding. One survey [xx get citation] suggests, for example, that people in the USA are most likely to disagree with the contention that success in life is determined by forces beyond the control of the individual, whereas individuals in Bangladesh are most likely to agree with that contention. When you look at age as a factor, you find that people in their mid-20s to mid-30s are most likely to disagree with the idea that what happens in their lives is beyond their control, whereas people in their early 60s to mid-70s are much less likely to disagree with that contention. A similar pattern is seen in respect to income. People who have low incomes tend to be more willing to agree with the contention that what happens in their lives is beyond their control, whereas people with high incomes (unsurprisingly) are least likely to agree with this contention.

When we look at the workplace, what we see is that people who have greater control and greater autonomy over their work tend to suffer lesser levels of job-related stress. This can be demonstrated in a wide variety of ways. Steptoe and colleagues (2004), for example, showed that people at work who can decide when they take a break have lower levels of ambulatory blood pressure than people who are not allowed control over things like when they can take a break. There is an important lesson for employers here, which is that humans are not machines and our bodies are not machines. Humans need care, they need maintenance, and they need some degree of control over their circumstances to perform optimally. Scheduled and timetabled toilet breaks, for example, for somebody who may have stomach problems would be seen to be extremely aversive and unpleasant. Another way of engaging in control has already been mentioned, namely cognitive reappraisal (Seligman 1991). Cognitive reappraisal refers to

how it is that we think about what is happening to us and how we reframe the events in our lives so that we can find some form of meaning or some positivity in a crisis (for example, reframing a crisis as some form of opportunity: to engage in a new business, to develop new markets, or simply to think about other ways of doing what you do). A great example is how Marvel Comics reengineered themselves away from being the writers of comic books to being an entertainment company. Marvel as a comic book enterprise would now be bankrupt if they had persisted with their old business model when the internet changed everything utterly. When they reframed themselves as an entertainment company with a rich stream of characters and stories to mine, which in the digital age could be turned into films, could be repackaged and resold as digital editions, then Marvel turned itself around dramatically as a company.

Martin Seligman has provided a simple three-point recipe for engaging in cognitive reappraisal. Essentially, cognitive reappraisal relies on the idea that you need to change your explanatory style. Explanatory styles refer to how you characteristically explain what happens to you in your life. Seligman suggests that you need to practice three changes to your explanatory style. The first is to shift the explanation from being internal to external. This means saying out loud to yourself that ‘it’s not always the case that bad things happen because I’m a bad person and I deserve it’, but rather that bad events can happen because of chance, and they aren’t necessarily your fault. Your default might be to blame yourself; the shift is to attempt to blame the outside world. A more important shift that Seligman emphasises is from a global explanatory style to a specific explanatory style. A global explanatory style occurs when you say that when something has happened that’s wrong in your life, it’s your fault because you’re a bad person and you deserve it, and it indicates that something is terribly wrong with your life; and instead you say ‘This is just a small, narrow thing, and it has no implications for the rest of my life’. The final component is to shift from a permanent to an impermanent explanatory style, in other words, saying to yourself that this thing—whatever it happens to be—can be changed, and it’s important that it should be changed because that allows me to exert some sense of control over my environment again. These are habits of thought, and as a result they require some considerable degree of work or attention. One way of doing this is by means of journaling. That is, at the end of the day, write down the things that have happened to you that are pleasant and unpleasant. Then, with the unpleasant things, think about explanations for them. Write down your characteristic form of explanation. Then write down how you can change that explanation, focusing on the three dimensions already mentioned, shifting the explanatory style from internal to

external, from global to specific and from permanent to impermanent. These are very powerful tools that allow you to change how it is that you characteristically think and feel about what it is that happens in your world.

The Ageing Brain

Senescence—the ageing of the brain—is a pervasive phenomenon in developed and increasingly in developing societies. The media stereotype and common perception of ageing is one of steady decline, loss of cognitive and other faculties, loss of dignity and eventual death. The picture of uniform decay and eventual death is a beguiling and perhaps self-fulfilling one, but it is only a component of a more complex overall picture. A more complex picture is emerging of the changes undergone by the ageing brain, the capabilities and capacities it retains, how the worst effects of ageing might be mitigated and of the continued promise of a fulfilling life that endures, despite the ageing process. The gain in terms of continued personal autonomy and dignity, as well as the reduction in social and economic costs, will be very large indeed if we can ameliorate some of the consequences of ageing. The changes required in terms of behavioural routine to moderate the effects of ageing are quite modest. The trick with ageing is to load the dice as early as one can to slow down the inevitable changes that will occur; this means engaging in behavioural changes that serve to maintain the brain for longer in an optimum state. Another key insight of modern neuroscience, reflected in the idea of life-long neuroplasticity, is that *behaviour changes the brain*, in addition to the brain changing behaviour. The relationship between brain and behaviour is reciprocal, not unidirectional.

Wellbeing, Mindfulness and Positive Brain States

Wellbeing is the subjective sense of feeling good and also of functioning effectively both over time and when challenged by circumstance. Wellbeing also includes the idea of being able to experience negative emotions and being able to manage them appropriately. Being able to deploy good coping skills when tested (such as not losing your temper when provoked by an unreasonable colleague) and controlling impulses when confronted with rewards (*I WILL ignore the dessert option!*) are all central to wellbeing and functioning effectively.

We are, it appears, undergoing something of a ‘mindfulness’ revolution. Mindfulness is one of those all-pervasive phrases used in a whole variety of differing ways to mean differing things. Some people seem to regard it as a

silver bullet that will cure all the ills that befall us; others are much more sceptical. Recently it has become possible to test some of the claims that are being made for mindfulness, defined roughly as a state of being aware of yourself and the pattern of your thoughts and feelings as they traverse your mind while you are in the moment. Mindfulness as a practice owes much to traditional methods of meditation, and meditative practices of differing types have been around for at least some thousands of years, often associated in particular with eastern religious practices such as Buddhism.

I want to suggest here that there is a narrow sense of mindfulness, which has already been hinted at in the first chapter, which we all can profit from. As noted already, our mental lives are very busy. Unprompted, a stream of thoughts and feelings parades itself across our consciousness, and we have little insight from introspection as to the sources of this activity. We also know that cognition did not arise to make us perfect, rational calculators. It happens too quickly and it uses many heuristics to serve the immediate adaptive needs of the present. Being mindful—in this narrow sense—is very useful, because the awareness of the limits to one's cognition can point the way to better ways of making decisions. Similarly, being mindful in this narrow sense is useful for understanding one's own stress response and how to go about ameliorating it. Regrettably, the broader claims about mindfulness as a therapeutic intervention are beyond the space available here. Just remember, though, when someone attempts to sell you a 'mindfulness' solution for whatever ails you, your business or your organisation—ask for the evidence that this is solution works, and works better than other alternatives, and apply the tools for thinking outlined in [Chapter 1](#). There will be few-to-no large-scale, double-blinded, randomised controlled trials available with proper statistical power conducted over the long term to allow you to assess the evidence for the efficacy of mindfulness interventions within organisations. There will be plenty of case studies, however. And this is not to say that mindfulness doesn't work at an organisational level—what we need is lots of evidence that it does. And that it is better than the other alternatives.

Exercise

1. Think back to a personally experienced, stressful event at work. What did you think about it at the time? What do you think about it now? What did you learn from it?

2. Think about a stressor that arises from within your organisation. What can be done to ameliorate the stressor? What steps can you and your organisation take to mitigate the stressor in future? What can you learn from it?
3. Think again of a particular stressor that usually gives you some high degree of stress—such as an important presentation to an important client. Think of the ways that you can engage in cognitive reappraisal of the stressor so that the whole experience becomes easier to deal with.
4. Have you attempted to build some reserve in your life—through regular sleep and regular aerobic exercise in nature?
5. Had Tom Spengler attempted to build resilience in his own life? In his organisation? What steps would you have taken had you been in his place, but knowing what you know now?

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