Recalibrating Resilience

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Abstract

Individual resilience training is a natural fit with systems to help people recover from injury, but practice has not lived up to the promise of the concept. The problem is not with the idea, but with the way that it has been applied. A conceptual model of the operating mechanism of resilience is described. The model implies that individuals have a variety of different skills that contribute to resilience, and research demonstrates that individual preference among those skills varies significantly. Creation of an individualized training protocol that matches with the preferences and personality of the trainee is necessary to facilitate practice that will lead to good results. The operational mechanism for resilience is discussed, as is a tool for profiling the resilience skill preferences of individuals. The utilization of the new tool to create a scalable individualized training protocol applicable to both claimants and the staff who serve their needs is discussed.

Keywords: Individual resilience, workers' compensation, secondary harm, burnout, turnover, neuroplasticity

What's wrong with "resilience"?

Resilience sounds great on paper. Make the injured person more able to bounce back from whatever challenges confront them and they are more likely to return to work and their pre-injury lives. Achieve that goal and the compensation system should be able to focus on the people whose circumstances are more serious, allowing the entire system to be more efficient and effective. But resilience has been a disappointment. There is a disturbing tendency for people to knock back resilience training or fail to practice the new skill enough to make it an habitual response to stress. A positive return on investment has not been demonstrated with any consistency. New research suggests that we've failed to take into account the differences between individuals in the design of our resilience programs, and that a properly designed and delivered resilience training protocol shows far greater potential.

About 20 years ago, some researchers in early education looked at a population of disadvantaged school children. Their hypothesis was that the circumstances of their birth and early childhood were so challenging that they predicted poor educational and life outcomes for them. To their surprise, a percentage of the children did not fail under the crushing weight of their environment and were able to "bounce back" from the adversity they had experienced and thrive. The term "resilience" was borrowed from materials science to describe the ability to "bounce back". Masten (2001); Masten (2004).

Studies of this new phenomenon followed and correlations between characteristics of the children that had not failed were noticed and tested. The correlation studies were extended to adults, who also sometimes showed a remarkable ability to rebound from adversity. Tests were devised to detect the presence of this characteristic. Smith (2008); Campbell-Sills (2006); Resnick (2011). Soon individuals who had been through adversity began to give motivational talks about their experience with recovery, and the new testing instruments were applied to people who practiced their techniques to "prove" that learning the speaker's technique was the road to resilience. Chiesa (2009).

"Resilience training" became a high visibility endeavor in management circles, and research was done to see if the characteristic might be valuable for people recovering from injury. Not surprisingly, the results were promising.   When tested, a slight majority of workers tested in the medium range with respect to resilience and about equal numbers tested as having either "high" or "low" resilience. When comparing highly resilient injured workers with workers with low tested levels of resilience, those with low resilience incurred about three times the claim costs and required about four times the number of weeks to return to work. When looking at the population of people who had filed claims for mental illness or injury, 55% of the sample demonstrated low resilience and only 11% demonstrated high resilience. Those with low resilience reported themselves to be less physically and mentally

ready to return to work than those with high resilience. Odgers (2013). All of those results seem to "fit" with our everyday experience of the claims environment.

It would seem to be a "natural" for claims systems to provide injured workers, or at least a subset with psychosocial indicators associated with poor recovery outcomes, to be given resilience training. Make the injured worker more able to bounce back from the adversity associated with the injury and the stress of navigating the workers' compensation system, and the improvement in outcomes should far outweigh the cost to provide the training. Savings in claims costs should easily pay for the training, and the worker not only recovers better, but has a new skill. The theory is good, but the ability to effectively train has proven elusive. Bullen (2008); Horan (2016)

To understand why resilience training has been a disappointment, it would be helpful to step back and ask the question, "How does resilience actually work?" Surprisingly, that question seems to have been placed in the "too hard" bin by the industry that grew up to take advantage of the public attention to the phenomenon. But a conceptual model of the operating mechanism by which resilience has an impact can point to more effective use of the phenomenon, as well as illuminating past failures.

Understanding the operational mechanism

Let's consider an ordinary person. We'll call him "William". To be able to pay attention to, or focus on, any subject, William has to do some important work "in the background". William has a huge amount of information coming in at any given time. William takes in all of the inputs from the external world (sensory data, events of all kinds, interactions with others) and all of his internal data (thoughts, emotions, memories, and sensations within the body) and has to be able to pay active attention to only a few of them at one time. We've all experienced this focus when we are able to shut out things that normally would attract our attention. (Remember

having found that you had gotten a cut or bruise and not being able to recall when or how?) When we lose that focus, we are said to be "distracted" and the ability to execute purposeful action is delayed until focus is re-established. Logically, and neurologically this requires William's brain to connect all of the inputs that come in at the same time for the critical decision where to place his attention Silva (2017). This connection of all of the inputs that are temporally related is important for understanding how we "learn" not only skills, but how to get along in the world.

Evolution dictated that there was value to the ability to connect frequently repeated combinations of ideas, sensations, memories and thoughts quickly and easily. For example, William started out this morning with the intention to drive to his physical therapy appointment, and in a moment of thinking about something else, took a turn that he would normally use to go to work (demonstrating that established associations take over when we are distracted). But at the same time, he was able to direct and control his automobile in heavy traffic with hardly a thought.

The ability to learn physical and mental skills in this manner gave rise to the old adage, "Practice makes perfect" and we experience the ability to do things faster, easier and with less conscious control or thought all the time. People who operate equipment, play a musical instrument, or engage in sport or hobbies/crafts know how repetition makes complex tasks easy and automatic. Moreover, these skills, once thoroughly learned, tend to persist over time. "You never forget how to ride a bike" is just shorthand for the observation that the hard won set of skills combining balance, complex arm and leg movements and the exhilarating feeling of being able to get from place to place persists even after years of disuse.

Neuroscientists tell us that the process of making these neurological connections allowing this sort of competence takes about 12 weeks of practice (which, not coincidentally, is about the same amount of time it takes for someone who is out of work to experience a dramatically lower probability of ever returning to work

Heshemi (1997); Stewart (2001), Bouter (2006). This process occurs with much more complicated actions than just physical skills, as when we learn to "read" another person's moods, use heuristic tools to make quick judgements or invoke selection, confirmation and other biases.

It bears repeating that mechanism that creates this ability is repetition of things that are associated because they are linked in time. This ability to learn through repetition has been referred to as the First Law of Neuroplasticity: "Neurons that fire together, wire together" Doidge (2007). At the same time, connections that are not as thoroughly anchored may be recycled for other uses in what Doidge calls "competitive neuroplasticity" Doidge (2015). We all know this phenomenon by the phrase "Use it or lose it" if we learned a language as a school child, but never practiced it in an immersive setting.

Let's suppose that William has a compensable knee injury. William has a flood of inputs surrounding his claim – pain, anxiety and a sense of loss of control arising from his injury, distancing from his identity as a worker, economic stress, messages about what he's supposed to do (that may be conflicting) from his claims manager, doctors, lawyer, family and friends and the weight of all the expectations from his own past experience and the cultural environment. All these inputs (and notice that many of them are negative) are presented at the same time and so William's mind uses normal neurological mechanisms to link them together to focus and stay present. Many of those linkages will be momentary and not repeated sufficiently to acquire the property of having become faster and more automatic (the neuroscientists call these linkages "facilitated"). They will fade away, as quickly as we forget the conjugation of a verb in a language we don't habitually use. But some connections are repeated sufficiently to become "wired in" to William's experience of the world Aurbach (2015). They will color his perceptions and lead to interpretations of the world that confirm his learned view of it Kahneman (2012). They will act as triggers for other ideas, memories, thoughts and sensations present when the facilitated connection was formed, creating reactions of loss of personal

control Aurbach (2015) and even chronic pain and the symptoms we call PTSD Doidge (2015).

William also has some elements of his experience that seem to have become fixed in his associated ideas concerning his injury without the necessary repetition. His doctor read his x-rays for the first time in front of William and muttered : "That's the worst knee I've ever seen" without realizing that William could hear. The statement only happened once. William told his wife, and a few friends. He tried to repeat it to the claims manager, who said that he'd wait for the doctor's report. But William's public repetition hardly seemed to have happened sufficiently often to form a "habit of thought". Nonetheless, William recalls the comment from the doctor frequently, often when worrying about the future or thinking about the doctor or the claims manager that wouldn't listen. It just "pops into his head", and when it does, he often feels the pain in his knee more intensely or feels anxious.

William has had plenty of time to think about what's happened to him. Like many people, he ruminates on the claim and all that is associated with it during the time he now has because he is not working. He may have insomnia, because of the combination of anxiety and pain or other factors like a sympathetic nervous system ("fight or flight") reaction arising from his claims processing experience Aurbach (2017). Within his mind, the ability to repeat the adverse message "that's the worst knee I've ever seen" is almost unlimited. When that message is associated with current thoughts about the claim and his future, his physical sensations, anxiety and the sense of loss of control William feels in the claims experience, it becomes part of a facilitated network of association. William has used his "inner voice" to create the necessary repetition. This "self-talk" is a critical way of incorporating content into our learned experience of the world. [i]

If self-talk is a critical mechanism for repetition of thoughts and ideas sufficiently to associate them with other features of experience, then a sufficiently well-established ability to control or turn off the self-talk can do the opposite. If William can *habitually*

calm or change his negative self-talk it will not get sufficient repetition to become part of his network of automatic beliefs, interpretations of experience and perceptual filters. Without the undue influence of negative messages on perceptions of what's happening now, William will be able to experience the world as he would have before his injury – meaning that he will "bounce back" and cope about as he did before. Without that control, the doctor's judgement colors William's perceptions and experience, and may become William's explanation to himself (and the rest of the world) creating limitation as to what he can and cannot do. William is in danger of falling into the behavior attributed to low resilience workers – longer and more expensive claims and less preparedness for return to work. Generalizing William's experience yields a new operational definition of resilience: ***Individual resilience is the habituated ability to quiet, change or modulate negative self-talk about experience.***

The habitual nature of the mechanism for altering self-talk is a key feature of the definition. Many of the skills used for controlling self-talk are also skills that can be used as stress reduction techniques. The difference between a stress reduction technique and a resilience skill is the autonomous nature of the trigger mechanism for invocation of the behavior. When a resilience skill has become part of the facilitated association of experiences associated with the adverse stimulus, it doesn't require focus on the adverse stimulus to invoke the skill, and it is easier to control any associated self-talk. The phenomenon is one that is well known. The difficulty that people experience when trying to avoid responding to a thought that has other associations with it is frequently observed. As an old parable goes, it's hard to seek enlightenment when you can't stop thinking about "the dead donkey on the road".[ii]

Putting the new definition to work

So, why hasn't it worked? Since the research "skipped over" the development of adequate theory to explain the observations, it's not entirely surprising that a couple key features got overlooked. First, self-talk about adversity in the environment is

quite individual and diverse. The briefest of environmental scans shows that not all "resilient people" have anything like the same behaviors. An entrepreneur exhibits tremendous faith in his or her ability to make more money in the face of significant losses. Losing a fortune doesn't create self-doubt. This skill set doesn't look the same as that exhibited by a single mum, working two jobs and studying at night, who still finds the time and money to cook a batch of cupcakes for the school fete. Nor does it look like the skill set of a Zen master, for whom all of the challenges of this life are inconsequential. They are all resilient people, but they appear to conquer their self-talk in different ways. One "size" does not fit all and different people will demonstrate differential willingness to learn a skill that does or does not feel comfortable in his or her overall personality organization. It's not surprising that attempts to "teach" one approach to resilience meet with resistance from some participants.

Second, the key to calming self-talk is that it must be learned as any other habituated skill – in association with other experiences that trigger its use. All our habituated skills associate a set of temporally related experiences, so that each of those experiences has the ability to "trigger" the utilization of the skill. When the pattern is not habituated in that way, the necessary effort to use the skill is much higher. Try to carry on a conversation with the native speaker of a language, using only phrase book knowledge of that language. The level of necessary effort and the overall effectiveness of the attempt are quite different than that experienced when speaking a language in which both participants are fluent. The key to learning to calm self-talk is to learn the skill under circumstances where its invocation becomes habituated to the situation in which the skill is needed.

Differing skill preferences

To make sense of differing approaches to self-regulation of internal dialogue requires that some organizing principle be applied to observations of the world.[iii] People seem to use skills that can be placed into four categories, based upon the overall

strategy. Within those categories, skill orientation can be either inwardly focused or outwardly focused, generating heuristically useful groupings.[iv]

Believer skills

Strong belief can calm or drown out negative messages from the world, allowing the possessor of that belief to continue on as if the negative message was not present. Entrepreneurs and politicians are classic examples of people that appear to have great faith in their own abilities. They often can shrug off external criticisms and continue in the face of adverse events. People with this preference may assess a wide range of life challenges as being well within their personal capabilities, with varying degrees of accuracy. These internally focused believer skills can quiet self-doubt or discount negative experience, allowing decisive action.

Believer skills can also be externally focused. Strong spiritual faith or strong belief in a cause or ideal can allow people to persevere in the face of nearly overwhelming opposition. The focus on an external belief does at least two things – it may create a confirmation bias, where we interpret events as confirming what we already thought would happen. If William has a belief that a Higher Power will personally look after him, then external events will be interpreted as confirming that belief. He has no need to look for another explanation, so there is no inner doubt or conflict. The same would be true if William had a strong belief that insurance companies are "evil" predators. Where the belief is in an external source of intervention or protection it can provide strong reassurance in the face of doubt and anxiety. Where the belief is negative, it can create the opposite message.[v] The following case study (varied in name and details to protect the individual) demonstrates the power of believer skills to turn a life on the verge of spiraling into permanent disability to a more fulfilling path.

William suffered a knee injury while working. Through a combination of circumstances the injury left him with permanent limitations in the use of that knee. The work that was known to him is now unavailable, and he's gone through a difficult period where he lost his identity as a worker and his sense of purpose. William thought a lot about an act of kindness that was extended to him when he was at lowest period. He realized that he had a deep and abiding belief in the power of individuals to help others and the importance of that work. He now runs a food bank for injured workers and their families, has established a fund for educating the children of deceased workers and actively counsels injured people that the system has "thrown on the scrap heap of life". His own life is now full and fulfilling, and when there are dark days they are quickly lightened by the recollection of the importance of his work.

Reframer skills

Evolutionary forces have placed value on learning from past experience. Sometimes a negative message from the world can be placed into non-threatening perspective by the act of understanding what has happened. For people relying on reframer skills, the ability to find an explanation or a lesson to be learned puts them comfortably back in control of the situation. Explanation allows the message to be viewed without being seen as personally intended or directed. The externally focused reframer may replay an unpleasant event for the purpose of finding a meaning. But once having found a "silver lining" to the cloud or a lesson from the event, the inner voice is quieted and the memory can be safely filed away without a disruption of the reframer's sense of self or place in the world. The credo of an externally focused reframer is "Learn the lesson and leave the baggage".

The internal manifestation of reframing is optimism. Stability is achieved by focusing on the best of people gratitude for the things that are going well in one's life, or other affirming messages.[vi] When something unpleasant happens, the internal reframe holds onto the underlying principle and creates an explanation that explains the event as an aberration. The unusual can be discounted as not

impacting the optimist's view of the world. If an optimist is disappointed by someone's behavior, he or she can quiet the concern by deciding that "people are still good even if that person is having a bad day".   With the explanation in place, the belief system remains and the optimist's sense of control over his or her life is unshaken.[vii] As the following case study demonstrates, the power of reframer skills is to de-personalize the "explanation" given to an event, placing it in a non-threatening light.

> *A claims management team leader was talking to a colleague about a particularly "difficult" claimant. The team leader tried to create empathy by asking the colleague to put herself in the place of the injured person. The colleagues virtually yelled the word "Irrelevant" as her response and forced a change of subject. The team leader lost sleep that night, playing the scene over and over in her mind, trying to understand what she had done wrong. She realized that he had inadvertently triggered in the colleague a previously unknown set of facilitated associations that included the significant anger that powered the outburst. She had "pushed her buttons" without even knowing that they were there.   The team leader was able to get back to sleep and seek help for the colleague the next day. It turned out the colleague had herself been previously injured and harbored a lot of anger at the treatment she had received. The team leader was able to control the tendency to take an unpleasant confrontation as a personal failure, and refocus on improving the situation.*

Achiever skills

The Achiever uses constant activity to remove the opportunity for negative messages to be considered. While engaged in activity, planning or preparation, the achiever can push out concerns about success, consequences and appropriateness. The externally focused achiever may "soldier on" filling their time with work, study, parental duties, activities or a combination of them. The single

mom, who works two jobs, takes care of her children and studies in the evening, simply has no mental space or energy for rumination about anything but the tasks at hand.

Achievers who are internally focused tend to set aside their concerns when engaged in activities that have been determined by primarily internal motivations. People "driven" to achieve their own goals, such as amateur athletes, musicians, sportsmen, and craftsmen can ignore their concerns and regain a measure of their sense of control while engaged in their activity. In recognition of the power of this approach, people who have retired from working life are told to "get a hobby" to deal with their sense of lost purpose. As this case study demonstrates, sometimes the adoption of something that allows focus to be placed elsewhere is all that's needed to turn around the life of someone in danger of prolonged work absence.

There was a female bodybuilder in the news recently. She didn't start out with bodybuilding in mind. In fact, she was an injured worker who detested the gym. Her injury required physical rehabilitation after healing, but her attitude toward the injury left her non-compliant with the prescribed exercises. Her physical therapist recommended a gym that he knew had a strong culture of physical development. Therapy sessions with the "hard bodies" gave her motivation to try to fit in. One day she realized that the "hated" exercises had resulted in a positive change in her physical appearance. Suddenly, the gym sessions were more rewarding and became a motivating force in her life. Her sense of doubts and desperation concerning returning to work disappeared as she threw herself into her exercise and the social aspect of gym participation. After recovery and return to work she continued her new-found routine and eventually became a competitive bodybuilder at a sufficiently high level to attract media attention.

Distancer skills

The distancer is able to avoid the negative messages of the inner voice by selectively focusing on something else. The quieting of the inner voice, relative to the object of focus, creates a "breathing space" allowing the restoration of a sense of control. By creating this "time out" the distancer is able to get perspective and act going forward in a more considered manner.

A distancer focused on inner resources presents an outwardly calm image, although he or she may be expending significant effort in maintaining the state. Images of the Zen master, or the yoga practitioner in the *savasana* pose come to mind. The practice of mindfulness meditation is a more common manifestation of internal distancer practice. Internal visualisation practices used by athletes and others also fit into this category, and they are shown to have to positively impact performance, suggesting that visualisation is a form of neuroplastic repetition. In this way, the practice of internal distancer techniques also serves to train new pathways and engrain new behaviours.

The external distancer uses outward focus to achieve the same sort of result. Computerized video games are designed to provide a focus for attention, and are addictive precisely because they allow the creation of space between the person and the messages that self-talk is attempting to deliver. Other forms of external distancing include many hobbies and activities such as golf, gardening and fishing. Even recognized psychological distress can be addressed by correctly choosing a new habit that allows distance from the challenge to be created, as demonstrated by the following case.

An American ex-pat moves to Melbourne after living in a Southwestern desert environment that featured an average of 325 days of sun a year. The long periods of cloudy, cool, breezy and wet weather resulted in symptoms of

seasonal affective disorder, with mood alterations during the extended winter months. The person noticed a particularly beautiful landscape on one of those dreary days, taking a few minutes to stop and appreciate it. With the beautiful image in mind, it was possible to stop focusing on the disagreeable aspects of the weather. Mood elevation and relief from the depressive symptoms occurred immediately after the experience and lasted the entire day. The individual decided to consciously pair the practice of looking for natural beauty in the environment to instances where he felt an adverse reaction to the weather. The pairing of the new skill with the stimulus was habituated by the end of the winter and the ex-pat learned that "stopping to smell the roses" was more than just a saying. The habit was unconsciously applied from the beginning of the next winter season, resulting in complete relief from the seasonal affective disorder symptoms. Moreover, the skill generalized to other situations where the person felt their other coping resources overwhelmed. Testing confirmed that a new resilience skill had been added to the list of "preferences" previously identified.

Assessing different styles

All of the different strategies outlined above are effective in allowing people to take more control over their self-talk and therefore more control over what messages get incorporated into the associated ideas, thoughts, emotions and memories that guide our "fast" thinking system. But different people demonstrate that their personality organization is more accepting of some strategies than others. Mindfulness meditation and positive psychology approaches have been the two most commonly taught methods of achieving greater resilience. They both work, but only if they are "practiced" enough to become habituated as a response to a specific challenge or to challenges generally. And that's the problem. If a person feels uncomfortable with the approach that they are taught, the probability is low that they will habituate the skill through practice. The most common results of such training are outright rejection of the approach by some percentage of the population or poor retention of the results of the training by a substantial portion of

the rest of the cohort Bullen (2008). What has happened is that some of the participants simply will not engage in the recommended activity and some of the remainder may participate during the training period, but are not sufficiently comfortable with the skill to "practice" it for a sufficient time to make it habitual.

You'll detect a conflict between the resilience skill offered and the individual's resilience skill preferences by their responses. A participant might just say that she's "too busy" for mindfulness meditation. Another may react to a positive psychological approach by saying that it's too "touchy-feely". Some will simply deny that they need additional help. What is being expressed is discomfort with the approach being offered. One size truly does not fit all when it comes to resilience skills training.
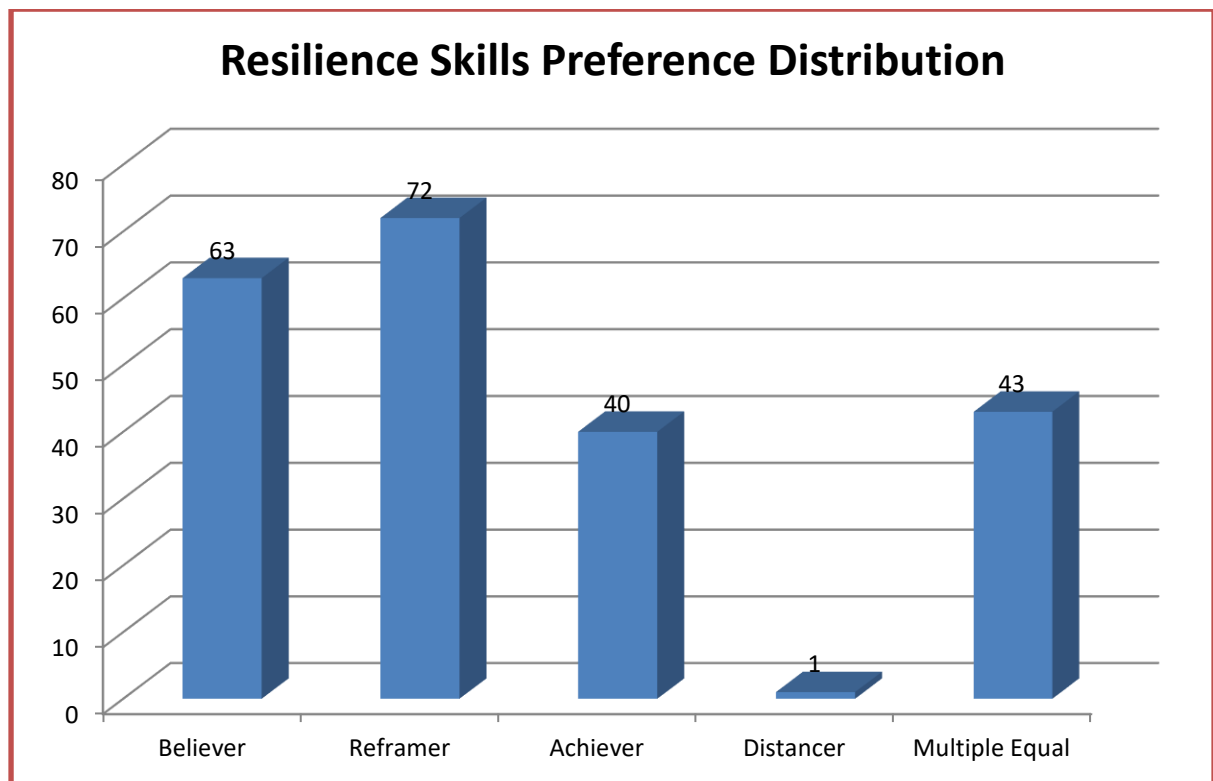
The trick then is to individualize the approaches offered and give the individual something comfortable enough to practice and internalize. Once the preferences of the individual are known, training of skills that are within the individual's "comfort zone" can be offered with a much higher expectation of individual uptake. This raises two questions: How do we help the individual to pick an appropriate skill, and how do we offer individualized training in a cost effective manner?

Resilience style preferences

It is reasonably easy to construct a profiling tool that takes a current read of an individual's preferences amongst the various resilience skills. Forced choice amongst juxtaposed archetypical statements exemplifying different resilience styles can yield a picture of current skill preferences and the tendency toward inward or outward focus quite quickly. A 22 question profiling tool was developed, and facial validity was established through feedback of over 200 participants.[viii] The tool yields a snapshot of an individual's preference amongst the skill sets in less than five minutes.

Analysis of the results of people taking the profiling tool appears to verify the hypothesis that different people have substantially different skill preferences. Figure 1 strongly suggests that there is a wide variation amongst individual preferences.[ix] Interestingly, mindfulness meditation, which has been the focus of significant training emphasis, falls within a skill set that is the first or equal first preference of approximately 3% of the test population.

Resilience Skills Preference Distribution

Skill	Value
Believer	63
Reframer	72
Achiever	40
Distancer	1
Multiple Equal	43

Sample collected from 3 July 2016 through 29 January 2017, n=219[x]

Figure 1

The profile of existing skills preferences is just the starting place. For most of us, life will have taught us one or more skills fairly well. The trick then is to pick a new skill that is different than the one we most favor to build. Then, when life overwhelms our usual defenses, we have developed a new skill to fall back upon. Development of these backup resilience skills creates the "defense in depth" that we value when observing highly resilient people.

Interactions with multiple audiences in workshop settings and feedback solicited through the web based testing site has yielded a long list of skills that people have self-identified as significant parts of their "resilience toolbox".[xi] With reference to that list, which is broken down by skill category and inward or outward focus, it is possible for most individuals to find a skill that they do not currently rely upon, but that fits sufficiently in their preference profile to be an acceptable subject for the kind of focus necessary to habituate the skill.

Cost-effective habituation of the new skill

The building of new resilience skills may be done in response to current or anticipated challenges or as a prophylactic to inoculate a person against unknown future challenges. The paired habituation of a new resilience skill with the adverse stimulus that it is intended to control requires 12-16 weeks of focused attention Doidge (2007); Doidge (2015); Merzenich, (1998); Ramachandran, 1996).   When a person is already under environmental stress, the ability to concentrate on the necessary paired practice without external assistance may be compromised. In situations where there is no current perceived threat, motivation for a sustained effort may not be sufficient without assistance. Unfortunately, while individual attention in support of the necessary practice is reasonable for individuals or small groups, scaling the process for larger groups of participants has proven a challenge until recently. New technology has allowed the development of smart phone applications that "coach" individuals through complex interactions and has proven effective with regard to medication compliance for certain chronic conditions Clevertar (2017) and for online intervention in cases of mild to moderate anxiety and depression Geraedts (2015); National Institute for Health and Clinical Excellence (2008). The same technology can be used to deliver practice for habituation of a selected skill in paired practice with a specific adverse stimulus. One firm has estimated that, after development of the underlying programming, the cost of delivery of a sixteen week program of daily interaction would be less than $100 per person. The experience of the IAPT program in the UK Health system was that backup support by a modestly trained individual to answer technical questions and

provide referral for unanticipated situations or worsening conditions is desirable. Even with this additional feature, the automated support of large scale habituation of individualized chosen resilience skills is economically feasible.

Changing outcomes

Resilience skill development can be utilized in many ways. It could be an intervention for flagged workers like William, with the aim of preventing secondary psychological overlay on the original injury that may turn it into an expensive long tail claim. If William has more skills in his resilience toolbox, he's less likely to be overwhelmed by the process, and less likely to become long-term disabled.

But "resilience" is a learned skill that may be applied inappropriately in some circumstances. We have words for unhelpful resilience – "stubbornness", "obsessiveness" and "lack of insight"[xii]. When an injured worker consistently misinterprets the attempts of the system to provide high quality and necessary care, he or she may be tenaciously holding on to their beliefs and drowning out what is perceived as "fake news" that the workers' compensation system is trying to send. The writer of long detailed complaining emails may be using achiever techniques to avoid confronting something more distressing. The belligerent claimant may be reframing what was presented to them in a way that "twists the words" of the claims manager in an attempt to make sense of their world. The disengaged claimant may be using distancer techniques to avoid confrontation with challenges they experience. These too are examples of resilience, and this perspective provides different avenues than have been previously available for addressing such behavior.

From a scheme design perspective, the new understanding of operational mechanism of resilience (and failures of resilience) can provide perspective and some guidance. Most claimants have resilience skills adequate to get them through

a claims experience without undo delay or complication. The first job of a scheme designer should be to take care not to overwhelm the skill sets present in the majority of claimants. The question that must be asked, when considering any significant systemic change, is whether the proposed change is likely to create a new kind or degree of stressor on existing claimant coping mechanisms. If the answer is "yes", then an increase in the consequences failures of resilience can be predicted. The moral and economic costs of increased harm to claimants can then be weighed against the cost of providing remedial resources to prevent the harm or weighed against the systemic benefits achieved by the change.

A similar question may be asked when reviewing an existing claims management system. Does this system have a higher than average failure of the normal expectation of recovery? If so, what are the systemic features that create or exacerbate this outcome? The old assumption sets we are used to employing in such cases may not provide good guidance. We often assume that claimants "take advantage" of benefit structures that permit prolonged use of benefits because they appear to be choosing not to return to their pre-injury lives. The natural tendency is to seek to limit benefit availability to channel claimants away from this tendency. The new understanding of resilience suggests that this common response may be less than optimal. It may be that the claims management system contains features that are causing the adverse results. Other articles have discussed some of the causes for unnecessary disability that may be addressed by scheme design Aurbach (2015). A profitable search for answers is likely to be motivated by a realization that failures of recovery may be caused by systemic forces that overwhelm the claimant's existing resilience resources. What should follow is an examination of what stressors our claims management system has created or to which it has contributed.

Working in claims management is highly stressful for claims managers as well. The new understanding of resilience could yield prophylactic intervention to minimize burnout, turnover and presenteeism. Moreover the educational component of the resilience skills profiling process creates a new awareness. At least one senior claims

manager has observed that after training she is less likely to ""inflict" her notions of what someone "ought" to do on the injured workers in her portfolio.[xiii] She predicts that she will be better able to appreciate the idea that different workers have different resilience skills and different ways of coping in the world. She will be more effective because she will be better able to take each claimant as she finds them and respond appropriately. Moreover, those management skills are likely to carry over to her supervisory role within her team.

Claims management teams may provide the most attractive "proof of concept" test case in the insurance context for this new approach. Comparative "before and after" resilience scores can be tested, Smith (2008), and the costs of turnover, recruitment and training replacement personnel can be used to test cost effectiveness. There are also opportunities for extension of this new approach to resilience in other fields, including, but not limited to, employee assistance, executive coaching and education.

We can utilize an operational model of resilience to improve outcomes within the compensation system. The science is there. We "only" have to break through our old habits of thought to see that there is a need. [xiv]

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i Self -talk is a highly effective way of learning and extends even to physical skills. Sports psychologists and elite athletes have demonstrated that "mental practice" is nearly as effective as an equivalent amount of physical practice in enhancing performance (Isaac, 1992; Brouziyne, 2005)

ii Thanks to Bob Pelekanakis for this parable. Litigators have their own version – "Here's a skunk – now try not to smell it."

iii What follows is only intended for application in Western cultures. The application to other cultures and world views deserves study and may result in different organizational heuristics.

iv Obviously, this is not the only possible way of grouping these skills, but testing indicates that the matrix resonates with users of a tool devised to assist people in understanding their personal style and preferences.

v Adverse childhood events are probably so devastating because of the reversal of the child's externally focused belief that the parent will protect the child from harm.

vi The various "positive psychology" approaches to resilience fit into this category.

vii You will have noticed that the behaviours of the externally focused reframer and the externally focused believer look very similar. There are practical differences between them. The reframer is focused on an overriding principle to maintain a sense of control, where the believer is focused on the worthiness of an external entity or mission. The reframer uses the creation of an exception to the principle as an

explanation, where the perceptual filters of the believer provide comfort through confirmation.

viii www.uncommonapproach.com/resilience

ix It cannot be claimed that the sample was random, and therefore no strong claims are made concerning the population as a whole. The sample consists of 100% of the volunteers who took the test during a specified time period after peaking and publications created some modest interest in it in the U.S. and Australia.

x 5 instances of "distancer" as an equal 1st choice

xi The list is updated periodically with responses from the feedback submitted through the website.

xii Arguably, the current President of the United States could be used an example of internally focused believer skills, taken to an absurd extreme.

xiii Many thanks to Renee Harley, a senior injury management specialist with a large personal injury insurer, for the insightful observation that claims managers may project their own personal resilience styles on claimants, resulting in unnecessary misinterpretation, misunderstandings and friction.

xiv Special thanks to my peer reviewer, Robert Guthrie, whose insightful comments greatly improved this paper.