Masking Stress with Misbehaviour:  
A Shanker Self-Reg® Lens  

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Abstract

The concept of self-regulation has been present in the literature for over 150 years. However, many believe that self-regulation and self-control are synonymous. According to Shanker Self-Reg®, self-regulation makes self-control possible by understanding stress and effectively managing our energy and tension levels. This paper discusses and provides evidence in support of the key constructs of Shanker Self-Reg®, including the 5 Steps of The Shanker Method® (reframe, recognize, reduce, reflect and respond), the distinction between stress behaviour and misbehaviour, the importance of reframing what is often viewed as misbehaviour as stress behaviour, and much more.

An adolescent tells her mother she doesn’t care about school and storms out of the room, slamming the door behind her.

A student in Grade 4 punches another student in the playground for no apparent reason. This happens often.

A college student procrastinates on completing a final paper for a course and after multiple chances to submit the paper late just gives up and fails the course.
A three-year-old has a tantrum at the department store when her dad says no to buying the toy she wants him to buy.

A teacher loses her temper and yells at her students after telling them for the third time to work quietly.

A bus driver humiliates a senior citizen when she puts the wrong amount of money in for the bus trip because she didn’t know the cost of the fare had gone up.

Stuart Shanker contends that when we see a person differently, we see a different person (Shanker, 2016). Any of the examples of misbehaviour listed above can be reframed as stress behaviour, thereby deepening understanding of the roots of the behaviour and opening up new ways of responding. Shanker Self-Reg® is a five-step method for managing stress, which involves recognizing the signs of stress behaviour; identifying and reducing negative stresses; becoming aware of the signs of escalating stress; and developing customized strategies for returning to a state of being calmly focused and alert (Shanker, 2016). The difference between self-regulation and self-control, misbehaviour and stress behaviour, and the five steps of Shanker Self-Reg® are discussed in this paper.

Untangling Self-Regulation from Self-Control

Burman, Green, and Shanker (2015) documented 447 different uses of the term “self-regulation” in the psychological literature. The multiple uses of “self-regulation” were categorized into six concept-clusters: self-control, including emotional regulation and control; self-monitoring; self-management; social behavior; agency or self-determination; and self-regulated learning. According to Shanker, self-control serves as the overarching construct linking these six clusters of self-regulation definitions. It is important to note that self-control and self-regulation are not synonymous in Shanker Self-Reg®, which focuses on self-regulation. Self-regulation from the psychophysiological lens is what makes self-control possible.

Self-control became a focus in psychological research largely due to the “delay of gratification” studies that began to appear in the late 1960s (Mischel, 2014; Mischel,
Ebbesen, & Raskoff Zeiss, 1972). These studies showed that problems in self-control could be detected in children as young as four, and that these problems were associated with challenges in emotion-regulation and executive functions (Eisenberg et al., 1995; Blair & Razza, 2007; Diamond & Lee, 2011). The self-control paradigm became dominant because of the longitudinal studies showing that the children identified at a young age as having poor self-control fared worse over the long run, both physically and academically, and had significantly higher rates of internalizing and externalizing disorders as young adults (Moffitt et al. 2011; Mischel, Shoda, & Rodriguez, 1989). This research led many to conclude that children should be taught in primary school how to control their impulses (Schlam, Wilson, Shoda, Mischel, & Ayduk, 2013; Diamond, Barnett, Thomas, & Munro, 2007).

The Psychophysiological Definition of Self-Regulation

In 1865, the father of modern physiology, Claude Bernard, inaugurated the scientific study of what came to be known as “self-regulation.” Bernard was interested in the mechanisms that enabled an organism to maintain a stable internal state in response to both internal and external “perturbations,” what Walter Bradford Cannon (1932) later defined as “stressors.” In its original psychophysiological sense, self-regulation refers to the way one recovers from the expenditure of energy required to deal with stressors.

In psychophysiology terms, self-regulation is a prerequisite for exercising self-control. An unstable internal state can lead to a limbic response – fight-or-flight, or freeze (a primitive neural response to threat easily misconstrued as compliance) – and impinge on the functioning of the prefrontal cortex, the part of the brain governing self-control (Porges, 2011; McEwen, 2007). The more an individual is chronically hypo- or hyper-aroused because of excessive stress, the more readily that person goes into fight-or-flight, or freeze (Lillas & Turnbull, 2008). These fight, flight, and freeze limbic states suppress, and at times “brake,” the necessary mechanisms in the prefrontal cortex for the practice of self-control.

The psychophysiological definition of self-regulation on which Shanker Self-Reg® is based refers to how effectively we manage stress. When one is over-stressed, tension increases markedly and energy reserves drop sharply. In what Shanker describes as a “red brain” state, limbic arousal is heightened, fight-or-flight responses are easily triggered, and the “blue brain” (prefrontal cortex) functions critical for learning and well-being are suppressed.
The Five Steps of Shanker Self-Reg®

Grounded in the psychophysiological science of self-regulation (Fogel, 2013; Greenspan & Shanker, 2006; McEwan, 2007; Porges, 2001, 2011) combined with a Dynamic Systems Theory lens (Van Gelder, 1998), Shanker Self-Reg® is a method for understanding and managing stress. Self-Reg was first described in detail by Shanker in Calm, Alert & Learning: Strategies for the K–6 Classroom (2012). In Shanker’s most recent writings (2016), this five-step process, practiced as part of everyday life, enhances self-regulation in children, youth, and adults:

1. read the signs and “reframe” the behaviour;
2. recognize the stressors across all five domains of experience – biological, emotion, cognitive, social, and prosocial;
3. reduce the stressors and lighten the stress load;
4. reflect – enhance stress awareness by becoming aware of what it feels like to be calm and when you’re in fight-or-flight or freeze;
5. respond – develop personalized strategies to reduce tension and restore energy by figuring out what brings you back to being calm.

Reflect on the scenarios in the introduction to this article – an angry adolescent, an aggressive Grade 4 student, a procrastinating college student, a child having a tantrum, a teacher who loses their temper, and a bus driver who takes his frustration out on a senior citizen. As we reframe with Shanker Self-Reg® we ask ourselves reflectively: “why this person” and “why now?” How might their behaviour be derived from the accumulation of stressors they are experiencing? Here are two examples of seeing a person differently – through the lens of Shanker Self-Reg® – to recognize that what appears to be misbehaviour may in fact be stress behaviour:

Instead of seeing a yelling teacher, see a teacher who has been struggling with spring allergies for weeks, is worried about her ailing father’s health, has a teenage daughter who has told her she hates her three times this week, and spent lunch hour once again supporting her colleague who was in tears feeling overwhelmed with the many needs in her
classroom this year that she can’t seem to meet. You will see a teacher with an excessive stress load, the signs of which leaked out through yelling in frustration, not so unlike the adolescent with the limbic utterance: “I don’t care,” when she really does, quite deeply. Instead of seeing an abusive bus driver, see a bus driver who has been struggling with horrible traffic all day, and has spent too many hours without moving, maybe without eating, and you see, not an ogre, but someone whose needs in that moment are not that different from the three-year-old in the department store. A gentle word to him, and to the flustered senior citizen, might just be all that is needed to help them connect with each other in a way that is good for both of them.

Shanker’s work emphasizes that enhancing one’s self-regulation requires learning to understand and manage stress through an ongoing iterative and developmental process. In other words, Self-Reg is about stress and the connected energy and tension states beneath the problematic behaviours, not the behaviours themselves. Misbehaviour is a mask, it is what is visible on the surface. Using Shanker Self-Reg® we can gently begin to peer behind the mask to better understand the excessive stress that lies beneath the outward “misbehaviour.” Seeing people differently with science-informed “soft eyes” brings with it the most amazing shift: we truly do, as Shanker says, see a different person every time.

Table 1 identifies and defines many of the key concepts of the Shanker Self-Reg® Framework. This table additionally includes research describing the origins of and supporting the inclusion of these constructs.

Table 1: Key Definitions and Research Underpinning the Shanker Self-Reg® Framework
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<table>
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<th>Stressor</th>
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<td>Stressor is anything that disrupts homeostasis, and requires the organism to burn energy to return to homeostatic balance (Cannon, 1932).</td>
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Selyle’s research (1956, 1976) helped make the term “stress” more common.

The HPA Pathway

The HPA Pathway – hypothalamus, pituitary gland, and adrenal glands – is mobilized in the stress response to prepare the body for fight-or-flight, or freeze (McCain, Mustard, & Shanker, 2007; Porges, 2011).

Porges’ research introduced a new paradigm in human development because of the effects of allostatic overload – the consequence of prolonged and excessive stress – on the systems in the prefrontal cortex that subserve such “higher” functions as language, social cognition, executive functions, and self-control (see van der Kolk’s Foreword to Porges, 2011).

Porges (2000) identified a “hierarchy” of four neural mechanisms for dealing with stress: (1) social engagement; (2) fight-or-flight (sympathetic arousal); (3) freeze (parasympathetic arousal); and (4) dissociation. This hierarchy represents an application of MacLean’s (1990) “three” model of the brain, from the “newest” to the most ancient mechanism.

Secondary Altricity

Secondary altricity is a term, coined by Portmann (1941), that refers to human newborns’ need for nourishment from their caregivers, due to their physical, neurological, and behavioral vulnerabilities. The term was rediscovered by Gould (1976), who stated that human infants are born prenatally and require their environment to finish developing.

Human neonates are born prematurely, with brains less than 30% of their adult size (Dawson, Warrner, Deacon, Ellison, & Ponsier, 2012). The consequence of this is that newborn infants are utterly helpless and therefore highly dependent on their caregivers for support. However, this vulnerability opens babies’ brains to an extraordinary ability: post-natal plasticity, enabling children to become highly attuned to the environment they are born into and adapt to it accordingly.

Greenough, Black, and Wallace (1987) found that enriched environments promote brain development, specifically dendritic density; however, these results were later seen in research into the effects of deprivation (a stressor), rather than enrichment, because in a natural (non-laboratory based) environment enrichment naturally occurs.

The Interbrain

The interbrain refers to the connection between a higher and lower order brain, allowing caregiver and infant to change each other’s arousal states (Damasio, Nadel, Sossignan, Martineau, & Gartner, 2010).

Since newborns’ brains are premature (see Secondary Altricity) and executive functions within them have not yet formed, the baby requires a higher order adult brain to serve as an “external brain” to regulate the baby’s physiological states. The higher order brain reads the baby’s cues – such as facial expressions, posture, movements, and sounds – and adjusts actions accordingly either to up-regulate (stimulating) or to down-regulate (regulating) the baby as necessary. These dyadic experiences are vital to help the baby develop the capacity for self-regulation, emotions, the HPA axis (our central stress response system), perceptual skills, cognitive skills, and communicative skills.
### Dynamic Systems Theory (DST)

Stressors across the five domains of Self-Reg – biological, emotion, cognitive, social, and prosocial – are viewed through a dynamic systems theory lens, as interacting and co-actional.

Jim Van Gelder (1998) states that systems are sets of interdependent variables. A variable is a single unit, subject to change. Interdependent variables are those that change dependent on others, and that are in turn dependent upon other variables.

#### BIOLOGICAL DOMAIN

Self-regulation is, in part, a function of becoming aware of one’s arousal states to bring oneself back to a state of being calmly focused and alert (Barnum, Green, & Shanker, 2015).

Bruch (1965) and Bruch and Nogent (1995) considered six arousal states – asleep, drowsy, hypo-aroused, calmly focused and alert, hyper-aroused, and tuntrum – but focused on awareness, activity (physical or mental), energy (how much is being burned), and tension (high/low).

McEwen (1998, 2007) found that a child in allostatic overload has difficulties moving along the arousal states.

Arousal regulation is best understood as the competing forces of the Sympathetic Nervous System’s (SNS) activation, fight-or-flight responses, and the Parasympathetic Nervous System’s (PNS) inhibition, feed-and-breed responses. In effect, how much activation or recovery is necessary for any task is going to vary from child to child, and from situation to situation. It is important that parents learn to recognize these states of arousal so that they can adjust through up-regulating or down-regulating their behavior to maintain optimal regulation.

The brain’s reward system can help restore energy; however, when stimulated in excess, it can throw the body out of homeostatic balance. When stressed, the individual goes for quick fix energy sources (sugar stimuli) to maintain energy, even if they are further stressors (Baumeister & Tierney, 2011).

#### EMOTION DOMAIN

Basic emotions (e.g. happiness, fear or anger) are biological, hard wired, and genetically selected, with specific associated facial expressions and neuro-hormonal events (Greenspan, 2001; Greenspan & Shanker, 2006). More complex emotions however are not reflexive, but rather a response to a basic emotion. Emotion, not biology, comes first.

Affect Diathesis Hypothesis states that babies have precursors of emotion (for example, a happy or distressed state).

The Physical-Emotional Nexus is the mechanism whereby emotion leads to a physical response, which in turn strengthens the emotion, creating a stress cycle.

Basic emotional facial expressions are recognized worldwide and emerge between three and nine months (Elman, 1979).

Secondary emotions are where there is variation around the world (Frazz, 1992).

A physical sensation is attributed to the feeling of being distressed and to learned helplessness (Seligman, 1972).

Selye (1956, 1976) found that negative emotions can burn considerable amounts of energy.
**COGNITIVE DOMAIN**

Attentional problems are downstream consequences of basic cognitive deficits or challenges. Strengthening the roots of executive functioning can alleviate attentional problems (Greenspan, n.d.; Greenspan & Shanker, 2006).

Patterns act as a buffer against stress (Porges, 2011).

Porges (2011) spoke of attention within a triphasic-ergotropic shift. When focused on a problem, one goes still, ignoring external sensations to focus on the problem. This takes a lot of energy and requires one to be in a state of high tension; therefore, one must have high energy reserves to successfully focus.

Patterns (for example, Mothercare) allow for predictability, and that includes the predictability of safety, allowing for stress reduction (Porges, 2011).

**SOCIAL DOMAIN**

To be successful in social interaction, one must master non-linguistic conventions (Argyle, 2007; Argyle & Dean, 1965). However, with negative bias, incoming non-verbal cues may be interpreted as a threat.

Neuroception is the child’s unconscious limbic system that is constantly monitoring the environment for safety or threat (Greenspan & Shanker, 2006; Porges, 2011). Social engagement is the first line of defense.

Co-regulation is a social process by which individuals dynamically alter their actions with respect to the ongoing and anticipated actions of their partners (Fogel, 1993). We can co-regulate via non-linguistics mentioned by Argyle (2007).

Still Face Paradigm is an experiment where a mother faces her baby and holds a “still face,” unresponsive to her baby’s behaviours (Tronick, Adamson, Als, & Braunsch, 1975).

**PROSOCIAL DOMAIN**

From Plato’s story of trying to steal oneself away from dead bodies, it is taken on that humans naturally have these urges, but must strengthen their reason to control their impulses.

Children naturally have the roots for empathy, and it is developed through the dyad.

Dyadic synchrony or engaging in afnamic behaviour produces rewarding hormones which further act to promote prosocial interactions; this is known as helper’s high (Feldman, 2012; King, 2009; Zahn et al., 2009).

Limbic resonance allows a species to have a limbic-to-limbic communication system (Greenspan & Shanker, 2006; Lewis, Amin, & Lasson, 2007). In humans this communication system operates through facial expressions, vocal tone, and so on.

Stress can influence fetal development (Field, Diego, & Hernandez-Reif, 2010; Grandgen & Landigran, 2014).

Entrained Behavioural Patterns – canalization is the process of creating specific patterns of behaviour, attractors are the resulting behaviours (see below).

Developmental reactions brought about by natural selection are canalized, whereby the reaction is adjusted to bring about a specific result, regardless of minor variations in conditions during the reaction. These reactions are referred to as canalization (Waddington, 1942).

Attractors are stable patterns that establish in dynamic systems (Fogel, 2013).

Heightened stress is a key attractor of concern in Self-Reg.

Babies are more stressed, and this stress can cause them to burn energy even when they are at rest. In experiments, babies with higher resting heart rates took longer to return to resting heart rate after being stressed (Porges, 2011).
References


