

## **Emotion Regulation in High Conflict Mediation**

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If it was not clear to me as conflict management practitioner before, the post-graduate NeuroLeadership (PGCNL) program confirmed the need for a careful reexamination of many of the basic operating premises underlying the most prevalent models of conflict management and mediation practice and teaching. For example, what became evident is that the notion of a third party acting as a neutral, objective and dispassionate problem solver is especially suspect. The conflict management field, not unlike other professions, is predicated on the rationalist presumption that people, if given the opportunity, will be reasonable and cooperative because it is in their self-interest and makes good business sense. The reality does not fit that design quite so neatly; despite a presence of 25 years or more, the demand for interest-based mediation services remains underwhelming. That might support the emerging view that people are not nearly as rational as we might like to believe.

Unresolved feelings and threats linger as emotional events from the past impact rational thinking in the present. Emotional experience is connected to a large network, the limbic system (LS). Parts of the LS are the amygdala, hippocampus, cingulate gyrus, orbital frontal cortex and insula. The LS tracks our emotional relationship to thoughts, objects, people and events. It determines how we feel about the world moment-to-moment. Moment-to-moment decisions are more than rational processes – subtle choices based on value judgments. It drives our behavior, quite unconsciously. This is evidenced in my account of a mediation between an elderly couple and an oil giant where I was the mediator. I have altered the subject matter and any identifiable criteria, including names, to maintain the confidentiality of mediation and those involved.

Ken and Julie did what most couples would do when they get close to retirement age. They started to think about slowing down and enjoying life. Their search for the ideal retirement property culminated in a seven-acre parcel where they built their retirement home. They were forecasting their future happiness by engaging their emotions of today away from a hectic daily routine, towards peaceful enjoyment of nature, wildlife, birds, tranquility. They considered what was important to them and focused on all the positive things they could attain by settling on the piece of 'paradise' they carved out for themselves. In the distance they saw an abandoned oil tank and were told not to worry - that oil in the area was equivalent to tar and extraction would never be economically viable.

Twenty years later Ken and Julie are compelled to write a letter to the regulator of the oil and gas industry, voicing their strong objection against the 30+ oil wells and future heavy oil extraction that is surrounding their little piece of 'heaven on earth'. Living has become a nightmare. Oil tankers on dusty gravel roads, intermittent odour of hydrocarbons, light pollution from well sites shining into bedroom windows, sudden bursts of hissing sounds from pressure release valves disturbing a good night's sleep, and no communication or consultation. The company is satisfied to be compliant with industry regulations and has obtained written approval to harvest minerals from the landowner of the quarter section adjoining Ken and Julie's acreage.

Ken and Julie are emotionally drained; they are stressed beyond their threshold of tolerance, as they enter the mediation room. This belief in the unfairness of their situation results in nervous system activity and in neuromodulators (i.e., catecholamine) getting ready for fight or flight reflexes. In the brain, the amygdala gets turned on to express emotions and form associations between stimuli and emotion. The amygdala activates proportionately in relation to the strength of an emotional response. This happens at an unconscious level of processing. At the same time prefrontal cortex (PFC) activity virtually shuts down, including the working memory that guides behaviour and inhibits inappropriate response or distraction, allowing posterior and subcortical structure to control Ken and Julie's behaviour.

Catecholamines exert opposing actions on the amygdala (LS) and PFC. During stress, the amygdala induces increased catecholamine release in the PFC which results in cognitive dysfunction.

Neural circuitry of emotion and cognition interact from early perception to decision making and reasoning. The brain may function to first decide the danger of stimuli and then determine the context or detail. This is a biologic survival mechanism, which is governed by memories of a stimuli. Julie's memories of stimuli are passionately captured in her objection letter which she asked to read out loud (to help her overcome presentation anxiety). *"More than fifty years ago at a facility devoted to pathology I was exposed to the facts that people who work in oilfields have appreciably more cancer than those who do not and that breathing the hydrocarbon fumes of petroleum is conducive to lung cancer and other respiratory problems. As time went by it was indicated that hydrocarbon fumes caused brain damage and more recently in an academic setting it was demonstrated that hydrocarbon fumes interfered with neurotransmitters and destroyed neural tissue. The oil industry will deny this until the end of time so I will waste no more effort on this subject!"*

What are Ken and Julie's emotions? First and foremost they are feeling powerless. They are now second-guessing whether they are 'equipped' to handle the situation they selected: a face-to-face meeting with those that – in their perception - have power over them. The motivation behind achieving their goal (to voice their concern in a face-to-face mediation) has changed as the proximity of the goal drew closer. Valuation of a future reward relies on Ken and Julie's ability to decide between immediate and future payouts. They now fear being evaluated by young oil executives as the 'grumpy old couple' and their nervousness shows through their body language: Ken's arms crossed over his chest and Julie's reluctance to make eye contact and feeling too hot in the room. The fear circuitry resides in the amygdala. A sudden fear or anger response is called "amygdala hijack". The competitive relationship of the PFC and amygdala when it comes to activation in the face of an emotionally "negative" stimulus shuts down PFC activity that would otherwise inhibit inappropriate response or distraction.

One of the young executives quickly picks up the phone to call the front desk for assistance with the temperature control panel.

Ken and Julie notice that the room resembles a boardroom – a large oval table with executive chairs, a whiteboard which can be connected to a computer, an LCD projector and a sideboard neatly arranged with juice, coffee and water jugs. Ken decides to break the ice as he modifies the situation by telling a 'boardroom' joke he had heard on the radio on his way to the meeting. He lightens the atmosphere as everyone joins in (polite) laughter.

Julie selectively focuses on the mediator (myself) and finds comfort in small talk about the weather and an interesting article in the local paper. She deploys her attention by distracting herself from the uncertainty surrounding her, the lack of relatedness with others in the room, not knowing her status in the eyes of her 'opponents' and the context of adversity.

The mediator opens the meeting thanking parties for agreeing to a face-to-face meeting and acknowledges the fear and anxiety that accompanies mediation meetings and particularly presenting concerns face-to-face. The mediator then offered that they consider themselves brave to be at the table and to embrace the opportunity for mutually satisfying solutions (as opposed to an imposed decision by way of Public Hearings). Enhancing positive expressions helps parties to modulate their emotional response from the initial negative frame of mind to the feeling of 'okayness'. Adding the statement that most parties in mediation have achieved results they never thought possible prior to mediation also sets the stage for the placebo effect, expectations that there will be reduced pain (stress) by attending mediation. The mental expectation for reduced pain often accounts for a disputant's change in (social) pain perception; it causes a person to repeatedly focus his/her attention on the experience of pain relief so that the brain's pain relief circuits are activated causing a decrease in the sensation of pain. The reduction of social pain through mediation can be likened to the placebo effect and is an example of the subjective experience of pain.

This kind of introduction by the mediator recognizes that emotions are interpretations and vary across individuals. The mediator guides parties to make emotional regulation come from within.

The importance of autonomy for Ken and Julie is reflected as Julie anxiously reads another paragraph from her letter, *"We have no illusion that our objection will have even the most minimal effect on the oil activity in this area but this oil activity has devalued our property, has invaded our privacy, has destroyed the peaceful enjoyment of our land, has degraded the quality of our retirement, so therefore we object now and we will continue to object in the future."*

Ken also sees his status as landowners threatened. His brain is masterful at putting patterns together into a cohesive whole to tell a good story. *"Now, you may ask: If these whiners hate the energy industry so much, why don't they move? This would not be a minor move. There would be the financial and physical aspect of moving. I am close to eighty years old – not the time of my life that I feel up to an undertaking of this magnitude. My wife is disabled to a significant degree and a move such as this would be very difficult for her also. We would have to sell our present property which has been significantly devalued by the surrounding new and rapidly expanding oilfield."*

Furthermore, Ken's need for certainty is expressed in his words to the company: *"You have provided so much confusing information that I cannot now say where each well site will be nor can I say what the total number of these multiple wells will be. I do know, however, that my quiet rural retirement site will be in a concentrated industrial area with all of the attendant activity, noise, hydrocarbon effluvia, etc. And my property value has been and will be further decreased by the surrounding unpleasantness."*

Ken and Julie's social hierarchy needs, such as certainty and autonomy, are strong mediators of their behavior. The default mode of the brain is to minimize danger and maximize reward. Under conditions of fear and stress, Ken and Julie's attention is pushed towards perceived threats in the environment in order to minimize danger. The impact of their 'over arousal' is the inability to attend to relevant stimuli as their energy is consumed by the threat stimuli. With Ken and Julie's level of anxiety there is less drive from the PFC to inhibit attention to threat stimuli. The limbic system pushes towards fixating attention on the threat.

Julie openly expresses her emotions to whoever wants to listen to her story. Her narrative is focused on her past experiences as a nurse handling accidents which had occurred on offshore oil rigs and left painful impressions about the dangers of blowouts and sour gas releases. As she draws from memories of her past she projects these circumstances to the wells located in proximity of her homestead and possible injuries and health risks for workers and residents.

Ken suppresses his emotions and avoids listening to Julie's stories. It is too tiring for him to imagine the details of Julie's forecasting of what will be in store for them. Suppressing emotions needs cognitive resources and has an impact on memory consolidation as it decreases activity in the amygdala and hence memory for details. Ken tries to suppress his beliefs in order to reach a logical conclusion.

Emotional reflection becomes an important element of emotional self-regulation. Emotional reflection 'labels' the emotion and thereby defuses its intensity. The amygdala decreases activity and makes room for cognitive activity to increase. The situation can then be modified by deploying attention that helps to modify and appraise the situation to modulate the response and produce a modified understanding of the situation. Consequently, reconsolidation of declarative memory will result in a more flexible, open participation in the mediation process by both Ken and Julie.

Conditioned fear memories, such as Julie's from her previous experience whereby she associates the smell of hydrocarbons with severe health concerns like various cancers and brain damage, are susceptible to change when they are recalled during a reconsolidation period, which has implications for self-regulating behavior. As a mediator, I acknowledge Julie's fear by reflecting on emotions - reflecting without intention, with internal focus, and by putting feelings into words. A state of fear or anxiety changes the way the brain perceives the world. The simple act of directing attention and awareness to emotional reflection decreases the impact in the amygdala and replaces the need for self-reflection (thinking about self).

Emotional regulation strategies are achieved by 'labeling'; putting feelings into words can alleviate negative emotional responses. A number of studies of affect labeling have demonstrated that linguistic processing of the emotional aspects of an emotional image produces less amygdala activity than perceptual processing of the emotional aspects of the same image (Hariri, Bookheimer, & Mazziotta, 2000; Lieberman, Hariri, Jarcho, Eisenberger, & Bookheimer, 2005). Additionally, these studies have demonstrated greater activity during linguistic processing than during nonlinguistic processing of emotion in the right ventrolateral prefrontal cortex (RVLPFC).

Ken and Julie's predicted experience of the world, namely their expectations, shape their perceptions and therefore how they interact with others. Areas of the cortex involved with prediction and error detection are integral to Ken and Julie's thought process. When errors are detected in the environment, intense bursts of neural firing occur. These are signals generated by the orbital frontal cortex. Error detection can push people to become emotional and impulsive and resort to their 'animal instincts'.

For Ken and Julie to change routine (habitual) behavior when the message in the brain that something is not right grabs attention and overpowers rational thought takes strong will to push past such mental activity. Brains are pattern-making organs with an innate desire to create novel connections.

When Ken and Julie solve problems themselves, the brain releases a rush of neurotransmitters (like adrenaline) as they create novel connections. As mediator, my task is not to judge or make decisions for parties in dispute; the task is to create an environment of trust where Ken and Julie can label their emotions, change perceptual positions (looking at it from the other person's point of view and taking a view as if they were the 'fly on the wall') and reappraise the situation.

Neurons communicate with each other through a type of electrochemical signaling. When close, focused attention is paid to a mental experience (a thought, an insight, a picture in the mind's eye, or a fear) it stabilizes associated brain circuits. Over time, paying attention to a specific brain connection keeps circuitry open and dynamically alive, from just chemical links to stable, physical changes in brain structure. The brain is capable of significant internal change as response to environmental changes. The brain is also capable of changing as a function of where we put our attention. It reshapes the patterns of the brain. Such is the power of focus. Hence, people who practice a different specialty every day think differently (different sets of connections are activated) – i.e., professionals in finance, legal, engineering or human resources have physiological differences that prevent them from seeing the world the same way.

In the quest for certainty people create expectations, which may materialize in "what you put your attention on you will get more of". Expectations play a large role in perception. In Ken and Julie's case where they expect to increase their status and their autonomy by participating in face-to-face negotiations with the petroleum company, oil executives attending the meetings specifically to listen to and negotiate with them increase their sense of respect for Ken and Julie's concerns. Whether real or perceived, the environmental change from not having a say to having a face-to-face meeting with oil executives is confirmation to them that their status and autonomy are intact.

Ken and Julie are involved in one and the same dispute; however, they both have different mental maps. Julie sees company employees as 'rude' employees and in her mind, they don't give a moment's care about intruding in her lifestyle. Ken, however, sees company employees as busy, intelligent professionals; he hears valuable information about improved technology and considerations for processes to lessen impact his lifestyle.

A large-scale behavior change requires large scale change in mental maps. It requires that the experience allow people to provoke *themselves* to change attitudes or behaviors more quickly. As evidenced in the first mediation cited in this paper parties created mental space to move from strictly analyzing the situation to allowing remote associations of distantly

related concepts surface. Mediators wanting to change the way people think or behave should learn to recognize, encourage and deepen their disputing parties' insights. Julie, who sees oil workers as rude employees, won't change how she listens without a moment of insight in which her mental maps shift to seeing the workers perhaps as capable, specialized personnel.

Ken and Julie must own any change initiative for it to be successful. A moment of insight is a complex set of new connections being created. Connections have the potential to enhance mental resources and overcome the brain's resistance to change. The mediator knows what the brain wants and responds to narrowly focused negative emotions with:

- focusing people on solutions instead of problems
- letting them come to their own answers and
- keeping them focused on their insights

The way Ken and Julie pay attention during mediation in the very moment of challenge is the difference that can make the difference. When they listen, thinking of their response requires focus and attention, and energy in the PFC. Like Ken and Julie, we often process our thoughts right away and later our working memory allows us to hear another chunk of what was said (with delay and after we stop processing our thoughts). We can actually miss pieces of what has been said entirely as we are busy processing. This is called "attention blink".

The mediator's task is to give consideration to and then guide parties away from their past experiences and to focus on the here and now. From the present state Ken and Julie are experiencing they can correctly label their emotions and identify what impact this has on them 'now'. From there they are guided to distance themselves and look at the situation from an observer's perspective. This opens the scope of possibilities for reappraisal. Reappraisal is a cognitive-linguistic strategy that alters the trajectory of emotional responses by reformulating the meaning of a situation. Reappraisal can intervene relatively early in the emotion-generative process, recruiting executive cognitive control processes in medial, dorsolateral, and ventrolateral prefrontal cortex (PFC) and dorsal anterior cingulate cortex (ACC).

Reappraisal effectively down-regulates emotional experience and behavior and emotion related neural responses that together modulate ongoing emotion experience in emotion-appraisal brain systems, including the amygdala, ACC, ventromedial PFC, and insula. Over the long term, frequent use of reappraisal leads to enhanced control of emotion, interpersonal functioning, and psychological and physical well being.

From moment to moment, emotions influence attention, decision-making, memory, physiological responses, and social interactions. However, even as they shape a wide range of intrapersonal and interpersonal processes, emotions are themselves subject to modification: *mindfulness* begins by bringing awareness to current experience - observing and attending to the changing field of thoughts, feelings, and sensations from moment to moment - by regulating the focus of attention. This leads to a feeling of being very alert to what is occurring in the here-and-now.

Mindfulness approaches teach Ken and Julie to become more aware of thoughts and feelings and to relate to them in a wider decentered perspective as transient mental events rather than as reflections of the self or as necessarily accurate reflections on reality. Thus, when Ken and Julie recognize self-devaluative, hopeless thoughts simply as thoughts, they are better able to disengage from them since no action will be required (i.e., since the thoughts are not 'real, there is no goal to obtain and thus no need to ruminate to find a solution).

For Ken and Julie, rather than observing experience through the filter of their beliefs, assumptions, expectations, and desires, mindfulness involves a direct observation of the company's behavior as if for the first time, a quality that is often referred to as "beginner's mind".

An unexpected reward for Ken and Julie comes as the executives briefly retreat and return with an offer to remove all above surface tanks and to connect existing oil wells via a network of underground pipelines, eliminating tanker traffic, noise pollution and odor concerns, not to mention the positive effect on the esthetics of the countryside.

If mirror neurons are currently being investigated, this report should be considered a demonstration of the power of mirror neurons' influence on two oil executives who observe Ken and Julie's emotional pain and switch attention from threat ("we do business as we see fit") to reward ("return on investment equals peace of mind for all parties") to achieve a win-win outcome.

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