

Putting your best brain forward:

How neuroscience awareness and evolutionary psychology can help lawyers avoid claims and offer better client service

The success of books like Malcolm Gladwell's *Blink* and Norman Doidge's *The Brain that Changes Itself*, has brought discussion of neuroscience out of the medical lab and into everyday conversation. The potential for what we know about the brain to be used to our advantage in the business and professional realms has spurred a growing body of research, and lawyers are beginning to pay attention.

From LAWPRO's perspective, the most interesting implication of this research is that a basic understanding of neuroscience may provide lawyers with insights into how to shape their own behaviour so that they can better serve clients and avoid malpractice claims.

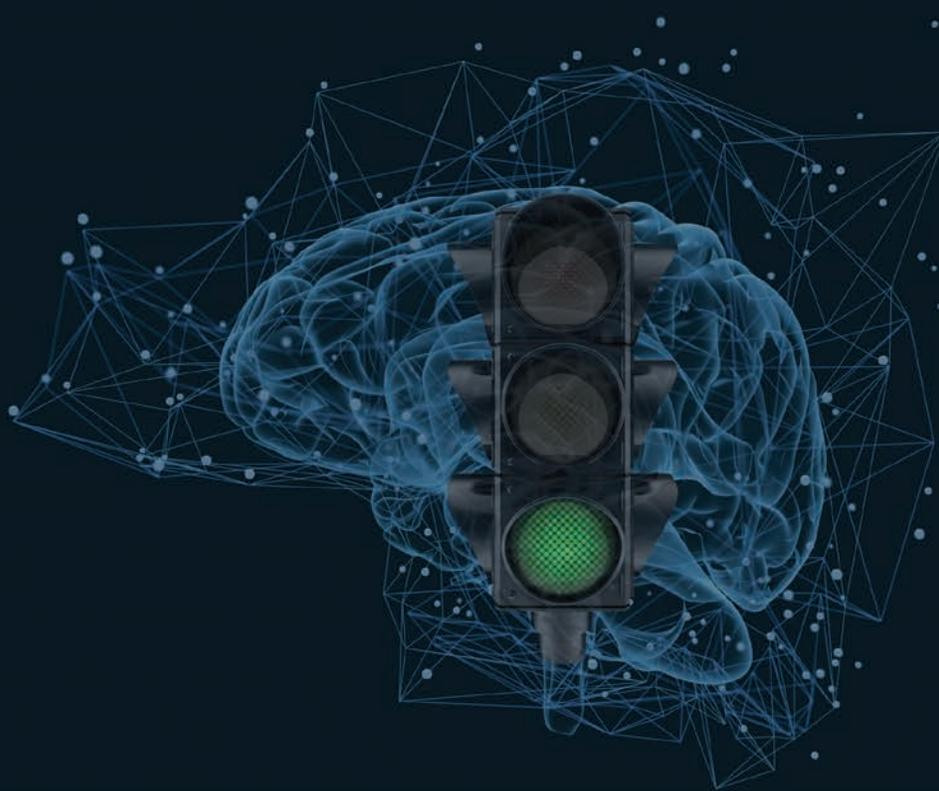
To learn more, we spoke to two lawyers who have studied the application of neuro awareness and evolutionary psychology to legal work. Nathalie Boutet is a Toronto family lawyer and mediator, and the founder of the Neuro Family Law Institute.™ Craig E. Jones, Q.C. is a professor in the Faculty of Law at Thomson Rivers University in Kamloops, B.C. His litigation career includes work on the Polygamy Reference, the *Election Act* challenge, the Missing Women Commission of Inquiry, and the "Occupy Vancouver" courthouse-access case.

Brain basics

To understand what is being said about the impact of brain physiology on how we practise law, we need to be familiar with the relevant terms (see the definitions sidebar on page 7 for a quick guide).

Professor Jones says that "**evolutionary psychology** offers an explanation for the **neuroscience**. Neuroscience has confirmed the psychological evidence, which has been gathered since the 1960s, that many of our decisions are made **sub-rationally**." In other words, they are made outside the realm of our awareness. Functional magnetic resonance imaging (fMRI) studies, Jones explains, have shown that between 90 and 100 per cent of our decisions are made subconsciously.





The theory of evolutionary psychology suggests a distinction between two decision-making mechanisms, which Jones refers to as “**System 1** and **System 2.**” System 1, sometimes described as our “reptile brain,” is located in the **basal ganglia** region, an area that was well-developed from the beginning of our evolution as a species. Decisions originating in this part of our brains are primal, basic and instinctual, and they happen sub-rationally. System 2, which evolved later, is based in our brain’s **neocortex**. Its workings are within our conscious awareness – we perceive them as conscious thought. Neuroscience suggests that System 2 does not actually make many (or even any) decisions; instead, it either provides rationalizations for our System 1 decisions, or acts as an override mechanism that allows us to revise them.

The benefits of neuro awareness

The process of making an effort to take into account the interaction of the two systems when interpreting our own behaviour is what Nathalie Boutet describes as “**neuro awareness.**” Boutet views neuro awareness as a tool lawyers can use to gain a deeper understanding of “how we show up in the world, how we show up in negotiation.” Both Boutet and Jones believe that we can benefit greatly from an understanding of our clients’ psychology and thought processes. When we realize that our client’s reasoning is shaped by the same forces as our own, we can tailor our communications so that they are better understood.

But what does it mean to be neuro aware? How do we know what to watch for?

Heuristic biases

Biases in the neurological sense of the term, explains Jones, are forces that influence our decisions. A **heuristic** is a mental shortcut developed by our brains that promotes our capacity to make what

Jones calls “fast and frugal” decisions – decisions that allow us, using as little mental energy as possible, to take action. A heuristic bias is one that allows us to interpret and classify the information that underlies our decisions in an efficient – though often imperfect – way.

While we are not aware of our biases on a conscious level, studies of decisions analyzed in the aggregate can, by proving that aggregate results diverge from a random distribution, reveal our biases at work. Researchers have identified many different kinds of biases, including **confirmation bias** and **anchoring bias**.

While a review of all of the various types of bias is beyond the scope of this article, an examination of just those two can provide a convincing argument for the benefits of neuro awareness.

CONFIRMATION BIAS

Confirmation bias is a heuristic that leads us to interpret new information in a way that serves to entrench our pre-existing beliefs.

Jones cites voter reaction to stories about the candidates in the November 2016 presidential election as a demonstration of confirmation bias at work. While there was no shortage of information available about the candidates, “it became clear that as they piled on, rather than changing minds, new facts tended to entrench people ever more deeply into their positions.”

Confirmation bias can be dangerous for investigators or justice system participants who are charged with drawing conclusions from facts, because it prevents the decision-maker from being dissuaded from early impressions, even if new facts don’t support those impressions. It’s the effect behind investigative “tunnel vision.”

Jones notes that research about the operation of confirmation bias has the potential to undermine the testimony of expert witnesses, because it has been demonstrated that a witness’s prior knowledge

of inculpatory evidence about an accused can skew even his or her “technical” evidence, for example, fingerprint analysis.

Jones warns that to consider oneself immune from confirmation bias is dangerous, because the research suggests that the most intelligent and the most educated among us – and lawyers often see themselves as falling into that category – are also the most successful at rationalizing their decisions. “This means that the people who do the most thinking are actually the most likely to fall prey to confirmation bias.”

ANCHORING BIAS

Anchoring bias is a heuristic that prompts us, when we need to propose a numeric value, to skew toward a number we have recently seen. In negotiation or litigation, this can mean that the first number put forward by a party can strongly influence the eventual settlement.

But the anchor number need not even be relevant to the context: even reading a room number on the meeting room door can trigger the anchoring effect. It’s a brain shortcut with daunting implications.

Not only are we biased, says Jones, “but all of our biases manifest themselves in a self-interested way. That means, for instance, that not only may you rationalize putting off a call to a difficult client to the afternoon when your decision-making processes are at their worst, but also, by the time the afternoon arrives you may rationalize not making the call at all because you have to prepare for court in the morning.”

How stress impacts decisions

Our System 1 thought processes are highly sensitive to perceived threats (though not very good at threat assessment). “It’s very traumatizing to encounter the legal system,” says Boutet of her clients. “When we are traumatized, there are reactions in our body that are identical to what would happen if we were encountering a beast in the wild.” These reactions prompt behaviours – for example, a **fight-or-flight reaction** – that are designed to help us save ourselves.

“These reactions destabilize us,” explains Boutet. “Understanding this really helped me, as I looked back on my interactions with clients. It explained that vacant look I would sometimes get. Now I understand that it means that the client is being triggered by something I am saying.” Being in the midst of a fight-or-flight reaction has a profound impact on short-term memory, which explains why clients may have difficulty remembering what was discussed in a meeting.

Emotional turmoil can also impair reasoning abilities, which can affect the quality of clients’ decisions in certain circumstances, for instance, in a negotiation where ex-spouses and their counsel are in the same room. “A raised eyebrow between spouses can set someone off, without the lawyers having any idea what is going on.”

While lawyers may be better acclimated to the workings of the justice system, they are not immune to stress. Aggressive tactics by opponents can have a real impact on lawyers’ ability to reason

Speaking the language

New to the language of neuroscience and evolutionary psychology? Here’s a primer of key terms:

Anchoring bias: a bias that prompts us to perceive and reflect, in our choices, a connection that may not actually exist between one piece of information and a subsequent piece.

Basal ganglia: a collection of structures called subcortical nuclei, located at the base of the forebrain, the primary function of which seems to be task switching and prioritization.

Confirmation bias: a bias that prompts us to interpret new information as reinforcement for our existing beliefs or conclusions.

Evolutionary psychology: the study of psychological and thought processes as evolutionary adaptations.

Fight-or-flight reaction: a physiological (including biochemical) response to a perceived threat. It is designed to prepare our bodies for action (to fight or to flee).

Heuristic: a technique that enhances our capacity to understand something quickly; or in other words, a mental shortcut.

Neocortex: the grooved part of the brain sometimes described as the “gray matter.” It is divided into many distinct sub-regions that are responsible for a wide range of cognitive processes.

Neuro awareness: the state of being able to formulate potential neuroscience explanations for thoughts and behaviour based on information one has gathered about brain science.

Neuroscience: the scientific study of the nervous system, including the brain.

Sub-rational decisions: decisions below the level of conscious reasoning.

System 1: according to the dual-process theory of reasoning, System 1 choices are unconscious, rapid, low-effort, “default” dominated, and arose early in our evolutionary history.

System 2: System 2 choices are conscious, explicit, logical, slow, high-effort, and the capacity to make them arose relatively recently in our evolutionary history.

Truthiness: the capacity of a belief to be perceived as fact – for example a “gut feeling” that it is true – regardless of whether it is actually true.

clearly and to react in a measured way. Long-established advice designed to allow for the reconsideration of reactions – for example, the practice of allowing an email reply to “sit” for twenty-four hours before sending – can help to counteract the ill effects of stress.

Stress need not necessarily be acute, or generated by opponents, to impact performance; it can flow from simply taking on more work than we can effectively handle. Jones acknowledges that pressure to work faster is part of the reality of legal work, but he suspects that it may come at a cost: “One of my students studied the increase in the number of ethical complaints made to a law society alongside the increase in the cost of law school tuition over the same period within a jurisdiction, and found a possible correlation. One interpretation might be that as new lawyers graduate with higher debt, they take on a higher volume of work to try and pay for that debt, their reasoning is taxed, and one result is a greater number of complaints.”

The impact of energy on decision quality

Research studies of decisions analyzed in the aggregate¹ show that the quality of our decisions decreases significantly when our brains are low on energy. Jones notes that brain functioning requires a high proportion of our body’s energy resources, compared to other organs – up to 20 per cent of our total energy consumption at any given moment. To conserve energy, our brains “push down” as many routine decisions as possible to the System 1 subconscious, primal brain.

The effective use of routine (for example, by relying on checklists; more on this below) can help unburden a lawyer’s brain so that he or she has more energy available to make important decisions. Even then, there is a limit on effective decision-making capacity. Says Jones: “any time you believe you are working at full capacity, you are really working at overcapacity” – and the quality of your decisions may suffer. Lawyers can compensate for this by scheduling their most difficult thinking work for times of the day when their energy is highest, and by being careful to control their workload so that enough time can be taken for important decisions.

Boutet is careful to monitor her clients for decision fatigue. She reminds them, when preparing for a negotiation or mediation session, to pack foods high in protein and low in sugar (for example, nuts) that promote a slow and continual release of energy, and to make sure that they remain well-hydrated, preferably with water instead of sugary or caffeinated drinks. Boutet considers this kind of advice to be well within a lawyer’s scope, because she has found that her clients appreciate anything that has the potential to improve the results that they get from the legal process. “I think it would be great if, as lawyers, we go beyond simply providing clients with information about the law. They ask broad questions, and they want to know how to prepare themselves for the process.”

Boutet takes care to monitor her own nutrition for the same reason: to be certain that she is bringing her most effective self to the task. Boutet’s training in event preparation has taught her how important a

healthy lifestyle, including healthy eating and sufficient sleep, are to a lawyer’s own brainpower. “Lawyers must try to be mindful of what their brains and bodies need for a gruelling event, like a full day of trial or a long mediation.”

Practical strategies for improving our decisions

For many, the revelation that 90 to 100 per cent of our decisions happen sub-rationally can be discouraging. If we don’t have conscious insight into our choices, how can we have any control over our performance? Are we simply doomed to make mistakes?

Jones reminds us that our System 1 decision-making process evolved to promote the making of *good* decisions in a fast and frugal way. In general, we can count on our gut reactions to be useful – there is no reason why a sub-rational decision is automatically a bad decision. But the process is not perfect, and so when it comes to our most important decisions, it is helpful to take steps to ensure that our System 2 decision-making process is doing what it is designed to do: provide an effective override mechanism.

The seven strategies that follow can help you apply the emerging lessons of neuroscience and evolutionary psychology to the day-to-day work of your practice.



1. THINK SLOWLY – AND LET CLIENTS DO THE SAME

A heavy workload combined with emotional arousal – for example, feeling pressured by a client or bullied by an opponent – have the potential to derail clear thinking. To ensure that we are making the best decisions possible, says Jones, “it helps to be aware of how many decisions we are making, at what time of day, and under what conditions.”

Both stress and fatigue tend to make our choices more conservative, and making too many decisions too quickly risks pushing important decisions down to our sub-rational System 1 processes. To avoid mistakes, it is important to allow sufficient time for decision-making, and to do so at a time when our brains can handle the work. If a task requires problem-solving or creativity, for example, a lawyer should reserve it for a time when the brain has plenty of available energy. For many, says Jones, it can be helpful to heed common advice: “as soon as you arrive at work in the morning, complete the hardest task on your schedule” (that is, if you can keep your biases from convincing you that some other task is more important).

The opportunity to apply slow thinking can be even more important for clients, who may be unfamiliar with legal concepts and the legal process. Says Boutet, “I always ask a client, what’s the best time of the day and the best day of the week for a meeting?” To ensure that clients make good decisions, Boutet also schedules multiple negotiation meetings instead of a single long meeting so that the client has appropriate time between meetings to reflect on the options.

¹ See, for example, Danziger, Shai; Levav, Jonathan; and Avnaim-Pessoa, Liora; “Extraneous factors in judicial decisions”; *Proceedings of the National Academy of Sciences of the United States of America* (PNAS); Volume 108 Number 17; April 2011.

A problem that has sometimes caused claims against family lawyers is settler's remorse. In some cases, clients who have sought to repudiate settlements have alleged either having been pressured into settling by a lawyer, or not having been provided with sufficient information prior to making a decision. Boutet believes that an understanding of neuroscience can help prevent settler's remorse. "Clients sometimes regret decisions when they feel they have been rushed. Breaking up a negotiation into multiple sessions can allow the client to move gradually in the direction of agreement, which can help them to solidly endorse what they are signing." Boutet notes, however, that some clients will still make agreements they later regret in an effort to get themselves out of a high-conflict situation. Where the lawyer observes that a client may be doing this, it can be useful to leave the negotiation with an agreement in principle in place, and to wait a few days before concluding a binding settlement.

2. LAY A SOLID FOUNDATION FOR ROUTINE DECISIONS

Not every task in a lawyer's workday requires laser-focus and time to reflect. Many areas of practice follow well-established patterns of activity.

2 When we undertake routine work, our brains rely heavily on System 1 decision-making. This is not necessarily inappropriate, unless we zone out so completely that we overlook exceptional details or, for example, red flags that would otherwise alert us to fraud.

Routine work is less memorable to us than more complicated work (because we have completed the same actions many times), and so it can be difficult, at a later date, to remember specific answers to questions we asked the client – or whether we asked a particular question at all.

To ensure that routine tasks are completed correctly and that our System 2 override function will kick in when we encounter an exception, it can be helpful to develop and adopt routinized, ritualistic work habits that reflect established best practices.

A simple example is an email handling routine. It might go something like this:

1. Read email at specific times each day (for example, at 9:00 am, 1:00 pm, and 4:00 pm);
2. If the response required will take 5 minutes or fewer, respond immediately, and then file the email in the appropriate client folder;
3. If the response will require more than 5 minutes, BEFORE closing the message, make a note on a task list or a to-do list about the actions required and the date/time by which they must be completed;
4. File the email in the appropriate client folder.

Checklists: a safer autopilot

To preserve energy, our brains make many decisions at a sub-rational level. When we do routine or familiar work, this kind of decision-making predominates, making it easier to miss steps, or to forget whether work has been completed.

Using an area-of-practice specific checklist to track progress can help eliminate oversights and preserve a record of the status of the transaction.

From our historical database of issues that drive claims, and with the contribution of expert lawyers in each area, we have developed a useful collection of practice management checklists and toolkits. Visitors to practicepro.ca are welcome to download them free of charge and to adapt them to their purposes. Here's a sampling of what's available at practicepro.ca/checklists:

For managing transactions and client services

- Client trial preparation checklist
- Commercial transaction checklist
- Domestic contract matter toolkit
- General checklist for the giving of independent legal advice
- Using Title Insurance Safely: Issues to Consider

To keep your practice running smoothly

- Employee departure checklist
- Post-matter client service survey precedent
- Sitting on a non-profit board: A risk management checklist

To help clients identify their legal needs

- Annual legal health check-up



Lawyers can also create routines for summarizing outstanding tasks at the end of a week, reviewing the status of client files at regular intervals, or even gathering relevant documents and equipment before leaving the office for a meeting.

Checklists are an excellent tool for helping lawyers adhere to best practices, and for ensuring uniformity in how matters are handled by all firm staff. Whether completed electronically, as part of transaction-management software, or simply printed out on paper and attached to a file, a checklist can ensure that steps are not missed, and that any staff member who reviews a file can determine what work remains to be done. Lawyers can develop their own checklists or adapt those prepared by others – we have a number of area-of-law specific checklists available at practicepro.ca for download.

Jones explains that consistent routines improve the quality of tasks we de-prioritize, and they can be helpful if our work is later challenged. If an aspect of a lawyer's work is challenged and there is no specific memory of what was done, the lawyer can at least testify to the usual practice. Being able to produce a checklist that is used to structure a routine is even better evidence of what has been completed.

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3. CONSULT WITH OTHERS

As long as lawyers are mindful of client confidentiality, they can benefit from asking colleagues to weigh in on important decisions. Research has shown that group decisions are less prone to bias and other distortions than are individual decisions.² From a practical perspective, checking in with others allows the lawyer to bring a broader range of experience to bear on the issue.

Consulting with others provides an excellent opportunity to practice countering confirmation bias: when asking colleagues for second opinions, lawyers can monitor themselves for the tendency to seek confirmation of early conclusions. Jones notes that because we have a bias in favour of agreeing rather than disagreeing, and yet another bias in favour of the opinions of more senior colleagues, it's useful, when consulting with others, to carefully consider who speaks first in these exchanges. Jones reports that some judicial panels maintain a practice of allowing the most junior justice on a panel to speak first, because of the natural tendency of the panel to agree with the chief justice (or most senior member).

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4. CHECK YOUR BIASES

An understanding of some of the biases that shape our decisions can offer us the opportunity to bring to bear the “override” function of System 2 reasoning on problems. Because System 2 most often provides a rationalization for our unconscious decisions, this won't always sway our choices, but it may slow us down and provide the chance, for example, to consult

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with others, or, as Jones puts it, to “pay attention to the difference between ‘truthiness’ and truth.”

Skills for challenging confirmation bias have long been an important part of the training of scientists, law enforcement personnel, and other investigators. Lawyers are beginning to pay attention, too – and not only with respect to the impact of the bias on their own decisions. An understanding of confirmation bias has useful implications for litigators. For example, while many of us may feel compelled, in an argument, to have the last word, studies of legal decisions suggest that juries are more likely to latch onto early information and to interpret subsequent testimony and argument as confirmation of their preliminary conclusions.³

Having the *first* word – especially where that word is a number – may also be important when it comes to negotiating settlements, because of anchoring bias. And where the first number is proposed by someone else, it can be useful to consciously resist the natural impulse to be drawn toward it – an impulse that gets even stronger if we have our eye on a compromise position that is an even number, or one that is a multiple of five.

There are many different kinds of biases that our brains use as short-cuts – lawyers who take time to learn about them may well discover other strategies for improving performance and avoiding mistakes.

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5. NOURISH YOUR BRAIN

As noted above, brain function requires substantial energy. To be able to think clearly, we need to eat sufficient calories, and it is best to choose foods that are digested slowly (for example, proteins and healthy fats, rather than simple carbohydrates and sugar) so that the level of glucose in our blood is fairly consistent.

Drinking adequate water helps nutrients circulate in the bloodstream, and there has been considerable research about the brain's specific nutrient needs (for example, omega-3 fatty acids have been found to be especially important to the brain).

Eating healthy meals and avoiding complex tasks when we are very hungry can help our brains work best. Boutet regularly reminds her clients to pay attention to their own nutrition, and to get enough sleep before stressful events.

² See, for example, Charness, Gary and Sutter, Matthias; “Groups Make Better Self-Interested Decisions”; *The Journal of Economic Perspectives*, Volume 26, Number 3, Summer 2012, pp. 157-176 (20).

³ See, for example, Carlson, Kurt A. and Russo, J. Edward; “Biased Interpretation of Evidence by Mock Jurors”; *Journal of Experimental Psychology: Applied*, Volume 7, Number 2; pp. 91-103; 2001.

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6. REFLECT ON YOUR CLIENTS' PSYCHOLOGY

Even a basic introduction to evolutionary psychology can offer useful insights into clients' experiences with the legal system. After taking a course on the subject, Boutet found herself better able to detect when a client was feeling triggered into a fight-or-flight response by a conversation. Armed with the knowledge that short-term memory suffers in these situations, Boutet now gives clients notepads so that they can write down information. She follows up meetings with an email that summarizes instructions and advice given, and also reminds clients of tasks they have been asked to complete.

Here at LAWPRO, we have long recommended summarizing instructions and advice in writing, because problems with lawyer-client communication are the most common cause of claims. We may not have had the benefit of knowing the underlying science behind communication failures, but we've certainly seen the evidence: lawsuits against lawyers.

"Trigger" reactions are just one effect lawyers can look for in their clients. Jones reminds us that just as we can strive for awareness of our biases, it can be useful to identify them in clients, too. "When you are speaking with a client," says Jones, "be aware that [because of the effect of confirmation bias] he is trying to reinforce what is already in his own mind." This means that after a loss, a client may have a salient memory of anything the lawyer said that the client interpreted as "egging him on" to go ahead with the litigation, and may not remember any qualifications expressed. An understanding of confirmation bias might prompt a lawyer to put into writing any words of caution that she might have about the action's chances for success.

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7. STRIVE FOR SELF-AWARENESS

The most important risk-management insight that evolutionary psychology may offer lawyers is more general than the foregoing tips. It's the basic lesson that most of our choices are not motivated by neutral, objective reason. Rather, the decisions we make are shaped by perceptions and motivations that lie below the level of our consciousness, and were important to our species thousands of years ago, in a very different environment.

It takes effort to adjust our behaviour to the modern world, where mistakes are more likely to lead to ethics complaints or malpractice claims than to being eaten by sabre-toothed tigers. Says Jones, "don't let one poor choice snowball into something worse." Once a small thing happens – for example, a lawyer oversells the odds of a client's success – "our impulse can be to pile on self-serving decisions." The result? Those improbable cases in which a small exaggeration culminates in someone forging a court order.

Difficult ethical situations can often be averted by drawing our attention to the existence of these self-serving impulses, so that we

have an opportunity to slow down our decisions. Slow thinking allows us to explore a wider range of options, which can be the key to identifying a less destructive path out of the weeds.

Boutet is a firm believer in the benefits of self-awareness. When asked what single piece of advice she would give a lawyer just beginning to delve into an understanding of neuroscience, she recommends looking inward: "develop more awareness of your own triggers." A lawyer who knows what creates fight-or-flight mode – for example, bullying tactics from an opponent – can take steps to avoid turning the client's fight into the lawyer's own. "Because if you've lost it emotionally, whatever fee you charge your client is too much."

Boutet credits law schools and law societies with doing a better job, in recent years, of educating lawyers about effective conflict resolution, including outside the courtroom. "But I think," she says, "that we are now beginning to move into the next phase of evolution in law schools, and that is going to be developing better self-awareness. Because our internal triggers operate before we have a chance to identify them, we need to do the work of understanding what we ourselves bring to the process *before* we encounter it." ■

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The science is clear: brain health – which includes both mental and physical health – has an important influence on lawyers' decisions. Did you know that as an Ontario lawyer you can turn to the Member Assistance Program (MAP) for information about wellness topics like nutrition, sleep hygiene, addictions recovery, and mental health? MAP offers online resources, counselling and coaching services.

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