

NEURO-ADVOCACY: HARMONIZING PERSUASION WITH THE OPERATION OF THE BRAIN

Gary S. Gildin[†]

ABSTRACT	600
INTRODUCTION	601
I. THE AMERICAN LEGAL SYSTEM’S ASSUMPTIONS AS TO HOW JURORS WILL UNDERSTAND AND USE THE EVIDENCE WE PRESENT	602
II. “FACT-STACKING” ADVOCACY IS CONSISTENT WITH OUR LEGAL SYSTEM’S PRESCRIPTIONS AS TO HOW JURORS WILL RECEIVE AND USE THE EVIDENCE.....	603
III. SOCIAL SCIENCE FINDINGS AS TO JURY DECISION-MAKING	604
IV. WHAT NEUROSCIENTISTS HAVE LEARNED ABOUT HOW THE BRAIN MAKES DECISIONS AND WHY	606
A. <i>Anatomy</i>	606
B. <i>Evolution</i>	607
C. <i>How the Brain Makes Decisions Under These Constraints</i>	607
1. <i>Prediction</i>	607
2. <i>Emotion</i>	610
V. THE FIRST TEACHING OF NEUROSCIENCE FOR THE SUBSTANCE OF ADVOCACY: PIVOTING FROM STACKING FACTS TO STORY	612
A. <i>Stacking Facts to Satisfy or Defeat Legal Elements and the Burden of Proof Does Not Align with How the Brain Makes Decisions</i>	612
B. <i>Advocacy Through Story Harmonizes with How the Brain Makes Decisions</i>	613
1. <i>A Single Plot</i>	614
2. <i>Motive and Character</i>	615

[†] G. Thomas and Anne G. Miller Chair in Advocacy and Dean Emeritus, Penn State Dickinson Law. I am grateful for the invaluable contributions of Joseph Myers, an award-winning documentary filmmaker and my co-founder of Trial Story LLC. <https://www.trialstory.com/>. Special thanks to the Public Defender Association of Pennsylvania for allowing me to co-direct and teach their annual trial skills training for over 20 years, providing a laboratory in which to develop and test-drive ideas about story.

A. <i>Motive</i>	615
B. <i>Character a/k/a Pre-Motive</i>	616
3. <i>The Continuum</i>	617
VI. THE SECOND LESSON OF NEUROSCIENCE FOR THE SUBSTANCE OF ADVOCACY: INTERJECTING EMOTION.....	619
VII. OPENING STATEMENT	620
VIII. DIRECT EXAMINATION	622
A. <i>Direct Examination of Lay Witnesses</i>	622
B. <i>Direct Examination of Expert Witnesses</i>	624
IX. CROSS EXAMINATION	625
A. <i>Cross Examination of Lay Witnesses</i>	625
B. <i>Cross Examination of Expert Witnesses</i>	626
X. CLOSING ARGUMENT	627
A. <i>Expanding the Plot of the Story to Include the Testimony at Trial</i>	627
B. <i>Preserving the System 1 Prediction</i>	628
CONCLUSION.....	630

ABSTRACT

The most significant contemporary advances in effective courtroom advocacy will emerge from what on the surface is an unlikely source: neuroscience. Revolutionary advances in technology for the first time allow us to see how the human brain makes decisions. The findings are wholly inconsistent with how the trial process presupposes the finder of fact will perceive and use information delivered by lawyers and witnesses. Consequently, lawyers seeking to persuade jurors (and judges) must reframe their advocacy to align with what we have learned about how the minds of these decision-makers will receive testimony and argument and use these inputs to reach their verdict.

This Article first will summarize the two signature features of the brain's decision-making: 1) instantaneous, autonomous, and sub-conscious prediction based on comparing new inputs to past life experience, and 2) the integrated and dominant role of emotion. To

coordinate the substance of what we advocate with how the mind operates, lawyers must pivot the focal point of their trial presentations away from stacking facts around the legal elements. Instead, we must tell one person's story—one that satisfies a continuum of character, motive, and single plot and includes the human stakes. The Article further proposes the most important tactics lawyers must execute at each stage of the trial—opening statement, direct examination, cross-examination, and closing argument—to make their advocacy neuro-congruent.

INTRODUCTION

Advocacy is often categorized as an art.¹ The peril of that conceit is that the trial experience we use to hone our personal style becomes an unreliable feedback loop. As professor of cognitive neuroscience Tali Sharot cautions: “A brain-imaging scan showed that when people received the opportunity to communicate their pearls of wisdom to others, their brain's reward center was strongly activated. We experience a burst of pleasure when we share our thoughts.”²

Yet “[i]t turns out that what most of us believe will cause others to alter their thoughts and actions is wrong.”³ Fortunately, Professor Sharot prescribes the antidote to conflating self-gratification with effective trial advocacy: “if we want to affect the behavior and beliefs of the person in front of us, we need to first understand what goes on inside their heads and go along with how their brain works.”⁴

1. See, e.g., Ashley Jones Hall, *The Art of Advocacy Revealed through Law School Curriculum*, 54 J. L. & EDUC. 1 (2025); Paul Mark Sandler, *THE FINE ART OF TRIAL ADVOCACY: A YOUNG LAWYER'S RESOURCE FOR SUCCESS* (2002); Christopher D. Balch, *The Art of War and the Art of Trial Advocacy: Is There Common Ground?*, 42 MERCER L. REV. 861 (1991); Judge Advocate General's School Faculty, *The Art of Trial Advocacy*, ARMY L. 45 (1997); William A. Hunter, *The Art of Advocacy: A Plea for the Renaissance of the Trial Lawyer*, 7 FLA. L. REV. 229 (1954); CLE Panel Discussion, *A View from the Bench: Master the Art of Trial Advocacy*, TOURO L. CTR (June 12, 2025), <https://www.tourolaw.edu/news/eventdetails.aspx?id=10721> (last visited Dec. 1, 2025) (on file with Syracuse Law Review); Christopher O'Donnell, *Art of Trial and Advocacy*, TRTCLE, <https://www.trtcle.com/online-cle/ny/566/art-of-trial-and-advocacy> (last visited Dec. 1, 2025) (on file with Syracuse Law Review).

2. TALI SHAROT, *THE INFLUENTIAL MIND: WHAT THE BRAIN REVEALS ABOUT OUR POWER TO CHANGE OTHERS* 6 (2017).

3. *Id.*, at 2; see also W. LANCE BENNETT & MARTHA S. FELDMAN, *RECONSTRUCTING REALITY IN THE COURTROOM* 13–15 (2d ed. 2014) (finding lawyers “as a whole, unreflective about their behavior and their impact on trials,” with none of the variables cited as affecting verdicts “likely to be a determining force in more than a small percentage of cases”).

4. SHAROT, *supra* note 2, at 7 (emphasis removed).

Quite recent discoveries in neuroscience have debunked our legal system's longstanding assumptions as to how the jurors will understand and use the evidence we present. Consequently, it is imperative that we now anchor our advocacy in hard science, adapting both the substance of what we argue and our trial techniques to align with how the brains of the jurors will reach a decision.⁵

I. THE AMERICAN LEGAL SYSTEM'S ASSUMPTIONS AS TO HOW JURORS WILL UNDERSTAND AND USE THE EVIDENCE WE PRESENT

Trial judges' standard instructions to the jury manifest three fundamental tenets of the American legal system. First, as the jurors hear testimony and observe exhibits, they must not leap to any decision—rather, each juror will warehouse the evidence in their brain's library, retrieving it hours, days, weeks, or even months later during deliberation with their fellow jurors.⁶

Second, the jury's task is to determine whether the prosecutor or plaintiff has proven each and every element of the crime or cause of action by the governing burden of proof.⁷ The jurors are to base that decision only upon the evidence presented, without relying on or sharing any extrinsic “unique personal experiences.”⁸

5. See ANDY CLARK, *THE EXPERIENCE MACHINE: HOW OUR MINDS PREDICT AND SHAPE REALITY* 6 (2023) (“The idea that the brain is a giant prediction machine is relatively recent”); LEONARD MLODINOW, *EMOTIONAL: HOW FEELINGS SHAPE OUR THINKING* xii (2022) (“Just as Newton's laws of motion were superseded by quantum theory when science developed the tools that revealed the atomic world, so too is the old theory of emotion now giving way to a new view, thanks in large part to extraordinary advances in neuroimaging. . . .”); LISA FELDMAN BARRETT, *HOW EMOTIONS ARE MADE: THE SECRET LIFE OF THE BRAIN* xv (2017) (“We are, I believe, in the midst of a revolution of our understanding of emotion, the mind, and the brain—a revolution that may compel us to radically rethink . . . central tenets of our society. . . .”). For a comprehensive history of the various hypotheses and findings as to the operation of the brain, see MATTHEW COBB, *THE IDEA OF THE BRAIN: THE PAST AND FUTURE OF NEUROSCIENCE* (2021).

6. See, e.g., Judicial Council of Cal., *Civil Jury Instructions* (2025 ed.), CACI No. 100, *Preliminary Admonitions*, at 9 (“It is important that you keep an open mind throughout this trial. Evidence can only be presented a piece at a time. Do not form or express an opinion about this case while the trial is going on. You must not decide on a verdict until after you have heard all the evidence and have discussed it thoroughly with your fellow jurors in your deliberations.”).

7. See, e.g., *id.* at CACI No. 400, *Negligence—Essential Factual Elements*, at 232 (describing that where the defendant has raised an affirmative defense, the jury also will have to consider whether the defendant has proven the elements of the defense).

8. See, e.g., *id.* at CACI No. 5009, *Predeliberation Instructions*, at 1451 (“During your deliberations, do not make any statements or provide any information to other jurors based on any special training or unique personal experiences that you

Finally, the jurors must reach their verdict through wholly rational decision-making. The jurors are cautioned not be influenced by any bias or emotional reaction to what they are learning.⁹

II. “FACT-STACKING” ADVOCACY IS CONSISTENT WITH OUR LEGAL SYSTEM’S PRESCRIPTIONS AS TO HOW JURORS WILL RECEIVE AND USE THE EVIDENCE

If jurors behave as the judge instructs, our advocacy will be guided by “fact-stacking.” Lawyers for both parties will offer testimony and exhibits to place on their pan of the scale (and to attack the credibility of their adversary’s evidence) for the jurors to weigh in applying the legal elements.¹⁰ The prosecutor/plaintiff’s lawyer will introduce evidence sufficient to meet their burden of proof for each required element.¹¹ In turn, the defense lawyer will submit proofs to defeat one or more of the elements.¹²

Elements codify the ingredients of specific conduct that constitutes a civil or criminal wrong. Organizing our trial presentations to stack facts affecting the legal elements has two intended or unintended consequences. First, evidence we offer to prove or disprove elements is directed at events that occurred at—or immediately proximate to—the moment of the alleged wrong. Second, when we conceive of the trial as a battle over the legally relevant facts, we purge our advocacy of emotion, for we expect the jurors to reach a verdict by engaging in the purely rational exercise of weighing the competing evidence for each element.

Fact-stacking advocacy will be effective only if the jurors comply with the judge’s instructions as they listen to the evidence and reach a decision. As will next be discussed, even before revelations by

may have had related to matters involved in this case. What you may know or have learned through your training or experience is not a part of the evidence received in this case.”). The jurors are permitted to “use your common sense and experience in deciding whether testimony is true and accurate.” *Id.*

9. See e.g., *id.* at CACI No. 100, *Preliminary Admonitions*, at 9 (“You must decide what the facts are in this case. Do not let bias, sympathy, prejudice, or public opinion influence your verdict.”).

10. See BENNETT & FELDMAN, *supra* note 3, at ix (“Conventional legal training places inordinate emphasis on accumulating a volume of facts and details, the search for which is shaped by the law applicable to the case.”).

11. Plaintiff’s counsel/the prosecutor must present evidence sufficient to prove every element in its case-in-chief to avoid the court granting a motion for judgment as a matter of law/acquittal. See FED. R. CIV. P. 50(a); see also FED. R. CRIM. P. 29; MOLLY TOWNES O’BRIEN & GARY S. GILDIN, *TRIAL ADVOCACY BASICS* 39–40, 100 (3d ed. 2022).

12. See TOWNES & GILDIN, *supra* note 11, at 40–41, 100, 103.

neuroscientists, social science researchers concluded that jurors do not conform to the prescribed norms during the trial or in their deliberations.

III. SOCIAL SCIENCE FINDINGS AS TO JURY DECISION-MAKING

Because the law safeguards the sanctity of jury deliberations, we cannot witness firsthand when and how jurors reach their decisions in real-world trials. Consequently, the best available evidence of juror decision-making has been generated by viewing and interviewing jurors in mock trials,¹³ surveying jurors after the conclusion of trials in which they served,¹⁴ and extrapolation from watching trial proceedings.¹⁵ A comprehensive analysis of the literature is well beyond the scope of this Article. Nonetheless, social scientists consistently found that in at least four ways, jurors neither react to testimony nor reach a verdict in the manner the judge has directed.

First, jurors do not passively store evidence as it is offered, to be retrieved once deliberations commence. Instead, as they listen to witnesses testify, jurors actively fit the evidence into a story they construct.¹⁶

Second, in formulating their story, jurors do not solely use the evidence the parties offered in court. Rather, in constructing the narrative, jurors draw significantly upon their out-of-court life experience.¹⁷

13. See, e.g., REID HASTIE, *Introduction*, in *INSIDE THE JUROR: THE PSYCHOLOGY OF JUROR DECISION-MAKING* 28 (Reid Hastie ed. 2010) (acknowledging that while there are limitations on extrapolating from laboratory studies of juror behavior, this methodology is more reliable than “expert intuitions about juror behavior.”) *Id.* at 4.

14. See Paula L. Hannaford et al., *The Timing of Opinion Formation by Jurors in Civil Cases: An Empirical Examination*, 67 *TENN. L. REV.* 627 (2000).

15. See, e.g., BENNETT & FELDMAN, *supra* note 3, at 12–13 (basing conclusions on ethnographic study observing more than sixty trials; informal and formal interviews with spectators, bailiffs, witnesses, lawyers, and judges; communication experiments with undergraduate students; and review of transcripts of forty cases argued before court of appeals).

16. See NANCY PENNINGTON & REID HASTIE, *The Story Model for Juror Decision Making*, in *INSIDE THE JUROR: THE PSYCHOLOGY OF JUROR DECISION-MAKING* 192, 194 (Reid Hastie ed., 2010); Jill E. Huntley & Mark Constanzo, *Sexual Harassment Stories: Testing a Story-Mediated Model of Juror Decision-Making in Civil Litigation*, 27 *L. & HUM. BEHAV.* 29, 49 (2002) (finding jurors use “story prototypes” in reaching verdicts); BENNETT & FELDMAN, *supra* note 3, at 18 (“Virtually all members of the courtroom scene, from judges to spectators, framed the key judgmental issues in trials by organizing the opposing cases into stories. . . .”).

17. See PENNINGTON & HASTIE, *supra* note 16, at 206 (discussing interview with 26 volunteers who acted as jurors while watching a reenactment of a murder

Third, in reaching a verdict, the jurors do not compare the weight of each party's evidence for each legal element. Instead, the jurors decide which verdict best aligns with the story they created.¹⁸ Jurors use two criteria in choosing the story to accept—coverage and coherence.¹⁹ Unsurprisingly, one factor—coverage—is the degree to which the evidence offered at trial supports the story. However, the second variable—coherence—is based on whether the story is internally consistent, includes all the expected parts of a story,²⁰ and conforms to the jurors' experience of what typically happens in the real world.²¹

Finally, contrary to the judge's admonition, emotion affects the narrative the jurors construct and motivates them to reach a verdict that is consistent with that story.²²

Lawyers may be loath to reform their advocacy based on social science experiments that attempt to replicate jury decision-making. We must shed our hesitancy to adapt in the wake of findings emerging from direct observation of the human brain. Neuroscience not only confirms social scientists' conclusions; it explains why jurors' departures from the judge's edicts are both rational and unavoidable.

trial found 55% of references to evidence were to actual testimony while 45% of references were to "inferred events—actions, mental states, and goals that 'filled in' the stories."); Louis Ellison & Vanessa Munro, *Telling Tales': Exploring Narratives of Life and Law Within the (Mock) Jury Room*, 35 LEGAL STUD. 201, 218–20 (2015) (finding jurors construct and then defend what they believe to be the story using their personal experiences).

18. See PENNINGTON & HASTIE, *supra* note 16, at 193.

19. See PENNINGTON & HASTIE, *supra* note 16, at 198. Pennington and Hastie identified a third variable affecting a juror's willingness to accept a story, "uniqueness." The belief in any one story over another will be decreased if there is more than one coherent explanation for what happened. *Id.* at 199.

20. See PENNINGTON & HASTIE, *supra* note 16, at 199; BENNETT & FELDMAN, *supra* note 3, at iii ("The relationship between the story and being accepted as true depends on the structural ambiguities linking the key elements of the narrative together."). The elements of story will be discussed more fully in Part V (B).

21. See PENNINGTON & HASTIE, *supra* note 16, at 199; BENNETT & FELDMAN, *supra* note 3, at vi ("stories that evade or distort some of the evidence may be more compelling than ones that seem ambiguous due to the complexities of everyday life. . . . [T]he basis of judgment rests more on the crafting of the narrative than on the simple dictates of fact.").

22. See Todd E. Pettys, *The Emotional Juror*, 76 FORDHAM L. REV. 1609, 1630 (2007); Douglas O. Linder, *Jury Empathy and Race*, 63 TENN. L. REV. 887, 900 (1996); BRIAN BORSTEIN & EDIE GREENE, *Jurors Can Control Their Emotions*, in THE JURY UNDER FIRE: MYTH CONTROVERSY AND REFORM 242, 242–70 (2017). For an argument that emotion is and should be embedded in legal reasoning as well, see Susan A. Bandes, *Feeling and Thinking Like a Lawyer: Cognition, Emotion, and the Practice and Progress of Law*, 89 FORDHAM L. REV. 2427, 2434 (2021).

IV. WHAT NEUROSCIENTISTS HAVE LEARNED ABOUT HOW THE BRAIN MAKES DECISIONS AND WHY

Our understanding of how the brain makes decisions has taken a giant leap forward since 2010 as a result of pathbreaking technological advances that “have allowed scientists to look into, and experiment upon, the brain.”²³ Two findings elucidate why fact-stacking will not be effective advocacy. First, the brain constantly, autonomously, and instantaneously makes sense of what we perceive by matching new inputs to past life experience. Second, emotion is an unavoidable and integral part of every decision. These attributes of the brain’s operation defy the judge’s instructions to the jury but are an inescapable product of anatomy and evolution.

A. Anatomy

How the human brain makes decisions is, as a threshold matter, the consequence of anatomy. Unlike a camera, the brain does not have the capacity to directly perceive the universe.

Like those ancient mummified Egyptian pharaohs, the brain spends eternity entombed in a dark, silent box . . . it learns what is going on in the world only indirectly via scraps of information from the light, vibrations, and chemicals that become its sights, sounds, smells, and so on. Your brain must figure out the meaning of these flashes and vibrations. . . .²⁴

Our brain receives an overwhelming amount of chemicals, flashes, and vibrations from the senses. “One human retina transmits as much visual data as a fully loaded computer network connection in every waking moment.”²⁵ But unlike computer systems, our brains cannot expand the magnitude of its servers to meet the staggering demand. The skull must first be small enough to travel through the birth canal. And as we develop, the skull cannot grow beyond our body’s capacity to support it while erect.²⁶

The brain is not only constrained by its physical confines but must also share a finite source of fuel with all our body’s needs. While occupying only two percent of our body’s weight, the brain consumes twenty percent of the supply of the glucose required to nourish all our

23. MLODINOW, *supra* note 5, at xii.

24. BARRETT, *supra* note 5, at 58.

25. BARRETT, *supra* note 5, at 60.

26. *See* BARRETT, *supra* note 5, at 60.

functions.²⁷ “[B]y far our most ‘expensive’ adaptive accessory,” the brain must drive as efficiently as possible.²⁸

B. Evolution

Beyond the limiting anatomical features, the brain evolved to make immediate choices to keep us alive and well. When we heard the sound of an animal while wandering across the savannah, we did not have the luxury of considering every ingredient that would allow us to make the most rational choice of whether we faced danger. To ensure survival, the brain instantly had to alert us to whether a threat was afoot, and if so, whether to fight or flee. While the perils have changed, our brains have not only retained but have refined the facility to make instantaneous judgments.

C. How the Brain Makes Decisions Under These Constraints

1. Prediction

Given the volume of data coursing into the limited capacity of its black box every second, how can the brain rapidly make decisions essential to our survival while conserving energy to satisfy all the body’s other needs? The answer—prediction. Our brain constantly, unstoppably, and invisibly predicts the meaning of signals it is receiving by comparing present sensory inputs to patterns of our past experiences.²⁹ Once the brain finds an acceptable resemblance to what occurred earlier in our life, it will signal our bodies to act in accordance with that match—and do so without being conscious of that intent.³⁰ To avoid squandering glucose, once it locates a satisfactory experiential

27. See CLARK, *supra* note 5, at 8–9.

28. *Id.* at 9.

29. See BARRETT, *supra* note 5, at 26, 58, 125.

30. See BARRETT, *supra* note 5, at 59–60. Those seeking a deeper but still comprehensible foray into how, throughout our lifetimes, each experience strengthens 1) the likelihood that a signal will proceed from the dendrite (ears) of the individual neuron through its axon hillock to the neuron’s axonal terminal (mouth), 2) the chemical transmission of the signal across the synapse to effectuate communication between neurons, and 3) the connections of the networks of neurons in our brain, should read ROBERT M. SAPOLSKY, BEHAVE: THE BIOLOGY OF HUMANS AT OUR BEST AND WORST, 137–53, Appendix 1 694–706 (2017) [hereinafter BEHAVE]. Anyone wishing to go deeper down the rabbit hole of how our perceptions and decisions are defined by our life experience will profit from tackling Dr. Sapolsky’s follow-up book, DETERMINED: A SCIENCE OF LIFE WITHOUT FREE WILL, in which he submits that there is no “neuron (or brain) whose generation of a behavior is independent of the sum of its biological past.” ROBERT M. SAPOLSKY, DETERMINED: A SCIENCE OF LIFE WITHOUT FREE WILL 15 (2023).

equivalent, the brain will not revisit the prediction. Rather, the brain will ignore—in fact actively suppress—contrary information.³¹ In short: “[W]hat we perceive today is deeply rooted in what we experienced yesterday, and all the days before that. Every aspect of our daily experience comes to us filtered by hidden webs of prediction—the brain’s best expectations rooted in our own past histories.”³²

The late Daniel Kahneman categorized this functioning of the brain in his iconic book, *THINKING FAST AND SLOW*.³³ A cognitive psychologist by training, Kahneman won the Nobel Prize in economics for research that proved that—contrary to the unifying theory underlying micro and macroeconomics—human beings do not make rational, wealth maximizing decisions. Kahneman described two modes of the brain’s decision-making, which (adopting the labels assigned by psychologists Keith Stanovick and Richard West) he termed System 1 (fast thinking) and System 2 (slow thinking).³⁴

System 2 as the “conscious reasoning self”³⁵ can “construct thoughts in an orderly series of steps,”³⁶ “check the validity of a complex logical argument,”³⁷ and “follow rules, compare objects on several attributes, and make deliberate choices between options.”³⁸ By contrast, System 1 is an “associative machine,”³⁹ automatically, instantly, and silently making predictions based on the resemblance of new inputs to past experiences. System 1 looks for the “best possible interpretation of the situation,”⁴⁰ with past events creating “the range of plausible values as well as the most typical cases.”⁴¹ Possessing “little understanding of logic and statistics,”⁴² System 1 treats what it perceives as normal if it is similar to what has happened in our lives, with recent and recurring experiences having the greatest sway.⁴³ Because it bases predictions on past events, System 1 is highly subject to

31. BARRETT, *supra* note 5, at 27 and 114; CLARK, *supra* note 5, at 5; NICOLA GENNAIOLI & ANDREI SHLEIFER, *A CRISIS OF BELIEFS: INVESTOR PSYCHOLOGY AND FINANCIAL FRAGILITY* 147 (2018).

32. CLARK, *supra* note 5, at xv.

33. See DANIEL KAHNEMAN, *THINKING FAST AND SLOW* (2011).

34. See *id.* at 20.

35. *Id.* at 21.

36. *Id.*

37. *Id.* at 22.

38. KAHNEMAN, *supra* note 33, at 36.

39. *Id.* at 51.

40. *Id.* at 81.

41. *Id.* at 74.

42. *Id.* at 25.

43. See KAHNEMAN, *supra* note 33, at 62, 66, 74, 80.

confirmation bias, seeking data that is consistent with currently held beliefs.⁴⁴ Compounding the risk that the prediction that triggered our action was wrong, System 1 “does not keep track of alternatives that it rejects, or even the fact that there were alternatives.”⁴⁵

Our legal system presumes the jury’s verdict will be a product of System 2. To the contrary, the jurors’ brains unavoidably and effortlessly are always operating in System 1 mode.⁴⁶ When System 1 finds an acceptable resemblance to what we have experienced and proposes acting in accordance with that finding, System 2 “adopts the suggestions of System 1 with little or no modification.”⁴⁷ System 2 will activate its critical executive functions only where System 1 cannot associate what it is perceiving with a pattern of what has occurred in our lives.⁴⁸

Why doesn’t the more reliable System 2 drive decision-making? Glucose. As Kahneman explains, “[t]he nervous system consumes more glucose than most other parts of the body, and effortful mental activity appears to be especially expensive in the currency of glucose.”⁴⁹ Because it relies on familiar patterns of experience, System 1 does not place a heavy demand on the body’s limited glucose supply. Under the “general ‘law of least effort,’” where there are several ways to attain a goal, the mind will take “the least demanding course of action”—uncritical acceptance of System 1’s prediction.⁵⁰

Because of anatomy and evolution, as we present evidence, the juror’s brain cannot withhold judgment until receiving the judge’s instructions on the law and listening to the views of fellow jurors. Instead, at every moment the brain compares what the juror is seeing and hearing to patterns of their life experience. Once it finds a sufficiently similar match, the juror’s brain will predict that the disputed events giving rise to the trial happened the same way that juror experienced. After making the prediction, the juror’s brain will not unnecessarily draw down the body’s glucose supply by reconsidering its decision.

44. *See id.* 81.

45. *Id.* at 80.

46. *See id.* at 20–21, 24.

47. *Id.* at 24.

48. *See* KAHNEMAN, *supra* note 33, at 24. Beyond errors that are baked into making decisions based upon similarity to previous occurrences, System 1 further warps the prediction by substituting a different question for a situation it cannot easily answer. *See id.* at 97. And System 2 “may have no clue” as to the various errors and biases that infect the prediction System 1 has reached. *Id.* at 28.

49. *Id.* at 43.

50. *Id.* at 35

Instead, the brain will ignore or actively suppress testimony that contradicts the prediction, deeming that evidence to be one of the many signals it is steadily receiving that are inconsequential noise.

2. *Emotion*

Another aspect of the brain's decisional process—the signature influence of emotion—also undermines what the court expects of jurors. “The American legal system assumes that emotions are part of an inherent animal nature and cause us to perform foolish and even violent acts unless we control them with our rational thoughts.”⁵¹ We designed the trial process to ensure jurors reach their verdict by collective rational analysis, untainted by the truth—obscuring the influence of emotion. Rules of Evidence exclude otherwise relevant testimony if its value in helping the jurors to determine disputed facts is substantially outweighed by the risk that its emotional content will divert the jurors' logical thinking.⁵² After acting as the gatekeeper excluding unduly emotional evidence, the judge specifically instructs the jurors not to be swayed by emotion in reaching their verdict.

Despite the judge's management of the evidence and marching orders, emotion will be the leading driver of how the jurors' brains will reach a decision. The efficacy of the legal system's proscription of emotion rests upon Paul MacLean's since-refuted theory of the Triune Brain.⁵³ MacLean posited that emotion emanates from the brain's primitive limbic system but can be overridden by the reasoning processes of the anatomically and functionally separate, more evolved neocortex.⁵⁴

Modern neuroscience has proven MacLean's theory to be “one of the most successful misconceptions in human biology,”⁵⁵ false in its belief that emotion is severable from and can be conquered by the brain's rational decision-making. Contrary to the Triune Brain hypothesis, the brain's limbic system and neocortex neither operate separately nor in opposition. Rather, the various anatomical portions of the brain act interdependently, each sending useful information to and receiving valuable input from their neighboring regions.⁵⁶ Put another

51. BARRETT, *supra* note 5, at xii.

52. *See, e.g.*, FED. R. EVID. 403.

53. *See generally* PAUL D. MACLEAN, *THE TRIUNE BRAIN IN EVOLUTION: ROLE IN PALEOCEREBRAL FUNCTIONS* (1990).

54. *See id.*

55. BARRETT, *supra* note 5, at 81.

56. *See* BEHAVE, *supra* note 30, at 28 (“The cortex and limbic systems are not separate, as scads of axonal projections course between the two. Crucially, these

way, the brain cannot weaponize a rational decision reached solely in the neocortex to defeat a separate, less evolved emotional conclusion that issued from the limbic system.

By characterizing emotion as the product of a primitive limbic system, the Triune Brain theory also seriously devalued emotion's imprint on the integrated decision. As more fulsomely explained in Lisa Feldman Barrett's trial lawyer's must-read, "emotion" is a label we attach to the feeling we perceive from "interoception."⁵⁷ Interoception is the signal that the brain receives from the organs, tissues, hormones, and systems inside the body⁵⁸ broadcasting what is needed to achieve homeostasis. The significance the brain should and will attach to interoception is evident from the National Institute for Health National Cancer Institute's definition of homeostasis:

A state of balance among all the body systems needed for the body to survive and function correctly. In homeostasis, body levels of acid, blood pressure, blood sugar, electrolytes, energy, hormones, oxygen, proteins, and temperature are constantly adjusted to respond to changes inside and outside the body, to keep them at a normal level.⁵⁹

The brain's most important job is to keep us alive and well. Hence, signals from inside the body—that is, emotion—not only play a part in every decision but wield the greatest clout over our choices.⁶⁰ Emotion is "the body's way of saying, 'Hey, something really important is going on,' and it is crucial that you respond accordingly."⁶¹

projections are bidirectional—the limbic system talks to the cortex, rather than merely being reined in by it.”).

57. BARRETT, *supra* note 5, at 56.

58. *See id.*

59. *Homeostasis*, NAT'L CANCER INST., <https://www.cancer.gov/publications/dictionaries/cancer-terms/def/homeostasis> (on file with Syracuse Law Review) (last visited Nov. 21, 2025).

60. *See* BARRETT, *supra* note 5, at 121 (“Every prediction you make, and every categorization your brain completes, is always in relation to the activity of your heart and lungs, your metabolism, your immune function, and the other systems that contribute to your body budget.”); BEHAVE, *supra* note 30, at 58 (“A simplistic view is that the vm [very emotional] PFC and dl [deliberative] PFC perpetually battle for domination by emotion versus cognition. . . . Instead, they are intertwined in a collaborative relationship needed for normal function . . .”); MLODINOW, *supra* note 5, at 23 (“We now know that emotion is profoundly integrated into the neural circuits of our brain, inseparable from our circuits for ‘rational’ thought.”).

61. SHAROT, *supra* note 2, at 40; *See* JONATHAN HAIDT, *THE RIGHTEOUS MIND: WHY GOOD PEOPLE ARE DIVIDED BY POLITICS AND RELIGION* 47 (2012) (“Reason is the servant of the intuitions. The rider was put there in the first place to serve the elephant.”).

Consequently, just as the juror's brain is incapable of withholding or reconsidering its System 1 prediction, the brain cannot purge emotion from its decision.

To carry out the ethical obligation to zealously represent their clients within the bounds of the law, trial lawyers must first adjust *the substance* of what they advocate to embrace two teachings of neuroscience, given how the brains of the jurors will actually reach a decision.

V. THE FIRST TEACHING OF NEUROSCIENCE FOR THE SUBSTANCE OF ADVOCACY: PIVOTING FROM STACKING FACTS TO STORY

A. Stacking Facts to Satisfy or Defeat Legal Elements and the Burden of Proof Does Not Align with How the Brain Makes Decisions

The first—and most important—way we must reform our advocacy to synchronize with the jurors' brains concerns the substance of our trial presentation. From the initiation of the action through the final instructions to the jury, the law presses us to address two variables: 1) the elements of the cause of action or crime, and 2) the burden of proof. Neither of these features, however, align with how the brain of the juror will render a verdict.

Neither legal elements nor burdens of proof are founded in any life experience the brain's prediction machine will be able to match. Quite the opposite. The law disaggregates real-world conduct into discrete elements which—as a matter of desirable social policy—it deems a redressable civil or criminal wrong when commingled. Burdens of proof likewise do not mirror how humans make decisions outside the courtroom. Devised to accommodate the impossibility of determining with one hundred percent certainty how the disputed past event giving rise to the trial occurred, the law invented lesser probabilities of proof commensurate with the differential consequences of a verdict in civil and criminal cases.⁶²

62. See, e.g., Ronald J. Allen & Nicolas Elliot-Smith, *Proof Beyond a Reasonable Doubt Doesn't Exist: Except as an Emergent Property of a Complex Adaptive System*, 115 J. CRIM. L. & CRIMINOLOGY 783, 787 (2025) (“the debate over BARD relies on a flawed assumption, namely, that proof beyond a reasonable doubt ‘exists’ in the world with knowable parameters that can be ascertained through rational inquiry and discourse, similar to a natural entity or human artifact like money or stock ownership.”); KEVIN M. CLERMONT, A GENERAL THEORY OF EVIDENCE AND PROOF: FORMING BELIEFS IN TRUTH 164 (2024) (“In sum, the factfinder should abductively construct a chain of inferences to produce a belief function for each item of evidence bearing on an element, and then weight and average them to produce for each

Legal elements and burdens of proof also disdain the most significant agent in the brain's decision-making—emotion. Objectifying human conduct and assigning probability of proof as the decisive metric, legal elements and burdens of proof aim to assure the jurors' verdict will be purely rational.

To raise and defeat motions for judgment before⁶³ and during⁶⁴ trial, we must continue to discover and offer evidence to support or undermine the burden of proving legal elements. However, stacking facts neither corresponds to any life experience of jurors that will trigger their brains' prediction nor cause the jurors to emotionally desire the verdict we seek. More ominously, if what we maintain is contrary to the jurors' prior beliefs, we "can cause them to come up with altogether new counterarguments that further strengthen their original view; this is known as the 'boomerang effect'."⁶⁵

B. Advocacy Through Story Harmonizes with How the Brain Makes Decisions

To synchronize the substance of our persuasion with the functioning of the jurors' brains, instead of stacking facts, we must package our evidence into a human story.⁶⁶ As Professor Paul Armstrong explains in *Stories and the Brain*, "narratives configure lived experience by invoking brain-based processes of pattern formation that are

element a composite belief function ready for applying the element-by-element standard of proof."); Kenneth R. Berman, *Rethinking Credibility and the Burden of Proof*, 45 LITIG. 19, 24 (2019) ("[T]he real burden of proof is defined by the images that root in the decision maker's mind. Once an image takes hold, the burden of proof is all about reinforcing or dismantling that image . . .").

63. See, e.g., FED. R. CIV. P. 56.

64. See, e.g., FED. R. CIV. P. 50.

65. SHAROT, *supra* note 2, at 17; see also *id.* at 7 ("Numbers and statistics are necessary and wonderful for uncovering the truth, but they're not enough to change beliefs, and they are practically useless for motivating action."); see also Arthur C. Brooks, *A Gentler, Better Way to Change Minds*, THE ATLANTIC (Apr. 7, 2022), <https://www.theatlantic.com/family/archive/2022/04/arguing-with-someone-different-values/629495/> (on file with Syracuse Law Review); Elizabeth Kolbert, *Why Facts Don't Change Our Minds*, NEW YORKER (Feb. 19, 2017), <https://www.newyorker.com/magazine/2017/02/27/why-facts-dont-change-our-minds> (on file with Syracuse Law Review); Matthew Feinberg & Robb Willer, *Apocalypse Soon? Dire Messages Reduce Belief in Global Warming by Contradicting Just-World Beliefs*, 22 PSYCH. SCI. 34 (2011).

66. See J. Christopher Rideout, *Applied Legal Storytelling: An Updated Bibliography*, 18 LEGAL COMMUN & RHETORIC 221, 225–29 (2021) (compiling articles on the various applications of storytelling in law).

fundamental to the neurobiology of mental functioning.”⁶⁷ To persuade, we must tell the jurors a story that is rooted in a repeated pattern of life events.⁶⁸ And our trial story must contain three elements that reside on a continuum—a Single Plot, Motive, and Character.

1. A Single Plot

Obviously, our story must include our account of the disputed real-world events giving rise to the trial—the plot. In legal argument, we routinely offer alternative grounds on which the judge can rule in our favor. Where the evidence plausibly supports different versions of what occurred, each of which would lead to a winning verdict, we will be tempted to present and argue alternate plots. But if we hope to induce the brains of the jury to accept our rendition of the facts, we must present only a single version of what occurred⁶⁹—one that is most comparable to an event the jurors likely have experienced.⁷⁰

As more fully described in Part IV, enclosed in the black box of the skull, the brain predicts what the senses are signaling by matching these inputs to previous happenings in our life.⁷¹ Unlike the realm of

67. PAUL B. ARMSTRONG, *STORIES AND THE BRAIN: THE NEUROSCIENCE OF NARRATIVE* 13 (2020). See also BENNETT & FELDMAN, *supra* note 3, at i (“Despite the complexity of the information revolution and the pace of contemporary change . . . one unchanging common human principle remains that we are *homo narrans*, the storytellers. Storytelling is so ubiquitous that its transcendent role in organizing and simplifying complex human activity is hard to overstate.”).

68. Experience increases the ease with which a signal is transmitted across a single neuron and between neurons. See BEHAVE, *supra* note 30, at 138–39, 687–93. Named after Canadian neurobiologist, Donald Hebb, Hebb’s Law posits that neurons “that fire together wire together.” COBB, *supra* note 5, at 213; see also KAHNEMAN, *supra* note 33, at 66 (“repetition induces cognitive ease and a comforting feeling of familiarity.”). Therefore, the story we choose should be one that, in some form, is likely to have recurred rather than one of a unicorn that, drawing upon our lawyerly ability to organize vast quantities of data, we invent from shards of evidence.

69. The number of potential plots range from the two stories identified by Aristotle to the 69 suggested by Rudyard Kipling, with a recent search of 1,737 stories for their “emotional arcs” concluding there were only six basic story shapes. Emily Eakin, *The Plagiarism Plot is Having a Moment*, *Copy That.*, N.Y. TIMES BOOK REV. (Jan. 2, 2025), <https://www.nytimes.com/2025/01/02/books/review/plagiarism-plot.html> (on file with Syracuse Law Review).

70. BARRETT, *supra* note 5, at 27 (“Simulations are your brain’s guesses of what’s happening in the world. . . . Your brain uses your past experiences to construct a hypothesis . . . and compares it to the cacophony arriving from your senses. In this manner, simulation lets your brain impose meaning on the noise, selecting what’s relevant and ignoring the rest.”); CLARK, *supra* note 5, at xiii (“[W]e are never simply seeing what’s ‘really there,’ . . . insulated from our own past experiences.”).

71. See *supra* Part IV.

science fiction and art house movies, no event we have experienced transpired in alternate versions. If we offer the jury multiple variants of what occurred, we fail to instigate their brains to effortlessly locate an associated life experience. Instead, we provoke their minds to actively consider each option. In short, we abandon appealing to the jurors' default System 1 thinking. By activating their evaluative System 2 thinking, we not only cause the jurors to ponder our alternative tales of what may have occurred; we induce their minds to consider our adversary's account.⁷²

2. Motive and Character

The human brain does not store the past experiences it draws on to predict what we perceive as freestanding events. Instead, our neural pathways conjoin each occurrence with the traits of the people involved in those events. “[S]ome of your synapses literally come into existence because other people talked to you or treated you in a certain way.”⁷³ From the time we were infants, our brain has strived to make sense of what we are perceiving by finding reasons for these occurrences—both the motive of the persons involved and the attributes of character that gave rise to that motive.⁷⁴ For the jurors' brains to automatically associate our factual story with their lived experience, our story must go beyond the objective actions that constitute the plot. We must include the motive and character of the person whose story we are telling.

A. Motive

Motive is rarely a legal element.⁷⁵ To pass muster with the brain, however, our story must include the reason the person whose story we

72. Presenting multiple plots may inhibit the jurors from reaching a decision. See generally BARRY SCHWARTZ, *THE PARADOX OF CHOICE: WHY MORE IS LESS* (2004); Sheena S. Iyengar and Mark R. Lepper, *When Choice is Demotivating: Can One Desire Too Much of a Good Thing?*, 79 J. PERSONALITY AND SOC. PSYCH. 995 (2000).

73. BARRETT, *supra* note 5, at 34.

74. BARRETT, *supra* note 5, at 59, 97, 103. See also BENNETT & FELDMAN, *supra* note 3, at 7 (“Evidence [in trials] gains coherence through categorical connections to story elements such as the time frames, the characters, the motives, the settings, and the means.”); SHAROT, *supra* note 2, at 208 (“Biological principles, behavioral rules, and psychological theories can be hard to remember. But stories, plots, and characters stick in your mind; they provide a vivid emotional tale that you can make sense of and retrieve easily.”).

75. Even where not required for the prosecution of a crime, law enforcement officials have continued their investigation to discern the motive. After fatally shooting 60 people at an outdoor music festival, Stephen Paddock killed himself in the

are telling acted as they did.⁷⁶ Put another way, in addition to recounting actions, we have to relate the thoughts running through their head at the time.

The first question you must ask to assess the viability of any prospective plot is “why?” Why did the person behave the way I am arguing? If you cannot find a motive that the jury will believe people typically harbor given the circumstances, you have to reject that plot option.

B. Character a/k/a Pre-Motive

Motives do not drop like manna from heaven. To galvanize the jurors’ brains to find our story resembles its life experience, we must pull our story further back in time. We must recount the earlier event(s) that explain how and why the person whose story we are telling developed their motive. For “[t]he mind—especially System 1—appears to have a special aptitude for the construction and interpretation of stories about active agents, who have personalities, habits, and abilities.”⁷⁷

In disciplines other than law, this element of story is called character. The notion of including character in our factual story, however, raises red flags for lawyers socialized by rules that generally exclude

hotel room from which he fired the shots. See Sheri Fink, *Las Vegas Gunman’s Brain Exam Only Deepens Mystery of His Actions*, N.Y. TIMES (Feb. 9, 2018), <https://www.nytimes.com/2018/02/09/us/las-vegas-attack-paddock-brain-autopsy.html> (on file with Syracuse Law Review). After determining that Paddock was the shooter and acted alone, the FBI continued investigating to ascertain Paddock’s motive—including having a Stanford University pathologist examine Paddock’s brain. *Id.* After one year the FBI closed the investigation, finding no motive. See Vanessa Romo, *FBI Finds No Motive in Las Vegas Shooting, Closes Investigation*, NPR (Jan. 29, 2019, at 21:44 ET), <https://www.npr.org/2019/01/29/689821599/fbi-finds-no-motive-in-las-vegas-shooting-closes-investigation> (on file with Syracuse Law Review).

76. See ARMSTRONG, *supra* note 67, at 61 (“[O]ur brains seem to have developed a predisposition to bind cause and effect by temporally closing the gap between them . . . This subliminal mechanism also predisposes us to link the events emplotted in a story.”); KAHNEMAN, *supra* note 33, at 75 (“Finding such causal connection is part of understanding a story and is an automatic operation of System 1.”); Nancy Pennington & Reid Hastie, *Explaining the Evidence: Tests of the Story Model for Juror Decision Making*, 62 J. PERSONALITY AND SOC. PSYCH. 189, 202 (1992) (“[e]xplanations, semantic structures that summarize the causal relationships among events the decision maker believes occurred, are key mediators of jurors’ decisions and their confidence in decisions.”).

77. KAHNEMAN, *supra* note 33, at 29. See also *id.* at 76 (“Your mind is ready and even eager to identify agents, assign them personality traits and specific intentions, and view their actions as expressing individual propensities.”).

evidence of character.⁷⁸ These rules prohibit admission of prior actions similar to the conduct on trial, fearing the jurors will overweigh the value of such propensity evidence.⁷⁹ On the other hand, the law of evidence expressly condones admission of past acts if offered to prove motive.⁸⁰ For purposes of our trial story, character is used to make more probable the person's motive for acting, not to prove their conduct. In fact, these prior acts need not be—and usually are not—similar to the actions that constitute the plot of our story.

The concern with prejudice that animates exclusion of prior acts is further diminished because the most effective portrayal of character neither demonizes nor canonizes the person whose story we are telling.⁸¹ The vulnerability to human mortality of Achilles' heel, Adam and Eve's eating the forbidden fruit, and the tragic flaw of Shakespeare's otherwise noble protagonists all reflect our true nature. Everyone is vulnerable to acting against their better angels under certain circumstances. The past acts we offer to prove motive help explain why the subject of our story would (or would not) be motivated to depart from their inherent goodness under the circumstances they faced.

Like motive, character is not a legal element that we must prove. But to attune our advocacy to the brain's operation, character and motive frankly are more important than our evidence of what occurred. For the minds of the jurors will deem the plot of our story to be predictable—in fact inevitable—if our depiction of character and motive best resembles their lived experience.⁸²

3. *The Continuum*

In every phase of pretrial fact gathering—interviews of our client, meetings with witnesses who voluntarily agree to chat with us,

78. See, e.g., FED. R. EVID. 404(a)(1) (“Evidence of a person's character or character trait is not admissible to prove that on a particular occasion the person acted in accordance with the character.”).

79. See, e.g., FED. R. EVID. 404(b)(1) (barring admission of prior acts to prove character).

80. See, e.g., FED. R. EVID. 404(b)(2).

81. See Chris Arledge, *Making Your Case*, 108 ABA J. 16, 17 (Aug.–Sept. 2022) (“The greatest heroes and villains are complex. Hans Solo was a smuggler and selfish but also a hero. Hannibal Lecter was brilliant, cultured and talented, but also a monster. Your witnesses have flaws, and the other side's witnesses have strengths. Embrace these real complexities.”).

82. See Huntley & Constanzo, *supra* note 16, at 35 (finding that divergent verdicts in mock sexual harassment trials by jurors hearing same facts and evidence were based on jurors' view of character prototype of accusing employee and accused employer).

and formal discovery—we must explore potential plots, motives, and character traits that give rise to motive. Then we must choose the *single* strongest story to present at trial.⁸³ The indispensable, most important criterion for the chosen story is that the character, motive, and single plot must be a lie on a continuum.

Any disconnect between the three elements will prevent System 1 from effortlessly recognizing and accepting our story. For the jurors' brains to automatically associate the story with their lived experience, the events that formed character must naturally give rise to the motive. That motive in turn must unmistakably supply the reason for the actions that constitute the plot of our story.⁸⁴

We also must resist the ingrained view that we can advance a story at trial only if we have evidence to support every link in the narrative chain. The completeness of the story, while not wholly irrelevant, is secondary to the confluence of its character, motive, and plot.⁸⁵ For once the jurors have constructed a story in their minds, their brains will fill in any testimonial blanks in the narrative.⁸⁶

83. See generally KAHNEMAN, *supra* note 33 and accompanying text. To trigger the juror brain's automatic, System 1 prediction, you must tell only one person's story, sharing the character and motive that explain their actions. If you attempt to tell multiple persons' stories, the jurors will have to switch between narratives consciously and actively, undermining the goal of causing the brain's immediate, subconscious association with their life experience. Of course, other people may enter the story with their own character and motive; but you must take the jurors on the journey through the eyes, ears, and actions of a single player. See also PENNINGTON & HASTIE, *supra* note 16, at 199 (if more than one coherent story is offered, confidence in belief in any one story over the others will be diminished).

84. See PENNINGTON & HASTIE, *supra* note 16, at 197 ("In stories . . . *initiating events* cause characters to have psychological *responses* and to form *goals* that motivate subsequent *actions*, which cause certain *consequences* and accompanying *states*."). Pennington and Hastie identify three components to the coherence of a story: 1) consistency, the absence of internal contradictions; 2) plausibility, correspondence with the jurors' knowledge and life experience; and 3) completeness, the presence of all parts of the structure of a story. See *id.* at 198–99.

85. See KAHNEMAN, *supra* note 33, at 85 ("The measure of success for System 1 is the coherence of the story it managed to create. The amount and quality of the data on which the story is based are largely irrelevant"); BENNETT & FELDMAN, *supra* note 3, at 30 ("[T]here are cases in which the structural characteristics are far and away the critical elements in determining the truth of a story.").

86. See Louise Ellison & Vanessa E. Munro, *Telling tales: exploring narratives of life and law within the (mock) jury room*, 35 LEGAL STUD. 201, 221 (2015) ("In the present study, we uncovered striking evidence of jurors' willingness to construct hypothetical explanations for events when information presented at trial was deemed incomplete or otherwise deficient."); PENNINGTON & HASTIE, *supra* note 16, at 206 (interviews with volunteers shown reenactment of murder trial found 45% of the bases for their verdicts were events and inferences outside the evidence presented).

VI. THE SECOND LESSON OF NEUROSCIENCE FOR THE SUBSTANCE OF
ADVOCACY: INTERJECTING EMOTION

By presenting the single story that best satisfies the Character—Motive—Single Plot continuum, we cause the jurors' brains to instantaneously predict that inputs received from outside the body—the evidence they are hearing and seeing—are true because of similarity to their lived experience. This aspect of neuro-persuasion, while necessary, is not sufficient. For we cannot fail to mobilize signals from inside the body—emotion—which are the most influential drivers of decision-making.

To fully harness the power of the brain, we must rouse the jurors to feel good about the prediction—to root for it to be true. The tool for activating the jurors' emotion without running afoul of the law of evidence is “the stakes.” We have to propose how the verdict we seek will improve the lives of one or more of the players in the story.

We cannot rely on the legal consequences of the outcome of the trial to inspire the jurors. The usual aftermath of a verdict in civil cases—the award or denial of money damages—is founded in economic and social policies of compensation, deterrence, and risk allocation. In criminal cases, a guilty verdict furthers retribution and deterrence by punishing the defendant. A verdict of not guilty—more accurately not proven—advances society's preference that 99 guilty people go free rather than one innocent person be wrongfully convicted.⁸⁷ The legal underpinnings, while valid and second nature to lawyers, will not necessarily evoke an emotional reaction to the verdict's effect on the trial participants.

To harness the emotional driver of the jurors' brains, we must share how—apart from the legal consequence—the verdict we seek will better someone's life. Positive incentives are more likely to stimulate the jurors to render our verdict than negative repercussions:

We . . . have a bias to move towards objects of pleasure and away from objects of pain, because that is usually effective. The bias runs deep. Our brains are wired such that anticipating a reward not only triggers approach, it is more likely to elicit action altogether. The fear of a loss, on the other hand, is more likely to elicit inaction.⁸⁸

87. Letter from Benjamin Franklin to Benjamin Vaughan (Mar. 14, 1785) (on file with Syracuse Law Review).

88. SHAROT, *supra* note 2, at 64.

Interestingly, the best way to make the jury feel good about finding in our client's favor is to illustrate how their decision also will have positive ramifications for the *opposing* party. By entering a verdict of not guilty, the jury will prompt the police to reopen their investigation to apprehend the real criminal, providing the victim and society with the safety and closure they seek. Finding the defendant was negligent could lead them to drive more carefully in the future, ultimately protecting their family.

We must choose our single neuro-persuasive trial story and stakes before we utter a single word in the courtroom and never waver from that choice throughout the trial. In addition to moving the substance of our advocacy from stacking facts to story, we have to construct our opening statement, direct examinations, cross exams, and closing argument to most effectively convey the substance of the story and the stakes to the jury. While admittedly not empirically tested, the balance of this Article proposes ways we can reform our trial technique to incorporate the teachings of neuroscience on the operation of the brain.⁸⁹

VII. OPENING STATEMENT

If the jurors behave as the rational ideal posits, we could justify including a laundry list of topics in our opening statement. To establish our credibility as a dependable guide through the courtroom wilderness, we could explain the stages of the trial process that the jurors are about to experience.⁹⁰ We also could describe the applicable burden of proof in the light most favorable to our position. Cognizant that the jurors will be asked to apply the facts to the law at the end of the trial, there would be reason to spell out the governing elements of the cause of action or crime.⁹¹

On the other hand, given how the information we deliver will truly influence the brains of the jurors, we must limit our opening statement to the story continuum and the stakes. When we share the character and motive of the person whose story we are telling, the jurors' brains automatically will predict our version of what occurred—

89. For a report on experiments using an electroencephalograph to assess how the brain responds to persuasion, see Cheryl Boudreau, Seana Coulson & Mathew D. McCubbins, *Pathways to Persuasion: How Neuroscience Can Inform the Study and Practice of Law*, in *LAW AND NEUROSCIENCE* 395, 395–405 (Michael Freeman ed., 2011).

90. See Peter Perlman, *The First Two Minutes of the Opening Statement*, 16 *PRAC. LITIGATOR* 23, 27 (2005).

91. See Karen Turner McWilliams & Elisha A. King, *Effective Opening Statements*, 15 *PRAC. LITIGATOR* 13, 19 (2004).

the plot—is the closest resemblance to its neurally embedded patterns of life experience. When we relate the stakes, signals emanating from inside their body will cause the jurors to want to render a verdict in favor of our client.

Once System 1 has found a satisfactory experiential match and the prospect of acting on that prediction has returned the body's internal state to homeostasis, the jurors' brains will not unnecessarily draw down their finite glucose supply by inviting System 2 to reconsider or re-evaluate that prediction. Instead, as the trial proceeds the jurors will accept evidence that confirms the prediction and ignore—in fact actively suppress—testimony that contradicts the prediction.

We face three challenges to delivering a neuro-congruent opening statement. First, we will have great difficulty consigning to the cutting room floor the many ingredients beyond the story and stakes that we readily rationalize as worthy of inclusion. To edit out these distractors, we must religiously ask whether what we propose to share is something the jurors have experienced, the raw material for their brain's automatic prediction. Explaining the trial process transports the jurors away from the world in which they have lived to the rarified air of a courtroom designed to maximize procedural fairness. Burdens of proof facilitate the jurors' fact-finding amidst the impossibility of ascertaining past events with absolute certainty. Yet the jurors have never made a decision in their life by a preponderance of the evidence, clear and convincing evidence, or beyond a reasonable doubt. Rather than aligning with happenings in the jurors' lives, the categorical elements of the law disembodied lived experience to promote certainty and objectivity. Including any of these concepts in our opening at best is useless noise; at worst we prevent the jurors' brain from recognizing the story that aligns with their life experience.

Second, the legal elements require the jury to resolve the dispute over facts that happen at the moment of the crime or civil wrong. As a result, we are inclined to devote the bulk of our opening to the culminating event. To ensure the jury fully understands our account of what happened, we fear leaving out details such as dates, times, street names, directions, and the names and location of witnesses. But we must remember that the occurrences in the lives of the jurors that will generate their prediction are neurally linked to the characteristics of the people involved in those experiences and the reasons for their actions.⁹² To counteract legal socialization that draws us to overshare

92. *See supra* Part V.

facts about the plot, we should devote 75% of our opening to discussing the character and motive of the person whose story we are telling.

Finally, we must combat the enticement to refute our adversary's case (within the bounds of the prohibition on arguing in the opening). Addressing the other side's evidence will distract the minds of the jurors from living our story and predicting its ending—what filmmakers call the suspension of disbelief. By inviting the jurors to reject opposing evidence we will drive the operation of their brains into evaluative System 2, overriding System 1's readiness to accept our version of what occurred.

There is no single way to tell the story continuum and convey the stakes. Yet by structuring the introduction, body, and conclusion of the opening, we can convey the full story protocol and mobilize the persuasive power of primacy and recency.

Our opening should immediately parachute the jurors into the moment of the story that unveils the motive for what occurred. That introduction will pique the jury's interest; cement a core driver of the prediction in the jurors' minds; and may well represent the theme of the case—the lens through which to view all the evidence.

In the body of the opening, we will pull the story back in time. We should unfurl the episodes that tell why the person whose story we are telling harbored their motive—the character element. We then continue our story by elaborating on the facts that gave rise to the motive we teased in the introduction. Finally, just as the jurors have already subconsciously predicted, we complete our story with what happened—the plot.

Frankly, we now have nothing further to convey about our story. But we need an elegant and persuasive way to finish our opening. We can unleash the powerful role emotion plays in decision-making by concluding our opening with the stakes—how, by entering a verdict in favor of our client, the jurors will in a real-world way markedly improve someone's life.

VIII. DIRECT EXAMINATION

A. Direct Examination of Lay Witnesses

By training, most trial lawyers organize their direct examination by first accrediting the witness, then setting the scene, and finally describing the action. This schema ignores an important lesson of neuroscience: the brain will predict what happened based upon

resemblance to the character and motive of people with whom they have interacted in their lives.

Rather than prioritizing the plot, our primary goal on direct should be to have the witness relate the events that sculpted the character and motive of the person whose story we are telling.⁹³ Admittedly, not every witness will have personal knowledge of facts supporting these story elements. Nonetheless, this structure primes the jurors to trust the witness' subsequent account of what happened because it corroborates the prediction their brains reached following the testimony about character and motive.⁹⁴

Organizing our examination around character and plot also helps us navigate the key challenge of direct—the inability to control the witness. The alien environment of the courtroom exacerbates the witness' likely aversion to public speaking. The rules of evidence compound the degree of difficulty, barring leading questions while at the same time precluding unbounded narratives. Under these constraints, the witness invariably will fail to fully and understandably relate all the particulars that we want the jury to absorb. In a simple negligence action arising out of a collision, we expect our witness to testify to times, places, distances, and the speed of various objects and people in motion. Our direct examination in commercial litigation may walk the witness through an arc of negotiations; terms of agreements; conduct conforming to or breaching legal obligations; and written, electronic, and face to face communications. As the prosecutor, we may rely on the witness to recall the facial features, clothing, height, and weight of the perpetrator as well as a description of the weapon used in the commission of the crime.

By contrast, the witness' knowledge of character and motive arises from events that do not necessitate recalling and communicating an array of minute details. Ideally, the facts supporting character and motive are not disputed. Hence neither the direct examiner nor the witness will feel under pressure to hit all their marks. As a result, our

93. While prioritizing character and motive, direct examination should not abandon relating the credibility of the witness and setting the scene. See Philip N. Meyer, *The Power of Settings in Place and Time*, 106 ABA J. 28, 28–29 (2020).

94. See PENNINGTON & HASTIE, *supra* note 16, at 194–96 (finding order of presentation affects the listener's organization of evidence in their memory; specifically, "Subjects who heard the evidence ordered by story showed more story organization in their free recall."). We must be mindful of not only organizing our individual direct examinations around our story, but also of choosing the order in which we present our witnesses to best unfurl that story. See *id.* at 203 ("[A] narrative *story sequence* is the most effective 'order of proof' at trial.").

exam will be more conversational and authentic—the precise, albeit most elusive, goal of conducting a direct.⁹⁵

B. Direct Examination of Expert Witnesses

A separate finding of neuroscience—the importance of agency in persuasion—inspires an important tweak to the direct examination of expert witnesses. The typical direct presents the expert as an authority who lectures the jury on a topic that is beyond its ordinary comprehension. In the best of circumstances, the jury will gain a glimmer of understanding as to how and why the expert reached the proffered opinion(s). In other cases, the jury remains ignorant but concludes that the lecturer clearly was knowledgeable and confident in the validity of their conclusions. In both instances, the jurors do not independently formulate their own deduction.

One principle of effective neuro-persuasion is to cultivate the target audience’s agency over its decision.⁹⁶ Our brains are more apt to buy an argument if we sussed out the answer of our own volition rather than simply accepted another’s entreaty.⁹⁷ Consequently, we should not approach the direct examination of our expert as a lecture, but rather ask our witness to teach the jurors how to reach their own conclusion.

A typical expert-as-lecturer direct unfolds in the following chapters: 1) qualify the expert;⁹⁸ 2) connect the witness to the case and

95. See Robert Kenneth Dixon III, *The Art of Storytelling: 10 Techniques to Ensure Your Witnesses Win Over the Jury*, A.B.A. (Nov. 5, 2024) <https://www.americanbar.org/groups/litigation/resources/newsletters/solo-small-firm/the-art-of-storytelling/> (on file with Syracuse Law Review); see also AMY HANLEY & LETIFFANY OBOZELE, *Direct Examination: The Gift of a Well-Told Story*, at 09:00–16:30, 31:00–35:00 (Nat’l Inst. Trial Advoc., Dec. 13, 2024), <https://www.nita.org/s/product/direct-examination-the-gift-of-a-welltold-story/01tUm000007Uz0PIAS> (on file with Syracuse Law Review).

96. See SHAROT, *supra* note 2, at 84–103.

97. See *id.*

98. See, e.g., FED. R. EVID. 702 (“A witness who is qualified as an expert by knowledge, skill, experience, training, or education, may testify in the form of an opinion or otherwise . . .”). To let the jury know why they should care about hearing the witness’ qualifications rather than viewing them as braggadocio, we should begin the exam by previewing the subject matter of the opinions (but not disclosing the actual opinions) the witness will be offering:

Q: Dr. Michaels, are you prepared to offer an opinion as to how far away the muzzle of the gun was from Mr. Daniels at the time he was shot?

A: Yes, I am.

Q: Dr. Michaels, let us first discuss what education and experience allowed you to reach that opinion.

elicit the opinion;⁹⁹ 3) disclose facts underlying the opinion;¹⁰⁰ 4) elicit the opinion and the basis for the opinion; and 5) disprove the opposing expert's opinion.

The neuro-persuasive direct exam will include a new chapter three, titled "Teach the Jury How to Reach the Opinion." As the witness discloses the underlying facts in the following chapter, the jurors will actively formulate an opinion, using the skills they learned in the teaching chapter. When we then ask whether the witness holds an opinion to the requisite degree of certainty, the jurors—having successfully applied their newly acquired expertise—are mentally nodding "yes." When we call upon the expert to share that opinion, the jurors already have reached the conclusion the witness will offer. We complete our exploitation of agency when we summon the expert to explain the basis for that opinion, as the jurors hear the expert convey the same roadmap they have charted.

IX. CROSS EXAMINATION

A. Cross Examination of Lay Witnesses

Movie and television portrayals feature cross examination as the dramatic high point of the trial, with the examiner skillfully unmasking the witness as a liar. Lawyers view the thrust and parry required to expose the witness as the highest and most demanding art.

When we use cross examination to undermine the credibility of the witness, we do not elicit what the jurors' brains will find most valuable and influential. Unless showing the witness is lying or mistaken

We also can trigger the jurors' brains to find our expert trustworthy by going beyond their resume-worthy bona fides. The late trial lawyer extraordinaire William Caroselli alerted me to the wisdom of asking the witness, "What made you decide to go into the field of _____?" The jury now will see the witness as a human who chose to pursue their field for altruistic reasons rather than as a member of the educated-elite offering opinions at an unconscionable hourly rate. That confluence of admirable character and motive will automatically and subconsciously cause the jurors to predict that the witness' opinions will be reliable.

99. *See, e.g.*, FED. R. EVID. 705 ("Unless the court orders otherwise, an expert may state an opinion . . . without first testifying to the underlying facts or data."). The purpose of eliciting the opinion at this juncture is not to persuade the jurors but, as with the preface to qualifications, offering context for the detailed testimony to follow.

100. Federal Rule of Evidence 705 generally permits the witness to offer an opinion without previously testifying to the underlying facts, but rarely, if ever, will it be tactically advisable to do so. *See id.* ("[T]he expert may be required to disclose [such] facts or data on cross-examination.").

is consistent with—and arguably essential to—our chosen story, it will be more effective to conduct a constructive cross. Rather than declaw the adverse witness, we can procure their agreement with facts consistent with the character, motive, plot, and/or stakes of our story.

If we have succeeded in causing System 1 of the jurors' brains to endorse our story in the opening statement, throughout the trial the jurors' minds will: a) seek out and accept testimony that confirms the story, and b) ignore or actively suppress evidence that contradicts the story. When we begin our cross, the jurors' minds already will have rejected direct testimony that undermines our story. As the jurors listen to our cross examination, their brains will welcome facts that confirm our story.

We can elicit three categories of facts on cross supportive of our story. First, the witness may have personal knowledge of facts that *did occur* that are helpful to the character, motive, plot, or stakes of our story. Second, the witness may have personal knowledge of facts that *did not occur*, whose non-occurrence is consistent with the character, motive, plot, or stakes of our story. Finally, the witness may admit they do not have personal knowledge whether certain facts corroborating our story did or did not occur. By asking those questions, we reiterate and support our story.

We do not face a binary choice between using a constructive or destructive cross. We should begin our cross examination by procuring admissions to the three categories of facts the brains of the jurors will welcome as corroborative of their System 1 prediction. However, we need not take a leap of faith that the jurors' brains ignored or actively repelled direct testimony that refutes our story. Instead, we may follow the constructive chapters of our cross with questions that contest the credibility, perception, or recollection of the witness as to those facts.

B. Cross Examination of Expert Witnesses

The same strategies apply to arguably the most challenging part of the trial, the cross examination of expert witnesses. No matter how thoroughly we prepare, these witnesses will have greater expertise on the subject matter, and in some cases may have more trial experience than we do. At all costs, we must avoid debating the expert over their opinion.

As with the constructive cross of the lay witness, we should first extract all the facts the expert will admit that are consistent with any elements of our story—facts that are not necessarily related to the

subject matter of the expert's opinion. We then can ask the expert to admit facts that both the witness and our expert used in reaching their opinions. Our aim is to characterize the disagreement between the experts as a dispute over the conclusion to be drawn from an agreed-upon set of facts.

Without disparaging the witness, we then can bring out facts that will lead the jury to find our expert is the more reliable source of the conclusion. First, there may be a disparity in the quality or quantity of the underlying data used by the competing experts. We can have the expert admit to limits on information they had access to, including tests they did not conduct; documents they did not review; information they relied upon that came from other sources; and their dependence on subjective as opposed to objective information. Second, without contesting the competence of the witness, we can extract admissions as to the ways in which our witness has greater qualifications relating to the expertise needed to reach the specific opinion.

As with lay witnesses, we can opt to follow the constructive chapters with questions that challenge the credibility of the witness. In some cases, the expert's opinion rests on accepting our adversary's view of facts that are in dispute. We also could attack the believability of the expert by bringing out their bias; contradiction by learned treatises; prior inconsistent statements in other similar cases; and in rare but not unheard-of cases, prior bad acts relevant to the qualifications or truthfulness of the witness.

X. CLOSING ARGUMENT

To attune our closing to how the jurors' brains reach decisions, we must adapt our argument in two ways. First, we must extend the plot of our story to account for the trial testimony of the opposing party. Second, we must integrate arguments about our adversary's case in a way that reinforces the jurors' existing System 1 prediction without prompting the jurors to re-assess that conclusion through System 2 evaluative decision-making.

A. Expanding the Plot of the Story to Include the Testimony at Trial

To correlate with how the minds of the jurors will reach a decision, our most important mission in closing argument is to continue to press our single story of the case. The character and motive chapters of the story caused the brains of the jurors to predict our version of what occurred in the world outside the courtroom. However, that story did not reconcile what the jurors may have witnessed firsthand—the

opposing party testifying, under oath, to a different version.¹⁰¹ Hence in closing we must extend the plot of our story—while maintaining the continuum—to resolve that testimony.

Two motives for the opposing party's testimony seemingly offer the lowest hanging fruit. First, we could suggest that because of their interest in the outcome of the case, the party intentionally lied. To believe this rendition, however, the jury must find the party committed the felony of perjury in their presence and in full view of the judge. That explanation will be plausible only where the consequence of losing at trial is sufficiently dire to lead the party to knowingly commit a crime. And to be contiguous with our story, their reasons for falsifying their testimony also must be in keeping with the character and motive that caused the party's real-world actions.

Alternatively, we could argue that the opposing party honestly erred in their perception or recollection of the event. This explanation will be persuasive only where there is a reason that their ability to perceive or recall would be impaired or compromised. That reckoning of their testimony also must be a foreseeable result of the same character and motive that caused the party's out-of-court conduct.

A more nuanced way of accounting for the opposing party's trial testimony does not require us to either accuse the party of a crime or suggest a defect in cognition; we can argue that the party had no choice but to sincerely believe their version of what happened. As suggested earlier, in most instances the most plausible portrayal of the opposing party's character is a good person whose journey through life gave rise to an impulse to act against their better angels in certain circumstances.¹⁰² Understandably, it would be impossible for the party to accept that they succumbed to temptation, leading them to sincerely believe and testify to a version of the events that absolves them from any wrongdoing.

B. Preserving the System 1 Prediction

Unlike opening statements, arguing the flaws in the other side's factual story and the credibility of its witnesses is permissible in closing. The opportunity to argue, however, risks unraveling the neuro-persuasion we have nurtured throughout the trial.

101. In criminal cases, the nominal party testifying against the defendant may be the investigating officer or the victim. Of course, the defendant may invoke their privilege not to testify.

102. *See supra* Part V(B)(2)(B).

Before uttering a single word in the courtroom, we chose the single story the jurors would automatically predict was true based on its resemblance to life experiences that created the neural wiring of their brains. Limiting our opening statement to that story, we caused System 1 of the jurors' minds to effortlessly make that prediction, obviating the need to engage the brain's more evaluative but energy expensive System 2 functions. Having reached that decision in the opening, throughout the trial the jurors subconsciously welcomed confirming evidence and rejected testimony inconsistent with our story. In our closing argument, we must not ignite the jurors' System 2 to re-evaluate the winning System 1 prediction.

We could organize our closing around the legal elements, comparing our proof to our adversary's evidence on each element. That structure, however, demands the jurors' brains engage its System 2 function. The elements are legally inspired categories for which the jurors have no life experience. Furthermore, when we analyze the competing evidence for each element, we abandon the story continuum that triggered the System 1 prediction in favor of a direct appeal to conscious System 2 reasoning.¹⁰³

At the opposite extreme, we could preserve the jurors' System 1 prediction by limiting our closing to re-telling our story continuum, abstaining from presenting any argument about our adversary's witnesses and proofs. Few lawyers will be willing to place all their chips on the neuro-persuasive power of story.

The solution to arguing the flaws in our adversary's case while preserving the jurors' System 1 conclusion lies in knowledgeably selecting where in the course of re-telling our story we address the opposing party's evidence and witnesses. One option—likely used by most trial lawyers—is to tell our story, pausing at points along the way to refute our adversary's evidence. Unfortunately, every time we divert from telling our story and discuss opposing evidence, we shoot the jurors' brains into System 2 thinking, upsetting the prediction their minds contentedly had adopted and reinforced.

Alternatively, we could re-tell our story without interruption and then turn to arguing the flaws in our adversary's witnesses and evidence. Narrating our story buttresses the conclusion System 1 reached.

103. We should not entirely abandon guiding the jury how to meld its fact findings with the law. After completing argument about our story in Part I of the closing, Part II of our closing should explain how the jury should apply the story to the judge's instructions and/or verdict form.

But when we then critique the opposition case, we launch the jury into System 2 re-evaluation.

While at first blush unconventional, the best option may be to first argue the flaws in the adversary's witnesses and factual theory. Our goal is to cause the jurors' System 1 quest to find a comfortable fit between our opponent's story and the jurors' lived experiences to fail. But we do not then invite the jurors to activate System 2. Instead, we tender a glucose-friendly solution with the following transition: "Why are there so many problems with what [our adversary] asks you to find? Because that is not what happened." We then recount, without detour, the evidence we offered to prove the character-motive-plot story the jurors' brains already accepted. And as with the opening, we can muster the driving influence emotion exerts on the jury's decision by concluding our closing argument with a reminder of the stakes.

CONCLUSION

Adapting our advocacy to neuroscientists' discoveries about how the brain reaches decisions is not a ruse to divert the jury from reaching a just verdict.¹⁰⁴ By escorting the jury inside the mind and body of the person whose story we tell, we create a more reliable pathway to finding the truth than procedural and substantive legal norms wholly detached from the jurors' life experience.¹⁰⁵ As the United States Supreme Court acknowledged in *Old Chief v. United States*:

[M]aking a case with testimony and tangible things not only satisfies the formal definition of an offense, but tells a colorful story with descriptive richness. . . . Evidence thus has force beyond any linear scheme of reasoning, and as its pieces come together a narrative gains momentum, with power not only to support conclusions but to sustain the willingness of jurors to draw the inferences, whatever they may be, necessary to reach an honest verdict. This persuasive power of the concrete and particular is often essential to the capacity of jurors to satisfy the obligations that the law places

104. *But see* Dane S. Ciolino, *Harmonizing Legal Ethics Rules with Advocacy Norms*, 36 GEO. J. LEGAL ETHICS 199 (2023) (arguing current rules of professional conduct preclude use of storytelling and emotion and suggesting reform of ethics rules to prohibit 'unreasonable' persuasion techniques).

105. *See* Christos D. Strubakos, *Legal Persuasion: Insights from Cognitive Psychology and Neuroscience*, 102 U. DET. MERCY L. REV. 345, 356 (2025) ("As legal professionals continue to explore the psychological underpinnings of persuasion, they not only enhance their advocacy skills but also contribute to a more nuanced understanding of how justice is served in a compelling and human-centric manner.").

on them. . . .When a juror's duty does seem hard, the evidentiary account of what a defendant has thought and done can accomplish what no set of abstract statements ever could, not just to prove a fact but to establish its human significance, and so to implicate the law's moral underpinnings and a juror's obligation to sit in judgment.¹⁰⁶

106. *Old Chief v. United States*, 519 U.S. 172, 187–88 (1997).

