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Improving Clinical Judgment in Lawyering with Multidisciplinary Knowledge about Brain Function and Human Behavior: What Should Law Students Learn about Human Behavior for Effective Lawyering?

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IMPROVING CLINICAL JUDGMENT IN LAWYERING WITH MULTIDISCIPLINARY KNOWLEDGE ABOUT BRAIN FUNCTION AND HUMAN BEHAVIOR: WHAT SHOULD LAW STUDENTS LEARN ABOUT HUMAN BEHAVIOR FOR EFFECTIVE LAWYERING?

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I. INTRODUCTION AND OVERVIEW

This article explores the significance of emerging multidisciplinary theories about brain function that dictate profound reassessment of basic lawyering assumptions about human behavior. These emerging theories indicate that, as human beings, our perceptions and memories are flawed, and as a result, lawyers work with distorted information that influences our thinking.[1] This article describes how the brain functions to create these distortions, how this affects law practice, and how we can teach students to compensate for these deficiencies in thinking.[2] I argue that these premises should be integrated into the teaching of law and lawyering to law students.

Several universal and unconscious dimensions to human behavior or brain function significantly affect the lawyer's conscious decisions and actions. New substantial knowledge about how the brain works as well as significant scientific attention to the biological basis of the human capacity for perception and decision-making exists[3] that

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1. *See* discussion *infra* Parts II.A–B, II.D.
2. This article does not address the emerging substantive legal issues that both law professors and neuroscientists are actively producing critical literature on matters including ethics, privacy, and evidentiary issues such as lie detection. *See, e.g.*, Henry T. Greely, *Knowing Sin: Making Sure Good Science Doesn't Go Bad*, *in* CEREBRUM 2007: EMERGING IDEAS IN BRAIN SCIENCE 85, 90–91 (Cynthia A. Read, ed., 2007) (discussing ethical issues in contemporary neuroscience concerning new developments being used beyond their intended uses or being used without scientific justification, the primary ethical concern is the use of neuroscience in lie detection); Adam J. Kolber, *Therapeutic Forgetting: The Legal and Ethical Implications of Memory Dampening*, 59 VAND. L. REV. 1561 (2006) (discussing whether access to memory dampening drugs should be allowed, prohibited, or severely restricted); Stacy A. Tovino, *Functional Neuroimaging Information: A Case for Neuro Exceptionalism?*, 34 FLA. ST. U. L. REV. 415 (2007) (discussing neuroethics and the confidentiality, privacy, and identity implications of advances in functional magnetic resonance imaging). These studies document debate about the implications of neuroscience on the future development of doctrine in areas such as constitutional law, criminal law, and ethics. Instead, my attention is on how we can implement more conscious problem-solving skills in the application of law and what the implications are of doing so.
3. Although I reference biological capacity, I do not dismiss the common scientific understanding that human reasoning processes are an intricate association between the biological basis and social interaction—this association is so tight that the relationship cannot be disassociated. *See, e.g.*, Antonio Damasio, *The Neural Basis of Social Behavior: Ethical Implications*, *in* DEFINING RIGHT AND WRONG IN BRAIN SCIENCE: ESSENTIAL READINGS IN NEUROETHICS 175, 175–76 (Walter Glannon, Ph.D., ed., 2007) [hereinafter DEFINING RIGHT AND WRONG IN BRAIN SCIENCE]. However, this acknowledgment does not lessen the imperative to understand how the biological function operates in order to dispel outmoded and incorrect assumptions that lawyers

explains biological bases underlying human behavior. This article explores how this knowledge about brain functioning enables law students to perform more effectively as they acquire the range of lawyering skills including the fundamentals of fact investigation, fact analysis, and problem solving in their law school curricula.[4]

In section II, I explore the following specific premises of brain function that affect law practice: (1) we automatically think we know more than we do; (2) what we believe to be objectively true is not necessarily so; (3) the objects we perceive are not necessarily as they appear to be; (4) accurate memory recall is a falsehood; and (5) we have a structure for creating and storing memory that narrows what we are able to remember through a process using categorization and metaphor. I also illustrate how these premises interfere with the clear thinking lawyers need.

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make about themselves and others—that is, about human behavior. For instance, see Damasio's discussion of bioregulation as edifice for each individual's neural system interacting with the social collective that produces ethical behaviors. *Id.* at 176. People are responsible for their actions, their brains are not. MICHAEL GAZZANIGA, THE ETHICAL BRAIN, 87–102 (2005). I do not discuss the issue of free will since this reasoning is scientifically accepted, sound, and already intellectually rehashed. Nor do I address the basic issue of intentionality in that even though we may not understand the causes of our behavior, humans, nevertheless, act intentionally and consciously. The individual is capable of minimal rational reality because of the brain, and that rationality allows for intentionality. *See* Stephen J. Morse, *New Neuroscience, Old Problems: Legal Implications of Brain Science*, 6 CEREBRUM 81, 81–90 (2004), *reprinted in* DEFINING RIGHT AND WRONG IN BRAIN SCIENCE, *supra*, at 197.

4. Paying attention to human behavior does not diminish the reality that individual human character is a result of many factors other than internal brain function. Character evolves from the complex development of individual intention and social interaction. *See* Damasio, *supra* note 3, at 175; Morse, *supra* note 3, at 202. By "character" I mean the deliberate adoption of values and beliefs that drive conscious choices and that constitute one's orientation to external reality. However, core legal doctrine and lawyering are taught with no more than passing, and often inaccurate, references to the underlying knowledge of brain function and human behavior. I use the term "brain science" to reference the multidisciplinary study of human behavior including neuroscience, which includes both neuro-pyschology and cognitive psychology, since there is enormous flow and mutual reliance between these fields as well as among other disciplines such as linguistics, philosophy, neuro-anatomy, neuro-chemistry, and neuro-economics or behavioral decision theory. Some neuroscience is also called "neuro-ethics," which is defined as the "study of the ethical, legal, and social questions that arise when scientific findings about the brain are carried into medical practice, legal interpretations, and health and social policy." This term is attributed to William Safire. *See* Ruth Fischbach & Gerald Fischbach, *Foreword* to SANDRA J. ACKERMAN, HARD SCIENCE, HARD CHOICES: FACTS, ETHICS, AND POLICIES GUIDING BRAIN SCIENCE TODAY, at x–xi (2006).

In section III, I propose a systematic framework of internal monitoring called "Intentionality" as a method for lessening the distortions created by our brains. I advocate that law schools teach students how their brains function to distort information and how they can use this Intentionality framework to gain self-awareness to compensate for this distortion and lessen the adverse effects of our default assumptions about the functioning of our mental processes.

The Intentionality framework involves a three-step process.[5] This framework is one of attention that is controlled from the inside. One way to tear down erroneous mental preconceptions is to pay attention to the "small thoughts" within us that preface our external reactions.[6] The framework is a repetitive cycle of internal intention to external attention; external attention to action; and action to reflection.[7] Once mastered, the cycle becomes more nuanced and recursive. To begin adoption, the process is deliberate and conscious but as the individual successfully practices Intentionality, the process becomes habitual and highly adaptive.[8] My key premise is that following the cycle of this framework and focusing on these premises about human behavior leads to improved understanding of external circumstances, better recognition of the issues to be solved, and greater capacity to effectively respond to the problem.

In section IV, I explore ways to teach the Intentionality framework in both classroom dialogue as well as in lawyering or clinical supervision.[9] Students can apply this framework to incorporate Intentionality into their broader legal problem-solving analysis. Using their knowledge of brain functioning, students can explore how distortions occur and parse apart with increased rigor any legal or fact analysis.

All three major reports on the state of legal education in the United States over the past two decades indentify the need to teach law or lawyering within a reality-based context as well as embedding greater metacognitive reflection capacity in the law student.[10] Over the past

5. *See* discussion *infra* Part III.

6. *See infra* Part III.A (discussing Stage 1 of the Intentionality framework).

7. *See infra* Part III.

8. *See infra* Part IV (discussing how modeling and structuring can help normalize the reflection process).

9. *See infra* Part IV.

10. *See* ROBERT MACCRATE ET AL., A.B.A. SECTION OF LEGAL EDUC. & ADMISSIONS TO THE BAR, LEGAL EDUCATION AND PROFESSIONAL DEVELOPMENT—AN EDUCATIONAL CONTINUUM 234–35, 330–33 (1992) [hereinafter MACCRATE REPORT]; ROY STUCKEY ET AL., BEST PRACTICES FOR LEGAL EDUCATION 121–26 (2007) [hereinafter BEST PRACTICES FOR LEGAL EDUCATION]; GREGORY S. MUNRO, INSTITUTE FOR LAW SCHOOL

forty years, law schools have been criticized as lacking the integrated experience-based curriculum necessary to teach students how to provide effective and responsible legal services.[11] Scholars, practitioners, and judges alike have identified the need for educational institutions that train future legal professionals to pay more attention to what law students need to learn, how law students learn best, what teaching methods are most effective, and what duties the law school has to the profession and the society it serves.[12] From these observations, significant historical and present-day support has developed for integrating a reality-based context into teaching law, lawyering, or both to help students achieve the level of professionalism that justifies a claim to an exclusive right to engage in the practice of law.[13] Legal educators have a responsibility to reevaluate assumptions about how one learns to "think like a lawyer" and discover new methods of conceptualizing and providing student-centered legal education.

The MacCrate Report built upon the American Bar Association's (ABA) efforts to develop, through a dialogue, an understanding of the state of professional-skills education in law schools and to determine whether law school curriculums were adequately preparing students to perform effectively as lawyers after graduation.[14] The ABA Council of the Section of Legal Education and Admissions to the Bar established the Task Force on Law Schools and the Profession: Narrowing the Gap, which developed a "Statement of Fundamental Lawyering Skills and Professional Values" (Statement) to define the lawyering skills and professional values necessary to the responsibilities of a member of the legal profession (i.e., making professional judgments or giving legal advice).[15] The Statement is the subject of the MacCrate Report (Report), *Legal Education and Professional Development—An Educational Continuum.*[16] The skills and values identified in the Statement include litigation and alternative dispute-resolution procedures; factual investigation;

TEACHING, OUTCOME ASSESSMENT FOR LAW SCHOOLS 50–52 (2000) [hereinafter MUNRO].

11. *See* BEST PRACTICES FOR LEGAL EDUCATION, *supra* note 10, at 1, 8–13.
12. *See id.* at 9; MUNRO, *supra* note 10, at 51–56.
13. *See* MACCRATE REPORT, *supra* note 10, at 233–36 (describing the benefits of reality-based clinical programs to the professional development of young lawyers).
14. *See id.* at 123–26 (detailing the ABA's efforts to determine what skills are necessary for effective legal counseling after graduation from law school).
15. *See id.* at xi–xii.
16. *See id.* at 7–8 (noting that the MacCrate Report includes the Statement and uses it to identify the role of law schools in the development of law students).

striving to promote justice; fairness and morality; striving to improve the profession; and professional self-development, among others.[17] The Statement understands "professional self-development" as the commitment to increasing one's own knowledge and improving one's own skills by making use of the process of "reflecting upon and learning from their lawyering experiences."[18] The Report states that this process involves a critical assessment of one's own performance—including one's preparation, the performance itself, and the identification of practices that will enable replication of effective components of the performance and prevent recurrence of ineffective ones.[19] With the hope of encouraging a stronger sense of ownership in students' own decision making, the Statement places more of an emphasis on the student's individual role in shaping his or her own legal education to meet their professional goals and the demands of the profession.[20] The Report concludes that law schools need to recognize that the task of educating students to assume the full responsibilities of a lawyer is an ongoing "process that neither begins nor ends with three years of law school"; rather, a continuum exists that mandates students develop a capacity for self-reflection and awareness of their professional practice.[21]

The decade following the publication of the MacCrate Report found bar associations, law schools, and judiciaries formally convening in more than twenty-five states to discuss the Report's findings and recommendations.[22] From these ongoing discussions, members of the Clinical Legal Education Association (CLEA) in 2001 established a committee of legal practitioners and academics to create a "Statement of Best Practices for Legal Education."[23] Professor Roy Stuckey of the University of South Carolina School of Law was asked to chair the committee. The final report, *Best Practices for Legal Education* (*Best Practices*), developed collaboratively over six years, advocates that one of the goals of legal

17. *See id.* at 138–41.
18. *Id.* at pts. II.5.A, IV.A, II.4.D.
19. *See id.* at pts. IV.C, II.4.E ("Preparation to handle situations necessarily involves an ability to deal with more contingencies than turn out to occur. That kind of preparation is the hallmark of professionalism.").
20. *See id.* at pt. II.4.D ("[S]tudents will be assisted to . . . develop for themselves a considered long-range educational agenda aimed at attaining professional competence and eventually excellence.").
21. *See id.* at Introduction.
22. Robert MacCrate, Esq., *Foreword* to BEST PRACTICES FOR LEGAL EDUCATION, *supra* note 10, at vi.
23. *Id.*

institutions must be to help students acquire the attributes of effective, responsible lawyers, including "self-reflection and lifelong learning skills, intellectual and analytical skills, core knowledge of the law, core understanding of law, professional skills, and professionalism."[24] The Report calls for law schools to use best practices for assessing student learning by first identifying "[t]he goals of [the] particular assessment . . . to evaluate a student's knowledge, behavior (what a student does before and after a learning experience), performance (ability to perform a task), attitudes and values" before and after a learning experience.[25] The Report points out that these goals require different methods to assess each of the educational objectives trying to be achieved.[26] For example, assessing a student's capacity for self-reflection or professionalism necessitates a different assessment method than for core knowledge of the law or analytical analysis.[27] The Report calls for more use of criteria-referenced assessments that determine how well the individual student has achieved the educational objectives of the course, rather than normative assessments based on how students perform in relation to other students.[28] In turn, these assessments are used to provide students with formative feedback, which the Report emphasizes should "be the primary form of assessment in legal education."[29] The Report builds upon the contemporaneous Carnegie Report's findings that contemporary learning theory suggests educational effort is greatly enhanced by the use of formative assessment while summative assessments (i.e., tests, grades, etc.) are "'devices to protect the public by ensuring basic levels of competence.'"[30]

The Carnegie Foundation for the Advancement of Teaching's report, *Educating Lawyers: Preparation for the Profession of Law*, identified effective means of formative assessment as critical to educating professionals since the goal of professional schools must be to develop practitioners who are cognizant of what they need to do

24. *Id.* at viii, 48; MACCRATE REPORT, *supra* note 10, at pt. II.5.A.

25. BEST PRACTICES FOR LEGAL EDUCATION, *supra* note 10, at 179.

26. *Id.* at 181.

27. *See id.* at 179–84, 190 (noting that cognitive assessments, such as essay questions and multiple choice exams, assess learning or knowledge, whereas by actively putting students in the role of lawyers, educators can assess each student's performance and competence, which "not only assess students' knowledge and capabilities, but also their professionalism").

28. *Id.* at 243.

29. *Id.* at 256.

30. *Id.* (quoting WILLIAM M. SULLIVAN ET AL., EDUCATING LAWYERS: PREPARATION FOR THE PROFESSION OF LAW 189 (2007)).

to engage in the best practice in their profession and to equip them with the capacity for self-reflection to pursue expertise—thereby becoming "'metacognitive' about their own learning."[31] In response, *Best Practices* provides various assessment techniques identified by educators and practitioners, specifically "techniques for assessing prior knowledge, recall, and understanding," such as a misconception or preconception check prior to a simulation or a discussion on a particular material to uncover prior knowledge or beliefs that may hinder or block learning.[32]

The Intentionality framework that I have developed is such an assessment technique to assist students in applying a metacognitive approach to their own learning.[33] It can be used to help law schools teach students to develop self-awareness and understand why such awareness is so important to the legal practice—a public service profession that deals with the manifestations of human behavior on a day-to-day basis.[34]

Critical race, gender, and legal theorists have, for some time now, advocated a subjective understanding of human behavior based on the subjectivity of knowledge grounded in one's individual experiences.[35] However, how do such subjective processes affect one's thinking and decision-making?[36] An understanding of our cognitive processes is vital to assessing what we think we know. Legal theorist, Steven L. Winter, who has written a book assessing the implications of cognitive science for law and legal theory, explains that cognitive science shows the mind is neither a computer, processing input gathered from the senses, nor a cultural concept, at the mercy of our own "creativity."[37] Rather, studies show that the

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31. SULLIVAN ET AL., *supra* note 30, at 171–73.
32. BEST PRACTICES FOR LEGAL EDUCATION, *supra* note 10, at 256–58.
33. *See infra* Part III.
34. *See infra* Part III.
35. *See* STEVEN L. WINTER, A CLEARING IN THE FOREST: LAW, LIFE, AND MIND, at xiii (2001).
36. For example, author Elizabeth Wilson focuses specifically on the field of feminist psychology and discusses the implications of a failure to acknowledge advancements in neuroscience on feminist psychology. *See* ELIZABETH A. WILSON, NEURAL GEOGRAPHIES: FEMINISM AND THE MICROSTRUCTURE OF COGNITION (1998). Wilson argues that the exclusion of the body from the concept of gender, which she states has become indispensible to feminist psychology's critical practice, will prevent the discipline's advancement. *See id.* at 49–52. Wilson states, "[A]n antibiological gender will too readily reduce an analysis of mental processes, functions, and states to the exclusion or trivialization of neurology." *Id.* at 51.
37. WINTER, *supra* note 35, at xi–xii. Professor Winter is the Walter S. Gibbs Professor of Constitutional Law and director of the Center for Legal Studies at Wayne State

mind is formed by our interactions with the physical and social world. This is a dynamic and imaginative process that is the foundation of "human thought and rationality."[38] However, this imaginative process operates in a systematic and orderly way, so, as Winters asserts, a capable model of human knowledge can exist.[39] Neuroscience is moving towards an objective understanding of the influence of subjective factors, such as internal and external stimuli and cultural systems, on human thinking. By understanding our cognitive structures and their impact on our reasoning, we can understand our own judgment better and improve decision-making.

Human behavior is a characteristically complex system.[40] As Erica Beecher-Monas and Dr. Edgar Garcia-Rill explain, "Complexity theory explains that we, as individuals, are interacting parts of a complex world, we have numerous interactions with our environment, and the instigator of our actions, the brain itself, is a complex organ."[41] Therefore, complexity theory shows the importance of measuring all relevant information in order to make more accurate judgments.[42] Today, relevant information in criticizing and restructuring our understanding of human behavior includes neuroscientific research and findings. Perhaps, once we can understand how complex the origins of human behavior are, we will better be able to prevent certain factors from negatively influencing other factors.

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38. WINTER, *supra* note 35, at xii.

39. *Id.* at xi–xii.

40. Erica Beecher-Monas & Edgar Garcia-Rill, *Danger at the Edge of Chaos: Predicting Violent Behavior in a Post-Daubert World*, 24 CARDOZO L. REV. 1845, 1885 (2003).

41. *Id.*; *see also* WILSON, *supra* note 36, at 51–52 (explaining that by assuming gender to be inscribed upon an unchangeable biology (sex), the body is excluded "from questions of culturation that the notion of gender alone is thought to entail"). Wilson advocates that the relation of any biological space, structure, or element to its outside (thus the nature of biology itself) is figured as one of considerable complexity. *Id.* at 54.

42. Beecher-Monas & Garcia-Rill, *supra* note 40, at 1886.

The multidisciplinary study of brain science[43] reveals that the brain's mental functions are extremely interactive and dynamic. Neuroplasticity[44] is now an established theory that the brain is highly adaptive and that some brain functions are transferable to different brain regions. Neuroplasticity also refers to learning capacity that is more extensive than previously thought. In fact, studies suggest that learning is a process that an individual can effectively utilize despite significant lapses and issues of aging.[45] For example, comprehension of specific material can be consolidated even though the study activity has lapsed for several years or has been interrupted due to traumatic brain injury.[46] Thus, actual learning occurs in "fits and starts"[47] from one moment to the next. Often the learning proceeds in a backward momentum, which is similar to the way memory is reconstructed. In other words, learning is a "groping" process.[48]

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43. *See supra* note 4.
44. "Neuroplasticity" broadly includes changes that can occur both during learning and aging; the adult brain has enormous adaptive capacity, or neuroplasticity. *See* NORMAN DOIDGE, THE BRAIN THAT CHANGES ITSELF: STORIES OF PERSONAL TRIUMPH FROM THE FRONTIERS OF BRAIN SCIENCE, at xv (2007).
45. *See* John Dunlosky & Christopher Hertzog, *Training Programs to Improve Learning in Later Adulthood: Helping Older Adults Educate Themselves*, *in* METACOGNITION IN EDUCATIONAL THEORY AND PRACTICE 249, 254–59 (Douglas J. Hacker et al. eds., 1998) (discussing techniques for continued self-regulated learning for aging individuals based upon understanding of brain function).
46. Interruptions to engage in play activities during learning sessions can improve the capacity to learn and remember. *See, e.g.*, STUART BROWN & CHRISTOPHER VAUGHAN, PLAY: HOW IT SHAPES THE BRAIN, OPENS THE IMAGINATION, AND INVIGORATES THE SOUL 99–102 (2009). Learning is enhanced by interspersing aerobic activity. *See* JOHN MEDINA, BRAIN RULES: 12 PRINCIPLES FOR SURVIVING AND THRIVING AT WORK, HOME, AND SCHOOL 24–25 (2008).
47. "Fits and starts" is frequently used to refer to movement that occurs at irregular intervals. Although a tautology (because both fit and start refer to sporadic activity), the phrase is more than 300 years old, appearing, for example, in 1620. *See* ROBERT SANDERSON, D.D., *Ad Populum: Sermon 1*, *in* 3 THE WORKS OF ROBERT SANDERSON, D.D. 3, 18–19 (William Jacobson, D.D., ed., 1854), *available at* http://www.archive.org/details/worksrobertsand03sanduoft ("[I]f thou hast these things only by fits and starts.").
48. Learning has been described as occurring by a series of fits and starts, or "groping." *See, e.g.*, PAUL FREEDMAN, THE PRINCIPLES OF SCIENTIFIC RESEARCH 98 (1949), *available at* http://www.archive.org/details/principlesofscie029339mbp (describing the most difficult scientific learning as "groping through a maze of possibilities and difficulties").

II. WE DO NOT KNOW WHAT WE THINK WE KNOW

I identify five specific theories about brain function or human behavior, each of which affects the quality of legal problem-solving. The impact of each theory detracts from the intended accuracy of the lawyer's perception and interpretation of data. I give separate treatment to each theory, although they likely overlap in actual function. It is not my intention to provide an overarching scientific framework of the interrelationship of these separate points. I leave the development of that global framework to the scientists within those disciplines. The reader should also note that I do not intend any hierarchical order to these theories other than I start with a foundation theory and then move through perception processes, then interpretation methods, and then conclude with memory.

A. We Automatically Think We Know More Than We Actually Do: We Assume Unconsciously That We Understand More About Everything

Neuroscience confirms the presence of an automatic unconscious assumption by the human brain that the individual thinks she or he knows more than the individual actually does.[49] The human brain routinely overestimates how much understanding we have about any experience or circumstance. For example, one study documents an "illusion of exploratory depth," which illustrates that people think they understand how and why things occur in "far greater detail" than they actually do.[50] When tested, their understandings are significantly incomplete regarding the dynamics of the systems involved.[51] Each individual incorrectly believes that they accurately perceive, understand, and imagine future experience.[52] As I describe below, brain functioning often causes significant distortions to what

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49. *See* Leonid Rozenblit & Frank Keil, *The Misunderstood Limits of Folk Science: An Illusion of Explanatory Depth*, 26 COGNITIVE SCI. 521 (2002) (consisting of several studies demonstrating that the individual tends to think they know more than they actually do); Frank C. Keil, *Folkscience: Coarse Interpretations of a Complex Reality*, 7 TRENDS COGNITIVE SCI. 368, 369 fig.1 (2003) (discussing the assumption that the individuals believe they understand the world in far more detail than they actually do).

50. Rozenblit & Keil, *supra* note 49, at 522.

51. *Id.* at 526–29; *see also* Keil, *supra* note 49, at 368.

52. Daniel Gilbert devotes an entire book to debunking this distortion in human processing by explaining the compelling scientific theory and quantitative studies. *See generally* DANIEL GILBERT, STUMBLING ON HAPPINESS (2005); *see also* Jeremy A. Blumenthal, *Law and the Emotions: The Problems of Affective Forecasting*, 80 IND. L.J. 155, 173–77 (2005) (supporting Gilbert's theory by arguing that individuals overpredict their level of unpleasant reactions to future negative situations).

an individual perceives and remembers. Yet the brain does not recognize these distortions, and the result is that we routinely overestimate what we know.[53] The initial platform of inaccurate perception and faulty inferences form the backdrop to the beginning of the lawyer's deliberate fact investigation and any reasoning based thereon. The organic propensity to assume greater knowledge, at least partially, explains why we are often surprised by what we do not know about a specific aspect in a given legal case.[54] By integrating some knowledge about brain science, law students are encouraged to question their own inferential processes and intentionally expand their data gathering.[55] This knowledge allows lawyers to be less defensive about what they do not know or what they may have misunderstood. The result is increased openness to further exploring the facts and a different approach to problem solving.

If law students understand that what they "know" may not be accurate and, as a result, develop skepticism about what they know, they will be more open to learning the tools to avoid both their novice assumptions that certain facts exist[56] and "automatic" jumps to inappropriate conclusions on the basis of inadequate fact development.[57] When students are taught that our brains reassure us that we know more than we do rather than the truth, that our brains trick us and fail to alert us to distortions, they will see the value in learning these tools.

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53. *See* Rozenblit & Keil, *supra* note 49, at 522.

54. *See id.* at 530–31; Keil, *supra* note 49, at 368.

55. As Rozenblit and Keil have demonstrated, laypersons are often unaware of their lack of or incompleteness of knowledge and, generally, have little reason to doubt their intuitions. By being aware of this common fault, lawyers can take proactive steps to avoid this. *See* Rozenblit & Keil, *supra* note 49, at 522.

56. *See generally* Keil, *supra* note 49 (supporting the notion that people tend to think they know or understand more than they actually do).

57. *See* Avishalom Tor, *The Methodology of the Behavioral Analysis of Law*, 4 HAIFA L. REV. 237, 294–95 (2008). I commonly encounter law students in my Evidence courses that make the faulty assumption that all individuals perceive and process facts in the same way. This orientation stands in stark contrast to my instruction that all perception is based on drawing inferences from external data. Teaching students about the inferential reasoning process is an essential basis for understanding the law of relevance and the necessary fact investigation skills for taking into account individual differences in perception.

B. What We Believe to Be Objectively True Is Not Necessarily So: Belief Is Simply a Point of View.

Belief is simply a point of view and is not inherently accurate or inaccurate, objectively true or false, or right or wrong. However, the individual—including the legal practitioner—usually operates with unquestioned reliance on their beliefs as objectively accurate.[58] We construct our own point of view as a byproduct of our everyday perception of the world and "indeed, it is how we *have* a world."[59] We operate under the mistaken belief that our perceptions reflect objective reality because we are, more often than not, successful in correlating our perceptions to reality.[60]

Several studies indicate how beliefs shape assessments and create distortions that may influence a lawyer's capacity to predict accurately.[61] Preferences influence the formation of an individual's belief.[62] Fragale and Heath, among other scholars, stand apart for their clarity in showing the human propensity to confabulate belief with fact.[63] Their findings show that individuals automatically default to using their specific belief as the accurate measure used in the self-educating techniques of trial and error methods in any problem-solving process.[64] This approach is commonly referred to as "heuristics."[65] Perceived reality is based upon individual biases and those biases are a product of experience combined with the individual's fundamental beliefs.[66] This means that individuals "invest ambiguous information with the meaning" that most favors

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58. *See* Alison R. Fragale & Chip Heath, *Evolving Informational Credentials: The (Mis)Attribution of Believable Facts to Credible Sources*, 30 PERSONALITY & SOC. PSYCHOL. BULL. 225, 226–27 (2004); *see also* Tor, *supra* note 57, at 255.

59. WINTER, *supra* note 35, at 33.

60. *Id.* As a professor of Evidence Law for more than twenty years and a practicing law professor for even longer, I observe that law students conflate their inferences with what they assume to be verifiable external data. Rather, the separation of inference from external fact happens only as a product of explicitly identifying the students' inferences repeatedly.

61. *See* Fragale & Heath, *supra* note 58, at 225; Tor, *supra* note 57, at 256.

62. Tor, *supra* note 57, at 254.

63. *See* Fragale & Heath, *supra* note 58, at 226–27.

64. *Id.* at 233.

65. *Heuristic – Definition and More from the Free Merriam-Webster Dictionary*, MERRIAM-WEBSTER, http://www.merriam-webster.com/dictionary/heuristic (last visited May 12, 2011) (defining *Heuristics* as "involving or serving as an aid to learning, discovery, or problem-solving by experimental and especially trial-and-error methods; *also:* of or relating to exploratory problem-solving techniques that utilize self-educating techniques (as the evaluation of feedback) to improve performance").

66. *See* Tor, *supra* note 57, at 253–55.

their individual self-interest.[67] Individuals readily conflate what is belief with what is actual fact, because if we did not do so we would not be able to function in the most mundane of daily tasks.[68] A problematic consequence of this default functioning of conflating belief with fact is that we "align [our] expectations" of outcomes in problem solving "with [our] preferences about [those] outcomes."[69]

For example, Fragale and Heath concretely demonstrate how we use belief as an oversimplified heuristic that leads to inaccurate perception.[70] Specifically, they demonstrate how readily individuals credit their beliefs to credible sources. And the more the individual believes their proposition to be true, the more likely the individual will be to credit their belief to "high-credibility sources."[71] This heuristic comes from the "well-developed association between credible sources and truthful information."[72] Fragale and Heath demonstrate how individuals rely on the "well-learned cognitive shortcut" of the "simple-decision rule" that expert knowledge is reliable when spontaneously judging the accuracy of the data.[73] In any given circumstance, the objective accuracy may often not correlate with the spontaneous judgment.[74] Fragale and Heath confirm that individuals confuse their subjective belief in the truth of a statement with the objective truth of the statement.[75]

We do not routinely include in our perception the consideration that our belief forms the basis for our determination of what is true. Yet, belief inevitably colors judgment even when there is the expectation that judgment should be independent of belief.[76] This understanding does not deny the existence of a "reality" or actual facts; Instead, it reinforces the objective truth that there are multiple interpretations of the actual facts. What one "sees" is heavily dependent on that individual's previous contextual history of what their visual

67. *Id.* at 255. One may argue, therefore, that one's learning capacity is profoundly influenced by one's biases. *See id.*
68. *See id.* at 256–57.
69. *Id.* at 256.
70. Fragale & Heath, *supra* note 58, at 225, 227–33 (discussing three scientific studies that demonstrate how individuals attribute their beliefs to credible sources).
71. *Id.* at 226–27.
72. *Id.* at 226.
73. *Id.*
74. *Id.*
75. *Id.* at 226–27.
76. *See* WINTER, *supra* note 35, at 33.

experiences have taught them to see.[77] We interpret what we actually see within our established framework of previous understandings.[78] This concept is also clarified by the term "predictably irrational" as used in the explanation that economic choices are often made before conscious thought, which rationalizes the choices.[79]

Other studies also illustrate how one's beliefs regularly distort his or her predictions by, for example, overestimating personal abilities and overpredicting the likelihood of successful outcomes.[80] As a consequence, lawyers may not anticipate degrees of risk nor plan a course of action appropriately.[81] Psychological research confirms that individuals are unable "to accurately predict future emotional states" of themselves or others, particularly in terms of intensity and duration.[82] Rather, the research demonstrates that individuals are hard-wired to overestimate the degree of future emotional states.[83] Furthermore, research studies show that individuals will more strongly react to negative content than to pleasurable content.[84] This natural tendency leads to overestimating future negative experience and undervaluing future neutral or positive experience.[85] Thus, brain science has begun to provide us with tools to understand the operation of the mental functions we use in carrying out lawyering tasks, whether conscious or not.[86] Applying our understandings from brain science may increase the law student's receptivity to becoming

77. *Id.* at 34 (discussing Jerome S. Bruner & Leo Postman, *On the Perception of Incongruity: A Paradigm*, 18 J. PERSONALITY 206 (1949); quoting THOMAS KUHN, THE STRUCTURE OF SCIENTIFIC REVOLUTIONS 113 (2d ed. 1970)).

78. *Id.* at 34–36.

79. DAN ARIELY, PREDICTABLY IRRATIONAL: THE HIDDEN FORCES THAT SHAPE OUR DECISIONS, at xxx, 243 (1st rev. & expanded ed. 2009).

80. Tor, *supra* note 57, at 254 (citing Shelley E. Taylor & Jonathon Brown, *Illusion and Well-Being: A Social Psychological Perspective on Mental Health*, 103 PSYCHOL. BULL. 193, 195 (1988); Shelley E. Taylor & Jonathon Brown, *Positive Illusions and Well-Being Revisited: Separating Fact from Fiction*, 116 PSYCHOL. BULL. 21, 22 (1994); Neil D. Weinstein, *Unrealistic Optimism About Future Life Events*, 39 J. PERSONALITY AND SOC. PSYCHOL. 806, 806 (1980)).

81. *See id.* at 245–55 (stating that people generally underestimate risks and fail to take appropriate action).

82. Blumenthal, *supra* note 52, at 155, 167.

83. *Id.* at 166–67 (citing Philip Brickman et al., *Lottery Winner and Accident Victims: Is Happiness Relative?*, 36 J. PERSONALITY & SOC. PSYCHOL. 917, 926 (1978)).

84. *See id.* at 176.

85. *See id.* at 175–76 (citing Daniel T. Gilbert et al., *Immune Neglect: A Source of Durability Bias in Affective Forecasting*, 75 J. PERSONALITY & SOC. PSYCHOL. 617, 618–20, 636 (1998)).

86. *See* WINTER, *supra* note 35, at 2–3.

more self-aware in the execution of legal tasks and therefore more able to exercise better clinical judgment.

Decision-making is a prerequisite to conscious action. However, studies indicate that individuals take actions milliseconds before becoming conscious of making the decision to act.[87] Brain research suggests that our actions are initiated by unconscious mental processes before we become aware of our intention to act.[88] We can thus reasonably infer that the default human inclination is to overestimate the degree of conscious choice in dictating action before awareness.[89] Judge Morris B. Hoffman acknowledges that neuroscience is producing evidence that decisions are products of complex brain function and therefore there remains little utility to think of behavior as simply habitual, mindless, or unthinking.[90]

There exists extensive knowledge and applied theory on the range of complex brain functions also known as "executive functions."[91] Executive function refers to the large set of metacognitive processes in the brain that, among other abilities, help us plan, incorporate past knowledge, track time, simultaneously pay attention to multiple things, reflect, redirect and modify our choices, and supplement our fact gathering.[92] Nor is there utility in holding onto the inaccurate belief that all our behavioral choices are conscious or entirely a product of free will. We may function with the belief that we are driven almost entirely by free will but that belief is seriously

87. Benjamin Libet, *Unconscious Cerebral Initiative and the Role of Conscious Will in Voluntary Action*, 8 BEHAV. BRAIN SCI. 529, 533 tbl.1 (1985).

88. Chun Siong Soon et al., *Unconscious Determinants of Free Decisions in the Human Brain*, 11 NATURE NEUROSCIENCE 543, 543 (2008); *Id.* at 536.

89. *See* Soon et al., *supra* note 88, at 543.

90. *See* Morris B. Hoffman, *The Neuroeconomic Path of the Law*, 359 PHIL. TRANSACTIONS ROYAL SOC'Y BIOLOGICAL SCI. 1667, 1671 (2004).

91. *See* RICHARD E. NISBETT, INTELLIGENCE AND HOW TO GET IT: WHY SCHOOLS AND CULTURE COUNT 49–51 (2009).

92. *See id.* at 7; *see also* Sheldon H. Horowitz, *Executive Functioning and Learning Disabilities*, NAT'L CTR. FOR LEARNING DISABILITIES (Mar. 1, 2007), http://www.ncld.org/ld-basics/ld-aamp-executive-functioning/basic-ef-facts/executive-functioning-and-learning-disabilities. In my article *To Be of Service*, I identified several mental processes associated with both the intuitive skills as well as the range of executive functions, which I articulated in a framework of interconnecting both the Perceptive Self and the Knowing Self. *See* Beryl Blaustone, *To Be of Service: The Lawyer's Aware Use of the Human Skills Associated with the Perceptive Self*, 15 J. LEGAL PROF. 241, 264–68 (1990).

questioned by many researchers and scholars.[93] As a result, Judge Hoffman argues for revisiting our understanding of how judges, jurors, and legislators make decisions.[94]

In fact, there are many scholarly experiments that repeatedly document the basic human behavior to collect information that validates one's pre-existing prejudices and biases.[95] Any human being will more likely gravitate towards the information, which corroborates one's pre-existing point of view and subconsciously dismiss data that undermines one's point of view.[96] Some research studies document the effects of group identity in creating a double moral standard of fairness.[97] However, studies also demonstrate that individuals are able to fall back upon their intuitive sense of fairness if they are preoccupied with other mental functions, which disallow the ability to rationalize one's actions.[98] Given all the validation that belief influences what we determine to be objective truth,[99] we should embed a deliberate practice that promotes doubt and encourages us to disconnect or create separation for ourselves from our impulses in formulating a point of view.

Most of our beliefs go untested. Some studies have shown a strong correlation between whether we believe a statement to be true with our judgment of the credibility of the source.[100] For instance, a rumor or false statement of fact is often taken as true if attributed to a reputable source.[101] The predilection to gravitate toward confirming evidence of our beliefs adversely affects the quality of our data

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93. *See* Joshua Greene & Jonathan Cohen, *For the Law, Neuroscience Changes Nothing and Everything*, 359 PHIL. TRANSACTIONS ROYAL SOC'Y BIOLOGICAL SCI. 1775, 1781 (2004).

94. Hoffman, *supra* note 90, at 1673.

95. *See, e.g.*, Thierry Devos & Mahzarin R. Banaji, *American = White?*, 88 J. PERSONALITY & SOC. PSYCHOL. 447, 447–48 (2005).

96. Jessica Winet et al., Do We See Barack Obama and John McCain as Equally American? It Depends on Your Lenses!, poster presented at the 89th Annual Convention of the W. Psychological Ass'n, Portland, Or. (Apr. 22, 2009); *see also* Nicholas D. Kristof, Op-Ed., *What? Me Biased?*, N.Y. TIMES, Oct. 30, 2008, at A39, *available at* http://www.nytimes.com/2008/10/30/opinion/30kristof.html?_r=1 (discussing Devo's studies of race in the 2008 presidential election).

97. Piercarlo Valdesolo & David DeSteno, *The Duality of Virtue: Deconstructing the Moral Hypocrite*, 44 J. EXPERIMENTAL SOC. PSYCHOL. 1334, 1334-37 (2008); *see also* John Tierney, *Deep Down, We Can't Fool Even Ourselves*, N.Y. TIMES, July 1, 2008, http://www.nytimes.com/2008/07/01/science/01tier.html (discussing computer task studies relating to moral hypocrisy).

98. Valdesolo & DeSteno, *supra* note 97, at 1336–37.

99. Fragale & Heath, *supra* note 58, at 226–27.

100. *Id.* at 229 (results from Study 1).

101. *Id.* at 225–26.

gathering processes in the full range of tasks in legal problem-solving.[102] For example, a lawyer who searches for confirming evidence and ignores conflicting evidence will develop an inadequate theory of the case for trial or present the client with problem-solving options that limit rather than expand the client's options.[103] By teaching the Intentionality framework, teachers aid law students in developing an internal monitor essential for self-regulated learning in professional practice.

C. *The Objects We Perceive Are Not Necessarily As They Appear to Be: Perceptual Blind Spots Exist in All Cognitive Functions*

Perceptual blind spots are part of all cognitive function, and therefore looking is never the same as seeing. Perception is quite porous yet our default behavior is to assume that our looking is the same as accurately seeing the objective external world. Reality and memory are "constructs" of the brain rather than truly "mirror[ed]" images.[104] We most often experience perceptions as "'corresponding' to an objective reality."[105] The successful correlation of our day-to-day interactions with the external world creates the misimpression that our beliefs correspond to objective reality.[106] As lawyers, we assume that we can easily assess the distortion of perception by client, witness, and fact-finder. We may not, however, question the impact of our own organic level of perceptual distortion. What we absorb visually is full of perceptual holes, but our brains fill in the rest of the picture very well;[107] however, this does not mean our filling in is highly accurate.[108]

What matters is how we focus our attention on what we see. We are creatively filling in from previous moments and previous experiences to a much more extensive degree than we commonly acknowledge.[109] We do not notice the gaps unless something appears to be out of place. For instance, the individual may paint in the existence of a stop sign rather than a yield sign at the scene of an

102. *Id.* at 226–27.
103. *See* MODEL RULES OF PROF'L CONDUCT R. 1.1 cmt. (2009) (stating that competent representation requires adequate preparation and evaluation of the evidence).
104. WINTER, *supra* note 35, at 33.
105. *Id.*
106. *See id.*
107. *See id.* at 34 (citing KUHN, *supra* note 77, at 113).
108. *See id.* at 35–36.
109. *See id.*

accident[110]—this is why some studies observe participants watching magic tricks.[111]

Magic tricks show us that what matters in seeing is the point of attention.[112] What holds our attention may not be what is objectively true or decisive. Magicians intentionally misdirect and thus distort the observer's perception by controlling the social cues. The brain function of perceiving fact is not predominately driven by visuomotor control.[113] In other words, the process of perception is more "than what meets the eye."[114] In fact, most participants who watched a disappearing ball trick were convinced that they saw a ball in the air that never left the hand of the magician.[115] Events may occur in full view and yet be unnoticed by the observer. Studies of both "change blindness," which happens by interrupting the viewing, and "inattentional blindness," in which the observer's focus on specific tasks causes the failure to detect fact, demonstrate how difficult it is to register what should be perceived.[116] We create information out of what we see, and we fill in assumed information with the received information in order to make sense out of any circumstance.[117] We are too comfortable with our subjective perceptual experience, which allows us to believe that our brain's perceptual processing of all our day-to-day events corresponds to an accurate objective reality.

"Presentism" is "[t]he tendency for current experience to influence one's views of the past and the future."[118] Predictable error occurs because the individual is operating with the unconscious assumption that the future will be like the present.[119] "[O]nly a small portion of [the] sensory information [from our eyes, ears, and skin] ever arrives

110. *See infra* text accompanying notes 152–53.

111. *See* Benjamin W. Tatler & Gustav Kuhn, *Don't Look Now: The Magic of Misdirection*, *in* EYE MOVEMENTS: A WINDOW ON MIND AND BRAIN 697 (Roger P.G. van Gompel et al. eds., 2007); Gustav Kuhn & Michael F. Land, *There's More to Magic Than Meets the Eye*, 16 CURRENT BIOLOGY, at R950 (2006); Gustav Kuhn & Benjamin W. Tatler, *Magic and Fixation: Now You Don't See It, Now You Do*, 34 PERCEPTION 1155 (2005); Gustav Kuhn et al., *Misdirection in Magic: Implications for the Relationship Between Eye Gaze and Attention*, 16 VISUAL COGNITION 391 (2008).

112. Kuhn & Tatler, *supra* note 111, at 1156.

113. Kuhn & Land, *supra* note 111, at R950.

114. *Id.*

115. *Id.*

116. Kuhn et al., *supra* note 111, at 391–92; Tatler & Kuhn, *supra* note 111, at 699.

117. *See* WINTER, *supra* note 35, at 95–97 (discussing a research experiment with Linda, a feminist bank teller).

118. GILBERT, *supra* note 52, at 121.

119. *See id.* at 126–27.

in our conscious awareness."[120] We recognize these misimpressions only when something goes wrong and we become more aware of perceptual defects.[121] In other words, we more readily notice something when it is "wrong" or out of place, meaning that we often form perception based on expectation.[122] When we do not notice the distortion, we operate as though it does not exist. However, some level of distortion does exist; it simply may not appear to be so out of place that it is worth our noticing.[123] The problem is that the distortion may be significant even though we are unaware of its presence. Perception by its very nature means that we never see the same image twice.[124] Studies also show that we make value judgments instantaneously about other individuals based upon less than conscious reactions to facial expression.[125]

The antidote to perceptual blindness is to incorporate the Intentionality framework in which we consciously assume that all perception contains defects and thus routinely remain open to subjecting our observations to further scrutiny.

D. Accurate Recall Is a Falsehood

Human beings assume that their memory is more accurate than it is. In order to make sense of what is recalled, each person must fill in information beyond what the person actually physically stores in his or her brain. The "sheer mass" of all the sensory data that is sifted during daily activity would immobilize the individual's cognitive resources if the brain had to recall all the information consciously.[126] In other words, humans fill in gaps with assumed information in order to make sense of any external circumstance.[127] Law students, however, are not adequately challenged in their view of the accuracy of their own recall and are minimally exposed to the inaccuracies of

120. Daniel T. Smith, *Research*, DURHAM UNIV., http://www.dur.ac.uk/daniel.smith2/Research%20Interests.htm (last visited May 12, 2011).

121. WINTER, *supra* note 35, at 33.

122. *See id.*

123. *See id.* at 33–34.

124. *See* H. Sebastian Seung & Daniel D. Lee, *The Manifold Ways of Perception*, 290 SCI. 2268, 2268 (2000) (stating that people "never see the same face twice" because "facial images . . . vary from moment to moment . . . [and] sensory inputs are in flux").

125. *See, e.g.*, Alexander Todorov et al., *Evaluating Faces on Trustworthiness After Minimal Time Exposure*, 27 SOC. COGNITION 813, 813–19 (2009) (concluding that in less than 100 milliseconds people can make accurate trustworthiness judgments based on nothing more than facial expressions).

126. WINTER, *supra* note 35, at 96–97.

127. *See id.* at 95.

their clients' and witnesses' recall.[128] Although there is some imperative to understand credibility issues, law instructors do not emphasize that replaying of memory is inherently inaccurate, even after being tested for credibility defects.[129] Law students do not understand that memory is a process of filling in what is not recalled and for leaving out recalled data that does not help to recreate the memory. Source amnesia is one such routine example of the porous character of actual memory.[130] As fact imprints move from hippocampus to cortex, the fact imprint is separated from the context in which it was perceived—for instance, not recalling how one learned a basic fact like the name of a street.[131] Complete experience is not stored but "a few critical threads" are, and the recollection gives the illusion that full memory was stored and retrieved.[132]

Source amnesia partially explains why a person may not be able to discern the truth of statements of fact.[133] Moreover, the passage of time and attributing the information source as highly credible will influence how the information is remembered.[134] This influence may lead to remembering what did not happen with a great deal of detail that is consistent with the credible source.[135] Misattribution occurs when information is recalled that did not happen, or is attributed incorrectly to a time and place, or actually did happen but the mind attributes the recall to imagination.[136] "Suggestibility" is the tendency to incorporate misleading information from external sources

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128. Professor Berger's identification experiment in evidence class. Professor Vivian Berger, renowned evidence law professor and legal scholar (recently deceased), conducted studies among her law students at Brooklyn Law School to demonstrate for them that their inaccurate recall of external facts was substantial and that their conviction of belief reinforced those inaccuracies. The Eyewitness Identification Laboratory in the Psychology Department at the University of Iowa has done extensive scientific studies establishing the inaccuracies of eyewitness testimony and has been influential in the reform of witness identification procedures.

129. This observation is the author's point of view stemming from my experience in teaching evidence and lawyering skills for twenty-eight years and from my live-case clinical supervision of law students for fourteen years.

130. *See* Fragale & Heath, *supra* note 58, at 226.

131. *See* Pablo Alvarez & Larry R. Squire, *Memory Consolidation and the Medial Temporal Lobe: A Simple Network Model,* 91 PROCEEDINGS NAT'L ACAD. SCI. U.S. 7041, 7042 (1994).

132. GILBERT, *supra* note 52, at 87.

133. Fragale & Heath, *supra* note 58, at 226–27.

134. *See id.*

135. *See id.* at 226–27, 234.

136. *See id.* at 234; Daniel Schacter et al., *The Seven Sins of Memory: Implications for Self,* 1001 ANNALS N.Y. ACAD. SCI. 226, 228 (2003), *available at* http://www.wjh.harvard.edu/~scanlab/papers/2003_Schacter_SevenSinsSelf.pdf.

into personal recollections and can be caused by overt suggestion.[137] Both misattribution and suggestibility can easily occur in the lawyering context of interviewing witnesses and clients. It is important for lawyers to recognize that a memory is not a static recollection of an event. It is constantly being influenced in the process of recall and in the interactions between the lawyer and the person who is engaged in recollection. It is important that the lawyer does not try to edit the person's recollection by dismissing seemingly irrelevant material, which could be crucial in cueing material that is relevant to the case, or interrupting the witness's cognitive narrative with overt suggestions that might encourage the client or witness to please the interviewer. There is a delicate balance between listening, guiding, and probing that must be maintained so the client's recollection process occurs as unaffected by the lawyer as possible. Even then, the lawyer must maintain an awareness of the process of memory recall and its default operations. If something does not seem right, the lawyer can probe the witness while trying as much as possible to not contribute to either suggestibility or misattribution in the client's memory recall.

All this is to say that it is quite possible in any situation for an individual, including a lawyer, to remember a "statement" as true when originally it was false. Practicing Intentionality and paying attention to why sources feel familiar, paying attention to external expectations about recall, identifying suggestive questions, and not making snap judgments will reduce the effects of both misattribution and suggestibility.[138]

Also, "information acquired *after* an event alters memory *of* the event."[139] The information is not actually part of the event because it is inserted afterwards. Ordinarily, people cannot tell when they are both filling in gaps or leaving data out and creating gaps because it happens unconsciously and quickly.[140] The human brain is supplying best guesses without asking permission.[141] Our current experience influences our recreation of the past and influences our view of the future,[142] though we do fill in with a degree of accuracy.[143]

137. *See* Schacter et al., *supra* note 136, at 228–29.
138. *See* DANIEL L. SCHACTER, THE SEVEN SINS OF MEMORY: HOW THE MIND FORGETS AND REMEMBERS 8–9, 111, 137 (2001); *infra* Part III.
139. *See* GILBERT, *supra* note 52, at 88.
140. *Id.*
141. *Id.* at 90.
142. *See id.* at 125–27.
143. *See id.* at 89.

"Memory . . . is a dynamic property of populations of neurons; the basic mechanism is synaptic change, but memory occurs as a *system* property."[144] Individual sensory maps become memory.[145] The individual is unconsciously inclined to recall what one thought, did, or said by substituting what the individual now thinks, does, or says.[146]

Memory is thus a recreating process, fabrication woven among essential threads of bits of accurate recall.[147] Suggestibility continues to influence memory even when the person remembering understands this concept and is told that the exercise is a trick.[148] For instance in one study, the readers are instructed that after reading a list they will give the wrong answer as to what word was left out of the list.[149] The list has terms in the categories of rest, fatigue, bedding, and dreaming. The reader will quickly identify that the word "gasoline" was not among the terms read.[150] However, the reader will also misremember the word "sleep" as listed among the terms when, in fact, it was absent. Here, memory is actually incorrectly filling in details not stored.[151]

In another study, individuals watched a series of slides in which a car slows down at a yield sign and then turns the corner and hits a pedestrian.[152] Some participants were then prompted to recall what happened when the car stopped at the stop sign. Then, those participants were shown two slides: one with the car at a stop sign and one with the car at a yield sign. Ninety percent of the responders indicated that the slide with the stop sign was what they originally saw.[153] Thus, memory is extremely susceptible to subsequent distortion. This observation emphasizes that this distortion is greater than commonly acknowledged by lawyers.

In a meeting among a clinical legal supervisor, a legal intern, and a client, the legal intern made a statement about an important aspect of the case that the legal intern remembered the client having said. The client responded that she had never said such a thing and that she

144. WINTER, *supra* note 35, at 28.
145. *Id.* at 29–31.
146. GILBERT, *supra* note 52, at 125–26.
147. *Id.* at 87.
148. *Id.* at 88–90.
149. *Id.* at 88.
150. *Id.* at 88–89.
151. *Id.* at 89.
152. *Id.* at 87.
153. *Id.* at 87–88.

would never make such a representation.[154] In the subsequent debriefing of the meeting, the supervisor discussed her surprise and also questioned whether she had also "filled in" that gap because she said that this may be due to how her memory operates. The legal intern responded with relief and said "Aha, maybe I filled that in too!" The supervisor reports that a powerful discussion followed about the necessity for self-monitoring in the filling in of the gaps in our recall. The key point for the supervisor was that she rarely had such an explicit discussion about this issue in supervision meetings and that she thought these discussions are extremely valuable. This illustrates the value of practicing some stages of the Intentionality framework in clinical supervision.

E. The Processes of Reasoning and Decision-Making Do Not Exist Independent of the Body.[155]

Developments in the cognitive sciences over the past two decades reveal that our cognitive processes, such as the abilities to conceptualize and to reason, are imaginative processes grounded in our interactions with our environment, such that "imagination . . . is the soul of human thinking."[156] Therefore, in order to understand such processes we must understand their relationship to the vessel—our embodiment—in which they occur.[157]

All aspects of cognition, such as ideas, thoughts, and concepts, are dependent on a functioning brain, which operates the human body while it lives in an environment shaped by physical, cultural, social, economic, and moral factors.[158] Influenced by all of these factors, the brain sets up structures for how we experience and how we understand the world in which we live. Therefore, thought and reason do not exist independent of the body; rather, the very structure

154. Professor Maria Arias, CUNY School of Law, provided this example when discussing the content of this article with the author; Muneer I. Ahmad, *The Ethics of Narrative*, 11 AM. U.J. GENDER SOC. POL'Y & L. 117 (2003) (noting that narrative is indicative of cross-cultural biases).

155. WINTER, supra note 35, at xi–xii. This is a central tenet of Winter's book, which discusses the momentous implications of the discovery that human thought is grounded in our physical and social interactions with the world around us. The premise underlying this book is straightforward—a better theory of the mind should contribute to a better understanding of the products of the mind (that is law, philosophy, etc.). *Id.*

156. Mark L. Johnson, *Mind, Metaphor, Law*, 58 MERCER L. REV. 845, 846 (2007).

157. *See id.*

158. *See id.*

of our thoughts comes from the nature of our bodies.[159] This is what is referred to as "embodied mind," a term developed by cognitive linguists and philosophers George Lakoff and Mark L. Johnson.[160]

The concept of the "embodied mind" runs counter to the central Western philosophical notion of "disembodied mind," which understands "reason" as a separate phenomenon independent of the functioning human body.[161] In the legal academy, the perspective of the disembodied mind construes legal reasoning as the application of literal and objective categories or principles to a set of facts. However, cognitive science reveals that reason is not independent of subjective bodily experiences, such as perception, movement, and environment.[162] Tapping into such subjective, and often unconscious, factors has implications on understanding how an individual's conceptualization and reasoning processes may be static or, alternatively, capable of growth.

Empirical evidence within the field of cognitive science reveals that people build categories around and understand other concepts by similarity to a prototype.[163] The phenomenon of "prototype effects" is attributed to the work of the cognitive psychologist Eleanor Rosch and her colleagues, who illustrated this phenomenon through a bird study.[164] This study revealed that, in America, robins and sparrows are generally thought of as being at the center of the category "birds," thus establishing cognitive reference points for people's reasoning about birds.[165] Participants in the study also put chickens, ostriches, and penguins into the "bird" category but not at the center of the category.[166] Rather, depending on the perceived closeness of the item (chicken, ostrich, or penguin) to the prototype (sparrow or robin), the perspective of the mind created differing distances from the center of the category for each item.[167] This distancing effect among items with different characteristics is caused by "principles of extension."[168] This is a process of categorization using bodily experience as a

159. GEORGE LAKOFF & MARK L. JOHNSON, PHILOSOPHY IN THE FLESH: THE EMBODIED MIND AND ITS CHALLENGE TO WESTERN THOUGHT 77 (1999).

160. *Id.*

161. *Id.* at 75–77.

162. *Id.* at 77.

163. *See* Johnson, *supra* note 156, at 851 (discussing Eleanor Rosch, *Cognitive Reference Points*, 7 COGNITIVE PSYCHOL. 532, 532–45 (1975)).

164. *See id.* (discussing Rosch, *supra* note 163, at 192, 199, 205).

165. *Id.* (discussing Rosch, *supra* note 163, at 201 tbl.1).

166. *Id.* (discussing Rosch, *supra* note 163, at 201 tbl.1).

167. *Id.* (discussing Rosch, *supra* note 163, at 201 tbl.1).

168. *Id.* (discussing Rosch, *supra* note 163, at 532–47).

directional compass for structuring our cognitive processes.[169] This categorization process is what establishes patterns, which the mind uses to reason and create meaning.[170] This meaning is formed from our bodily experiences interacting with space, time, movement, and control, all of which are rooted in our sensory-motor systems.[171] The brain translates bodily experience into abstract thought. This dynamic and fluid process of creation and expansion of categories through bodily experience is known as "conceptual metaphor."[172] Metaphors are motivated by our images and experiences so that someone who has not previously heard the expression is still able to infer their meaning by "mapping" their literal meaning onto a more abstract domain.[173] Consider the metaphors "you are being closed minded" or "you are very open minded," which are commonly used to explain someone's breadth of view or willingness to engage with new or different things. These metaphors are grounded in our daily images of, and experiences with, objects that can be closed and opened, such as a door. A closed door blocks the ability of someone to enter while an open door invites entrance or even easy access. Doors also are generally both opened and closed; therefore, this metaphor implies an element of control that someone has over their own willingness or ability to be open minded or closed minded. The mapping of the literal meanings of "closed" and "open" are mapped onto the more abstract domain of whether someone is willing to engage. Consider also Steven Winter's example of the metaphor, "the proof of the pudding is in the eating," which, as Winter explains, one can reason to its metaphoric meaning even if unfamiliar with the cliché.[174] By understanding specific facts about puddings—that even though a pudding has appeared to have gelled on the outside does not mean it has congealed on the inside, and even though a pudding looks

169. *Id.* at 846, 851.

170. *Id.* at 851.

171. *See id.* at 846.

172. *Id.* at 857. Johnson uses the example of a container to show how our bodily experiences in combination with our cognitive processes allow us to extend embodied meaning and thought to the highest level of abstraction possible for us, all the way up to science, philosophy, mathematics, logic, and law. The metaphor "categories are containers" has its foundation in our experiences with a container in which we learn the logic of containment (i.e. "interior," "exterior," "boundary," etc.); thus providing the foundation for concepts like "in" and "out." "Categories are containers" is created by mapping the domain of spatial containment onto our understanding of conceptual categorization. *Id.* at 857.

173. WINTER, *supra* note 35, at 50–51.

174. *Id.*

good does not mean it will taste good—one can infer the general suggestion of the metaphor, which is to approach things pragmatically rather than judging by appearance.[175]

Conceptual metaphors are the basic building blocks that enable communication and are essential to the creation of all meaning.[176] However, the processes of metaphorical inference happen rapidly and are performed unconsciously.[177] Many of the most basic conceptual metaphors are developed during childhood by assigning a subjective thought to a bodily experience.[178] A baby that feels warmth associates it with affection and the abstract idea of "affection" will always be associated as being "warm."[179] We unconsciously recall these experiences and their metaphorical meanings. This is how we use the embodied mind to reason and understand abstract thought. Thus, individuals determine truth based on their particular formation of metaphor from their physical interactions with the external world.[180]

Learning is a process of the individual brain engaging in making flexible metaphorical order out of confusion and in external interaction with social reality.[181] In contrast, legal reasoning traditionally has imposed an arbitrary, external, and pre-existing order that is inconsistent with the way an individual learns through using metaphor.[182] Thus, the evidence that learning occurs by means of applying flexible use of metaphor is in opposition to the rigid use of categorization often used in legal analysis, which is understood as the categorical reason or "rule" for a decision and as being advantageous for its clarity and predictability.[183] Although legal reasoning requires flexibility in the process of analogy and distinction, these processes are often used in order to polarize legal

175. *Id.* at 50.
176. *Id.* at 50–51.
177. *Id.*
178. Johnson, *supra* note 156, at 859.
179. *Id.* (citing LAKOFF & JOHNSON, *supra* note 159, at 48–49).
180. *See id.* at 859–61.
181. *See id.*
182. *See* WINTER, *supra* note 35, at 187. Legal realism acknowledges that knowledge is subjective, and, therefore, law is not based on objective laws and principles that can logically apply, but rather is largely based on one's own political, social, and moral views. *See id.* at 41–42. However, strict-constructionism is still a prevailing view among many jurists who view law as an external "thing" that operates in a rule-like fashion. *See id.* at 206–11.
183. *Id.* at 43, 57.

understanding into opposites.[184] Neuroplasticity is the established theory that the brain has the ability throughout one's life to reorganize itself by forming new neural connections and adjusting its activities to respond to new situations or changes in the environment.[185] This concept is in opposition to the predominate lawyering disposition to dismiss the influence of a broad range of brain dynamics used in conscious manipulation of categories, which are the building blocks of any reasoning process.[186]

My Intentionality framework starts with the assumption of misunderstanding rather than common understanding. In order to overcome these differences, and to come to what might be some form of common understanding, law students or lawyers must first begin by intentionally examining their own underlying metaphors and categories that produce their memories. Mark Johnson strips away the top layer of legal reasoning and exposes the inner working of legal reasoning by explaining how the brain understands metaphor and inferences.[187] Veda Collmer, one of my research assistants, observed the importance of Johnson's deconstruction of the legal reasoning process into metaphor and inference as cognitively significant in her capacity to construct a deliberate metacognitive framework for monitoring her internal reasoning process.[188] She wrote:

> For instance, while briefing a case, I will determine what categories are present and what analogies and distinctions can be drawn from these categories. This awareness of the

184. *See* Blaustone, *supra* note 92, at 258–59 (explaining the tendency for lawyers to analyze matters by dividing issues into dichotomies).

185. *See* DOIDGE, *supra* note 44, at 24–26.

186. I have previously theorized several categories of mental functions in competent legal problem-solving. *See* Blaustone, *supra* note 92, at 241. I defined Perceptive Self to include "skills associated with nonjudgmental listening and expressing; the ability to monitor internal bias; attending skills for accurate understanding of others; and the ability to see patterns from analogy and from shifts in examining particularities to examining generalities." *Id.* at 241, 265. My theories of "Perceptive Self" in lawyering are based in psychological theory. I now argue that reformulating theories of Perceptive Self to include brain function will ground the law student with more credible hypotheses of the importance of other mental functions in evaluating data and performing analytic tasks. I did not focus on the issues of error in recall, perception, and prediction, which we now know are present even with the conscious integration of function that I advocated in that piece.

187. *See* Johnson, *supra* note 156, at 864–67.

188. Written statement of Veda Collmer, 2008 Graduate of CUNY Sch. of Law (Sept. 21, 2007) (on file with author).

> mechanics of legal reasoning has enhanced my skills . . . . I used these skills in my judicial writing class, where I wrote an opinion involving a police car chase and the [F]ourth [A]mendment. I extended the metaphor for deadly force used with a gun to deadly force used when ramming a car. I analogized and distinguished between the two to develop sound reasoning that would support my holding. My only experience with guns was that I knew they were deadly. However, I had experience with vehicles. I drew on my experiences with cars to analogize to the deadly force posed by guns.[189]

Without intentional reflection, memory is prone to inaccuracy and error.[190] This is because human inclination relies on the unconscious assumption of common understanding and, by default, takes it for granted that there exists a shared foundation of metaphor and categorization. Practicing my Intentionality framework improves lawyers' clinical judgment because consciously examining their internal thinking on choice of metaphor or category gives lawyers an opportunity to assess if they have the correct meaning at a specific choice-point in legal decision making. At a minimum, lawyers will be less likely to assume common understanding. Law students are able to deliberately counteract the pitfalls in their memory process. One of my legal research assistants wrote that knowledge about

> human memory has me more reflective and self-aware about how an individual uses his or her memory to recall events and construct the past. An understanding of what neuroscience has revealed . . . the true nature of memory and all its "sins" has made me think more about interviewing clients and witnesses, including the use of this knowledge to attack eyewitness testimony, mediate a conflict between two parties who each have completely different versions of the events that led them to mediation, or assisting a client in recalling events as accurately as possible..[191]

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189. *Id.*

190. *See, e.g.*, Daniel L. Schacter, *Seven Sins of Memory: Insights from Psychology and Cognitive Science*, 54 AM. PSYCHOL. 182, 183 (1999) (describing the many ways memory can be inaccurate and erroneous).

191. Written statement of Joanna Donbeck, 2008 Graduate of CUNY Sch. of Law (Jan. 29, 2008) (on file with author). In embracing the Intentionality framework and making fewer assumptions about brain function and human behavior, Ms. Donbeck placed importance on the work of Schacter, *supra* note 190, at 182–203.

III. INTENTIONALITY—A METACOGNITIVE FRAMEWORK TO MITIGATE THE EFFECTS OF DEFAULT HUMAN BEHAVIOR

The Intentionality framework is a metacognitive process that involves examining one's thoughts to compensate for erroneous default thinking and behavioral habits. Metacognition, the scientific study of methods of examining one's thought processes, encourages intentional mental behaviors that can be used to improve the quality of one's thinking by examining thoughts about one's internal mental representations.[192] Thus, the concept of "internal monitoring" is central to the Intentionality framework and any metacognitive process.

The Intentionality framework provides teachers, students, and lawyers with a method to embed an internal monitor that prompts us to resist default thinking and to be better problem solvers. By frequently making it a point to internally check in within oneself and by cultivating the habit of self-awareness and questioning one's basic assumptions, lawyers will be better fact gatherers who are able to communicate more effectively and accurately understand others in helping them achieve their goals. Critical components to practicing Intentionality are the internal focus and deliberate monitoring of thoughts for assumptions and language choice, consciously choosing our communication profile in the full range of activities in working professionally with others, and deliberately reflecting.[193] The

192. *See* Douglas J. Hacker, *Definitions and Empirical Foundations, in* METACOGNITION IN EDUCATIONAL THEORY AND PRACTICE 3 (Douglas J. Hacker et al. eds. 1998); John Flavell, *Metacognition Theory*, THEORIES LEARNING EDUC. PSYCHOL., http://www.lifecircles-inc.com/Learningtheories/constructivism/flavell.html (last visited May 12, 2011); *see also* John H. Flavell, *Metacognitive Aspects of Problem Solving, in* THE NATURE OF INTELLIGENCE 231, 232 (Lauren Resnick ed., 1976); JOHN H. FLAVELL, THE DEVELOPMENTAL PSYCHOLOGY OF JEAN PIAGET 41 (1963); John H. Flavell, *First Discussant's Comments: What Is Memory Development the Development of?*, 14 HUM. DEV. 272, 277 (1971); John H. Flavell, *Metacognition and Cognitive Monitoring: A New Area of Cognitive-Developmental Inquiry*, 34 AM. PSYCHOLOGIST 906 (1979); John H. Flavell, *Speculation About the Nature and Development of Metacognition, in* METACOGNITION, MOTIVATION, AND UNDERSTANDING 21 (F. Weinert & R. Kluwe eds., 1987).

193. I evolved my "Intentionality" framework over many decades of study, practice, and internal reflections. This framework is not novel thinking. One can turn to multiple religious, spiritual, and philosophical doctrines and find a variety of contemplative models that contain similar orientations and practices. Dr. Don Miguel Ruiz, a Mexican shaman, teaches a model containing similar steps to self-knowledge and how to reduce self-delusion. *See* DON MIQUEL RUIZ & JANET MILLS, THE FOUR AGREEMENTS COMPANION BOOK 102 (2000). What is novel is my perspective that

Intentionality framework provides a recursive, three-stage metacognitive process to successfully accomplish the goal of resisting default thinking.

A. Intentionality Framework

Stage 1) Internal Intention to External Attention:

This stage of forethought is the means for exercising control over one's individual judgment through metacognition. In other words, we focus our internal attention by looking at the quality of our reasoning. We do this by testing our assessment by identifying both our emotions and our logic that we hear ourselves think internally. Of course, this requires developing the capacity to hear and indentify our emotional thoughts as well as our analytical thoughts.[194] Thus, I emphasize the lawyer's development of the ability to hear both their emotional thoughts as well as their reasoning. In reality, this is how any self-correcting individual is able to check the accuracy of their understanding of meaning in any communication.[195] The influence of the lawyer in all lawyering activity is so powerful that we must be able to routinely self-monitor how we are constructing meaning in order to achieve the desired outcomes in the specific matter.

Effective lawyers should be able to validate the content of their own emotional thoughts through vetting their attitudes and reactions. Thinking about both our emotional and analytical thinking makes us accountable for what we say and plan to do. This is a deliberative stage where the lawyer focuses on critically listening to his or her thoughts. The lawyer works with these thoughts to understand his or her own emotional content and to question the quality of his or her judgments. All of this forethought occurs prior to the stage of externalizing one's attention to creating a plan. In this first stage of forethought, the lawyer is focusing on developing his or her intention as a result of his or her internal focus.

Metacognitive capacity reduces distortion in individual judgment.[196] This capacity or internal reflection framework enables the individual to think about the quality of his or her thoughts and how that thinking impacts on his or her actions in the external

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reflective self-awareness about the dynamics of human behavior should be integrated into legal problem-solving.

194. *See* Blaustone, *supra* note 92, at 266–67.

195. *See id.*

196. *See* Anthony S. Niedwiecki, *Lawyers and Learning: A Metacognitive Approach to Legal Education*, 13 WIDENER L. REV. 33, 44–45 (2006).

world.[197] To clarify, the lawyer examines the quality of his or her internal emotional and analytical reasoning. Examples of this self-aware internal focus include hearing our emotions and judgments in our reasoning, identifying what needs further inquiry, and testing our initial assessments. This can be understood as a form of self-editing designed to accomplish the goal. Once we have done the internal work, then we can effectively engage in the external attention and thereafter engage in both at the same time. This internal intention guards against mindless reactions.[198] This stage of forethought on our internal monitoring explicitly acknowledges our reactions and our default thinking. This forethought allows us the opportunity to modify our assessment before starting to implement our plan. This improves the quality of any potential problem-solving that will occur. Paying attention to this stage of forethought in the formation of our intention can make the difference between a good idea implemented well and a good idea implemented poorly.

Poor implementation of a good idea is often a worse consequence than no action at all. Thus, using the Intentionality framework differentiates in the quality of the implementation of a good idea. In this stage of forethought directed at our intention, the lawyer focuses on identifying the content of his or her reaction and surfaces his or her underlying concern that gives rise to the reaction.[199] Surfacing his or her underlying concern, the lawyer is then in a position to choose to generate a plan that addresses the core concern. This stage of deliberate forethought in examining our intention precedes the lawyer's external attention and subsequent actions.

Stage 2) External Attention to Action:

In this second stage of the Intentionality framework, the lawyer is self-aware or self-monitoring of his or her intended content, tone, and delivery when communicating to others. The lawyer successfully practices the second stage of Intentionality by simultaneously attending to both this internal agenda as well to the thought processes of the other individuals. The practice of this second stage at any given point of external attention is a streaming process of back and forth attention and is thus recursive. In other words, attention here is

197. *See* Hacker, *supra* note 192, at 10.

198. *See* Erika Summers-Effler, *The Micro Potential for Social Change: Emotion, Consciousness, and Social Movement Formation*, 20 SOC. THEORY 41, 50 (2002).

199. *See* Blaustone, *supra* note 92, at 266.

an unending component of awareness in performance rather than one effort at one time.[200]

In this second stage of Intentionality, the lawyer deliberately pays attention to word choice, tone, and method of delivery. The lawyer does so because of the importance of being as accurately understood and perceived as possible. When the lawyer acknowledges the existence of default misunderstanding as explained earlier, the lawyer is more motivated to pay attention to one's own delivery and language choice in carrying out all tasks in working with others.[201]

Stage 3) Action to Reflection:

The deliberate act of reflection allows the lawyer to identify what it is that he or she learned from the two stages of forethought to intention and paying external attention to action. Reflecting on the quality of the first two stages of Intentionality informs and improves similar actions in the future. Deliberate reflection provides the basis for making future choices that are more effective and less costly in accomplishing similar goals in the future.

Reflection is not a mindless rationalization process for justifying performance. Quite the opposite, reflection provides a way for the lawyer to know why choices were made and to draw lessons that will improve future performance.[202] The ability to reflect is a cornerstone of Intentionality because it is the means by which the master practitioner is capable of learning how to avoid responding the same way in the future. The ability to reflect on performance requires

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200. *See* Mary Ellen Kondrat, *Who Is the "Self" in Self-Aware: Professional Self-Awareness from a Critical Theory Perspective*, 73 SOC. SERV. REV. 451, 453–54 (1999).

201. *See* Blaustone, *supra* note 92, at 241–43 (discussing the perspective of the lawyer as one who professionally must effectively work with others in legal problem solving); *see also* Susan Bryant, *Collaboration in Law Practice: A Satisfying and Productive Process for a Diverse Profession*, 17 VT. L. REV. 459, 459–60 (1993) (discussing the lack of self-awareness in lawyers' work styles when working collaboratively); *see also* Susan Bryant, *The Five Habits: Building Cross-Cultural Competence in Lawyers*, 8 CLINICAL L. REV. 33, 56, 70–72 (2001) [hereinafter Bryant, *Five Habits*] (discussing "isomorphic attribution" and the lawyer's intentional listening for connotations—how words and acts can have different meanings; also discussing the lawyer's intentional thinking method of "Parallel Universes" to encourage alternative inferences in the assessment of accurate understanding of others).

I administer the Myers-Briggs Type Indicator (MBTI) psychological assessment to law students as a tool to increase self-awareness and to motivate law students to adopt my Intentionality framework in their professional practice.

202. Beryl Blaustone, *Teaching Law Students to Self-Critique and to Develop Critical Clinical Self-Awareness in Performance*, 13 CLINICAL L. REV. 143, 159–60 (2006).

separation from judging one's own motivation or character and is geared towards internal analysis of why difficulties occurred, and how to plan or strategize how to handle the tasks better next time. Thus, reflection should be a routine integrated component of thinking about the lawyer's performance that assesses the strengths and weaknesses of the particular task.[203] Reflection is a balanced assessment geared towards perpetual achievement of mastery in future lawyering.[204] Reflection is thus the last stage of Intentionality, which closes the circle and starts the next cycle in the Intentionality framework.

B. Potential Pitfalls:

A potential pitfall of practicing the Intentionality framework is that mastery can produce complacency. One might ignore the usefulness of each stage of Intentionality as they begin to perform each stage by rote or automatically. However, this tendency need not be a problem if users of the framework are aware of those situations in which it is necessary for them to examine their own intentional acts. The benefits of integrating core concepts of brain function can be accomplished by the active use of this framework as one part of conscious-lawyering activity. The imperative to choose to do so is reinforced by correcting our basic premises about human behavior.

IV. MODELING AND TEACHING INTENTIONALITY IN THE CLINICAL SUPERVISION CONTEXT.

A. Modeling Stages One and Two of the Intentionality Framework.

Effective clinical supervision requires supervisors to model habits of Intentionality in lawyering and in their supervision. Effective supervision requires supervisors to intentionally focus internally on their combined emotional- and analytical-thinking processes and to observe the comprehension process of the law student (recipient other) in their understanding of meaning in communication. The effective practitioner of the Intentionality framework actively focuses on the internal intention to resist assumptions about what the other understands from the supervision encounter. Thus both the clinical supervisor and the legal intern must deliberately devote attention to their communication processes, which yield either accurate comprehension or counterproductive misinterpretation. The student

203. *Id.* at 159.
204. *Id.* at 159–60.

and the supervisor are perceiving, listening, watching, interpreting, applying metaphors, and sorting into categories—all of which yields internal meaning of the external communication. This internal meaning sets the basis for indentifying the tasks, planning, exploring ambiguities, and selecting the appropriate responses. This means attorney supervisors should bring the same high level of self-awareness in communication with their legal interns that the attorney brings in deliberate language choice and deliberate actions with clients, when counseling, when negotiating, and in all courtroom activity.

The Intentionality framework[205] focuses on the understanding of meaning rather than purely on the information exchange. Often,

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205. I have synthesized several principles of learning that are the theoretical rationale for the teaching of a reflective Intentionality framework to law students. This article addresses two of these principles in text because they more directly reduce distortions from automatic default human behavior. Another three relevant principles can be found below:

1. Supervisor's explicit commitment to student's capacity.

The teacher or supervisor is explicitly reinforcing the law student's sense of competence and responsibility. This means the law teacher or supervisor explicitly tells the law student that they are capable of learning and performing the specific tasks assigned. This message encourages the law student's desire to do better—to do one's best—and to strive for excellence in the provision of legal services. Learning theory and scientific studies support the premise that explicit commitment to the student's capacity incentivizes the learning process. The act of being explicit about the student's capacity and responsibility helps move the legal intern from the role of student to the role of novice attorney—bearing responsibility for the welfare of the client.

2. Supervisor's explicit commitment to the joint responsibility for student learning.

This premise refers to the explicit contracting discussion between law student and supervisor or teacher about the assigned tasks, objective goals of the work, and specific learning goals for the student. However, more is intended. This premise also refers to the supervisor or teacher making the effort to explicitly communicate his or her commitment to shared responsibility for the student's learning. The act of doing so conveys to the law student that he or she is an active partner with the supervisor or teacher in the student's goal of acquiring lawyering competency. Implicitly, the student comprehends that he or she is not alone in the professional quest to become a competent lawyer. This message also implicitly conveys to the student that he or she bears primary responsibility for actually transitioning to the role of competent lawyer, and, thus is expected to be proactively accountable for all activity in the assigned matter.

3. Self-generated observations promote learning & ownership.

The act of taking initiative in the reflection process generates more momentum by the student to take on more responsibility in conducting the assigned legal task. Taking the lead in assessing their own performance of assigned tasks gives law students a sense of control and safety because they comprehend the actual professional learning goals of the assessment discussion or engagement with the supervisor. Further, the

clinical supervisors incorrectly believe that information-giving is the same as generating a common understanding of meaning. Further, supervisors may often assume that information-giving produces learning for the law student. From this faulty premise comes the erroneous assumption that "if I tell you something then you will understand me the way I intend to be understood."[206] As a countermeasure, practicing Intentionality means that the clinical supervisor must consciously foster shared meaning and actively resist the automatic human-behavior default shortcuts that generate more inaccuracies in the way we understand each other. When we take charge of verifying the understanding of our meaning, we cease to be reactive victims of misunderstanding. If we model this active engagement with our law students, we model a practice that embeds greater capacity in the law student to build more accurate common understanding of meaning in their future lawyering with the full range of individuals with whom they will be interacting.

B. Effective Teaching or Supervision Requires Constant Vigilance by the Supervisor to Language Choice, Tone, and Delivery. The Teacher or Supervisor Must Adopt an Approach of Inquiry and Not Judgment.

If we, as clinical supervisors, consistently listen and probe for the student's meaning and thus actively shows the student we are present with them, we model the very skills they are trying to effectively practice in their lawyering activity. We reduce predictable distortion by increasing our vigilance against premature and automatic judgments. We reduce the amount of default assumptions in our understanding by taking the time to make explicit the potential assumptions operating by both the clinical supervisor and the legal intern. This is accomplished by both the clinical supervisor and the legal intern asking questions of one another. The clinical supervisor sets the tone that it is appropriate to be a rigorous fact investigator and therefore to routinely check his or her understanding of the communication occurring in the supervision relationship. This

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students are less likely to subjectively experience themselves at the total mercy of a supervisor, who they may anticipate is judging both their capacity and their character. When the supervisor first engages with the students' self-generated observations, the students are less likely to conclude that they are subject to the complete imposition of the supervisor's assessment regardless of the law students' points of view.

206. Bryant, *Five Habits*, *supra* note 201, at 52–55; *see also* Blaustone, *supra* note 202, at 152.

proactive approach to actively increase common meaning will demonstrate to each participant how often there is inaccurate understanding. Sometimes the inaccuracy will be minimal and sometimes the inaccuracy will be significant. This process of checking in with each other and giving each other permission to ask questions and seek guidance will overtime contribute to the law student becoming more astute at figuring out when to consult and to monitor his or her level of accuracy in understanding meaning in the communication process. Given that the human brain unconsciously overestimates the depth and accuracy of knowledge—even in the way we view a photograph—it makes sense to explicitly monitor what we consciously understand as a product of our shared communications.[207] The supervisor's attention to tone and delivery establishes a sense of safety for the student to start reflecting on his or her actual limitations in sharing joint meaning in professional lawyering practice.

The supervisor is making hard choices not only in tone and delivery, but also of the substantive focus of reflection in order to effectively process the issues in performance. We see the vast terrain of what the student misses and it is difficult to be highly selective of what is both essential in processing the legal work of the intern and to also focus on the student's learning from the performance. In this process it is quite certain that the supervisor finds it more difficult to see the vast terrain of what they are missing with the legal intern as well as in the legal case. The supervisor needs to self-regulate for awareness of tone, delivery, and assumptions with the goal of keen attention or focus on what the law student is communicating by language and behavior. The attention is to what is going on for the law student in the instant communication rather than on the quick judgment as supervisor as to what is happening with the student in the communication process.

C. Modeling and Structuring Normalizes the Reflection Process

Reflection is not an accustomed exercise or habit of the novice attorney. Modeling and structuring a reflection process—including a feedback process on performance—normalizes the reflection process as an integral part of the attorney's professional attention to capable self-awareness.[208] Reflection should be regarded as a regular, normal component of the supervision discussion and of the assessment of the

207. Blaustone, *supra* note 202, at 152–53; *see also* Fragale & Heath, *supra* note 58, at 226–27.

208. *See generally* Blaustone, *supra* note 202, at 159–60.

actions taken in a case.[209] As such, the law student experiences it as a less risky encounter instead of being an unpleasant discussion, which only happens when problems arise in a specific circumstance. Modeling regular reflection that covers key productive and counterproductive aspects of the student's performance as a normal component of how a lawyer thinks is modeling proactive professional self-correction.[210] This is a productive countermeasure to the common experience that reflection is simply a random afterthought that happens only at uncomfortable and spontaneous intervals. Lastly, when teachers or supervisors consistently model and provide structure for reflection, there is less likelihood that the teacher or supervisor's input is full of subjective judgment made worse by the objective fact that the student perceives meaning through the actual framework of the power imbalance in the supervisor or teacher to student or intern relationship.

Modeling and structuring reflection produces explicit articulation of the expectations about this engagement. Expectations become known and are not a surprise for the student. The positive consequence is that there is less room for misinterpretation of the supervisor's intent by the student. Explicit expectations about debriefing performance and discussing expectations promote a sense of safety for the law student in their transition from student to novice attorney.[211] A sense of safety does not mean that the student is protected from performance anxiety and the fears of failure and judgment. It means that the student is flying with a safety net and that falling will not result in irreparable harm. Transparency, or the intentional elevation from implicit to explicit meaning, is the thread that forms the safety net. If this becomes the norm in the supervision, then the safety net becomes stronger and the student flies higher—taking on a more professional role and accountability. All of the above points suggest that before we ask students to engage in their reflection with us, it is fundamentally necessary for the teacher or supervisor to explicitly instruct on reflection and to model their own repetitive self-correction as a normal part of the master practitioner's continual personal and professional growth.[212] This modeling yields the profound lesson for the law student of becoming more comfortable with uncertainty and complexity as familiar realities in

209. *Id.*
210. Blaustone, *supra* note 202, at 161–62.
211. *Id.* at 153–54, 162.
212. *Id.* at 161.

which lawyers are expected to successfully solve problems.[213] Perhaps this process will become less scary for the student because we regularly demonstrate that we experience both mistakes and achievements and greater abilities and misjudgments in the performance of our lawyering activities. Success is the result of the fuller capacity to self-correct and to replicate our achievements as we move into our next assignments.[214] Lastly, the law student benefits from the supervisor's modeling of calm leadership in the urgent circumstances of legal representation. The student repeatedly experiences that certain forms of reflection produce the capacity to remain calm and take effective measures in the unanticipated reality of the present performance.[215]

Intensive repetition of reflective practice allows the student to create a framework for future legal problem-solving and professional development.[216] Repetition anchors or embeds the learning. The law student experiences the repeated process that self-learning is a big part of being a lawyer. The teacher or supervisor devotes time to repeating reflection skills with the student because random attention to reflection and assessment does not establish routine capacity or habit. This opportunity to practice repetition of reflection skills creates the possibility of the student achieving mastery in the use of the Intentionality framework.

V. CONCLUSION

Human beings should understand themselves better as self-regulating, thinking actors who are able to deliberately take into account the functioning defaults inherent in our thinking processes.[217] To do this, we must cultivate self-awareness and constantly monitor our thought process to ensure accurate understanding and to guard against erroneous default behavior or construction of meaning. By listening critically to our thoughts and hearing our emotions and judgments in our reasoning, we are better able to identify what needs further inquiry and to test our initial assessments. We are also better able to self-monitor and construct accurate shared meaning when communicating with others; through the process of reflection, we continually build on our capacity to achieve these goals. By

213. *Id.* at 155, 162.
214. *See id.* at 159.
215. *See id.* at 152–53, 155.
216. *Id.* at 159.
217. Hacker, *supra* note 192, at 10 (citing R.H. Kluwe, *Cognitive Knowledge and Executive Control: Metacognition*, *in* ANIMAL MIND—HUMAN MIND 222 (D.R. Griffin ed., 1982)).

understanding human behavior and adopting the Intentionality framework, law teachers will have a better understanding of how students learn, and can teach students how to more effectively practice.