

**IMPASSE AS AN OPENING: REFRAMING A
NEGOTIATION BARRIER INTO A PATHWAY FOR
INSIGHT & LEARNING**

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ABSTRACT

The negotiation field treats impasse as a failure-state. In negotiation impasse, progress towards agreement halts and parties may abandon their pursuit of resolution. For decades, Dispute Resolution scholarship focused on how to break, avoid or otherwise prevent this perceived undesirable outcome. Unfortunately, this negative framing obscures the potential hidden value of negotiation impasse. What if we viewed this supposed barrier through a different lens? What if impasse is, instead, a learning opportunity?

Cognitive science theory recognizes impasse as a harbinger of learning and creativity. When conventional problem-solving methods fail, learning theory provides a framework that transforms impasse from a barrier into a doorway to insight. Crucially, the main catalyst for this leap is not continued analytical problem-solving efforts—it is the suspension of those efforts. Impasse to insight learning presents a paradoxical twist: “How can a problem-solving model require an element that is defined as the cessation of problem-solving?”¹

By bridging negotiation theory with cognitive science, this Article proposes a reimagining of negotiation impasse from failure to a critical juncture where learning and insight become possible. By pausing problem-solving and reconstructing thinking, novel ideas spring forward from the unconscious. Rather than an obstacle, impasse becomes creativity’s ally.

1. Wendy Ross & Selene Arfini, *Impasse-Driven Problem-solving: The Multi-dimensional Nature of Feeling Stuck*, 246 COGNITION 1, 2 (2024).

INTRODUCTION

No escape!² Avoid it!³ “Bane of all Mediators!”⁴

Negotiation impasse is categorized by a myriad of negative epithets. Banally defined, impasse occurs when “one or two parties discontinue the interaction, either because one or both parties prefer no agreement, or because they could not reach an agreement despite them benefiting from doing so.”⁵ It “is the point in any negotiation when communication breaks down and the parties reach for their respective briefcases.”⁶

Many forces may actuate impasse. It may be caused by emotional complications,⁷ by failure to address interests of the counterpart,⁸ or serve as an intended strategy.⁹ Impasse may materialize when there is

2. See Peter Guyon Earle, *The Impasse Doctrine*, 64 CHI. KENT L. REV. 407, 409 (1988).

3. See Sharmishtha Trivedi, *Impasse, Breaking Impasse and Avoiding Impasse*, 4 INT’L J. L. MGMT. & HUMANITIES 1266, 1270–71 (2021) (emphasis added). See also Joan Stearns Johnsen, *Understanding Impasse: How to Prevent, Avoid and Break Deadlock*, 20 PIABA B.J. 373, 376–77 (2013) (negotiators must take steps in advance to avoid impasse).

4. Sharmishtha Trivedi, *Impasse, Breaking Impasse and Avoiding Impasse*, 4 INT’L J.L. MGMT. & HUMANITIES 1266, 1267 (2021). The author humorously posits the term impasse was created when the first mediator ran out of tools in mediating and didn’t know what to do next. See *id.*

5. Martin Schweinsberg, Stefan Thau & Madan M. Pillutla, *Negotiation Impasses: Types, Causes, and Resolutions*, 48 J. OF MGMT. 49, 50 (2022). This comprehensive article outlines a variety of causes of impasse and views it as a permanent rather than temporary obstacle. The authors describe three types of impasses: 1) If both negotiators perceive benefits from impasse, or “wanted impasse” 2) If one negotiator perceives benefits from impasse, or “forced impasse,” and 3) If neither party perceives benefits from impasse, or “unwanted impasse.” *Id.* at 52.

6. Stearns Johnsen, *supra* note 3, at 373.

7. See Harry L. Munsinger, Donald Philbin, *Why Can’t They Settle: The Psychology of Relational Disputes*, 18 CARDOZA J. CONFLICT RESOL. 311, 330–35 (2017). “Money is more than a medium of exchange – it has emotional baggage as well.” *Id.* at 354. Deadlock may also be caused by animosity or protracted history of hostility. See DEEPAK MALHOTRA, *NEGOTIATING THE IMPOSSIBLE: HOW TO BREAK DEADLOCK AND RESOLVE UGLY CONFLICTS* 5 (2d ed. 2025).

8. See Roman Trötschel et al., *Perspective Taking as a Means to Overcome Motivational Barriers in Negotiations: When Putting Oneself into the Opponent’s Shoes Helps to Walk Toward Agreements*, 101 J. PERSONALITY & SOC. PSYCH. 771, 778 (2011) (study confirms pairs of self-focused negotiators do not detect integrative possibilities for agreement and risk impasse).

9. See Martin Schweinsberg, Stefan Thau, & Madan M. Pillutla, *Negotiation Impasses: Types, Causes, and Resolutions*, 48 J. OF MGMT. 49, 52 (2022). Impasse can be used proactively when parties want extra time to develop new proposals, gather power/authority or address external influences impacting the conflict. See CHRISTOPHER W. MOORE, *THE MEDIATION PROCESS: PRACTICAL STRATEGIES FOR RESOLVING CONFLICT* 319–20 (3d ed. 2003).

a “lack of knowledge or facts, any type of limited resources, incompetence of parties or any interference of third parties.”¹⁰ Conflicts in data, values, and the structure of the potential deal raise impediments to resolution.¹¹ Impasse can be caused by disruptive misperceptions of the opponent,¹² psychological barriers,¹³ “mistaken perceptions of self-interest,”¹⁴ or competing conceptions of fairness.¹⁵

Impasse damages. It harms “relationships, reputations, and future value-creation opportunities.”¹⁶ It can be a costly breakdown.¹⁷ One study found that its participants perceived impasse as so painful that they preferred a poor agreement over stalemate, even if it meant giving up real value and economic interests.¹⁸ When these effects come to a head, negotiation positions may become unyielding and the impetus to walk away grows powerful.

But what if negotiation impasse is reimagined as an opportunity and a source of learning? What if, rather than something intractable—or worse, destructive—it is an occasion for revelation? Could it be a “detour rather than a dead end?”¹⁹

10. Sharmishtha Trivedi, *Impasse, Breaking Impasse and Avoiding Impasse*, 4 INT’L J. L. MGMT. & HUMANITIES 1266, 1269 (2021).

11. See Harold Abramson, *Problem-Solving Advocacy in Mediations: A Model of Client Representation*, 10 HARV. NEGOT. L. REV. 103, 121 (2005). A misinterpretation of information can also be a source of impasse. See George Loewenstein & Don A. Moore, *When Ignorance is Bliss: Information Exchange and Inefficiency in Bargaining*, 33 J. OF LEGAL STUD. 37, 38 (2004).

12. See Abramson, *supra* note 11, at 121.

13. See Russell Korobkin, *Psychological Impediments to Mediation Success*, 21 OHIO ST. L.J. 281, 325 (2006). See also Linda Babcock, George Loewenstein & Samuel Issacharoff, *Creating Convergence: Debiasing Biased Litigants*, 22 L. & SOC. INQUIRY 913, 922 (1997) (self-serving biases can impact, even when parties have strong incentives to reach resolution).

14. William A. Dreier, *Avoiding the Impasse, Closing the Deal*, 29 ALTS. TO THE HIGH COST OF LITIG. 1, 1 (2011). See also Ece Tuncel, Alexandra Mislin, Selin Kesebir, & Robin L. Pinkley, *Agreement Attraction and Impasse Aversion: Reasons for Selecting a Poor Deal Over No Deal at All*, 27 PSYCH. SCI. 312, 320 (2016) (even the mention of possible impasse can be threat, build tension and forestall agreement).

15. See George Loewenstein & Don A. Moore, *When Ignorance is Bliss: Information Exchange and Inefficiency in Bargaining*, 33 J. LEGAL STUD. 37, 42 (2004).

16. Martin Schweinsberg, Stefan Thau, & Madan M. Pillutla, *Negotiation Impasses: Types, Causes, and Resolutions*, 48 J. OF MGMT. 49, 50 (2022).

17. See *id.* (citing estimations that the opportunity cost of the 2018–2019 U.S. government shutdown was \$11 billion and that the impasse cost of Brexit was 8% of Britain’s GDP).

18. See Ece Tuncel et al., *Agreement Attraction and Impasse Aversion: Reasons for Selecting a Poor Deal Over No Deal at All*, 27 PSYCH. SCI. 312, 313–20 (2016) (concluding that impasse aversion is stronger than agreement attraction, even when impasse is nominal).

19. Stearns Johnsen, *supra* note 3, at 373.

Part I of this Article touches on some of the traditional negotiation strategies used to break impasse. Part II presents the historical development of cognitive sciences' learning and insight theory related to impasse. Part III describes a four-stage model for achieving insight and learning through impasse. Finally, Part IV proposes uniting the cognitive science approach of insight with negotiation theory, introducing a new strategy that reframes impasse from an impediment to an instrument of insight. This theory requires the negotiator to think and then refrain from thinking so that creativity may be nurtured and insight achieved.

I. TRADITIONAL NEGOTIATION PARADIGMS' ATTEMPT TO CIRCUMVENT IMPASSE

Interest-based negotiation problem-solving is an archetypal approach to resolution. Rather than focusing on adversarial goals or “winning,” parties in interest-based negotiation address their “underlying needs and objectives . . . [to identify] possible solutions.”²⁰ Parties are expected to work together to generate creative resolutions to the benefit of all concerned.²¹

Interest-based negotiation theory seems to presuppose that impasse will simply not occur—yet it does.²² In response, some negotiation experts recommend traditional strategies when addressing impasse. Some suggest continuing discussions while reframing “the other person’s position in terms of interests, options, and standards,”²³ or making sure the parties share all relevant information.²⁴ Another scholar opines that when impasse is reached, the parties should stop

20. Carrie J. Menkel-Meadow, *Toward Another View of Legal Negotiation: The Structure of Problem Solving*, 31 UCLA L. REV. 754, 793–94 (1984). Joint problem-solving occurs when “disputants see their own and other’s goals to be positively linked and to have high concern for their partner . . . [and] for their own outcomes.” Carsten K. W. De Dreu, *Social Conflict: The Emergence and Consequences of Struggle and Negotiation*, in HANDBOOK OF SOCIAL PSYCHOLOGY 997 (Susan T. Fiske, Daniel T. Gilbert & Gardner Lindzey eds., 5th ed. 2010).

21. See Menkel-Meadow, *supra* note 20, at 795.

22. Cf. Roman Trötschel et al., *Perspective Taking as a Means to Overcome Motivational Barriers in Negotiations: When Putting Oneself Into the Opponent’s Shoes Helps to Walk Toward Agreements*, 101 J. OF PERSONALITY & SOC. PSYCH. 771, 772 (2011) (“from a rational perspective,” negotiation impasse should not occur as, theoretically, the parties are seeking an agreement of higher worth for both than a nonagreement).

23. WILLIAM URY, GETTING PAST NO: NEGOTIATING YOUR WAY FROM CONFRONTATION TO COOPERATION 89 (1993) (emphasis omitted).

24. See Sharmishtha Trivedi, *Impasse, Breaking Impasse and Avoiding Impasse*, 4 INT’L J.L. MGMT. & HUMANITIES. 1266, 1269 (2021).

talking about the substantive issues and start talking about the negotiation process, even to the point of “ask[ing] the other side for suggestions on how to break the impasse.”²⁵ These are just some of the recommended strategies for reacting to impasse.

Yet, these and other approaches that confront impasse emphasize reactions that require effortful, analytical, and explicit thinking.²⁶ While often successful, missing from these strategies is the recognition that unconscious and intuitive thinking operating below conscious awareness may unlock novel solutions that cogent thinking cannot.²⁷ Instead of a barrier, impasse may initiate the genesis of insight, creativity, learning, and most importantly, a way toward negotiation resolution.

II. HISTORICAL DEVELOPMENT OF IMPASSE TO INSIGHT LEARNING THEORY

Most everyone knows that moment of “Ah Ha!” or “Eureka!” A solution to an unsolvable problem suddenly materializes without conscious awareness of how it came to be. Profound inspiration simply emerges, usually during the most ordinary goings-on of life, like walking the dog, driving, or getting ready for work. Yet behind the cognitive scene, mental processes are constantly whirling and cogitating on the dilemma. “It takes but a moment’s reflection to realize that a good bit of our perceptual and cognitive machinery is chugging away without our awareness.”²⁸ Then, without warning, a creative solution suddenly and inexplicitly surfaces.²⁹

25. G. RICHARD SHELL, *BARGAINING FOR ADVANTAGE: NEGOTIATION STRATEGIES FOR REASONABLE PEOPLE* 159–60 (3d ed. 2018).

26. Explicit or effortful thinking generally requires “overt, conscious, cognitive processes such as problem-solving, decision making, recognition and recall from short and long-term memory, apprehension of self, the monitoring of reality, and so on.” Arthur S. Reber, Faye F. Walkenfeld & Ruth Hernstadt, *Implicit and Explicit Learning: Individual Differences and IQ*, 17 *J. EXPERIMENTAL PSYCH.: LEARNING, MEMORY, AND COGNITION* 888, 888 (1991).

27. See John F. Kihlstrom, *Conscious Versus Unconscious Cognition*, in *THE NATURE OF COGNITION* 173, 176–77 (Robert J. Sternberg, ed., 1999) (conscious thoughts are those processes constituting awareness while unconscious thoughts are automatic processes). This Article presents a simplified framework of various scientific terms without attempting to resolve the nuances in cognitive psychology or learning theory research. Effort is made to use the terms chosen by the scholars.

28. Arthur S. Reber, Rhianon Allen, & Paul J. Reber, *Implicit versus Explicit Learning*, in *THE NATURE OF COGNITION* 475 (Robert J. Sternberg ed., 1999).

29. There are several anecdotal stories of insight coming from the “Ah Ha!” moment. See Benjamin Baird et al., *Inspired by Distraction: Mind Wandering Facilitates Creative Incubation*, 23 *PSYCH. SCI.* 1117, 1117 (2012) (noting that Isaac Newton, Henri Poincaré and Albert Einstein reported “moments of inspiration while

Learning springs from creativity and inspiration. In J. P. Guilford's seminal 1950 speech to the American Psychology Association, he postulated that creativity is a core cognitive skill of learning because "it represents a change in behavior . . . [and] must take into account both insight and creative activity."³⁰ Since Guilford's exhortation to his colleagues to study creativity,³¹ decades of comprehensive scholarship on the subject have emerged.³² Yet, defining creativity is still daunting.³³ For this discussion, creativity is defined as a process that generates a novel and satisfying idea.³⁴ This creative process is effectuated by allowing the brain to explore internal information that is stored in the unconscious. Then, the unconscious rearranges and reconstructs the information and new connections are formed. These new connections eventually coalesce into generative change and new ideas.³⁵

Knowing the history of how impasse to insight learning developed is central to understanding the "Ah Ha!" moment that may transform negotiation impasse. This theory evolves through the influences of several key thinkers, each adding layers to the scientific scholarship of how creativity emerges from impasse. Together, these scholars

engaged in thoughts or activities not deliberately aimed at solving the problem they were trying to solve.").

30. J. P. Guilford, *Creativity*, 5 AM. PSYCH. 444, 446 (1950).

31. *See id.* at 444.

32. *See* Bruce S. Rawlings et al., *Divergent Thinking is Linked With Convergent Thinking; Implications for Models of Creativity*, 31 THINKING & REASONING 1, 2 (2025) (describing multiple theories in creative science discipline). Multiple journals exist dedicated to creativity. *See e.g.*, *Journal of Creativity*, SCI. DIRECT, <https://www.sciencedirect.com/journal/journal-of-creativity> (on file with Syracuse Law Review) (last visited Nov. 17, 2025); *Creativity Research Journal*, TAYLOR & FRANCIS, <https://www.tandfonline.com/journals/herj20> (on file with Syracuse Law Review) (last visited Nov. 17, 2025); *Thinking Skills & Creativity*, SCI. DIRECT, <https://www.sciencedirect.com/journal/thinking-skills-and-creativity> (on file with Syracuse Law Review) (last visited Nov. 17, 2025).

33. *See* Anna Abraham, *Why The Standard Definition of Creativity Fails to Capture the Creative Act*, 35 THEORY & PSYCH. 40, 53 (2024). Part of the difficulty is scholars "fundamentally conflated the act of creative idea generation with the act of creative idea reception." *Id.* at 44.

34. *See id.* at 48. Other definitions use the term "useful" rather than "satisfying." *See* Matthijs Baas, Carsten K. W. De Dreu & Bernard A. Nijstad, *A Meta-Analysis of 25 Years for Mood-Creativity Research: Hedonic Tone, Activation, or Regulatory Focus?*, 134 PSYCH. BULL. 779, 780 (2008).

35. *See* Adam E. Green et al., *The Process Definition of Creativity*, 36 CREATIVITY RSCH. J. 544, 554–58 (2024). *See also* Baas et al., *supra* note 34, at 798 (creativity is not just a mechanism but is a "complex function of neurophysiological, cognitive and motivational processes.").

fashion the foundational principles that link impasse to insight and learning.

A. Theory of Insight Sprang from Gestalt Scholars

In the early 20th century, the prevailing scientific interpretation of problem-solving meant learning occurred through trial-and-error, when the learner replicates and improves methods that previously produced solutions.³⁶ Problem-solving is an intentional and effortful process.

With the rise of cognitive psychology, Gestalt psychologists theorize, instead, that novel ideas and insight manifest holistically from a transition of uncertainty to sudden comprehension.³⁷ The barrier to achieving insight is defined as “set” when thinking is “stuck in a rut.”³⁸ Then, when problem-solving ceases, the solution presents itself in a flash, seemingly without additional effort.³⁹ Under Gestalt theories, this sudden understanding comes from a perceptual and conceptual restructuring of the elements of the dilemma, creating a new “gestalt” or pattern.⁴⁰ “[T]he hallmarks of insight learning...were that [learning] was the result of reflections on internal mental representations of a situation which resulted in new understanding that was attained immediately and not gradually.”⁴¹ Deeper thinking facilitates the reimagining and restructuring of the problem, which creates a new pattern.

B. Leading Cutting-Edge Theorists Found Impasse to Insight Generates Novel Thought

A century ago, Graham Wallas embarked on an ambitious project – to create “a ‘scientific art’ of thought.”⁴² In his seminal book *Art of*

36. See Mary Vitello & Carola Salvi, *Gestalt’s Perspective on Insight: A Recap Based on Recent Behavioral and Neuroscientific Evidence*, 11 J. INTEL. 1, 1 (2023).

37. See *id.*

38. KENNETH J. GILHOOLY, INCUBATION IN PROBLEM SOLVING AND CREATIVITY 11 (2019) [hereinafter GILHOOLY, *Incubation in Problem Solving*].

39. See Ut Na Sio & Thomas C. Ormerod, *Does Incubation Enhance Problem Solving? A Meta Analysis Review*, 135 PSYCH. BULL. 94, 94 (2009).

40. See Gary Klein & Andrea Jarosz, *The Naturalistic Study of Insight*, 5 J. COGNITIVE ENG’G & DECISION MAKING 335, 336 (2011). The process is equated to seeing “a new pattern in an ambiguous picture.” GILHOOLY, *Incubation in Problem Solving*, *supra* note 38, at 8.

41. Ivan K. Ash, Benjamin D. Jee & Jennifer Wiley, *Investigating Insight as Sudden Learning*, 4 J. PROBLEM SOLVING 1, 22 (2012).

42. GRAHAM WALLAS, *THE ART OF THOUGHT* 5 (1926). “[S]ince the dawn of civilization, an unformulated ‘mystery’ of thought [exists] which has been ‘explained’ by no science, and has been independently discovered, lost, and rediscovered by successive creative thinkers”. *Id.* at 5–6.

Thought, he lays the foundation for creative thinking with his four stages for controlling the process: Preparation, Incubation, Illumination and Verification.⁴³ Wallas opines that conscious, systematic effort which creates new thought is sometimes fruitless.⁴⁴ Instead, ideas come as a flash of inspiration.⁴⁵ To accomplish the “flash,” he proposes that thinkers improve their cognitive processes by deliberately pausing problem-solving efforts (Wallas’s Incubation stage)⁴⁶ so “nothing should interfere with the free working of the unconscious [thought] on the particular problem.”⁴⁷ This Incubation stage or pause in effortful thinking permits the thinker to let go of the problem and allow ideas to arise naturally. This abeyance of effortful thought is the heart of Wallas’s landmark tenet and the impasse to insight model.⁴⁸

Stellan Ohlsson furthers the understanding of generating creative thought through the unconscious mind. His scholarship focuses on how an unwanted or unmerited impasse leads to insight or the “Ah Ha!” moment.⁴⁹ “How can complete solutions to intractable problems suddenly appear in the consciousness?”⁵⁰ Ohlsson theorizes impasse is overcome in the unconscious by its “constructing a different representation of the problem”⁵¹ using information or strategies previously stored in long-term memory. The unconscious rearranges the stored information and problem-solving strategies, creates a new construction of the problem, and unlocks a solution which becomes insight.⁵² This mental process occurs while the learner remains unaware of the mental activity creating the new construction.⁵³

43. *See id.* at 52. Wallas’s four steps are outlined more fully *infra* Part III.

44. *See id.* at 53.

45. *See id.* at 64.

46. *See* WALLAS, *supra* note 42, at 58 (1926).

47. *Id.* at 59.

48. *See id.* at 51. (Wallas’s theories are dedicated to “a single achievement of thought—the making of a new generation or invention, or the poetical expression of a new idea—and how it is brought about.”). For Wallas, success in thought meant “the creation of something felt to be beautiful and true.” *Id.* at 54.

49. *See* STELLAN OHLSSON, *Information-processing Explanation of Insight and Related Phenomena*, in *ADVANCES IN THE PSYCHOLOGY OF THINKING*, Vol. 1, 4 (M.T. Keane & K. J. Gilhooly eds., 1992) (“insight occurs in the context of an impasse, which is unmerited in the sense that the thinker is, in fact, competent to solve the problem.”) (emphasis omitted).

50. *Id.* at 2.

51. *See id.* at 12. Representational change can occur by enriching the representation, abandoning some of its components or by relaxing its constraints. *See id.*

52. *See id.* at 17.

53. *See id.*

Kenneth Gilhooly focuses most of his academic attention on one of Wallas's main stages for thought creation—the unconscious process of Incubation. His analysis centers not on whether Incubation is operative in creativity “but how such effects come about.”⁵⁴ How does a particular unknown idea get promoted to consciousness?⁵⁵ He agrees with Wallas that Incubation involves “unconscious, implicit, stochastic associative processes that demand little attentional capacity.”⁵⁶ Under Gilhooly's theory, stored knowledge is spread over an associative network of unrelated, unconnected information below the conscious level.⁵⁷ During Incubation, the unconscious connects the previously unconnected novel associations.⁵⁸ This “unconscious work” later facilitates the effort needed when the newly formed associations are retrieved and conscious processing resumes.⁵⁹ Insight arises from the newly created associative connections that constitute the solution.⁶⁰

C. Modern Theorists Expand Science on Insight

Theorists continue to strengthen empirical evidence that the impasse to insight process fosters learning.⁶¹ Modern studies confirm insight occurs “in a discrete transition from a state of no conscious information about a solution to the final complete solution, with no intermediate states.”⁶² This transition corroborates the feeling of “Ah Ha!” as a conscious experience.⁶³ Other theorists connect the cognitive bias of functional fixation⁶⁴ to impasse. In this theory, impasse is

54. GILHOOLY, *Incubation in Problem Solving*, *supra* note 38, at 107.

55. *See id.* at 74–75.

56. Kenneth J. Gilhooly, *Incubation and Intuition in Creative Problem Solving*, 7 *FRONTIERS OF PSYCH.*, 1, 7 (2016) [hereinafter GILHOOLY, *Incubation and Intuition*].

57. *See* GILHOOLY, *Incubation in Problem Solving*, *supra* note 38, at 74–76, 79 (associations are linked to memory).

58. *See id.* at 72–73.

59. *See id.* at 73.

60. *See id.*

61. *See* Kaya Yilmaz, *The Cognitive Perspective on Learning: Its Theoretical Underpinnings and Implications for Classroom Practice*, 84 *CLEARING HOUSE* 204, 204–05 (2011) (stating that under cognitivism learning theory, learning is a mental activity in which “[t]he primary emphasis is placed on how knowledge is acquired, processed, stored, retrieved, and activated by the learner.”). Learning is reorganizing and relating new information to memory and prior knowledge. *See id.* at 204.

62. John Kounios & Mark Beeman, *The Cognitive Neuroscience of Insight*, 65 *ANN. REV. PSYCH.* 71, 76 (2014).

63. *See id.* at 76.

64. *See* Leonardo Barón-Birchenall et al., *Creativity: An Individual or Collective Phenomenon? A Historical-Psychological Perspective*, 33 *ADAPTIVE BEHAV.* 249, 254 (2025).

caused because learners become “immersed in a state of functional fixation”⁶⁵ unable to visualize creative ideas. The “Ah Ha!” is the relief from that fixation. Scholars even propose one unifying creative problem-solving theory combining Wallas’s ideas with other process theories on incubation, unconscious work, creativity, and insight.⁶⁶

One important addition to insight theory is the clarification of how the choice of activities engaged in during Incubation enhances its effects. Relying on cognitive load theory (CLT),⁶⁷ scholars hold that while learners are pausing from problem-solving, they should engage in simple tasks that minimize the burden on cognitive processes.⁶⁸ When working memory becomes overloaded, learners can become confused and frustrated. Motivation to learn decreases.⁶⁹ Engaging in mundane tasks during Incubation diminishes cognitive loads, freeing mental resources for the unconscious work necessary for a successful Incubation period.⁷⁰

What happens neurologically during the exact moment of insight? Based on neuroimaging results, scientists now know insight is immediately preceded by a “sharp increase in neural activity in the right anterior temporal lobe.”⁷¹ The process of insight activates the amygdala and the hippocampus – portions of the brain associated with positive emotions, including suddenness and certainty.⁷² With the

65. Chengzhen Liu, Geng Li, Shikang Gong, Zifu Shi & Jinliang Guan, *Exploration of Impact of Incubation on Creativity: A Meta-Analysis*, *PSYCH. OF AESTHETICS, CREATIVITY, AND THE ARTS* 1, 9 (2024) <https://psycnet.apa.org/record/2025-57938-001> (on file with Syracuse Law Review).

66. See Sébastien Hélie & Ron Sun, *Incubation, Insight, and Creative Problem Solving: A Unified Theory and a Connectionist Model*, 117 *PSYCH. REV.* 1, 4 (2010).

67. See Ines Zeithofer, Joerg Zumbach & Judith Schweppe, *Complexity Affects Performance, Cognitive Load and Awareness*, 94 *LEARNING & INSTRUCTION* 1, 1 (2024) (cognitive load theory holds capacity of working memory is limited when processing new information).

68. See Ut Na Sio & Thomas C. Ormerod, *Does Incubation Enhance Problem Solving? A Meta Analysis Review*, 135 *PSYCH. BULL.* 94, 107 (2009).

69. See Kimberley A. Baxter, Nidhi Sachdeva & Sabine Baker, *The Application of Cognitive Load Theory to the Design of Health and Behavior Change Programs: Principles and Recommendations*, 52 *HEALTH EDUC. & BEHAV.* 469, 470 (2025).

70. See Zeithofer et al., *supra* note 67, at 1.

71. See Kounios & Beeman, *supra* note 62, at 88.

72. See Maxi Becker, Tobias Sommer & Roberto Cabeza, *Insight Predicts Subsequent Memory Via Cortical Representational Change and Hippocampal Activity*, 16 *NATURE COMMUN.* 1, 9 (2025) (demonstrating that evidence suggests insight created by integrated neural mechanism associated with memory). See also Wenwen Xu et al., *The Brain Markers of Creativity Measured by Divergent Thinking in Childhood: Hippocampal Volume and Functional Connectivity*, 291 *NEUROIMAGING* 1, 8 (2024) (showing creative thinking associated with specific regions of the hippocampal structure). Studies show the activation of these brain areas are associated with

change in brain activity, insight is objectively viewed as a “quick transition from a state of not knowing to a state of knowledge.”⁷³ Neuroscience confirms sudden insight is not anecdotal. It is a neurological event that signifies the crystallization of creativity.

III. FROM IMPASSE TO INSIGHT: THE FOUR-STAGE FRAMEWORK

Traditional problem-solving is accomplished by taking incremental, intentional steps toward a solution.⁷⁴ Insight comes as a sudden realization of the solution, with little awareness of the source of the inspiration. Wallas’s four stages of creating thought, Preparation, Incubation, Illumination and Verification, serve as an elegant formula scholars embrace when opining about how impasse facilitates learning. These stages describe a sophisticated journey from effortful problem-solving to effortless insight.

A. Preparation

The Preparation stage involves the landscape of intellectual erudition, including observation, memorization, and calling “on a body of remembered facts and words. . . as well as a number of those habitual traits of association.”⁷⁵ In this stage, time-tested rules, logic, and conscious processes direct attention to the problem, attempting to create a solution.⁷⁶ This process continues until the learner realizes these problem-solving attempts are futile. The learner becomes stuck, unable to solve the problem. Once a motivated learner realizes she cannot solve the problem, she may experience a “state of aching ignorance.”⁷⁷

learning. See Carola Salvi & Edward Bowden, *Insight: What Happens Backstage?*, in THE EMERGENCE OF INSIGHT 280, 295 (Carola Salvi, Jennifer Wiley & Steven Smith, eds. 2024).

73. See Hélie & Sun, *supra* note 66, at 8.

74. See Janet Metcalfe & David Wiebe, *Intuition in Insight and Noninsight Problem Solving*, 15 MEMORY & COGNITION 238, 243 (1987).

75. WALLAS, *supra* note 42, at 83. Wallas uses the word “association” as defined by Thomas Hobbes—an unguided, inconsistent train of thoughts or mental discourse. See *id.* at 64.

76. See Hélie & Sun, *supra* note 66, at 3.

77. Wendy Ross, *The Possibilities of Disruption: Serendipity, Accidents and Impasse-Driven Search*, 1 POSSIBILITY STUD. & SOC. 1, 13 (2023). There is a debate about whether confusion is an “emotion, an epistemic state, or a mere cognitive state.” Sidney D’Mello & Art Graesser, *Dynamics of Affective States During Complex Learning*, 22 LEARNING & INSTRUCTION 145, 146 (2012).

Sitting in a place of unpleasant uncertainty⁷⁸ or “cognitive disequilibrium,”⁷⁹ confirms the learner has reached genuine impasse.⁸⁰

Confusion and frustration are impasse’s constant and vexatious companions. This stage of “stuckness” may be replete with emotional reactions for the learner – frustration, anxiety, anger, to name a few.⁸¹ Particularly for capable, competent learners, confusion may deepen the frustration.⁸² For some, this “metacognitive marker...[and the] state of being in impasse is so unpleasant that giving up is the preferable option.”⁸³

Yet impasse to insight learning welcomes confusion. Studies on learning show confusion, or “desirable difficulties” is not an unwanted emotional state but is a useful signal that the current problem-solving strategy does not work.⁸⁴ Since impasse has been reached, the learner must now consider different approaches that may garner solutions.⁸⁵ “Deep learning cannot be satisfactorily achieved without impasses and confusion.”⁸⁶ As for being stuck, “this is a moment not to be feared but cultivated. If your mind is truly, profoundly stuck, then you may

78. See Ross, *supra* note 77, at 496.

79. See D’Mello & Graesser, *supra* note 77, at 146 (noting that cognitive disequilibrium occurs when learner is “confronted with obstacles...interruptions...impasses, contradictions, anomalous events, dissonance, incongruities, unexpected feedback, uncertainty, deviations from norms, and novelty.”) Cognitive disequilibrium is one of the necessary stages for learning under cognitivism learning theory. See Yilmaz, *supra* note 61, at 209–10.

80. See Ross & Arfini, *supra* note 1, at 2 (noting that unmerited impasse means the learner is stuck even if she has all the resources to solve the problem).

81. *Cf.* Wangbing Shen et al., *Unpacking Impasse-Related Experience During Insight*, 23 SPANISH J. OF PSYCH. 1, 5 (2019) (noting that impasse triggers strong feelings of loss, hesitation and nervousness).

82. See OHLSSON, *supra* note 49, at 21 (“Impasse is not a state of relaxation, but of high tension.”).

83. Ross & Arfini, *supra* note 1, at 3.

84. See Jason M. Lodge et al., *Understanding Difficulties and Resulting Confusion in Learning: An Integrative Review*, 3 FRONTIERS IN EDUC. 1, 5 (2018). Coined by R. A. Bjork, “desirable difficulties” mean introducing challenging circumstances to the learning as “people learn by making and correcting mistakes.” Robert A. Bjork, *Memory and Metamemory Considerations in the Training of Human Beings*, in METACOGNITION: KNOWING ABOUT KNOWING 185, 201 (J. Metcalfe and A. Shimamura, eds. 1994).

85. See Lodge et al., *supra* note 84, at 6. Confusion does not directly cause learning – instead, cognitive activity (like impasse resolution) accompanies confusion and induces learning. See D’Mello & Graesser, *supra* note 77, at 154.

86. D’Mello & Graesser, *supra* note 77, at 154. It is “a somewhat counterintuitive claim that pedagogical tactics that challenge, perplex and productively confuse learners are stimulating alternatives to the typical shallow information delivery system that are comfortable to passive noncritical learners.” *Id.*

be much better off than when it was loaded with ideas.⁸⁷ Now, in reaching impasse, Wallas's Preparation stage concludes. Incubation begins.

B. Incubation

Before the "Ah Ha!" moment, a learner experiences "a mental state in which [she] is stuck or absorbed and does not know how to go forward."⁸⁸ In the Incubation stage, the learner must voluntarily relinquish problem-solving strategies and set the problem aside. Stepping away from the problem allows the learner to abandon the approaches she previously and unsuccessfully used.⁸⁹ She is not giving up. She simply pauses.

With the problem now set aside, "a gradual and continuous unconscious process [initiates]."⁹⁰ The unconscious mind begins to revive and capture inaccessible knowledge⁹¹ that is "disconnected...[from the] on-going stream of conscious thought."⁹² During Incubation, the "purposeful pause" encourages the mind to conduct a wide search of unconscious knowledge and triggers the "strategic shift needed to restructure a problem representation."⁹³ This breather "allows the dissipation of fixation,"⁹⁴ so the learner may break free from constraints in her thinking patterns. The learner's mind silently engages in implicit learning, crafting solutions beneath her consciousness.⁹⁵

87. Robert Pirsig, *Zen And the Art of Motorcycle Maintenance* (1975), in *DISPUTE RESOLUTION AND LAWYERS: A CONTEMPORARY APPROACH* 93, 94 (Leonard L. Riskin et al. eds., 2019).

88. Shen et al., *supra* note 81, at 2.

89. See Ohlsson, *supra* note 49, at 30.

90. Milos Savic, *The Incubation Effect: How Mathematicians Recover from Proving Impasses*, 39 *J. MATHEMATICAL BEHAV.* 67, 68 (2015) (citation omitted).

91. See Ron Sun, Paul Slusarz & Chris Terry, *The Interaction of the Explicit and Implicit in Skill Learning: A Dual-Process Approach*, 112 *PSYCH. REV.* 159, 161 (2005). In this groundbreaking paper, the authors present a multi-level cognitive computational model called CLARION positing implicit and explicit learning are intertwined, noting explicit knowledge is augmented by already acquired implicit knowledge. See *id.* at 162.

92. Salvi & Bowden, *supra* note 72, at 280.

93. Sio & Ormerod, *supra* note 39, at 109.

94. Liu et al., *supra* note 65.

95. See Sio & Ormerod, *supra* note 39, at 107. Implicit learning is generally "characterized by a set of automatic associative, nonconscious, and unintentional learning processes." Scott Barry Kaufman et al., *Implicit Learning as an Ability*, 116 *COGNITION* 321, 321 (2010). Implicit learning may occur independently of consciousness and outside of awareness. See Arthur S. Reber, *Implicit Learning of Tacit Knowledge*, 118 *J. OF EXPERIMENTAL PSYCH.: GENERAL* 219, 233 (1989). Reber

Crucially, while the learner shifts attention away from the problem, she must engage in low-demand, unrelated mental activities and tasks, or “low cognitive load[s].”⁹⁶ Engaging in an undemanding task, unrelated to the problem, improves performance on creativity far more than when engaging in demanding tasks.⁹⁷ Low demand or low stress tasks such as light exercise,⁹⁸ gardening, engaging in simple hobbies, or meditation provide optimal cognitive conditions for Incubation. A meta-analysis of studies confirms a simple task that minimally occupies a learner’s attention shifts the focused or “high cognitive load” efforts away from problem-solving, thus opening the path through the Incubation stage.⁹⁹ “Working intermittently on the problem while attending to mundane activities” leads to richer insight.¹⁰⁰

The time spent in Incubation may vary from hours to weeks.¹⁰¹ One study proposes the optimal length of time for idea generation is 50 minutes to two hours yet also found that more highly novel ideas are created during Incubation lasting longer than one day.¹⁰² Interestingly, time engaged in the Preparation stage may also be valuable. One study shows spending more time attempting to actively solve the problem generates a later and more pronounced Incubation effect.¹⁰³ This extended Preparation stage (with its accompanying frustration and confusion) means the learner may be more open to switching her strategies and unconsciously exploring the problem from different angles during Incubation.¹⁰⁴

Mind wandering also contributes to successful Incubation.¹⁰⁵ Mind wandering or daydreaming has long been considered an

argues “unconscious mental processes are the foundations upon which emerging conscious operations are laid.” *Id.* at 230.

96. Sio & Ormerod, *supra* note 39, at 106–07.

97. See Baird et al., *supra* note 29, at 1120. Rest is less effective than engaging in a low demand task. See Sio & Ormerod, *supra* note 39, at 107.

98. See WALLAS, *supra* note 42, at 89 (1926) (suggests engaging in the mundane activity of exercise).

99. Sio & Ormerod, *supra* note 39, at 107.

100. Hélie & Sun, *supra* note 66, at 996.

101. See Niyat Henok, Frédéric Vallée-Tourangeau & Gaëlle Vallée-Tourangeau, *Incubation and Interactivity in Insight Problem Solving*, 84 PSYCH. RES. 128, 138 (2020) (noting that study participants who did not solve problem initially were more likely to solve it after 2 weeks).

102. See Joanna Tsenn et al., *The Effects of Time and Incubation on Design Concept Generation*, 35 DESIGN STUD. 500, 523–24 (2014).

103. See Sio & Ormerod, *supra* note 39, at 109.

104. See *id.*

105. See Teng Teng Tan et al., *Mind Wandering and the Incubation Effect in Insight Problem Solving*, 27 CREATIVE RSCH. J. 375, 380–81 (2015).

unconscious undertaking leading to creative thought.¹⁰⁶ During this mental process, the mind drifts away, potentially without intention, from the primary problem-solving task at hand.¹⁰⁷ These shifts can be for brief periods of time¹⁰⁸ or for many hours.¹⁰⁹ Mind wandering is a unique cognitive state and serves “as a ‘bridge’ between unconscious processing and conscious thinking.”¹¹⁰ “[M]ind-wandering during the incubation interval, particularly with an easy incubation task, enhances such incubation efforts.”¹¹¹

Some scholars suggest learners may bounce back and forth between conscious and unconscious work throughout Incubation.¹¹² Stepping back and later returning to the problem means fresh ideas may emerge that help the learner identify new solutions.¹¹³ This cyclical process exemplifies the perpetual “reorganization of the reasoner’s

106. See GILHOOLY, *Incubation in Problem Solving*, *supra* note 38, at 63 (noting that the strategy is also called unfocused thought, daydreaming or task-unrelated thought) (citations omitted). Mind wandering may account for 30%-50% of our daily time. See Ying Huang, Xiaolan Song & Qun Ye, *Mind Wandering and the Incubation Effect: Investigating the Influence of Working Memory Capacity and Cognitive Load on Divergent Thinking*, 52 THINKING SKILLS & CREATIVITY 1, 1 (2024). One study found reading poetry during Incubation boosted mind wandering and may lead to creativity. See Soma Chaudhuri & Joydeep Bhattacharya, *Poetic Break: Incubation for Associative Creativity*, CREATIVITY RESEARCH J. 1, 10 (2025). “In an increasingly distracted world, poetry offers a unique and subtle way to allow the mind to wander and uncover surprising connections within the landscape of our thoughts.” *Id.* Yet Wallas specifically warns against using the Incubation period as a time to engage in “the habit of industrious passive reading.” WALLAS, *supra* note 42, at 91.

107. See Tan et al., *supra* note 105, at 375. *But see* Green et al., *supra* note 35, at 556 (2024) (stating that mind wandering is part of creative process only if it relates to the constraints impeding generative creativity).

108. See GILHOOLY, *Incubation in Problem Solving*, *supra* note 38, at 66 (short shifts in attention could be dubbed mini or micro incubation periods).

109. See Hélié & Sun, *supra* note 66, at 117.

110. Huang et al., *supra* note 106, at 11 (2024).

111. Steven M. Smith & Zsolt Beda, *The Past and Future of Research on So-Called Incubation Effects*, in THE EMERGENCE OF INSIGHT 13, 27 (Carola Salvi, Jennifer Wiley and Steven Smith, eds. 2024). *See also* Huang et al., *supra* note 106, at 13 (engaging in low cognitive load task while mind wandering facilitates creativity).

112. See Jonathan Smallwood & Jonathan Schooler, *The Science of Mind Wandering: Empirically Navigating the Stream of Consciousness*, 66 ANNU. REV. PSYCH. 487, 505 (2014) (participants who varied their attention between on-task and off-task states of thinking tended to show better meta-cognitive awareness). *See also* Liu, *supra* note 65, at 11 (meta-analysis of studies shows conscious work and unconscious work not mutually exclusive within incubation effect).

113. See Savic, *supra* note 90, at 75.

mental representation.”¹¹⁴ When impasse is overcome, the new or reconstituted clarity instantaneously appears as Insight.

C. Illumination/Insight

In this third Wallas stage, the unconscious work leads to a sudden Insight (or as Wallas labels, Illumination) or “Ah Ha!”—the moment when the problem is solved.¹¹⁵ The confusion is resolved, the restructuring complete,¹¹⁶ and a solution presents itself in a momentary experience.¹¹⁷ Yet the learner has little or no conscious understanding of what thinking processes produce the solution.¹¹⁸ Insight is “a discontinuous discovery, a nonobvious revision to a person’s mental model of a dynamic system, resulting in a new set of beliefs that are more accurate, comprehensive, and useful.”¹¹⁹

This unexpected feeling of inspiration or understanding is an emotional experience and is accompanied by feelings of warmth,¹²⁰ relief¹²¹ and other positive influences and affects.¹²² Neurological

114. Henok, *supra* note 101, at 99 (reorganization can include switching strategies, relaxing constraints/assumptions about the problem or withdrawing attention to it).

115. See WALLAS, *supra* note 42 at 93 (appearance of new idea is instantaneous and unexpected). For Wallas, this abstention from thought occurs in two stages; one in which there is no conscious work on the problem; and two, a relaxation from other conscious mental thought. See *id.* at 41–42. Henri Poincaré, who made extraordinary contributions to physics, philosophy and engineering is “often credited with the idea that once a problem is temporarily put aside, unconscious work could then deliver an insight.” Smith & Beda, *supra* note 111, at 15. Poincaré warns “these sudden inspirations . . . never happen except after some days of voluntary effort which appeared absolutely fruitless and whence nothing good seems to have come.” Henri Poincaré, *Mathematical Creation, Reflections*, Reprinted from SCIENCE ET MÉTHODE, 1908 by RESONANCE, 85, 90 (Feb. 2000).

116. See Klein, *supra* note 40, at 347.

117. See OHLSSON, *supra* note 49, at 4.

118. See Margaret E. Webb, Daniel R. Little & Simon J. Cropper, *Insight is Not in the Problem: Investigation Insight in Problem Solving Across Task Types*, 7 FRONTIERS PSYCH. 1, 10 (2016).

119. Klein & Jarosz, *supra* note 40, at 346–47.

120. See HÉLIE & SUN, *supra* note 66, at 996 (just before insight is reached, participants experience a sudden increase in heart rates).

121. See ROSS & ARFINI, *supra* note 1, at 2.

122. See WALLAS, *supra* note 42, at 96. “Affect” in the most general sense is a subjective feeling that includes long-lasting moods (ex: depression or cheerfulness) as well as more specific temporary states (anger or happiness). See Baas, *supra* note 34, at 781; Kounios & Beeman, *supra* note 62, at 83. But see Gillian Hill & Shelly M. Kemp, *Uh-Oh! What Have We Missed? The Qualitative Investigation into Everyday Insight Experience*, 52 J. CREATIVE BEHAV. 201, 207 (2016) (new insight could trigger negative emotions with sudden realization that things are worse than originally thought).

studies validate these emotional reactions. As insight arises, the anterior cingulate cortex (ACC) is activated.¹²³ The ACC has long been associated with emotions and bursts of dopamine — thus clarifying why sudden insight is “associated with a characteristic feeling of pleasure, excitement, and reward.”¹²⁴ This neurological phenomenon is why sudden insight feels so profoundly satisfying.

Wallas writes about an interim step or substage occurring just prior to Insight or Illumination. He calls it “Intimation” — the moment in which the fringe-consciousness is in a state of rising consciousness, “which indicates that the fully conscious flash of success is coming.”¹²⁵ Wallas equates these feelings to “‘forms of things’ unknown and ‘airy nothings’”¹²⁶ or a rising train of association. Gilhooly referred to this interlude as a sub-threshold of consciousness that “does the work of selecting promising solutions [or] relevant associations.”¹²⁷ Wallas warns against trying to force Intimation—writing “the main danger of spoiling a train of association occurs in the process of attempting — perhaps before the train is complete — to put its conclusion into the words.”¹²⁸

Illumination or Insight emerges only after prolonged and complex unconscious work. This evolution should not be rushed or interrupted. The organic process must be allowed to materialize. With Insight now complete, conscious thought resumes, examining what unconscious work created.

D. Verification

In this final stage, the learner must ensure the insight achieved solves the problem presented.¹²⁹ For Wallas, this stage means returning to conscious effort “in which the results of the inspiration are verified and the consequence deduced.”¹³⁰ Studies show sudden insight

123. See Salvi & Bowden, *supra* note 72, at 289.

124. *Id.* One study shows during this sudden moment of comprehension, the eye pupils shift at approximately 200 milliseconds before the study participants signal having the “Ah Ha!” moment. See Vitello & Salvi, *supra* note 36, at 4.

125. WALLAS, *supra* note 42, at 67 (1926).

126. *Id.* at 72.

127. GILHOOLY, *Incubation and Intuition*, *supra* note 56, at 7.

128. WALLAS, *supra* note 42, at 74–75.

129. See *id.* (“[E]ven when a thinker . . . has thereby attained a new measure of moral and intellectual unity, he should beware of deceiving himself by the belief that he can now substitute a single formula for a whole complex art of thought.”).

130. *Id.* (quoting Henri Poincaré, SCIENCE AND METHOD 62 (1908)).

likely accompanies correct solutions.¹³¹ While not all insights will lead to a comprehensive solution, the new awareness may help the learner spot “essential features of the problem that were not considered previously.”¹³²

Insight or Illumination must be tested.¹³³ If the insight does not address the cause of impasse in its entirety, the learner must be willing to return to the initial stages and the impasse-to-insight process resumes.¹³⁴ Further, some additional cognitive work may be necessary to bridge the insight to the impasse solution, by using traditional problem-solving methodologies.¹³⁵ Verification confirms that the insight is more than intuition — it solves the problem that triggered the impasse.

E. Moving Among the Four Stages

During the impasse to insight learning process, Wallas’s stages continuously overlap.¹³⁶ Cognitive insight, learning theory, and creativity exist in perpetual interplay. Wallas notes “the mind may be unconsciously incubating on one aspect of [the problem], while it is consciously employed in preparing for or verifying another aspect.”¹³⁷ This process may also cycle between the conscious and unconscious work stages.¹³⁸ Neuroimaging studies corroborate that during the various stages, attention and focus are transient and move consciously inward and outward during problem-solving.¹³⁹ “Complex learning [is] rife with experiences of engagement/flow, confusion, boredom, and frustration.”¹⁴⁰ Travelling between impasse to insight and back is a dynamic experience.

These four stages of controlled creative thinking provide a useful structure that may lead to novel learning, particularly when the learner finds herself stuck in impasse. Insight is not random inspiration. It emerges from a foreseeable process of conscious and unconscious

131. See Robert E. Laukkonen, *The Adaptive Function of Insight*, in *THE EMERGENCY OF INSIGHT* 183, 184 (Carola Salvi, Jennifer Wiley & Steven Smith ed. 2024).

132. Hélie & Sun, *supra* note 66, at 996.

133. See Smith & Beda, *supra* note 111, at 16.

134. See Hélie & Sun, *supra* note 66, at 995.

135. See OHLSSON, *supra* note 49, at 20–21.

136. See WALLAS, *supra* note 42, at 54.

137. *Id.*

138. See Todd Lubart, *Creativity and Convergent Thinking: Reflections, Connections and Practical Considerations*, 4 *RUDN J. OF PSYCH. & PEDAGOGICS* 7, 9 (2016).

139. See Kounios & Beeman, *supra* note 62, at 83.

140. D’Mello & Graesser, *supra* note 77, at 153.

restructuring, allowing the learner to discover solutions, hidden just below the realm of awareness. It is a “shift in the way a person thinks, acts, sees, desires and feels. It is a form of sensemaking that occurs when the person restructures his or her understanding.”¹⁴¹

IV. RESOLVING NEGOTIATION IMPASSE: A CREATIVE LEARNING OPPORTUNITY IN DISGUISE

With this four-stage framework established, the question becomes a practical one: when facing impasse, how does one deploy this strategy? Negotiators can be myopic about the creative options available to overcome impasse.¹⁴² Traditional negotiation strategies over-emphasize analytical problem-solving routines. Absent from these strategies is the recognition that a “productive pause” from problem-solving may unlock creative ideas capable of resolving impasse. Cognitive science and impasse to insight learning theory offer a novel methodology to help negotiators overcome contentious impasse.

Studies show when negotiators face impasse, they are “more likely to reach high-quality, integrative agreements after they [take] a break in which they [are] cognitively busy with a distraction task.”¹⁴³ These findings explain one reason why mediation impasse may resolve after a break. The catalyst may lie not in conscious problem-solving effort during the pause but in the unconscious processing that stepping away allows.¹⁴⁴ In the pause, negotiation success depends on how this breathing period unfolds.

Wallas’s theoretical stages for creating new thoughts—Preparation, Incubation, Illumination and Verification—are practical expressions of a new approach to negotiation impasse. What follows is a description of a step-by-step process negotiators may use to generate learning from impasse. Planned disengagement accompanied by a

141. Klein & Jarosz, *supra* note 40, at 347.

142. See LEIGH L. THOMPSON, *THE MIND AND HEART OF THE NEGOTIATOR* 200–01 (6th ed. 2015).

143. *Id.* at 200 (author very briefly outlines Wallas’s steps but emphasizes need for breaks without discussing type of break needed). One mediator called it a “work hard-get frustrated-stop the session” technique. He promotes a mental “walk-about” encouraging the parties to take time to not think about the problem. See Robert Benjamin, *The Joy of Impasse: The Neuroscience of ‘Insight’ and Creative Problem Solving*, *MEDIATE.COM* (Mar. 13, 2018), <https://mediate.com/the-joy-of-impasse-the-neuroscience-of-insight-and-creative-problem-solving/> (on file with Syracuse Law Review).

144. See Benjamin, *supra* note 143.

fruitful pause is central to generating creativity. Impasse is no longer gridlock. It is now a portal to a sustainable agreement.¹⁴⁵

A. Prepare and Employ a Perspective of Learning

Unlike preparing for a negotiation (doing research, creating a plan or gaining client authority), Wallas's Preparation stage mirrors the actual negotiation. Parties engage in familiar activities, including multiple rounds of proposals and counteroffers, using logic and persuasion, and traditional negotiation strategies to advance the process. When parties exhaust their analytical approaches and reach impasse, deliberate problem-solving efforts should cease.¹⁴⁶

To effectively engage in impasse to insight strategy, negotiators must treat impasse as an opportunity to learn. This learning stance occurs in an atmosphere of the sometimes-difficult emotional elements that accompany stalemate. "Comfortable learning environments rarely lead to deep learning."¹⁴⁷ Embrace the confusion and frustration impasse brings. These emotional reactions are trustworthy signals that insight may be possible.¹⁴⁸

B. Take a Break and Incubate

Once genuine impasse emerges, parties should temporarily disengage from active problem-solving. They must set the problem aside. This Incubation stage mimics a long-employed method used by mediators - delaying a decision until the parties are "more psychologically disposed to an issue."¹⁴⁹ Yet, this respite differs fundamentally from typical negotiation breaks. Instead of pursuing conventional tactical maneuvers - changing negotiators, marshaling resources, or seeking arbitration - parties must step back from problem-solving and trust that the Incubation process will generate creative solutions.

Impasse to insight learning further instructs negotiators on what to do and, more importantly, what not to do during this pause. When taking a break from mediation or a negotiation, do not immediately check emails, or texts or call the office. Pause. Walk around the block. Do

145. *See id.*

146. *See* Michael D. Young, *Rethinking Mediation: The Briefs*, 31 ALTS. TO HIGH COST OF LITIG. 39, 40 (2013) ("If there is no impasse, nothing is stopping the parties from settling the case and heading to the local pub to celebrate.").

147. Sidney D'Mello, Blair Lehman, Reinhard Pekrun & Art Graesser, *Confusion Can Be Beneficial for Learning*, 29 LEARNING & INSTR. 153, 167 (2012).

148. *See* Lodge et al., *supra* note 84, at 1 ("Emotion ... plays a vital role in integrating new knowledge with prior knowledge.").

149. Moore, *supra* note 9, at 319.

not transition from the frustrating negotiation impasse to another challenging task. Refrain from engaging in complex activities, such as working on another client's case or revising a detailed document. Turn to distractive, effortless, simple activities. Watch a silly, well-loved movie, clean the apartment or work-out.¹⁵⁰ Engage in mind wandering or meditation. Give the unconscious space the chance to draw upon hidden expertise, knowledge and intuition.¹⁵¹ As Wallas opined, "a learner of good health and naturally fertile mind may have to be told that mere industry is for him...the worst temptation of the devil."¹⁵²

C. Wait for the Coming Illumination

When unconscious ruminations begin to reveal a solution, be receptive to the coming result. Insight can begin with "a dim feeling [or] faint intuitions."¹⁵³ Do not force the surfacing of the inspiration. To quote Henry Hazlitt, "thoughts of certain kinds are so elusive that to attempt to articulate them is to scare them away, as a fish is scared by the slightest ripple."¹⁵⁴ Respect the rising idea and avoid silencing "the prompting of that imperfectly [coordinated] whole" as it crystalizes into conscious understanding.¹⁵⁵ When the "Ah Ha!" moment finally ascends, recognize its import, honor its emergence, and prepare to implement the new learning and creative ideas.

D. Verify the Insight

Once the solution to impasse surfaces, test the insight and, if necessary, refine it. Be willing to transition from Incubation to Insight to Verification and back to Incubation as you improve the idea. Give your solution a reality check. Challenge any insight using recognized approaches that mitigate decision-making biases.¹⁵⁶ Further,

150. See Simone M. Ritter & Ap Dijksterhuis, *Creativity – The Unconscious Foundations of the Incubation Period*, 8 FRONTIERS IN EDUC. 1, 7 (2014) (stating that benefits increase during Incubation when participants occupied by undemanding task rather than in demanding task).

151. See Reber, *supra* note 95, at 232 ("... [I]mplicit learning represent[s] the epistemic core of intuition.").

152. See generally WALLAS, *supra* note 42, at 43–45; see also HENRY DAVID THOREAU, WALKING 10 (1994) (or follow Thoreau's advice of mindfulness: "What business have I in the woods, if I am thinking of something out of the woods?").

153. WALLAS, *supra* note 42, at 98.

154. HENRY HAZLITT, THINKING AS A SCIENCE, 82 (1916).

155. WALLAS, *supra* note 42, at 107.

156. See generally, Laura A. Frase, *Refining Our Thinking About Thinking: Battling the Sway of Cognitive Biases in Negotiation*, 51 CUMB. L. REV. 347 (2021). Confirmation bias could be particularly impactful at the verification stage. To

determine whether the insight constitutes a better solution when compared to the alternatives to a negotiated agreement or BATNA.¹⁵⁷

I suggest Verification in two substages—self-verification and verifying with the parties involved in the impasse, including the client, opposing counsel and mediator. Fundamentally, negotiation is about human interaction.¹⁵⁸ While taking steps to gain insight can be an individual, asymmetrical process, negotiation is an interdependent experience that requires an interpersonal form of communication.¹⁵⁹ It is naive to characterize negotiation constraints as “their problem and only their problem.”¹⁶⁰ Any insight/solution gained must work for the other party to effectively overcome the impasse.

Maintaining an open and prepared mind is central to the process.¹⁶¹ “Both sides are more likely to discover comprehensive and creative solutions if they approach the dispute with open minds.”¹⁶² Communicate with your impasse counterpart what you gained from the insight and be ready to build on the ideas.

Then, implement the new ideas. And celebrate the learning generated from impasse.

overcome confirmation bias, perhaps the question should be “what portions of my insight *do not* solve the problem?” See *id.* at 384.

157. If the Best Alternative to a Negotiated Agreement (BATNA) is more advantageous than the potential agreement, maintaining impasse may be economically advantageous. See Tuncel et al., *Agreement Attraction and Impasse Aversion: Reasons for Selecting a Poor Deal over No Deal at All*, 27 PSYCH. SCI. 312, 312 (2016).

158. See DEEPAK MALHOTRA, NEGOTIATING THE IMPOSSIBLE HOW TO BREAK DEADLOCKS AND RESOLVE UGLY CONFLICTS 1 (2025).

159. See HAROLD H. KELLY & JOHN W. THIBAUT, INTERPERSONAL RELATIONS: A THEORY OF INTERDEPENDENCE 292 (1978) (“negotiation involves two interdependent persons who are seeking an agreement that will make them both better off than their respective bargaining positions.”). See also Douglas Stone et al., DIFFICULT CONVERSATIONS: HOW TO DISCUSS WHAT MATTERS MOST, 26 (2d ed. 2023) (“Changing our stance means inviting the other person into the conversation with us, to help us figure things out... We need to have a learning conversation.”).

160. DEEPAK MALHOTRA & MAX H. BAZERMAN, NEGOTIATION GENIUS: HOW TO OVERCOME OBSTACLES AND ACHIEVE BRILLIANT RESULTS AT THE BARGAINING TABLE AND BEYOND 86 (2007) (In taking time to find out each side’s real interests, one may “think more broadly and creatively about agreements that might satisfy the interests of both parties”).

161. See Roger Frantz & Herbert Simon, *Artificial Intelligence as a Framework for Understanding Intuition*, 24 J. OF ECON. PSYCH. 265, 274 (2003) (“paraphrasing Poincaré, ‘inspiration comes only to the prepared mind.’”).

162. Harold Abramson, *Problem-Solving Advocacy in Mediations: A Model of Client Representation*, 10 HARV. NEGOT. L. REV. 103, 115 (2005). Studies show openness is a trait that facilitates implicit learning. See Scott Barry Kaufman et al., *Implicit Learning as an Ability*, 116 COGNITION 321, 336 (2010).

E. But I am an Expert and I Know This Won't Work

An experienced negotiator may believe that, because of her expertise, she knows once genuine impasse is reached it cannot be broken. So why trust this process? With negotiation impasse there is always the potential for negotiators to become fixated on one course of action because that is the option that worked best in the past. However, this functional fixation or “cognitive entrenchment,” may lead to inflexibility rather than heightened creativity.¹⁶³ Such inflexibility may even suppress innovative thought. Thus, the very nature of expertise may limit access to new creative solutions during impasse.

The goal of Wallas’s stages is to dissipate functional fixation.¹⁶⁴ Incubation and its unconscious processes allow the expert to call upon expertise buried deep in her unconsciousness. In insight “a restructuring among someone’s existing hypotheses, explanations, [and] initial representation of the problem...[may result] in a discovery at a higher-order level of sentience.”¹⁶⁵ The process draws out the temporarily hidden unconscious knowledge already possessed by the expert.

Cognitive science confirms that the unconscious mind is a formidable force in sparking creativity. Insights are trusted because they “carry with them feelings of certainty, clarity, reward and satisfaction.”¹⁶⁶ Validated research holds that ideas generated with insight are more accurate and reliable.¹⁶⁷ Finally, the Verification stage allows

163. See Erik Dane, *Reconsidering the Trade-Off Between Expertise and Flexibility: A Cognitive Entrenchment Perspective*, 35 ACAD. OF MGMT. REV. 579, 590–91 (2010) (emphasis added). This *Einstellung Effect* occurs “when the first idea that comes to mind, triggered by previous experience with similar situations, prevents alternatives from being considered.” *Id.* at 584. Dane suggests one way to avoid entrenchment is for experts to focus their attention on activities outside of the domain of their expertise, rather like the low demand, distractive activities recommended during Incubation. See *id.* at 590–91.

164. See Liu et al., *Exploration of Impact of Incubation on Creativity: A Meta-Analysis*, PSYCH. OF AESTHETICS, CREATIVITY, AND THE ARTS 1, 10 (2024) (dissipation of fixation leads to “more possibilities for creative insights and activate flexible, open-minded creating thinking strategies.”).

165. See Vitello & Salvi, *supra* note 36, at 6. Studies have also shown an increased production of dopamine may signal higher confidence in the validity of the insight. See *id.* at 6–7.

166. See *id.* at 8. See also Wendy Ross & Selene Arfini, *Impasse-Driven Problem-Solving: The Multidimensional Nature of Feeling Stuck*, 246 COGNITION 1, 5 (2024) (“insight may act as metacognitive marker signaling truthfulness of idea...facilitate memory and learning...[or] simply feel nice”) (citations omitted).

167. See Vitello & Salvi, *supra* note 36, at 5. One author suggests insight brings such powerful confidence of rightness that it should be viewed as a form of heuristic, or a shortcut for evaluating ideas that can be trusted. See Robert E. Laukkonen, *The*

those creative insights to be tested and substantiated by logic, conscious thought and traditional problem-solving methods. The impasse to insight experience does not challenge expertise. It unearths it.

CONCLUSION

When negotiations grind to a halt and positions appear unwavering, most negotiators will surrender. While trudging through analytical thinking strategies may seem like a rational way out of impasse, what drives this new strategy is that impasse - and the required “productive pause” - implores the parties to stop thinking. Reconciling with the temporary confusion impasse brings, setting the problem aside, engaging in low cognitive load/distractive tasks, and finding comfort in mind-wandering allows unconscious wisdom to surface as creativity. Employing theories from cognitive science and reframing negotiation impasse as learning, means “meeting problems at impasse with optimism that opportunities for solutions lie ahead.”¹⁶⁸

This impasse to insight strategy promotes the generation of creative ideas, which is “critical to...innovation, adaption, and survival.”¹⁶⁹ “Find the impasse, and you are on your way to crafting a resolution.”¹⁷⁰ Negotiators should embrace the incongruent wisdom of purposeful disengagement – that pausing conscious problem-solving and switching to simple tasks may help generate creative solutions. Give the unconscious mind time to ruminate. The open, prepared mind may then experience what conscious scrutiny cannot: the rush of an exhilarating “Ah Ha!” of genuine insight, transforming negotiation impasse into innovation.

“There is something going on in my foreconsciousness which must be in direct relation to my subject. I ought to stop reading for a little while and let it come to the surface.”¹⁷¹

Adaptive Function of Insight, in THE EMERGENCE OF INSIGHT 183, 192 (Carola Salvi et al. ed. 2024).

168. Colleen M. Seifert, *How Impasse Leads to Insight: The Prepared Mind Perspective*, in THE EMERGENCE OF INSIGHT 104 (Carola Salvi et al. ed. 2024).

169. Dane, *supra* note 163, at 586.

170. Michael D. Young, *Rethinking Mediation: The Briefs*, 31 ALT’S. TO THE HIGH COST OF LITIG. 39, 40 (2013).

171. J. VARENDONCK, THE PSYCHOLOGY OF DAYDREAMS 190 (1921).

