LAWYERING OUTSIDE THE BOX: CONFRONTING THE CREATIVITY CRISIS

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I. INTRODUCTION

“We will not succeed in navigating the complex environment of the future by peering relentlessly into a rear view mirror. To do so, we would be out of our minds.”

Between December 2007 and June 2009 the United States went through its longest, and by most measures worst, economic recession since the Great Depression. Labeled the “Great Recession,” this economic crisis struck after the United States housing market was pounded by shortfalls in subprime mortgages. The disruption in the United States residential mortgage credit market led to the freezing of financial markets in the United States and globally, eventually resulting in a world-wide recession.

Not only a defining moment in world history and for the United States economy, the Great Recession is having a devastating impact on the legal profession. The economic meltdown led to unparalleled layoffs, salary

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1. KEN ROBINSON, OUT OF OUR MINDS: LEARNING TO BE CREATIVE xiii (2d ed. 2011).
3. ASSOCIATED PRESS 2010 STYLEBOOK AND BRIEFING ON MEDIA LAW 127 (Darrell Christian et al. eds., 2010). The Associated Press Stylebook added the term the “Great Recession” to its 2010 edition and defined it as “[t]he recession that began in December 2007 and became the longest and deepest since the Great Depression of the 1930s. It occurred after losses on subprime mortgages battered the U.S. housing market.” Id.
4. Id.
6. Id.
reductions, hiring suspensions, and even deaths. While the Great Recession technically came to a close in 2009, its impact is still being felt.

The long-term consequences of the economic downturn on the legal profession are uncertain. Some believe that the changes are merely cyclical. Others, however, believe that the current state of affairs represents a long-term structural adjustment in the legal services market that will adversely impact the legal profession permanently.

For the legal profession to survive, lawyers must implement real changes. The changing legal landscape requires creative and innovative solutions. Yet, in the wake of the need for creative approaches to address...
the changing legal landscape, a disturbing phenomenon was recently identified: creativity in the United States is declining.\(^\text{15}\)

Fortunately, creativity can be taught.\(^\text{16}\) In fact, fostering creativity is a vital facet of an education that promotes judicious analysis, varying viewpoints, and original thought.\(^\text{17}\) The legal profession in the United States, however, discourages and suppresses creativity.\(^\text{18}\)

This Article argues that, in light of the changes to the legal profession caused by the economic downturn and the recognition that lawyers will need to be creative to adapt to the changes in the legal market, legal educators and the legal profession should strive to foster creativity. Part I discusses the Great Recession and the changes occurring in law practice as reasons why legal educators and the legal profession should foster creativity. Subsequently, Part III provides a summary of the science of creativity. Part IV then addresses the creativity crisis. Finally, Part V introduces some of the barriers to creativity in legal education and the profession.

II. LEGAL LANDSCAPE

Commencing in December 2007, the Great Recession battered the United States and global economies.\(^\text{19}\) This prolonged economic slump was the longest, deepest, and most extensive of the thirteen recessions that the United States had endured since the Great Depression of 1929-32.\(^\text{20}\) The Great Recession was an inflection point for the United States economy.\(^\text{21}\) Over half of working adults in the United States had work-related hardships, and the wealth of the average American household declined significantly.\(^\text{22}\)

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16. See discussion infra Part IV.C.
17. Wald, supra note 5, at ix.
18. See infra Part V.
19. The causes of this unparalleled recession were an “inflated housing market driven higher by easy credit, excessive leverage in the financial system, speculative excess in the hedge fund industry, staggeringly high trade deficits and an American consumer that relied too much on credit to finance their extravagant purchases.” *Definition of the Great Recession*, DAVEMANUEL.COM, http://www.davemanuel.com/investor-dictionary/the-great-recession/. Technically, this recession came to its conclusion in June of 2009. See Coy, supra note 2.
21. Wald, supra note 5, at 2051.
22. Fifty-five percent of working adults in the United States reported that the recession caused them to face a work-related hardship. See Balance Sheet, supra note 20, at 1 (noting that hardships included a “spell of unemployment, a cut in pay, a reduction in hours or an involuntary move to
Although “lawyers were not principal villains in the Great Recession,” the economic downturn has placed the legal profession in a position of unprecedented stress. In the wake of the recession, law firms laid off a record number of lawyers and staff. Even after the recession, an estimated 9500 lawyers were laid off from the 250 largest law firms in 2009 and 2010.

23. Wald, supra note 5, at 2055-56. Wald states:

Lawyers did not play a leading role in the deregulation efforts of the 1980s and 1990s, did not influence the Federal Reserve’s policy of not monitoring high-risk lending entities in the residential mortgage credit market, and were not the primary architects behind the aggressive and increasingly risk-taking behavior of financial institutions. Id. Lawyers, however, “may have been involved in wrongdoing in the latter stages of the bailout.” Id. at 2056 n.27; see also David Wilkins, Teams of Rivals? Toward a New Model of Corporate Attorney-Client Relationship, 78 FORDHAM L. REV. 2067, 2068 n.5 (2010).


Between 2007 and 2009, over 40,000 legal services jobs disappeared. Compare BUREAU OF LABOR STATISTICS, U.S. DEPT OF LABOR, THE EMPLOYMENT SITUATION: OCTOBER 2009 Table B-1 (2009), available at http://www.bls.gov/news.release/archives/empsit_11062009.pdf (setting forth statistics regarding the number of non-seasonally adjusted legal services positions in October 2009), with BUREAU OF LABOR STATISTICS, U.S. DEPT OF LABOR, THE EMPLOYMENT SITUATION: JANUARY 2008 Table B-1 (2009), available at http://www.bls.gov/news.release/archives/empsit_02062009.pdf (setting forth statistics regarding the number of non-seasonally adjusted legal services positions in December 2007). The nation’s largest law firms were particularly impacted. Ribstein, supra note 13, at 751. In September 2009, it was reported that the top 250 law firms laid off four percent of their lawyers, including 8.7 percent of their associates. Leigh Jones, 2009 Worst Year for Lawyer Headcount in 3 Decades, Says ’NLJ 250’ Survey, LAW.COM (Nov. 9, 2009), http://www.law.northwestern.edu/career/marketrends/2009/nljv6a80a1r.pdf (“Among the top 75 law firms on the list, 15 had reductions of more than 100 lawyers.”).

In addition to layoffs, historic unemployment has resulted due to hiring freezes and rescinded offers. To cut costs, law firms also cut salaries, deferred starting dates of new associates, and reduced annual payouts to partners. While some firms survived through layoffs and downsizing, others have completely collapsed.

Law students graduating today are faring worse than experienced attorneys. Pursuant to the ABA’s data of 2011 graduates of domestic ABA-approved law schools, just over fifty percent have full-time, long-term legal jobs. This erosion in legal job opportunities has led to a sharp decline in law school applications.

28. See, e.g., Ribstein, supra note 13, at 751; Michael J. de la Merced, The Legal Profession Feels the Pain of the Recession, N.Y. TIMES, Mar. 26, 2009, at F2; No Arguing With These Figures: Recession Slaming Law Firms, CHL SUN TIMES, Apr. 7, 2009, at 7; Carol J. Williams, New Lawyers Turn to Public Interest, L.A. TIMES, Apr. 6, 2009, at A6.
30. Employment Summary Report, AM. BAR ASSOC. SEC. ON LEGAL EDUC., http://employmentsummary.abaquestionnaire.org/ (select class “2011” under “Compilation All-Schools Data” section; then click “Download Complete Employment Data”) (last visited Jan. 31, 2013); see also Joe Palazzolo, Law Grads Face Brutal Job Market, WALL ST. J. (June 25, 2012, 10:18 AM), http://online.wsj.com/article/ SB10001424052702304458604577486623469958142.html; Debra Cassens Weiss, Only 55 Percent of 2011 Law Grads Had Full-Time Long-Term Legal Jobs, Analysis Shows, A.B.A. J. (June 19, 2012, 6:33 AM CDT), http://www.abajournal.com/news/article/only_55_percent_of_2011_law_grads_had_full-time_long-term_legal_jobs_analysis. Full-time, long-term jobs are defined as “jobs that require bar passage or are judicial clerkships and are for at least 35 hours per week and have an expected duration of at least one year.” Class of 2011 Legal Employment and Underemployment Numbers Are In, and Far Worse than Expected, LAW SCH. TRANSPARENCY (June 15, 2012, 5:30 PM), http://www.lawschooltransparency.com/2012/06/class-of-2011-legal-employment-and-underemployment-numbers-are-in-and-far-worse-than-expected/. The ABA data on these jobs was summed up as follows: At 73 law schools (37.1%), less than 50% of graduates had these legal jobs. 30 schools (15.2%) had less than 40%. 10 schools (5.1%) had less than 33%. 89 schools (45.2%) exceeded the national rate of 55.2%. 31 schools (15.7%) had more than 67%. 19 schools (9.6%) had more than 75%. 5 schools (2.5%) had more than 90%.
The Great Recession has changed client expectations and shifted the balance of power to clients. In the wake of the recession and the competitive market created by the decrease in demand for legal services, clients are now demanding cost control. Accordingly, an increased emphasis on efficiency and productivity is the primary impact of the recent recession on law firms.

This increased emphasis on cost control has already manifested itself in various ways, ways that further jeopardize the traditional business model of legal practice. Responding to the change in client expectations, firms are offering alternatives to the traditional hourly billing model. Clients are no longer willing to accept the traditional billing practices used in the past.

32. KAPLAN, supra note 25, at 6 (reporting that 92 percent of survey participants believe that the recession had changed client expectations).
33. See SUSSKIND, supra note 11, at 270 (“The legal market looks set to be a buyer’s market.”); TAMANANA, supra note 11, at 168; Ribstein, supra note 13, at 752.
35. Li, supra note 34.
36. Studies on the legal business model have focused on large firms because of “the central role [they] play[] in shaping practice realities and professional ideologies for its own lawyers and for the entire legal profession.” Judith S. Kaye, Women Lawyers in Big Firms: A Study in Progress Toward Gender Equality, 57 FORDHAM L. REV. 111, 113 (1988). Kaye notes:

[What seems to be happening in the big firms is symptomatic of something more pervasive . . . .] The big firms cast a giant shadow, in terms of public perceptions of the profession, parallels in other fields, and standards within the legal community. Their every uptick reverberates widely. [Next], the actual influence of the big firms and their alumni—many of them general counsels of major corporations—extends far beyond their numbers.

Id.
37. For example, in light of the recession, clients are pressuring law firms to offer flat fee billing for select services. See KAPLAN, supra note 25, at 6; Nathan Koppel & Ashby Jones, 'Billable Hour' Under Attack, WALL ST. J., Aug. 24, 2009, at A1, available at http://www.baldersonlaw.com/files/Download/WSJ%20Article%20-%20Billable%20Hour%20Under%20Attack.pdf (reporting that survey of Fortune 1000 companies revealed dramatic increase in money spent on alternative billing arrangements between 2008 and 2009). A survey conducted by LexisNexis revealed that just over forty percent of attorneys in private practice reported that they offer their clients alternative fee arrangements. LEXISNEXIS, supra note 13, at 6-7; see also Sterling & Reichman, supra note 13, at 2291. Moreover, almost sixty percent of the survey participants believed that the billable hour will eventually be replaced by alternative billing strategies. LEXISNEXIS, supra note 13, at 6-7. The majority, however, stated that the billable hour will always exist to a certain extent. Id. at 13, 15; see also SUSSKIND, supra note 11, at 270; Sterling & Reichman, supra note 13, at 2291.
38. KAPLAN, supra note 25, at 9.
Technological advances that both support and fundamentally change the practice of law are also redefining the legal landscape. The “disruptive technologies” that are transforming the legal profession include automated document assembly, relentless connectivity, the electronic legal marketplace, e-learning, online legal guidance, legal open-sourcing, closed legal communities, workflow and project management, and embedded legal knowledge. Radically improving efficiency, technology reduces the amount of time spent on a project, thus reducing cost.

Alternatives to the high cost of legal representation also exist. One alternative on the rise is the use of in-house counsel. This increase in the use of in-house counsel provides fewer opportunities for law firms. Clients are also seeking assistance from non-lawyer law consultants or accounting and economic consulting firms. Other available alternatives are online legal services.

39. See SUSSKIND, supra note 11, at 95, 100; cf. DANIEL H. PINK, A WHOLE NEW MIND: WHY RIGHT-BRAiners WILL RULE THE FUTURE 45-46 (2006) (discussing the impact of automation on the legal profession); Henderson, supra note 30, at 479 (“T]echnology . . . is reducing the need for expensive, artisan-trained lawyers . . . . [B]y removing the lawyer from the value chain, the cost goes down, quality goes up, and service delivery time becomes faster.”).  
40. See SUSSKIND, supra note 11, at 94. See generally CLAYTON CHRISTENSEN, THE INNOVATOR’S DILEMMA (1997). Disruptive technologies are “new, innovative technologies that periodically emerge and fundamentally transform companies, industries, and markets.” SUSSKIND, supra note 11, at 94.  
41. SUSSKIND, supra note 11, at 100-05.  
42. Id. at 105-08.  
43. Id. at 108-14.  
44. Id. at 114-21.  
45. Id. at 121-25.  
46. Id. at 125-30.  
47. Id. at 130-36.  
48. Id. at 136-41.  
49. Id. at 141-45.  
50. See id. at 95 (noting that while disruptive technologies “will not work as well as human lawyers . . . they will be less costly”). Computerized legal research, fast Internet connections, and declining costs of data storage and retrieval improve the efficiency of lawyers. Ribstein, supra note 13, at 761; see also KAPLAN, supra note 25, at 8 (“E-Discovery tools have eliminated the need to have junior associates review boxes of documents, which is why you are seeing thousands of junior associates laid off. . . . [C]lients are no longer willing to pay for junior associates to review documents that technology can evaluate with equal success.”).  
51. See Ribstein, supra note 13, at 760-61; Sterling & Reichman, supra note 37, at 2291.  
54. PINK, supra note 39, at 45-46 (“Dozens of inexpensive information and advice services are reshaping law practice.”); SUSSKIND, supra note 11, at xxvii (setting forth http://prismlegal.com as an example of online legal resources); Ribstein, supra note 13, at 768; Ribstein, supra note 53, at 324 (examining the changing limits of unauthorized practice, primarily due to technological
In addition, global competition is impacting the practice of law.\textsuperscript{55} For instance, clients are hiring less expensive, but equally accomplished, attorneys in other countries to perform legal work.\textsuperscript{56} Similarly, legal services are being outsourced to India and other places where labor costs are lower.\textsuperscript{57}

The economy has always influenced the legal profession.\textsuperscript{58} But unlike the past, changes wrought to the legal landscape by the Great Recession are long-term structural changes that are here to stay.\textsuperscript{59} To survive in this new and unfamiliar legal landscape, the legal industry must reevaluate the traditional business model created generations ago and consider new ways to serve its clients.\textsuperscript{60}

Although the current situation is a point of substantial distress, it is also a moment of great opportunity.\textsuperscript{61} To capitalize on this opportunity, lawyers need to be creative in adapting to the changing realities of legal advances). Basic legal forms and other documents are available online for little money. Pink, supra note 50, at 46.\textsuperscript{55}

Ribstein, supra note 13, at 765-67.\textsuperscript{56}

Kaplan, supra note 25, at 9 (“You will see a lot more firms and companies using outsourcing companies to do work more efficiently.”); Pink, supra note 39, at 38 (“Throughout India, you’ll find ... lawyers who do legal research for American lawsuits.”); SuSSkind, supra note 11, at 270; Ribstein, supra note 13, at 767.\textsuperscript{57}

Kaplan, supra note 25, at 6 (reporting that seventy percent of attorneys surveyed agreed that the economy has always impacted law practice).\textsuperscript{58}

See id. (reporting that seventy-four percent of attorneys surveyed think that the changes to the legal profession precipitated by the Great Recession are permanent); supra note 13 and accompanying text (addressing long-term consequences of the Great Recession). See generally Thomas D. Morgan, The Vanishing American Lawyer (2010) (discussing the decline of the legal profession due to the Great Recession). In fact, the legal profession began declining even before the onset of the recession, further supporting the notion that the changes occurring constitute long-term structural changes. TamanaHa, supra note 11, at 168 (noting that 20,000 legal services jobs were lost in the four years before the Great Recession); William D. Henderson & Rachel M. Zahorski, Law Job Stagnation May Have Started before the Recession—and It May Be a Sign of Lasting Change, A.B.A. J., July 2011, at 40, 41, available at http://www.abajournal.com/magazine/article/paradigm_shift/. Moreover, when measured by “growth rate as a percentage of growth domestic product, the legal sector has been in decline since the mid-2000s.” TamanaHa, supra note 11, at 168; see also Matt Leichter, A Profession in Decline: BEA Legal Sector Data (1977-), Law Sch. Tuition Bubble, http://lawscholtuitionbubble.wordpress.com/original-research-updated/a-profession-in-decline/ (last visited Apr. 12, 2013).\textsuperscript{59}

See Kaplan, supra note 25, at 15; Wald, supra note 5, at 2060 (offering new types of legal services may require embracing new styles of client interaction, reexamining business designs, and collaborating with non-lawyers); Littman, supra note 14, at 20 (“Economic pressures are real and law firms, like any business, need to implement real changes in order to survive.”); Weiss, supra note 34.\textsuperscript{60}

See, e.g., Scott L. Cummings & Deborah L. Rhode, Managing Pro Bono: Doing Well by Doing Better, 78 Fordham L. Rev. 2357, 2409 (2010); Jacques Derrida, Force of Law: The "Mystical Foundation of Authority," 11 Cardozo L. Rev. 919, 955 (1990) (examining “anxiety-ridden moment[s] of suspense”); Wald, supra note 5, at 2052 (noting that the Great Depression is instructive in considering potential opportunities of situation created by economic downturn).\textsuperscript{61}
practice. Creative people are able to recognize and solve problems and identify possibilities and opportunities that others may have overlooked.

The world is becoming increasingly complex. Today, “[a]ll organizations are competing in a world in which the ability to innovate and adapt to change is not a luxury: it is a necessity.” Consequently, “[t]hose with the imagination . . . to invent smarter ways to do old jobs, energy-saving ways to provide new services, new ways to attract old customers or new ways to combine existing technologies . . . will thrive.”

III. CREATIVITY

“(C)reativity is essential and beneficial to a society that continually needs to innovate to survive and prosper.”

Unlike in the past, where intelligence—“the capacity to learn and to use existing knowledge”—was viewed as the most valuable trait, the unprecedented challenges and frantic pace of change today renders creativity an indispensable trait. In fact, an IBM poll of more than 1500 CEOs reported that creativity—not “rigor, management discipline, integrity, or even vision”—was the top “leadership competency . . . of the future.”

This Part begins by providing a general discussion of creativity. An extremely complex phenomenon, it is impossible to describe all of the work that has been conducted. Accordingly, this Part provides a big picture

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62. See ROBINSON, supra note 1, at xii (positing that “[c]reativity is the greatest gift of human intelligence”).

63. ANNA CRAFT, CREATIVITY IN SCHOOLS 6 (2005).

64. ROBINSON, supra note 1, at 12. IBM published a study in 2010—Capitalizing on Complexity—that reported that global and business sector leaders “agree[d] overwhelmingly that the single most important leadership competency for organizations to deal with . . . [the] growing complexity is creativity.” Id.


67. JOHN S. DACEY & KATHLEEN H. LENNON, UNDERSTANDING CREATIVITY: THE INTERPLAY OF BIOLOGICAL, PSYCHOLOGICAL, AND SOCIAL FACTORS 3 (1998); see also ROBINSON, supra note 1, at xiii (“The more complex the world becomes, the more creative we need to be to meet its challenges.”); Po Bronson & Ashley Merryman, The Creativity Crisis, NEWSWEEK (July 10, 2010 4:00 AM EDT), http://www.thedailybeast.com/newsweek/2010/07/10/the-creativity-crisis.html (“The necessity of human ingenuity is undisputed.”).


69. See discussion infra Part III.A.

70. Instinctively, creativity may appear to be a simple phenomenon. On the contrary, there is much debate about what creativity is and the subject is quite complicated. See infra note 79 and
summary rather than an exhaustive review. The four facets of creativity are then summarized.\textsuperscript{71} The Part ends with a discussion of how creativity can be measured.\textsuperscript{72}

A. In General

Creativity is a relatively new field of study. The modern era of creativity research began in 1950 with J.P. Guilford’s address to the American Psychological Association.\textsuperscript{73} In his presidential address, Guilford argued that creativity was an important topic that psychologists had largely ignored.\textsuperscript{74} As such, he encouraged psychologists to “focus attention on a scientific approach to conceptualizing creativity and measuring it psychometrically.”\textsuperscript{75} This address was the galvanizing force in the field of creativity and rendered it acceptable to study creativity.\textsuperscript{76}

Initially, creativity appears to be “inherently unknowable, mysterious, and immeasurable.”\textsuperscript{77} A relatively new area of study,\textsuperscript{78} the definition of creativity is subject to debate.\textsuperscript{79} Nevertheless, scholars generally agree that

accompanying text. The study of creativity has, in fact, been interdisciplinary. Creativity has been studied from numerous perspectives, including behavioral, mystical, psychodynamic, cognitive, psychometric, developmental, historical, organizational, philosophical, economic, educational, evolutionary, personality, and social. \textsuperscript{\textsuperscript{\textsuperscript{71}} See discussion infra Part III.B.}

\textsuperscript{\textsuperscript{72}} See discussion infra Part III.C.

\textsuperscript{\textsuperscript{73}} ARTHUR J. CROPLEY, CREATIVITY IN EDUCATION AND LEARNING 1 (2001). Very little research was being conducted in the field of creativity prior to Guildford’s 1950 address, which was published in American Psychologist. Id.; JAMES C. KAUFMAN, CREATIVITY 101, at 9 (2009). For an overview of the study of creativity before 1950, see KAUFMAN, supra, at 9-11, and R. KEITH SAWYER, EXPLAINING CREATIVITY 39-43 (2006).

\textsuperscript{\textsuperscript{74}} KAUFMAN, supra note 73, at 11. Upon reviewing the index of psychological abstracts spanning the years from 1927 to 1950, Guilford discovered that of the 121,000 articles published, only 186 of them involved issues regarding creativity. J.P. Guilford, Creativity Research: Past, Present and Future, in FRONTIERS OF CREATIVITY RESEARCH 33, 34-35 (Scott G. Isaksen ed., 1987).

\textsuperscript{\textsuperscript{75}} THOUGHT 72 (Wikipedians eds., 2011).

\textsuperscript{\textsuperscript{76}} KAUFMAN, supra note 73, at 11.

\textsuperscript{\textsuperscript{77}} Gregory J. Feist, The Nature and Nurture of the Creative Personality, in THE CAMBRIDGE HANDBOOK OF CREATIVITY, supra note 70, at 113, 114.

\textsuperscript{\textsuperscript{78}} See supra notes 73-76 and accompanying text.

\textsuperscript{\textsuperscript{79}} TERESA M. AMABILE, CREATIVITY IN CONTEXT 19 (1996) (“The definition . . . of creativity [has] long been a subject of disagreement . . . .”). See generally DONALD J. TREFFINGER, CREATIVITY, CREATIVE THINKING, AND CRITICAL THINKING: IN SEARCH OF DEFINITIONS (collecting more than 118 different definitions of creativity).
there are two components to creative thought or behavior.\textsuperscript{80} First, creativity refers to something that is novel.\textsuperscript{81} An idea or work is novel if it is original or unexpected.\textsuperscript{82} Novelty alone, however, is not sufficient because novel ideas can be illogical or absurd.\textsuperscript{83} Second, a creative idea or product must also be “appropriate to the task at hand.”\textsuperscript{84} In other words, a creative idea is useful and relevant.\textsuperscript{85}

A common misconception about creativity is that it is the same as intelligence.\textsuperscript{86} To date, there is no consensus on the relationship between creativity and intelligence: that is, whether they are different traits that require different measures.\textsuperscript{87} Despite the lack of consensus, many

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\item Feist, supra note 77, at 114 (“[I]t is false to say that no consensual definition has emerged on how to define it. In fact, creativity researchers have for the last 60 years been nearly unanimous in their definition of the concept.”); see also Kaufman, supra note 73, at 19.
\item Cropley, supra note 73, at 2, 14; Kaufman, supra note 73, at 19; Feist, supra note 77, at 114; Sternberg & Lubart, supra note 70, at 3.
\item Kaufman, supra note 73, at 19; Sternberg & Lubart, supra note 70, at 3. Todd Lubart & Jacques-Henri Guignard state:

This work must be novel in the sense that it goes beyond replication or copy of that which exists. The extent to which the work product is novel can vary from being original only for the person who completed the work (this is the notion of reinventing ideas known already in the larger social context) to being original for a limited social group, to being original for all of humanity. Furthermore, within a given domain, there are different ways that an idea may be novel, or original. For example, it may (a) reiterate a known idea in a new way; (b) move a field forward along its current trajectory, (c) move a field forward in a new direction, or (d) lead to an integration of diverse trends in a field.

\item See Sawyer, supra note 73, at 27; Feist, supra note 77, at 114. Feist notes:

It is easy to see why originality per se is not sufficient—there would be no way to distinguish eccentric or schizophrenic thought from creative. To be classified as creative, thought or behavior must also be useful or adaptive. Usefulness, however, is not meant in merely a pragmatic sense, for behavior or thought can be judged as useful on purely intellectual or aesthetic criteria.

Feist, supra note 77, at 114.
\item Kaufman, supra note 73, at 19; Sawyer, supra note 73, at 27 (stating that an idea is appropriate if the community recognizes the idea as one that is socially valuable).
\item Kaufman, supra note 73, at 19.
\item Harvard Business Press, FOSTERING CREATIVITY: EXPERT SOLUTIONS TO EVERYDAY CHALLENGES 6 (2010).
\item Kaufman, supra note 73, at 102-08; Kyung Hee Kim, Bonnie Cramond & Joyce VanTassel-Baska, The Relationship Between Creativity and Intelligence, in THE CAMBRIDGE HANDBOOK OF CREATIVITY, supra note 70, at 395, 400-02 (“Research on the relationship between creativity and intelligence has been a topic of interest to researchers for a long time, but there has been no clear consensus among the researchers yet.”). Kim, Cramond, and VanTassel-Baska state:

[Intelligence is] an ability to understand complex ideas, to adapt to the environment, to learn from experience, and to engage in reasoning to overcome obstacles. . . . [It] reflects an individual’s capacities, shaped by experience and learning, and is often operationally defined by schools as the cognitive abilities that are measured by an IQ test.
researchers subscribe to the ‘threshold theory.’ Pursuant to this theory, in order to be creative an individual must meet a certain threshold of intelligence that is approximately an IQ of 120. Intelligence above this threshold, however, does not equate to higher creativity. Accordingly, creativity and intelligence are statistically independent, and a highly creative person may or may not be a highly intelligent person. Another widespread misconception is that creativity is confined to art and literature. In fact, people and organizations can be creative whenever they are using their intelligence. Creativity can be expressed in a wide range of fields including science, engineering, math, teaching, economics, business, industrial design, architecture, and advertising.

An additional misconception about creativity is that only a rare few people are creative. Consider the number of times you have heard others say—or have said yourself—“I am not creative.” In fact, creativity has been categorized via creative magnitude, and everyone has creative potential. Essentially, scientists have divided creativity into big-C and little-c creativity.
Big-C creativity, also referred to as eminent or exceptional creativity, involves unmistakable instances of creative expression. Individuals possess big-C creativity if they generate a socially valuable product “that lasts generations and will be remembered, used, or enjoyed a hundred years from now.” Examples of big-C creativity include Emily Dickinson’s poetry, John Coltrane’s jazz, Sigmund Freud’s psychology, Wolfgang Amadeus Mozart’s compositions, William Shakespeare’s plays, Louis Armstrong’s music, Albert Einstein’s physics, Alexander Fleming’s physiology, Pablo Picasso’s painting, T.S. Eliot’s verse, Martha Graham’s dancing, and Mahatma Gandhi’s leadership.

In contrast, little-c creativity focuses on everyday creativity, the ability to solve problems that arise daily and to easily adapt to change. While little-c creativity results in helpful and important contributions, the contributions are not earth shattering. Examples of little-c creativity include adapting a recipe to compensate for missing ingredients, dodging a bad traffic jam by discovering an alternative route, and coming up with a
way to ask a friend for forgiveness for unintentionally insulting him or her.\textsuperscript{106}

Unlike big-C creativity, little-c creativity recognizes that everyone has the potential to be creative.\textsuperscript{107} This creativity is important on numerous levels.\textsuperscript{108} As discussed above, creativity is pertinent at the individual level for problem solving both at work and in everyday life.\textsuperscript{109} On a larger, societal level, creativity is relevant because it “can lead to new scientific findings, new movements in art, new inventions, and new social programs.”\textsuperscript{110} Creativity is also important for economic reasons.\textsuperscript{111} The creation of novel goods or services generates employment opportunities.\textsuperscript{112}

This Article focuses on little-c or everyday creativity.\textsuperscript{113} While everyone has creative potential, the challenge lies in developing and fostering these creative capacities.\textsuperscript{114}

B. The Four Ps of Creativity

As mentioned above, creativity is a complex subject.\textsuperscript{115} In an effort to provide a practical framework for examining creativity, the numerous theoretical approaches\textsuperscript{116} to this complex subject have been divided

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\bibitem{106} Sawyer, supra note 73, at 27; see also Kaufman, supra note 73, at 45 (“Little-c could be making up parody song lyrics to amuse someone, figuring out what might be substituted into a recipe if you don’t have any eggs or milk, or doodling pictures of the people who are serving on jury duty with you.”); Sawyer, supra note 73, at 27 (“A person’s dreams or a child’s block tower could be creative under the [little-c] definition, but not under the [big-C] definition.”); Kozbelt, Beghetto & Runco, supra note 70, at 23 (setting forth modifying a recipe as an example of little-c creativity).
\bibitem{107} Dacey & Lennon, supra note 67, at 225 (“All people are born with the ability to be creative at some level.”); Kaufman, supra note 73, at 44-45 (noting that “[l]ittle-c creativity is the way that everybody can be creative” and “underscore[s] the important and often essential role that creativity plays in everyday life”); Robinson, supra note 1, at 4 (“Everyone has huge creative capacities as a natural result of being a human being.”); Mark A. Runco, \textit{Everyone Has Creative Potential, in Creativity: From Potential to Realization}, supra note 82, at 21, 21-30; Treffinger & Isaksen, supra note 96, at 343 (“Creativity can be expressed among all people in an extremely broad array of areas or subjects, perhaps a nearly infinite number of ways.”). The multiple cognitive processes involved in being creative are accessible to everyone. Sam McNerney, Jonah Lehrer and the New Science of Creativity, SCL AM. BLOG (Mar. 19, 2012), http://blogs.scientificamerican.com/guest-blog/2012/03/19/jonah-lehrer-and-the-new-science-of-creativity/.
\bibitem{108} Sternberg & Lubart, supra note 70, at 3.
\bibitem{109} Id.
\bibitem{110} Id.
\bibitem{111} Id.
\bibitem{112} Id. To stay competitive, “individuals, organizations, and societies must adapt existing resources to changing task demands.” Id.
\bibitem{113} See supra notes 103-07 and accompanying text.
\bibitem{114} Robinson, supra note 1, at 3 (“Creativity is latent in all of us and it just needs to be brought out.”).
\bibitem{115} See supra note 70 and accompanying text.
\bibitem{116} See generally Kozbelt, Beghetto & Runco, supra note 70 (discussing theories of creativity).
\end{thebibliography}
pursuant to the facet of creativity they stress. The four facets are referred to as the Four Ps: Person, Process, Press, and Product.

Person refers to recognizing the qualities that creative people possess. Process deals with delineating the cognitive operations involved in, or stages of, the creative thinking process. In contrast, Press refers to “examining the nature of situations and its context within the creative press (or environment).” Finally, Product involves identifying the characteristics of a creative product.

Although discussed individually, creative behavior nearly always arises from a combination of two or more of these facets. Nevertheless, each facet will be discussed separately for the sake of clarity.

I. Person

The Person or personality perspective looks at creativity as characteristics of the individual. Early researchers in the creativity field examined and compared highly creative people to ascertain traits that were

117. Id. at 24
118. KAUFMAN, supra note 73, at 21; Kozbelt, Beghetto & Runco, supra note 70, at 24; see also AMABILE, supra note 79, at 4-5 (providing general discussion of facets of creativity). Ross L. Mooney introduced the Four Ps of creativity at the Utah Conferences on the Identification of Creative Scientific Talent. Ruth Richards, Four Ps of Creativity, in 1 ENCYCLOPEDIA OF CREATIVITY 733, 733 (Steven R. Pritzker & Mark A. Runco eds., 1999). Mooney’s Four Ps have been widely adopted by creativity researchers. Id. Additional facets—or Ps—have been introduced. Kozbelt, Beghetto & Runco, supra note 70, at 24. These facets include Persuasion and Potential. Id. at 25.
120. Id.
121. Id.
123. CROPLEY, supra note 73, at 2 (“Actual creative behavior results from interactions among abilities and knowledge, personal properties, motivation and the properties of the surrounding environment.”); Scritchfield, supra note 119.
124. In psychology, the term “personality” refers “to the unique and relatively enduring set of behaviors, feelings, thoughts, and motives that characterize an individual.” Feist, supra note 77, at 114.
indicative or contraindicative of creative potential. While “[t]here is no one creative personality,” researchers have determined that it is very likely that creative individuals demonstrate particular traits and propensities.

Tolerance of ambiguity—“[t]he ability to remain open-minded in the face of ambiguity”—is one of the key traits associated with a creative personality. A situation is ambiguous when there is no framework to assist a person in making decisions or taking action. The tendency to embrace strange or unknown situations, rather than be frightened by them, enables an individual to respond creatively.

Another key characteristic of a creative personality is stimulus freedom. Unlike a stimulus-bound person who faithfully obeys the rules, people with stimulus freedom will bend the rules if the stated rules hinder their creative ideas. Moreover, when a situation is ambiguous, people with stimulus freedom do not assume that rules exist. In contrast, when confronted with an ambiguous situation, stimulus-bound individuals assume that there are rules because of the fear of being incorrect. This fear of being wrong inhibits creativity.

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126. See Kozbelt, Beghetto & Runco, supra note 70, at 25 (“Much early research compared mathematicians, architects, writers, and other groups in terms of the traits that may be indicative or contraindicative of creative potential.”).

127. RUNCO, supra note 70, at 315.


Empirical research over the past 45 years makes a rather convincing case that creative people behave consistently over time and situation and in ways that distinguish them from others. It is safe to say that in general a ‘creative personality’ does exist and personality dispositions do regularly and predictably relate to creative achievement.

Id. The existence of these creative traits, however, does not guarantee that an individual will be creative. RUNCO, supra note 70, at 281. Rather, these traits are just “one influence on creative behavior, rather than a complete explanation.” Kozbelt, Beghetto & Runco, supra note 70, at 25.

Some of the traits identified by researchers are more pervasive among people in artistic domains or in scientific domains. Id. Conversely, there are some traits that are not domain specific. Id.

129. DACEY & LENNON, supra note 67, at 99.

130. Id. at 98; see also Runco, supra note 70, at 297-98 (discussing tolerance of ambiguity).

131. DACEY & LENNON, supra note 67, at 99. The lack of framework means that “[r]elavant facts are missing, the rules are unclear, and the right procedures are unavailable.” Id. An example of an ambiguous situation would be a high school reunion for a forty-three-year-old. Id.

132. Id. If an individual is tolerant of ambiguity, he or she has an easier time dealing with imprecise problems that have creative potential. RUNCO, supra note 70, at 297.

133. DACEY & LENNON, supra note 67, at 99. For a description of Torrances 9 Dot Problem used to test this trait, see id. at 99-101.

134. Id. at 101.

135. Id.

136. Id.

137. Id. (“Breaking free from assumptions about a specific situation is only half the challenge. Sometimes it is also necessary to disengage from the mindset of one’s surroundings.”).
Functional freedom and flexibility are two additional characteristics of a creative personality. Functional freedom refers to the ability to envision using an object for something other than its typical purpose. Similarly, flexibility refers to an individual’s ability to see the entire picture, rather than just the details involved in the situation. The ability to imagine using something for other than its intended purpose and to recognize all aspects of a problem renders it more likely that an individual will arrive at a creative solution.

People with creative personalities also tend to be risk takers and have a preference for disorder. To be creative, people have to be willing to take risks and to share creative ideas that are by their very nature original, untested, and frequently unconventional. Moreover, creative individuals, while not disliking order, prefer disorder because it is more interesting.

Researchers have also determined that creative people exhibit a freedom from sex-role stereotypes, possessing qualities of both males and females. Unlike conventional people who generally adhere to conventional sex roles, creative people do not base decisions on stereotypes because they are flexible, open to experience, and do not appreciate conventional behaviors. Valuing authenticity and creativity more than fitting in, creative people have a wider range of perspectives leading to more creative behavior.

Finally, contrary to popular belief, “creativity can’t be explained in terms of raw, innate talent or clever imagination.” As famously stated by

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138. Id. at 102.
139. Id. at 104.
140. Id. at 102. For a description of the two string test to assess this trait, see id. at 102-03. Interestingly, researchers have found that this trait is “inversely related to years of formal education.” Id. at 103 (noting that “the more education a person has, the more rigid his or her perception of function is likely to become”). In fact, advanced education “works against producing simple ideas, which comprise many of the world’s greatest solutions.” Id.
141. Id. at 104. A person is flexible if they are “open to the world, open to change, and prepared to bring about such change.” Id. For a discussion of a test used to assess the existence of this trait, see id.
142. Id.
143. See RUNCO, supra note 70, at 314 (discussing risk taking).
144. Id. For an explanation of a simple illustration of this trait—the child’s game of ring toss—see DACEY & LENNON, supra note 67, at 105. Individuals who are risk averse are less likely “to consider, explore, or share original ideas.” Id.
145. DACEY & LENNON, supra note 67, at 106 (noting that creative people “prefer the richness of the disordered to the stark bareness of the simple”).
146. Id. at 107-11 (discussing freedom from sex role stereotypes). Specifically, “[c]reative males need to have that stereotypically female characteristic—sensitivity to the feelings of others—in order to get in touch with their own creative urges.” Id. at 109. In contrast, “[f]emales need assertiveness, a stereotypically male attribute, in order to champion their ideas courageously in a critical world.” Id.
147. RUNCO, supra note 70, at 314.
148. Id.
149. SAWYER, supra note 73, at 54.
Thomas Edison, “Genius is one percent inspiration and ninety-nine percent perspiration.” The final three traits of a creative person are perseverance, the ability to delay gratification, and courage. An important trait of a creative individual is the ability to persevere through overwhelming obstacles and counter the conventional approaches of looking at something. Similarly, the ability to delay gratification—“[t]he willingness to endure the stress of prolonged effort so as to reap higher pleasures in the long run”—is essential to being creative. Finally, if an individual comes up with a novel idea, he or she must possess “the courage to be a minority of one, at least in the early stages.”

2. Process

Unlike the Person perspective of the Four Ps that focuses on identifying the traits of creative people, the Process perspective focuses on how creativity occurs. Specifically, this perspective approaches creativity as a method of thinking, examining “the sequence of thoughts and actions that leads to a novel, adaptive production.” While there are numerous approaches to the creative process, Process theories generally focus on examining the stages or operations that occur when people act creatively.

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150. Id. at 53.
151. Id. (“[C]reativity is largely the result of hard work.”).
152. DACEY & LENNON, supra note 67, at 111; see also RUNCO, supra note 70, at 295 (discussing perseverance and persistence).
153. DACEY & LENNON, supra note 67, at 107. Creators frequently work for years on a problem. Id. The ability to delay gratification “is what makes some creative people spend years on a project without recognition or reward.” Id. For example, Thomas Edison conducted over 2000 experiments before he discovered the light bulb. Id.
154. Id. at 112. Every time the creator reveals his or her creative product is an act of courage in that “the creator must overcome the fear that the brainchild may be ridiculed or rejected.” Id. at 114. Additional creative personality traits have also been identified. See id. at 98, 114-15; SAWYER, supra note 73, at 47.
155. Santanen, Briggs & deVreede, supra note 125, at 2900; Scritchfield, supra note 119. The Process perspective examines the thinking stages or operations that happen when people behave in a creative manner. Scritchfield, supra note 119. Researchers studying the creative process tend to focus on examining whether the cognitive mechanisms of creative thinking are the same as those used in non-creative thinking, whether the creative process involves conscious or unconscious cognitive operations, whether creative thinking involves stochastic processes versus a more directed process, and whether the evaluative processes utilized in the creative process are reliable. Kozbelt, Beghetto & Runco, supra note 70, at 24.
156. Santanen, Briggs & deVreede, supra note 125, at 2900.
158. Id. at 297 (discussing other approaches to the creative process).
159. Kozbelt, Beghetto & Runco, supra note 70, at 24. Various other models of the creative process also exist, including Teresa Amabile’s componential theory of the creative process, see generally Teresa M. Amabile, The Social Psychology of Creativity: A Componential Conceptualization, 45
a. Stage Models

In an effort to understand the cognitive processes that produce creative thinking, researchers have developed cognitive stage models of the creative process. While there are numerous theories regarding the stages of the creative process, psychologists generally agree that the creative process consists of four stages across domains. These four stages are (1) Preparation, (2) Incubation, (3) Illumination, and (4) Verification.

The initial stage of the creative process is Preparation. During this stage, the creator identifies and defines a problem and assembles information. The creator must apprise himself or herself with prior works in order to embrace the symbols and standards of the domain.


Santanen, Briggs & deVreede, supra note 125, at 2901. For a discussion of some problems with stage theories, see SAWYER, supra note 73, at 70, and Lubart, supra note 157, at 297.

CROPLEY, supra note 73, at 71-72; SAWYER, supra note 73, at 58; Colin Martindale, Creativity and Connectionism, in THE CREATIVE COGNITION APPROACH, supra note 159, at 249, 251. The stage model for the creative process was originally developed by Graham Wallas. See generally GRAHAM WALLAS, THE ART OF THOUGHT (1926). Wallas originally identified five stages. KAUFMAN, supra note 73, at 38. Subsequently, two of the stages—intimation, when you “realize you are about to have a breakthrough,” and illumination, “when you have the insight”—were merged into one. Id.; Lubart, supra note 157, at 297 (discussing the evolution of the four stage model). For a discussion of various stage models, see R. KEITH SAWYER, EXPLAINING CREATIVITY: THE SCIENCE OF HUMAN INNOVATION 88-89 (2d ed. 2012). Researchers debate whether creativity is domain general or domain specific. See generally John Baer, Is Creativity Domain Specific?, in THE CAMBRIDGE HANDBOOK OF CREATIVITY, supra note 70, at 321.

See infra notes 167-69 and accompanying text.

See infra notes 170-75 and accompanying text.

See infra notes 176-81 and accompanying text.

See infra notes 182-85 and accompanying text.

SAWYER, supra note 73, at 58 (“Preparation is the initial phase of preliminary work.”).

Id. (noting that the preparation stage entails “collecting data and information, searching for related ideas, [and] listening to suggestions”); Kozbelt, Beghetto & Runco, supra note 70, at 30; Martindale, supra note 161, at 251 (“Ideas presumed relevant to the problem are learned and manipulated in an intellectual fashion.”); Scritchfield, supra note 119 (stating that the preparation stage involves scrutinizing the challenge from all directions).

SAWYER, supra note 73, at 59. In order to be creative, an individual must internalize the domain. Id. Creativity occurs “when the individual somehow combines . . . existing elements [from the domain] and generates some new combination.” Id.
After a period of intense work with no advancement achieved, the creator sets the problem aside for the next stage.\textsuperscript{169} Researchers understand the least about the second stage, Incubation.\textsuperscript{170} During this stage, the individual takes a break from working on the problem.\textsuperscript{171} While taking some time away from the problem, the creator is unconsciously thinking about it.\textsuperscript{172} In essence, during this stage, the individual internally expands and arranges the prepared material.\textsuperscript{173} Existing ideas are blended and combined to shape complicated mental configurations.\textsuperscript{174} Once the mental elements come together, the next stage, Insight, ensues when some of these mental structures surface into consciousness.\textsuperscript{175} This third stage, Illumination or Insight,\textsuperscript{176} is the “aha” or “eureka” moment\textsuperscript{177} when the creator suddenly realizes the solution to a problem.\textsuperscript{178} This new mental structure that surfaces into consciousness is comprised of ideas and conventions that already exist in the domain.\textsuperscript{179} A creative insight is rarely one hundred percent unique.\textsuperscript{180} Rather, the insight is novel in terms of how the creator has combined existing ideas.\textsuperscript{181} The fourth stage is Verification. This final stage has been divided into two substages, evaluation and elaboration.\textsuperscript{182} Not all creative insights are good ideas.\textsuperscript{183} Once the creator has had the “aha” moment when the idea surfaces into consciousness, the creator must evaluate whether the insight is a good idea.\textsuperscript{184} Unlike the Illumination/Insight stage, this stage is done

\begin{footnotesize}
\begin{enumerate}
\item[169.] Martindale, supra note 161, at 251.
\item[170.] Sawyer, supra note 73, at 61-62. See generally Steven M. Smith & Rebecca A. Dodds, \textit{Incubation}, in \textit{2 Encyclopedia of Creativity}, supra note 118, at 39.
\item[171.] Sawyer, supra note 73, at 62 (“Many creative people say that they get their best insights during a period of idle time, when they take time off from their hard, focused work to engage in an unrelated activity—gardening, walking—or to work on another problem for a while.”).
\item[172.] Id. at 61-62; Scritchfield, supra note 119.
\item[173.] Sawyer, supra note 73, at 58; id. at 61 (“Ideas and thoughts combine rapidly in an almost undirected way.”); see also discussion infra Part III.B.2.b.
\item[174.] Sawyer, supra note 73, at 67; see also discussion infra Part III.B.2.b.iii.
\item[175.] Sawyer, supra note 73, at 61-62, 67.
\item[177.] Sawyer, supra note 73, at 59.
\item[178.] Kozbelt, Beghetto & Runco, supra note 70, at 31.
\item[179.] Sawyer, supra note 73, at 67; see also Runco, supra note 70, at 22 (listing five situations in which insight may happen).
\item[180.] Sawyer, supra note 73, at 67.
\item[181.] Id.
\item[182.] Id. at 59. In this stage “the individual tests the idea or applies the solution.” Kozbelt, Beghetto & Runco, supra note 70, at 31; see also Scritchfield, supra note 119 (noting that this stage involves “a validity check on the idea and refining it to a more precise form”).
\item[183.] Sawyer, supra note 73, at 68.
\item[184.] Id. at 59, 68.
\end{enumerate}
\end{footnotesize}
During the second substage, elaboration, the creator consciously fashions the insight into a finished product. To mold the raw insight into its finished form, the creator draws on his or her domain knowledge. Elaboration and evaluation go hand-in-hand because it is difficult for the creator to assess the insight without elaborating on it to some extent.

Although initially presented as a linear process, recent theories have acknowledged the recursive nature of the creative process. During the creative process, individuals could proceed through each of the steps numerous times and in different orders.

b. Cognitive Operations

“The creative act is not an act of creation in the sense of the Old Testament. It does not create something out of nothing; it uncovers, selects, re-shuffles, combines, synthesizes already existing facts, ideas, faculties, skills. The more familiar the parts, the more striking the new whole.”

Numerous cognitive operations underlie the creative process. These cognitive abilities are not special. Rather, creative thinking involves particular combinations of everyday cognitive operations. The mental

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185. Id. at 68. The creator asks him or herself: Is the insight an idea that someone already had in the past? Is the insight kind of interesting, but trivial? How can this insight be integrated with the creator’s existing body of work? Or does it require a complete rethinking of a career, perhaps something the creator isn’t prepared to do at this time? How can this insight best be connected to other work that is going on in the domain?

Id.

186. Id. at 70 (discussing elaboration).

187. Id. at 69.

188. Id. at 70.

189. RUNCO, supra note 70, at 19; Kozbelt, Beghetto & Runco, supra note 70, at 31.


191. See Hennessey & Amabile, supra note 98, at 575; Labart, supra note 157, at 295; Ward & Kolomys, supra note 159, at 93 (“Creative cognition is concerned with explicating how fundamental cognitive processes, available to virtually all human beings, operate on stored knowledge to yield ideas that are novel and appropriate to the task at hand.”); Ward & Kolomys, supra note 159, at 95 (“Creative thinking . . . [is] characterized in terms of how various specific processes are employed or combined.”).

192. SAWYER, supra note 73, at 74; see also Ward & Kolomys, supra note 159, at 96-97.

strategies, processes, or habits most germane to the production of creative ideas include generating multiple solutions, defining problems, and synthesizing or combining information.\textsuperscript{194}

\textit{i. Generating Multiple Solutions}

Guilford identified two modes of thinking\textsuperscript{195}—divergent and convergent—involves in the creative process.\textsuperscript{196} The cognitive foundation of creativity,\textsuperscript{197} divergent thinking involves mental processes that allow a person to generate numerous responses to open-ended questions or problems.\textsuperscript{198} The ability to generate multiple responses based on the information provided favors the formation of new and original ideas.\textsuperscript{199} Accordingly, divergent thinking is critical to creativity and creative problem solving.

Researchers have identified four components of divergent thinking.\textsuperscript{200} The first component is fluency, the capacity to produce many ideas.\textsuperscript{201} The second component, flexibility, refers to the ability to generate various kinds of ideas.\textsuperscript{202} Originality is the third component and refers to the ability to

\textsuperscript{194} Researchers have studied the combination of various other subprocesses involved in creative thinking. Lubart, supra note 157, at 299; see also Smith et al., supra note 193, at 10-16 (discussing phenomena that take place when individuals engage in creative thinking).

\textsuperscript{195} These modes are two of the many that Guilford identified in the Structure-of-Intellect (SOI) model of creative thinking. Runch, supra note 70, at 9; Mark A. Runch, Divergent Thinking, in \textit{Encyclopedia of Creativity}, supra note 118, at 577, 577.

\textsuperscript{196} Kozbelt, Beghetto & Runch, supra note 70, at 32; see also James C. Kaufman, Jonathan A. Plucker & John Baer, \textit{Essentials of Creativity Assessment} 16 (2008) (explaining that divergent and convergent thinking "lie on a continuum of cognitive processes").

\textsuperscript{197} Cropley, supra note 73, at 32.

\textsuperscript{198} Kaufman, Plucker & Baer, supra note 196, at 16; see also Cropley, supra note 73, at 32 (divergent thinking entails the "production of variability"); Kozbelt, Beghetto & Runch, supra note 70, at 32 ("Divergent thinking . . . involves processes like shifting perspective, transforming, or producing multiple answers from the available information and this favors production of novelty."); Lubart, supra note 157, at 299.

\textsuperscript{199} Kozbelt, Beghetto & Runch, supra note 70, at 32 (noting that divergent thinking "occurs when ideas and associations move in varied directions, and as a result new and original ideas may be found"); see also Runch, supra note 195, at 577 ("Divergent thinking is cognition that leads in various directions. Some of these are conventional, some original. Because some of the resulting ideas are original, divergent thinking represents the potential for creative thinking and problem solving.").

\textsuperscript{200} Kaufman, supra note 73, at 14.

\textsuperscript{201} Id.

\textsuperscript{202} Id.
construct ideas that are the most atypical. Finally, the last component is elaboration, or the skill to advance ideas.

In contrast to divergent thinking, convergent thinking emphasizes precision and correctness. Convergent thinking entails the use of cognitive processes to come up with the best, or correct, response to a question or problem. While effective in situations “where a ready-made answer exists or needs simply to be recalled from stored information, or where the answer can be worked out from what is already known by conventional and logical search, recognition and decision-making strategies,” it does not lend itself to the production of novelty. The focus on identifying what is already known, using established methods, and maintaining existing knowledge inhibits creativity.

Both divergent and convergent thinking are involved in the creative process. Once the creator has finished the process of divergent thinking, the creator uses convergent thinking to structure and organize the ideas and information. The combination of divergent and convergent thinking allows individuals to generate original and effective ideas.

### ii. Problem Finding and Definition

While divergent and convergent modes of thinking focus on problem solving, recent research has unveiled the significance of problem finding.

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203. Id.
204. Id.
205. RUNCO, supra note 70, at 9; Runco, supra note 195, at 577.
206. CROPLEY, supra note 73, at 32; KAUFMAN, PLUCKER & BAER, supra note 196, at 16; Kozbelt, Beghetto & Runco, supra note 70, at 32.
207. Id.
208. KAUFMAN, PLUCKER & BAER, supra note 196, at 16 (“Very few problems (if any) in the real world require only divergent or convergent thinking.”); Kozbelt, Beghetto & Runco, supra note 70, at 32; Mark Runco, Divergent Thinking, Creativity, and Ideation, in THE CAMBRIDGE HANDBOOK OF CREATIVITY, supra note 70, at 413, 413.
209. Id.
212. RUNCO, supra note 70, at 16; SAWYER, supra note 73, at 73; Kozbelt, Beghetto & Runco, supra note 70, at 34; Lubart, supra note 157, at 299. Problem finding refers to problem identification, problem definition, and problem construction—things that happen before an individual solves the problem. STARKO, supra note 70, at 12 (“Problem finding, in its broadest sense, underlies all types of creativity.”); Mark A. Runco & Gayle Dow, Problem Finding, in 2 ENCYCLOPEDIA OF CREATIVITY, supra note 118, at 433, 433. For an in-depth discussion of problem finding, see STARKO, supra note 70, at 29-38, and R. Keith Sawyer, Creativity, Innovation, and Obviousness, 12 LEWIS & CLARK L. REV. 461, 473-77 (2006).
Rarely in the real world, except on standardized tests, are problems neatly presented. Rather, real-world creativity requires problem finding. Researchers have found that the ability to frame a sound problem, and not simply solve the problem, is critical to creativity. The difference between problem solving—"the type of creativity that occurs when a problem is known to everyone working in the area, yet no one is able to determine the solution"—and problem finding can be seen in this definition of the latter: “Problem finding is a type of creativity that occurs when no one . . . has yet realized that there is a problem to be solved; a problem finding creator is one who discovers the problem and first poses the question in such a way that it lends itself to solution.”

iii. **Synthesizing or Combining Information**

Individuals are creative when existing ideas come together. Creative individuals are able to manipulate content during the Incubation stage to examine information in innovative ways. Accordingly, “[T]he existing ideas that form the new mental structures aren’t new; they’re familiar ideas and conventions that are already in the domain and that have been internalized by the creator.” Cognitive psychologists have identified numerous mechanisms behind how individuals combine ideas to be creative.

Conceptual combination, one such mechanism, involves “combin[ing] concepts and us[ing] these combinations to develop new creative concepts.” Individuals are creative if they can combine concepts in a way that results in emergent effects that extend beyond the

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213. **SAWYER**, *supra* note 73, at 73. This is a common critique of standardized tests. *Id.*
214. *Id.*
216. **SAWYER**, *supra* note 73, at 73. Researchers believe that the manner in which a person conceives a problem has a large impact on the likelihood that he or she will come up with a creative solution. **SAWYER**, *supra* note 212, at 473 (“[H]istorically, the most radical breakthroughs result from problem finding creativity.”); Ward & Kolomyts, *supra* note 159, at 105.
217. **SAWYER**, *supra* note 212, at 473-74. Sometimes the solution is developed before a problem has even been identified. *Id.* at 474. For example, the adhesive for the Post-It note was created five years before the Post-It note came into being. *Id.*
218. **SAWYER**, *supra* note 161, at 114.
219. *Id.* at 114-15.
220. *Id.* at 115-22; see also **SAWYER**, *supra* note 212, at 465 (identifying the four mental processes at the core of creativity as conceptual combination, conceptual transfer, conceptual elaboration, and concept creation). For a discussion of conceptual elaboration, see **SAWYER**, *supra* note 212, at 469-70. For an explanation of conceptual creation, see *id.* at 470-71.
221. For a discussion of conceptual combination, see **SAWYER**, *supra* note 212, at 465-68.
222. *Id.* at 465; see also **Kozbelt, Beghetto & Runco**, *supra* note 70, at 32; Ward & Kolomyts, *supra* note 159, at 101. Examples of conceptual combinations are Combo snacks, a combination of cheddar cheese and pretzels, and Reese’s peanut butter cups, a combination of peanut butter and chocolate. See **SAWYER**, *supra* note 212, at 465.
characteristics of the individual pieces. A real innovation results from remote associations, the combination of ideas that are quite far away from one another. A camera phone is one example of conceptual combination. The combination of the concept of a camera and a phone “extend[s] the boundaries of traditional ideas, because new creative qualities . . . emerge from [the] combination[] of [these] concepts.”

Cross-fertilization is another means by which individuals creatively combine ideas. In essence, individuals are more likely to generate a new and interesting combination during Incubation if they are working on more than one project or working in more than one field at a given time. Creators working on multiple projects and that have multiple domains internalized are more creative because they “have a larger pool of basic ideas” that permit them to generate combinations of which they may not be consciously aware.

Finally, creative ideas can also arise from conceptual transfer. Unlike conceptual combination, which involves bringing two separate concepts together, conceptual transfer involves the transfer of concepts from one domain to another. Analogical and metaphorical thinking are two forms of conceptual transfer instrumental to creativity.

Metaphorical thinking involves uncovering parallels among distinct concepts to solve problems and produce new ideas. In essence, ideas are transferred from one context and used in another context “to create a new synthesis, transformation, or perspective.” In contrast to metaphorical thinking, analogical thinking involves transferring knowledge from one domain to construct a new idea in another domain.

223. SMITH ET AL., supra note 193, at 16.
224. Sawyer, supra note 212, at 468; see also Sawyer, supra note 161, at 118. For a discussion of the conceptual combination models, see Sawyer, supra note 161, at 116-18.
226. Id.
227. Sawyer, supra note 161, at 115.
228. Id.
229. Id.
230. Id. at 119.
231. Sawyer, supra note 212, at 468.
232. With analogical reasoning, “knowledge from a base domain is mapped to a target.” Sawyer, supra note 161, at 119.
233. Metaphorical thinking “involves conceptual combinations that involve mapping a vehicle concept onto a topic concept.” Id.
234. Id.
235. STARKO, supra note 70, at 88.
236. Id.
237. SMITH ET AL., supra note 193, at 13-14. Many important scientific advances resulted from analogies. Sawyer, supra note 161, at 119 (listing sound/water waves; earth/small magnet; Earth/moon; light/sound; planet/projectile (Newton’s apple); lightning/electricity; respiration /combustion; and heat/water as examples of scientific advances originating with analogies).
Velcro is an example of a product that was created via conceptual transfer. Specifically, George de Mestral created Velcro upon strolling through a field of cockleburs which stuck to his pants. Through the use of conceptual transfer de Mestral created a synthetic fabric that mimicked the small hooks on the burs that engaged with loops in the fabric of his pants.

3. Press

The third P stands for Press. Press refers to the environmental elements that “press” upon the individual, either encouraging or impeding creative behavior. Press, in turn, has been divided into physical and psychological press.

a. Physical Press

Quite simply, physical press refers to the physical environment in which an individual lives. Thus, physical press refers to the influences that are around the person, process, or product. These physical or external influences can be developmental, historical, cultural, or social.

238. STARKO, supra note 70, at 88.
239. Id.
240. Id. The light bulb socket is another example of a product created via conceptual transfer. Sawyer, supra note 212, at 468. Thomas Edison’s assistant got the idea of a screw-in lamp base when he watched Edison unscrewing the top of the turpentine can in the process of washing his hands. Id. For a discussion of conceptual transfer with examples, see id. at 468-69.
241. Amabile, supra note 79, at 17 (“Whatever an individual’s talents, domain expertise, and creative thinking skills, that individual’s social environment—the conditions under which he or she works—can significantly increase or decrease the level of creativity produced.”); Goran Ekvall, Creative Climate, in 1 ENCYCLOPEDIA OF CREATIVITY, supra note 118, at 403, 405; Creativity 101: Creative Press (Environment), INT’L CTR. FOR STUD. IN CREATIVITY, http://www.buffalostate.edu/creativity/documents/pressscript.pdf [hereinafter Creativity 101] (“‘Press’ refers to our environment; we are each being called to be creative in a specific context, and this context is seen as ‘pressing’ down on [sic] upon us.”). The term “press” originates from the Latin term pressus, which refers to “a box or container to put things in—the environment being the place where the other 3Ps live.” John Michael Fox, Mel Rhodes: The Man Behind the Four P’s of Creativity, ICSCREATIVITY (Mar. 15, 2012), http://facultyicsc.blogspot.com/2012/03/mel-rhodes-man-behind-four-ps-of.html.
242. Physical press is also referred to as external or extrinsic press. Creativity 101, supra note 241.
243. Psychological press is also referred to as internal or intrinsic press. Id.
244. Ekvall, supra note 241, at 405 (noting that there are social and psychological facets to creative press); Creativity 101, supra note 241.
245. Creativity 101, supra note 241 (describing physical press as an individual’s physical setting).
246. Ekvall, supra note 241, at 406 (discussing the impact of environmental factors during childhood). Developmental influences during childhood include, among other things, adversity, family size, birth order, parental personality traits, and parental creativity. RUNCO, supra note 70, at 46-56.
247. RUNCO, supra note 70, at 215. Referred to as historiometry, the historical perspective examines areas or eras when creativity flourished. Id. at 259. Runco notes:
This Article focuses on the social, or organizational, \textsuperscript{250} climate because it applies to the educational and legal practice setting. \textsuperscript{251}

Social factors play an integral role in developing a creative environment that enhances creative potential, resulting in creative performance. \textsuperscript{252} Researchers have identified nine dimensions necessary to facilitate a creative climate. \textsuperscript{253} While addressed to an organizational environment, these dimensions for a creative environment are equally applicable in an educational setting because the social environment of the classroom influences creativity. \textsuperscript{254}

Various historical events and situations seem to influence creativity, among them war, civil unrest, and economic ups and downs. Yet one of the most significant influences on creativity is Zeitgeist, the spirit of the times. This is manifested in attitudes, expectations, and assumptions about creative things and creative people. This is what draws people into creative endeavor—or scares some of them away from it.

\textit{Id.} For a discussion of historical influences on creativity, see \textit{id.} at 213-62.

\textit{248. Id.} at 276; see also Todd Lubart, \textit{Cross-Cultural Perspectives on Creativity, in THE CAMBRIDGE HANDBOOK OF CREATIVITY, supra note 70, at 265, 276 (“Culture influences both the production of ‘creative’ work and its reception, recognition, and diffusion.”). For a discussion of the impact of culture on creativity, see RUNCO, supra note 70, at 263-78 and Lubart, supra.}

\textit{249. Ekvall, supra note 241, at 406.}

\textit{250. Id. (“The social climate concept has come to be understood as organizational climate.”).}

\textit{251. RUNCO, supra note 70, at 189 (“Many ideas in the industrial and organizational research on creativity supports the conclusion that the environment and setting influences creative thinking and behavior; and in fact, much of it can be adapted to the school setting.”).}

\textit{252. Id. at 175. Organizations striving for creativity focus on social influences because they “can support, undermine, or neither support nor undermine . . . creativity.” Id. at 154.}


\textit{254. See RUNCO, supra note 70, at 189 (“There are clear parallels between the supervisor . . . and a teacher . . . and both should respect an individual’s autonomy if creativity is to be encouraged. Both settings involve resources, as well, such as time; and both supervisors and teachers should provide sufficient time if they want their charges to be creative.”). There are numerous studies that have confirmed that the Ekvall dimensions are equally applicable to the creative climate in
The first dimension is idea support. In a supportive environment, new ideas are encouraged and responded to in a positive manner. The second dimension, challenge, refers to how involved the members of an organization are with regular operations. In a climate with a high level of challenge the members are intrinsically motivated to contribute to the organization.

The next dimension of a creative climate is idea time. Organizations that provide high idea time allow its members to discuss and elaborate on their ideas. Freedom is the fourth dimension and refers to the degree of independence the organization’s members have. Freedom enhances creativity because members are permitted to exercise discretion and have the autonomy to define their work.

The fifth dimension of a creative climate is trust and openness. An environment that promotes emotional safety allows members to feel safe in introducing new ideas without fear of ridicule if they fail. The sixth dimension, dynamism/liveliness, “describes the eventfulness of the life of the organization.” A highly dynamic situation fosters a creative environment because new things are occurring all the time.


255. RUNC, supra note 70, at 164.
256. ISAKSEN, DORVAL & TREFFINGER, supra note 253, at 189; Lauer, supra note 253, at 182. In environments where idea support is lacking, suggestions are instantly countered—“[f]ault-finding and obstacle-raising are the usual styles for responding to ideas.” ISAKSEN, DORVAL & TREFFINGER, supra note 253, at 189; see also Lauer, supra note 253, at 182.
257. Lauer, supra note 253, at 162; see also RUNC, supra note 70, at 164 (noting that organizational climate must “[c]hallenge[] individuals with tasks, goals, and institutional operations”).
258. Lauer, supra note 253, at 162. In contrast, “[f]low challenge indicates alienation and indifference; a common sentiment and attitude is apathy and lack of interest for the job and the organization.” Id.
259. Id. at 241.
260. Id. Organizations that provide high idea time encourage the discussion and testing of new ideas even though this idea time is unplanned and not part of the original task assigned. Id. In contrast, in organizations that do not support idea time, “every minute is booked and specified.” Id. This time pressure renders “it impossible to think outside the instructions and planned routines.” Id.
261. ISAKSEN, DORVAL & TREFFINGER, supra note 253, at 188-89.
262. Id.
263. Id. at 189; RUNC, supra note 70, at 164.
264. RUNC, supra note 70, at 164; Lauer, supra note 253, at 225. In environments where trust is lacking, “people are suspicious of each other and count on high expenses for mistakes that may occur. Without trust, people are afraid of being exploited and robbed of their good ideas.” Lauer, supra note 253, at 225; see also ISAKSEN, DORVAL & TREFFINGER, supra note 253, at 189.
265. ISAKSEN, DORVAL & TREFFINGER, supra note 253, at 188.
266. Lauer, supra note 253, at 189.
Number seven is risk-taking. Organizations that support risk-taking produce a creative climate because they tolerate uncertainty and encourage members to seize opportunities. The eighth dimension, playfulness and humor, refers to how relaxed the atmosphere is. The ninth and final dimension that fosters a creative climate is debates. Organizations high in debates, or conflicts between viewpoints and ideas, foster a creative climate because members are willing to share ideas and “many voices are heard.”

In contrast to the first nine dimensions, a tenth dimension, conflict, hinders a creative climate. Conflict—“the presence of personal and emotional tensions”—results in immature behavior, creating a hostile environment.

b. Psychological Press

Unlike physical press, which refers to external factors that impact an individual’s creativity, psychological press refers to internal conditions that “press” upon the individual, thus impacting creativity. These internal conditions include attitude, mood, values, affect, collaboration, and brainstorming. Internal conditions have a powerful effect on an individual’s creativity because they impact motivation—one’s “attitude toward a task.”

Certain aspects of the environment shape this motivational state or orientation.

267. ISAKSEN, DORVAL & TREFFINGER, supra note 253, at 190; RUNC, supra note 70, at 164.
268. ISAKSEN, DORVAL & TREFFINGER, supra note 253, at 190 (“In the high Risk-Taking case, bold initiatives can be taken even when the outcomes are unknown. People feel as though they can ‘take a gamble’ on their ideas.”). In contrast, in a climate where risk is avoided, the mentality is cautious and hesitant. Id. To be on the “safe side,” people set up committees and cover themselves in many ways before making a decision. Id.
269. Lauer, supra note 253, at 192; see also ISAKSEN, DORVAL & TREFFINGER, supra note 253, at 189.
270. ISAKSEN, DORVAL & TREFFINGER, supra note 253, at 189; RUNC, supra note 70, at 165; see also Caroline Sharp, Developing Young Children’s Creativity: What Can We Learn From Research, TOPIC, Autumn 2004, at 5, 8, available at http://www.nfer.ac.uk/nfer/publications/55502/55502.pdf (“The more favourable situation for creativity seems to be interpersonal exchange, with negotiation of conflicts and comparison of ideas and actions being the decisive elements.”).
271. ISAKSEN, DORVAL & TREFFINGER, supra note 253, at 189; Lauer, supra note 253, at 201; see also RUNC, supra note 70, at 164 (“There is a permissive environment with frequent discussion and debate but no actual animosity.”). In contrast, in an environment where this dimension is not present, “people follow authoritarian patterns without questioning.” ISAKSEN, DORVAL & TREFFINGER, supra note 253, at 189.
272. ISAKSEN, DORVAL & TREFFINGER, supra note 253, at 189; RUNC, supra note 70, at 165.
274. Scritchfield, supra note 119.
275. RUNC, supra note 70, at 309.
276. AMABLE, supra note 79, at 17.
277. Alfonso Montuori, Social Psychology, in 2 ENCYCLOPEDIA OF CREATIVITY 345, 346 (2d ed., 2011) (“To be motivated, means to be moved to do something. Unless we are moved to do something, it is unlikely we will be creative in doing that task.”); see also Beth A. Hennessey &
The two motivational orientations that are shaped by the environment are extrinsic and intrinsic. These motivational orientations are significant in that they delineate what a person is able to do and what a person actually does under the circumstances. Intrinsically motivated individuals are motivated “to do something for its own sake, for the sheer pleasure and enjoyment of the task itself.” In essence, they are driven by curiosity.

In contrast, extrinsically motivated individuals are not motivated by the task itself. Rather, they are motivated by some external source. Extrinsically motivated people do not enjoy the task; they complete a task for some external reward, financial or otherwise. Individuals that are intrinsically motivated by the task itself are the most creative. Pursuant to The Intrinsic Motivation Principle of Creativity, “people will be most creative when they feel motivated primarily by the interest, enjoyment, satisfaction, and challenge of the work itself—not by external pressures.”

Extrinsically motivated people do not enjoy the task; they complete a task for some external reward, financial or otherwise. Individuals that are intrinsically motivated by the task itself are the most creative. Pursuant to The Intrinsic Motivation Principle of Creativity, “people will be most creative when they feel motivated primarily by the interest, enjoyment, satisfaction, and challenge of the work itself—not by external pressures.” In contrast, extrinsic motivation, whether it is money, admiration, or advancement, can dampen creativity because it can cause a person to narrowly focus on the task. The person becomes risk-averse and the goal becomes getting the task completed as quickly as possible.

Researchers have identified numerous extrinsic motivators and external constraints in the environment that decrease intrinsic motivation.
and stifle creativity. These extrinsic motivators and constraints undermine the motivation of preschoolers and seasoned professionals. The negative consequences of the extrinsic motivator or constraint depend in part on the individual.

Extrinsic motivators that are task-specific adversely impact intrinsic motivation. For example, the expectation that others will judge one’s work seriously undermines the intrinsic motivation and creativity of both children and adults. In addition to the expectation of evaluation, evaluation itself that communicates ineptitude or endangers self-determination can impact an individual’s motivation and creativity. On the other hand, evaluation that is informative, constructive, even if negative, and focuses on improving performance or recognizes an individual’s contributions can support creativity.

A related extrinsic motivator that can undermine an individual’s intrinsic task motivation and creativity is “the promise of a reward made contingent on task engagement.” External rewards hinder intrinsic motivation and creativity because they undermine self-determination. Feeling controlled by the reward, people lose any intrinsic interest in the task.

290. SAWYER, supra note 73, at 54. Although these extrinsic motivators—“rewards to manipulate or control behavior, achieving an expected reward, meeting deadlines, winning or competing, or managerial edicts”—stifle creativity, they are frequently used as motivators. Montuori, supra note 277, at 346.
291. Hennessey & Amabile, supra note 98, at 581.
292. RUNCO, supra note 70, at 309.
293. AMABILE, supra note 79, at 149.
294. Id. at 150; Hennessey, supra note 278, at 336. The negative impact of the expectation of evaluation “depends on certain individual-difference traits, on initial interest in the activity, and on initial skill level.” AMABILE, supra note 79, at 152. In limited circumstances, the expectation that one will be judged can sometimes increase extrinsic motivation, yet not negatively affect intrinsic motivation or performance. Hennessey, supra note 278, at 337.
295. AMABILE, supra note 79, at 152.
296. See generally id. at 131-52.
297. Id. at 152; RUNCO, supra note 70, at 309.
298. Hennessey, supra note 278, at 336; see also Hennessey & Amabile, supra note 277, at 17 (“The experience of performing a task for money significantly decreases subjects’ intrinsic motivation for that activity.”). See generally AMABILE, supra note 79, at 153-78. But see Hennessey & Amabile, supra note 98, at 581 (“Some researchers trained in the behaviorist tradition have offered the strongly contrasting view that creativity can be easily increased by reward and is seldom undermined.”).
299. Hennessey & Amabile, supra note 98, at 581. Rewards, however, “can actually enhance intrinsic motivation and creativity when they confirm competence, provide useful information in a supportive way, or enable people to do something that they were already intrinsically motivated to do. These boosting effects are most likely when initial levels of intrinsic motivation were already strong.” Id.
300. DACEY & LENNON, supra note 67, at 79.
Choice in aspects of task engagement also influences intrinsic motivation. People are more creative when they are permitted to make choices about aspects of a task rather than having someone else make all of the decisions. In contrast to choices regarding how one will engage in a task, creativity can be both enhanced and undermined by choices regarding whether to perform a task. Additional extrinsic motivators and task constraints in the environment that adversely impact intrinsic motivation and creativity are deadlines, competition, and surveillance.

4. Product

The fourth and final P is Product, the culmination of a person’s creative process, affected by Press. Groups of people or individuals can create these products. Moreover, the products of creativity can be tangible or intangible, including behaviors, presentations, ideas, objects, and all other types of yields.

The three properties of a creative product are novelty, relevance, and effectiveness. A product or outcome is novel if it is “previously
unknown in a specified setting.” It is relevant if “the novelty refers to a specific context.” Finally, an effective product or outcome is one that assists with a specific problem.

While some researchers contend that a product is only creative if it is so novel as to be unprecedented, the majority posits that “many novel ideas are based on what already exists.” As such, individuals can transform existing knowledge into novel, relevant, and effective products that can propel a field forward. Pursuant to this Propulsion Theory, there are eight types of creative contributions that a product can make.

The first six categories of creative products address how an individual can transform existing knowledge into effectively new and valuable products. Conceptual replication is the first means of propelling a field forward. With conceptual replication, a creative product is produced by transferring something that exists in one field to a new field. A creative product can also propel a field forward through redefinition, the second category of creative products. A redefined product “produces novelty by seeing the known in a new way.”

Forward incrementation, which involves extending the known in an existing direction, is the third way a product can make a creative contribution. The fourth contribution is an advanced version of the third—advanced forward incrementation. Advanced forward incrementation involves “extend[ing] the known in an existing direction . . . beyond what is currently tolerable.”

The last two ways a creative product can propel its field, redirection and reconstruction and redirection, involve adapting something that is...

312. Cropley, supra note 73, at 98.
313. Id.
314. Id. at 98-99 (discussing effectiveness).
316. A field is defined as “some domain of knowledge or area of activity.” Cropley, supra note 73, at 98.
318. Kaufman, supra note 73, at 26 (noting that the eight different contributions are categorized “based on their relationship to the domain”).
320. Cropley, supra note 73, at 98; Kaufman, supra note 73, at 26; Cropley & Cropley, supra note 315, at 307.
322. Cropley, supra note 73, at 99; Kaufman, supra note 73, at 27; Cropley & Cropley, supra note 315, at 307.
323. Cropley, supra note 73, at 99; Kaufman, supra note 73, at 27-28; Cropley & Cropley, supra note 315, at 307.
already in existence. Redirection entails expanding something that already exists in a new direction. An extension of this, reconstruction and redirection entails revisiting an approach that had been discarded earlier and “breath[ing] new life” into it.

The last category of creative products under the Propulsion Theory, re-initiation, does not involve something that is already in existence. With re-initiation, the thinking behind the creative contribution “begins at a radically different point from the current one and takes off in a new direction.” As such, it represents the most extreme form of creative contribution.

C. Assessment of Creativity

Despite popular notions that creativity is too complex to measure, there is a long history of creativity assessment. Psychometric approaches to creativity focus on producing tests that gauge creativity, with the goal of being able to foresee who will generate a creative product. As such, researchers have designed hundreds of creativity exams, tools, and rating scales.

The psychometric methods used to measure creativity can be organized pursuant to the Four Ps. Accordingly, psychometric methods investigate (1) the traits and behavior of the creative person; (2) the creative process; (3) the features of environments that promote creativity assessment.

324. CROPLEY, supra note 73, at 99; KAUFMAN, supra note 73, at 28; Cropley & Cropley, supra note 315, at 307.
325. CROPLEY, supra note 73, at 99; KAUFMAN, supra note 73, at 28; Cropley & Cropley, supra note 315, at 307.
326. CROPLEY, supra note 73, at 99; see also KAUFMAN, supra note 73, at 28-29; Cropley & Cropley, supra note 315, at 307.
327. CROPLEY, supra note 73, at 99; KAUFMAN, supra note 73, at 29; Cropley & Cropley, supra note 315, at 308.
328. KAUFMAN, supra note 73, at 29.
331. Plucker & Makel, supra note 329, at 59.
332. For a discussion of the strengths and weaknesses of creativity assessment, see id. at 61-63.
333. VILLALBA, supra note 330, at 22. Some tools used to assess the aspects of a creative person include personality characteristics, self-report check-lists, review of past behavior, biographical reviews, and interest and attitude gauges. See id. at 21-22; Plucker & Makel, supra note 329, at 56. See generally CROPLEY, supra note 73, at 114-32; KAUFMAN, supra note 73, at 83-110; Plucker & Makel, supra note 329, at 56-58. For a discussion of the weaknesses of this approach to assessing creativity, see Plucker & Makel, supra note 329, at 61-63.
334. See generally CROPLEY, supra note 73, at 96-113.
creativity;\textsuperscript{335} and (4) the attributes of creative products.\textsuperscript{336} The most well-known assessment procedures, however, focus on creative thinking and the creative process.\textsuperscript{337}

Measures used to assess creative thinking generally entail divergent thinking.\textsuperscript{338} The backbone of creativity assessment,\textsuperscript{339} as discussed above, divergent thinking allows an individual to have “a fuller cognitive toolbox from which to pull potential solutions, which from a statistical perspective suggests a greater chance of solving a problem than someone with fewer, less original ideas.”\textsuperscript{330} Accordingly, unlike standardized tests that are looking for one correct response, divergent thinking tests compel test takers to supply numerous answers to a question.\textsuperscript{341}

The most well-known and accepted divergent thinking test used to measure an individual’s creative capacity is the Torrance Tests of Creative Thinking (TTCT).\textsuperscript{342} Referred to as a creativity test,\textsuperscript{343} the TTCT requires

\begin{itemize}
  \item[i.] Plucker & Makel, supra note 329, at 60-61. Many of the measures used to examine creative environments explore the “correlation between successful work and situational variables,” rather than assessing “creative environments per se.” Id. at 61. Researchers, however, have developed an instrument that “examine[s] employees’ perceptions of aspects of their work environment that may influence creative work.” Id. Teresa Amabile and her colleagues developed KEYS: Assessing the Climate of Creativity Instrument. Id. KEYS is a “self-report instrument . . . designed to assess ‘individuals’ perceptions and the influence of those perceptions on the creativity of their work.” Id.
  \item[ii.] Plucker & Makel, supra note 329, at 51; see also Villalba, supra note 330, at 13. Many researchers believe that psychometric measures of the creative product are the “most appropriate assessments of creativity.” Plucker & Makel, supra note 329, at 59. For a discussion of assessments used to test the creativity of products, see Cropley, supra note 73, at 101, and Kaufman, supra note 73, at 53. The Consensual Assessment Technique is the most popular way of assessing products. Kaufman, supra note 73, at 53-54.
  \item[iii.] Cropley, supra note 73, at 102; see also Plucker & Makel, supra note 329, at 51.
  \item[iv.] Plucker & Makel, supra note 329, at 51. Divergent thinking tests of creativity include Guilford’s Structure of Intellect Model, Wallach and Kogan’s Divergent Thinking Test, and Getzel’s Divergent Thinking Test. Id. at 52. For a discussion of divergent thinking, see discussion supra Part III.B.2.b.i. There are, however, some limitations to divergent thinking measures of creativity. Kaufman, supra note 73, at 45-49.
  \item[v.] Kaufman, supra note 73, at 14.
  \item[vi.] Id. at 17.
  \item[vii.] Id. at 20; see also Cropley, supra note 73, at 102 (“Divergent thinking tests typically consist of open-ended, relatively unstructured tasks . . . whose function is to promote production of many and varied answers rather than recall or discovery of the single, best answer that already exists and is to be found in the test manual.”).
  \item[viii.] Kaufman, supra note 73, at 26 (describing the TTCT as “the most influential creativity assessment yet created”); Plucker & Makel, supra note 329, at 53; Scritchfield, supra note 119. For a detailed explanation of the TTCT, see Kaufman, supra note 73, at 25-31, Kyung Hee Kim, Can We Trust Creativity Tests? A Review of the Torrance Tests of Creative Thinking, 18 Creativity Res. J. 3, 3 (2006), and Plucker & Makel, supra note 329, at 53. This test is used widely “in the business world and in education to assess individual’s capacity for creativity,” Kim, supra, at 3. The TTCT was originally designed to serve as a tool for the enhancement of creativity, not to measure creativity. Id. at 4 (listing Torrance’s five uses for the test).
  \item[ix.] Kyung Hee Kim, Yes, There IS a Creativity Crisis, The Creativity Post (July 10, 2012), http://www.creativitypost.com/education/yes_there_is_a_creativity_crisis.
individuals to provide multiple responses to both the Figural and the Verbal Tests. The Verbal Tests involve thinking creatively with words and the Figural Tests entail thinking creatively with pictures. The test measures creativity, how the participant is creative, and identifies the creative strengths and weaknesses of the participant.

Specifically, participants’ responses are scored for Fluency, Originality, Elaboration, Abstractness of Titles, and Resistance to Premature Closure. Fluency refers to how many relevant ideas the participant comes up with. Originality, in turn, refers to “the number of statistically infrequent ideas” and measures the participant’s ability to generate unusual or unique responses. Elaboration refers to “[t]he number of added ideas” and reveals the participant’s proficiency at elaborating on an idea.

The next score, Abstractness of Titles, is premised on the belief that “creativity requires an abstraction of thought.” As such, “[i]t measures the degree a title moves beyond concrete labeling of the pictures drawn.” Finally, Resistance to Premature Closure measures “[t]he degree of psychological openness.” This measure is premised on the idea that to be creative, a person must contemplate a diverse array of information and maintain an open mind.

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344. Plucker & Makel, supra note 329, at 52.
345. For an explanation of the Verbal Tests, see KAUFMAN, supra note 73, at 27.
346. For a discussion of the components of the Figural Tests, see id. at 26.
347. Id.
348. Kim, supra note 343.
349. Kim, supra note 342, at 5. In addition, the creative strengths of “emotional expressiveness, storytelling articulateness, movement or action, expressiveness of titles, synthesis of incomplete figures, synthesis of lines or circles, unusual visualization, internal visualization, extending or breaking boundaries, humor, richness of imagery, colorfulness of imagery, and fantasy” are included in the scoring process. Id. For a discussion of the scoring process, see id., and KAUFMAN, supra note 73, at 29. Flexibility was removed as a category because the scores were similar to fluency. KAUFMAN, supra note 73, at 28.
350. Kim, supra note 342, at 5. Fluency is operationally defined as the number of responses to a given stimuli, “the total number of ideas given on any one divergent thinking exercise.” Plucker & Makel, supra note 329, at 52.
351. Kim, supra note 342, at 5. Originality is operationalized as the uniqueness of responses to a given stimuli, “the unusualness . . . of an examinee’s or respondent’s ideas.” Plucker & Makel, supra note 329, at 52.
352. Kim, supra note 342, at 5. Elaboration is operationalized as the extension of ideas with a specific category of responses to a given stimuli, “to fill [ideas] out with details.” Plucker & Makel, supra note 329, at 52.
353. Kim, supra note 342, at 5.
354. Id. For a more detailed explanation of Abstractness of Title, see KAUFMAN, supra note 73, at 29.
355. Kim, supra note 342, at 5.
356. Id. For a more detailed explanation of Resistance to Premature Closure, see KAUFMAN, supra note 73, at 28-29.
While subject to some dispute, the TTCT is generally recognized as a sound measure of creativity.\textsuperscript{357} The large amount of research on the TTCT establishes its reliability\textsuperscript{358} and concurrent validity.\textsuperscript{359} Predictive validity of the test, however, is subject to debate.\textsuperscript{360} Nevertheless, the perceived weaknesses in predictive validity have been attributed to methodological issues rather than the integrity of the test itself.\textsuperscript{361} In short:

The TTCT provide[s] useful insights into creativity as long as the tests are used with sensitivity and good judgment by qualified professionals, because variations in testing procedures can affect scores. . . . [T]he TTCT appears to be a good measure, not only for identifying and educating the gifted but also for discovering and encouraging everyday life creativity in the general population. When used appropriately, the TTCT is an important part of Torrance’s legacy and dream: to nurture and enhance creativity among students.\textsuperscript{362}

IV. CREATIVITY CRISIS\textsuperscript{363}

“Creativity is often obvious in young children, but it may be harder to find in older children and adults because their creative potential has been suppressed by a society that encourages intellectual conformity.”\textsuperscript{364}

The Great Recession and the changing legal landscape have rendered creativity a critical basis of competitive advantage. Yet, in the wake of the need for creative approaches to address the changing legal landscape, a disturbing phenomenon was recently identified: American creative thinking scores on the TTCT have fallen.\textsuperscript{365} Creativity in the United States is declining.\textsuperscript{366}

\begin{footnotesize}
\begin{enumerate}
\item[357.] Kim, supra note 342, at 8 (“Positive features of the TTCT include the wealth of information available on it, the short time needed for administration, and the ease of its administration. It has fewer limitations and cautions to apply, and is more researched and analyzed than any other creativity instrument.”). \textit{But see} Plucker & Makel, supra note 329, at 54.
\item[358.] Kim, supra note 342, at 6.
\item[359.] KAUFSMAN, supra note 73, at 29-30.
\item[360.] Id. at 40.
\item[361.] Id.
\item[362.] Kim, supra note 342, at 11.
\item[363.] Kim, supra note 15.
\item[365.] Kim, supra note 15, at 293. According to Kim’s study, “creative thinking is declining over time among Americans of all ages, especially in kindergarten through third grade.” \textit{Id.} Moreover, her study reveals that this “decline is steady and persistent, from 1990 to present and ranges across the various components tested by the TTCT.” \textit{Id.} For this study, Kim examined 272,599 TTCT scores from people ranging in age from kindergarten through adulthood from all regions of the country. \textit{Id.} at 287.
\item[366.] This is in contrast to IQ scores, which have been rising every year since 1990. \textit{Id.} at 285. This effect is known as the Flynn effect. \textit{Id.}
\end{enumerate}
\end{footnotesize}
A. Decline in Creativity Scores

Analyzing data on each of the subscales of creative potential, Dr. Kyung Hee Kim discovered that, in recent years, creativity has plummeted. Specifically, she found that Elaboration scores began falling in 1984, indicating that people are not as able to elaborate ideas and think reflectively and that people are not as persistent in their attempts to be creative. Since 1990, Fluency and Originality scores have also declined, indicating that Americans are not as proficient at generating unusual ideas. This drop in Originality scores “is an indirect measure of growing social pressures towards conformity and status quo, and increasing intolerance for new ideas.”

The decline in scores for Resistance to Premature Closure and Abstractness of Titles began in 1998. This decline signifies that Americans are not as able to postpone judgment and have a harder time looking past the easy answers. Finally, her research determined that the scores from the Checklist of 13 Creative Strengths demonstrate that creative attitudes have been declining since 1990.

B. Cause of Decline

“We are all born with creative potential: We don’t grow into creativity, we grow out of it.”

While scientists have yet to conduct research to determine the causes of this decline in American creativity scores, there has been speculation.

368. 5 Questions, supra note 367; see also Kim, supra note 15, at 288.
370. Kim, supra note 343.
372. Id. at 288, 290-91.
373. Kim, supra note 343.
374. Id.
375. Id.
376. Id. Specifically, Kim notes:
   We are becoming less verbally and emotionally expressive or sensitive and less empathetic, less responsive in a [sic] kinesthetic and auditory ways, less humorous, less imaginative, less able to visualize ideas, less able to see things from different angles, less unconventional, less able to connect seemingly irrelevant things together, less able to synthesize information, and less able to fantasize or be future oriented.
377. ROBINSON, supra note 1, at 49.
One cause is the proliferation of technology.\textsuperscript{379} For example, the amount of “screen time” that children have today has increased, whether it be the television, the computer, or video games.\textsuperscript{380} Accordingly, children are spending less time participating in creative endeavors such as playing outdoors.\textsuperscript{381} A related cause of the decline in creativity scores is the amount of “electric company” children now have.\textsuperscript{382} Children spend more time interacting with technology than they do interacting with people, distracting them from focusing on the important information that is being imparted upon them.\textsuperscript{383}

Another speculated cause of the decline in American creativity scores is the devaluation of creativity, creative people, and creative ideas at home, in school,\textsuperscript{384} and in society.\textsuperscript{385} The No Child Left Behind Act (NCLB),\textsuperscript{386} which mandates states to administer standardized tests in reading/language arts and mathematics beginning in third grade and ending in eighth grade, has had a profound impact on creativity in schools.\textsuperscript{387} Teachers are pressured to “teach to the test” rather than focusing on kindling the students’ imagination and curiosity.\textsuperscript{388} Moreover, a standardized test, NCLB encourages rote learning rather than critical, creative thinking, thus decreasing “students’ natural curiosity and joy for learning in its own


\textsuperscript{379} Id.

\textsuperscript{380} Id.

\textsuperscript{381} 5 Questions, supra note 367; Explaining the Decline, supra note 378.

\textsuperscript{382} Explaining the Decline, supra note 378.

\textsuperscript{383} Id. “For example, teachers claim to value creativity in children, but in fact it is proven that they generally dislike creative behaviors and characteristics in the classroom because they are inconvenient and hard to control.” Id.

\textsuperscript{384} Id. (noting that “research and development grants and programs are declining; society in general has less a sense of humor about mischief and diminishing tolerance for unusual behavior”).

\textsuperscript{385} Id.


\textsuperscript{387} See Explaining the Decline, supra note 378. Pursuant to the NCLB, school funding is linked to the students’ performance on the tests. ROBINSON, supra note 1, at 61.

\textsuperscript{388} Explaining the Decline, supra note 378; see also ROBINSON, supra note 1, at 62. Moreover: NCLB may stifle teachers’ creativity because the high pressure to cover the content required to produce passing test scores overrides the desire (and time) to stimulate children’s imagination and curiosity. NCLB does not value teachers’ skills that could encourage the creative application of classroom learning to real life situations. Teaching professionals are reduced to teaching technicians with less ability to develop creative approaches to engage students because they are required to cover what is on the tests.

Explaining the Decline, supra note 378.
Accordingly, NCLB stifles creativity in schools by discouraging purposeful creativity development. Fortunately, this trend is reversible.

C. Reversing the Trend: Fostering Creativity

Creativity can be renewed and fostered at any age. Efforts to enhance creativity do not increase an individual’s inborn potential. Rather, they insure that an individual’s creative potential is maximized. Not necessarily inborn traits, the traits of creative individuals can be attained through intentional effort throughout one’s lifetime. Similarly, the creative process is a learned behavior that can be taught and improved. Finally, environments, both physical and psychological, conducive to creativity can be cultivated.

389. *Explaining the Decline*, supra note 378. This focus on standardized testing caused by NCLB has also “led to the elimination of content areas and activities, including gifted programs, electives, arts, foreign languages, and elementary science and recess, which leaves little room for imagination, and critical and creative thinking.” *Id.; see also Robinson*, supra note 1, at 62 (noting that “since NCLB was passed into law, almost half of the school districts have eliminated or seriously reduced their arts programs, and the associated teaching posts”).

390. *Explaining the Decline*, supra note 378; cf. *Dacey & Lennon*, supra note 67, at 69 ("Schools suppress creativity."); *Robinson*, supra note 1, at 49 ("Dominant forms of education actively stifle the conditions that are essential to creative development."). It has also been speculated that contemporary parenting styles and over-diagnosis and over-prescription of attention deficit/hyperactivity disorder have played a role in the decline in creativity scores on the TTCT in the United States. *Explaining the Decline*, supra note 378.

391. *See, e.g.*, *Robinson*, supra note 1, at 245 (“There is a lot that individuals and organizations can do immediately, to revive their creative capacities.”); *Villalba*, supra note 330, at 11; Raymond Nickerson, *Enhancing Creativity*, in *Handbook of Creativity*, supra note 70, at 392, 400-01; Jonathan A. Plucker & Mark A. Runco, *Enhancement of Creativity*, in *1 Encyclopedia of Creativity*, supra note 118, at 669, 670 (arguing that everyone can improve his or her creativity); David R. Culp, *Law School: A Mortuary for Poets and Moral Reason*, 16 Campbell L. Rev. 61, 92 (1994) ("Lost creativity can be renewed, at least to some degree, at any age.").


393. *Id.

394. Michael C. Zilch, *The Creative Person*, http://homesclasses.files.wordpress.com/2011/03/the-creative-person-zilch.pdf (last visited Apr. 13, 2013) (”It is important to realize that while each of the above traits are necessary for creative individuals to utilize, if they are not present within your life at this point, the traits necessary for creative production can be developed throughout your lifetime.”).

395. *See generally* Gerard J. Puccio & Susan Keller-Mathers, *Enhancing Thinking and Leadership Skills, in Creativity: A Handbook for Teachers*, supra note 254, at 285. For example, the Creative Problem Solving (CPS) process is a “deliberate model for addressing complex problems” that can be taught. *Id.* at 297. The three stages of the CPS model—that reflect an individual’s natural approach to problem solving—are Clarification, Transformation, and Implementation. *Id.* at 285; *see also* Nickerson, supra note 391, at 400-01 (discussing CPS and the role of brainstorming).

396. For example, suggestions for creating a classroom environment that encourages creative thinking include:

1. Support and reinforce unusual ideas and responses of students. 2. Use failure as a positive to help students realize errors and meet acceptable standards in a supportive environment. 3. Adapt to student interests and ideas in the classroom whenever
Educators can maximize the creative potential of their students by incorporating creativity training and establishing optimal conditions. To support student creativity, educators must explain the creative process, teach creativity techniques, offer students the opportunity to practice creative thinking, “value and appreciate creativity, and model creative behavior themselves.” Fostering creativity in students is consistent with imparting knowledge and skills to students.

V. BARRIERS TO CREATIVITY

The legal profession must face the creativity crisis head on. Today’s children are the lawyers of tomorrow. In light of the changing legal landscape, the legal profession today needs creative lawyers that can invent new models for delivering legal services.

Yet, despite the numerous ways in which law schools and the legal profession can stimulate and develop the creative capacities of their students, educators can be immunized against the negative effects through several behavior themselves.”


397. For example, studies have shown that individuals can be immunized against the negative effects of reward on creativity. ROBERT W. WEISBERG, UNDERSTANDING INNOVATION IN PROBLEM SOLVING, SCIENCE, INVENTION, AND THE ARTS 529-30 (2006).

398. See STARKO, supra note 70, at 121 (“[T]ime spent in activities that specifically teach creative thinking skills and attitudes sends a valuable message to students”); Culp, supra note 391, at 92; Carrie Menkel-Meadow, “Aha? Is Creativity Possible in Legal Problem Solving and Teachable in Legal Education?”, 6 HARV. NEGOT. L. REV. 97, 142-44 (2001) (suggesting alternative program structure to teach legal creativity and effective problem solving); supra notes 396-97 and accompanying text. For a discussion of ways to foster creativity in the classroom, see generally, for example, PROBLEM-BASED LEARNING AND CREATIVITY (Oon-Seng Tan ed., 2009), NURTURING CREATIVITY IN THE CLASSROOM, supra note 278, SAWYER, supra note 73, at 295-314, STARKO, supra note 70, at 119-72, and Nickerson, supra note 391, at 400-19.

399. RUNCO, supra note 70, at 179; see also R. Keith Sawyer, A Call to Action: The Challenges of Creative Teaching and Learning, TCBS. COLL. REC. (forthcoming), available at http://www.artsci.wustl.edu/~ksawyer/PDFs/TCR.pdf (listing teacher behaviors associated with fostering creativity).

400. CROPLEY, supra note 73, at 136.

401. See discussion supra Part II.
students and associates, by and large law schools and the legal profession suppress rather than support the development of creative potential. The traditional law school education and legal practice model do not provide sufficient opportunities for practicing creative thinking and do not value creative thinking. Moreover, legal educators and lawyers could do a better job demonstrating creative behavior for their students and associates. Building on the information provided above about creativity, this Part reveals just some of the barriers to creativity in law schools and legal practice. A detailed examination of how to foster creativity in the legal profession is beyond the scope of this Article.

A. In Law School

“[L]aw schools are filled with creative, bright individuals who, given the right atmosphere, will be inventors of new models for legal services delivery in addition to practitioners of law.”

The focus in the twenty-first century has been on graduating practice-ready law students. In the wake of the Great Recession and its profound impact on the legal profession, law schools need to do more than that—they need to foster creativity. Legal education, however, suppresses creativity. For example, four barriers to the promotion of creative potential in law schools are (1) the Socratic method; (2) the traditional evaluation

402. ROBINSON, supra note 1, at 49, 245; Nickerson, supra note 391, at 400-01; see also discussion supra Part IV.C.

403. That is not to say that law schools and the legal profession do not encourage creative thinking at all. For example, law schools provide students with knowledge and expertise about substantive areas of law, and individuals cannot be creative in the absence of this domain knowledge. In addition, legal education can encourage creativity because it trains students to be tolerant of ambiguity in that there is seldom one answer. Katharine Rosenberry, Organizational Barriers to Creativity in Law Schools and the Legal Profession, 41 CAL. W. L. REV. 423, 429 (2005).


406. Law schools: cannot limit themselves to the transmission of set contents, techniques and values, since these will soon be useless or even detrimental to living a full life, but must also promote flexibility, openness for the new, the ability to adapt or see new ways of doing things, and courage in the face of the unexpected. These properties are becoming increasingly necessary if people are to adapt to a changing world and will probably continue to be important throughout each person’s lifetime, whereas specific skills and knowledge rapidly become obsolete. CROPLEY, supra note 73, at 136.
methods; (3) the culture of competition; and (4) the lack of collaborative opportunities.407

1. Socratic Method

The Socratic method,408 the pedagogical technique that is one of the defining attributes of American legal education, serves as one barrier to creativity in law schools. With the Socratic method, the professor calls on a student and proceeds to ask a series of questions in an effort to get the students to probe into a problem in detail.409 This pedagogical technique has been criticized on many fronts.410 The most universal criticism is that placing one student on the “hot seat” is “cruel and psychologically abusive.”411 This Socratic technique “exalts ‘criticism over imagination.’”412

The Socratic method can suppress creativity because it discourages many of the dimensions that facilitate a creative environment.413 For example, the intimidating nature of the Socratic method does not create an emotionally safe environment characterized by trust and openness.414 The power imbalance between law professor and student creates an intimidating environment in which students are hesitant to constructively dispute ideas.415

407. This is not meant to be an exhaustive list, but rather four examples of barriers to creativity in legal education.
411. Kerr, supra note 409, at 118.
412. Culp, supra note 391, at 63.
413. See discussion supra Part III.B.3.a.
414. See supra notes 263-64 and accompanying text.
415. Rosenberry, supra note 403, at 431; see also Culp, supra note 391, at 76 (noting that a “law faculty has almost total power over the students”).
The Socratic method also adversely impacts the seventh dimension of a creative environment, risk-taking. Risk-taking, which frequently results in failure, is necessary for creativity. The Socratic method, however, discourages risk taking and failure as students are wary of taking the intellectual risk of sharing their ideas in class for fear of being ridiculed by their peers and their professor.

In addition to the negative impact on the physical press, the Socratic method also adversely impacts the students’ psychological press. The Socratic method involves external evaluation, both by the professor and the class. This constant expectation of external critical evaluation reduces intrinsic motivation and thus creativity.

The Socratic method not only has a negative impact on the creative press; this teaching method also tends to stifle creative thinking. Students frequently perceive that the professor is searching for a specific answer to a question. This focus on one specific solution encourages convergent thinking rather than divergent thinking, which is critical to creativity.

2. Evaluation Methods

Another characteristic of legal education that serves as a barrier to creativity is the means by which students are evaluated. In a majority of classes, a student’s grade is determined by one three-hour exam at the end of the course. There is little, if any, opportunity for feedback during the course. Moreover, there is generally no feedback on the exam itself except for the grade.

As with the Socratic method of teaching, this means of evaluating students negatively impacts creative press. For instance, on a psychological level, the end-of-the-course exam decreases intrinsic motivation. The expectation of evaluation and the evaluation itself at the end of the course causes students to focus on the grade rather than being

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416. See supra notes 267-68 and accompanying text.
417. Rosenberry, supra note 403, at 433.
419. See discussion supra Part III.B.3.b.
420. Culp, supra note 391, at 68.
421. See supra notes 293-96 and accompanying text.
422. Culp, supra note 391, at 73.
423. See discussion supra Part III.B.2.b.i.
425. See id.
426. Id.
427. See discussion supra Part III.B.3.
428. Rosenberry, supra note 403, at 439.
motivated by the task itself, learning and understanding the material. While constructive feedback can support creativity, students generally get no feedback except for a grade at the end of the course. Simply incorporating assessment opportunities throughout the course, preferably formative, would help to foster students' creativity.

The timed exam also negatively impacts the physical press. For example, limiting the amount of time to respond to essay questions runs counter to the third dimension of a creative environment, idea time. The timed law school exam prohibits students from generating alternatives.

Moreover, the focus on a single or best answer on these exams, whether essay or multiple choice, discourages creative thinking. Rather than asking students to engage in divergent thinking to generate as many alternative solutions as possible, the exams emphasize convergent thinking processes. Students “invest[] . . . staggering amounts of energy in the quest for the correct solution which will satisfy the teacher, and . . . avoid[] . . . the wrong answer which will provoke argument of ‘ice cold indifference.’”

3. Culture of Competition

The highly competitive nature of law school is another facet of legal education that inhibits creativity. This atmosphere of intense competition is created by the ranking of students through “relentless public competitions . . . for grades, jobs, law journals, moot court, and clerkships.” Accordingly, law students compare themselves with their classmates to measure their worth.

Conformity trumps creativity in a culture that pressures students to constantly compare themselves to others. Law school thus inhibits the development of creative traits. For instance, one of the defining

429. See supra notes 293-96 and accompanying text.
430. See Moppett, supra note 424.
431. See id.; Rosenberry, supra note 403, at 438.
432. See discussion supra Part III.B.3.a.
433. See supra notes 259-60 and accompanying text.
435. Id. at 72.
439. Id. at 523.
440. Id. at 519; see also discussion supra Part III.B.1 (discussing traits of creative individuals).
characteristics of creative individuals is stimulus freedom. In an effort to compete, students are discouraged from bending the rules for fear of being wrong and falling behind in the competition.

Similarly, this fear of falling behind discourages risk-taking, another prominent trait that has been identified in creative individuals. In a culture of competition and conformity in which students strive for good grades, good reviews on classroom performance, and good opinions from peers and professors, students are not willing to take a risk because risk-taking can result in failure.

This culture of competition that law school breeds also adversely impacts psychological press. For example, students are externally motivated to perform well on exams by the prospect of a reward. The external reward takes the form of a grade that will translate into a good class rank, honor board membership, or employment opportunities. This promise of a reward undermines intrinsic motivation and stifles creativity.

4. Lack of Collaborative Opportunities

The final barrier to creativity that this Article will address is legal education’s preoccupation with individual learning and achievement. Collaborative thinking enhances the creative process. Contrary to the popular belief that creativity is produced by the “lone genius,” many breakthrough innovations result from group work.

Nevertheless, as discussed above, the prominent means of assessment is a single exam at the end of the semester that is taken individually. Even seminar courses with a paper requirement focus on students working

441. See supra notes 133-37 and accompanying text.
442. See supra notes 143-44 and accompanying text.
443. See generally Sturm & Guinier, supra note 438.
444. Moreover, legal education may also inhibit creativity because it teaches one “to be overly careful, to see all sides of the issue, and to leave no stone untumed in one’s analysis.” Culp, supra note 391, at 88.
445. See discussion supra Part III.B.3.b.
446. See Sturm & Guinier, supra note 438, at 523.
447. Hennessey, supra note 278, at 331 (“[S]chool environments fraught with rewards, competition, and frequent evaluation do not offer the best situations for students’ overall learning. . . . [C]lassrooms incorporating these extrinsic constraints might not be the best environments for promoting student’s creativity.”); see also supra notes 298-300 and accompanying text.
448. STARKO, supra note 70, at 77 (noting the view that “thought communities . . . more powerful than [the thinking] of a single individual” can enhance the “development and functioning of creative processes”).
449. Id. (quoting R. KEITH SAWYER, GROUP GENIUS: THE CREATIVE POWER OF COLLABORATION ix, 7 (2007)). For a description of four patterns that characterize creative collaboration, see id. at 78.
450. See supra note 424 and accompanying text.
on their own. Moreover, as a general rule, the classroom experience does not involve collaboration. Rather, it focuses on the interaction between the professor and the students. While legal education focuses on individual learning, creativity in the work world, the world that legal educators are preparing their students for, is typically collaborative.451

B. In Practice

The barriers to creativity do not end upon graduation from law school. Despite the need for creativity in legal practice today,452 the legal profession also imposes barriers to the development of creative potential. These barriers include, inter alia, (1) time pressures, (2) billable hours, and (3) the rigid hierarchical structure of legal practice.

1. Time Pressures

The practice of law is replete with time pressures. These time pressures are one facet of legal practice that inhibits creativity. One time pressure that associates continually face is impossibly tight deadlines.453 These deadlines adversely impact an associate’s psychological press because associates are left feeling overwhelmed and unfulfilled.454 This feeling, in turn, damages an individual’s motivation and, thus, creativity.455

Moreover, the intense time constraints placed on associates to meet deadlines negatively impacts the physical press. For example, the lack of sufficient idea time, one of the dimensions of a creative environment, forecloses idea exploration and creative thinking.456 Moreover, the need to complete a project as quickly as possible dissuades associates from taking risks, another dimension of creative environments.457 Under time constraints, associates are more inclined to be cautious and are hesitant to advance new ideas that may take more time to develop or that may fail.

452. See discussion supra Part II. Lawyers need to be creative in order to:
   identify[] new forms of legal service, different ways of delivering legal advice to . . . clients, novel ways of pricing, different ways of pitching, new ways to distinguish [their] firm in the legal recruitment market, and new ways by which teams can reach an even higher level of performance, as well as the formulation of a new and distinctive strategy.
453. Cf. Amabile, supra note 253, at 82.
454. Id.
455. Id.; see also discussion supra Part III.B.3.ii.
456. See supra notes 259-60 and accompanying text.
457. See supra notes 267-68 and accompanying text.
2. Billable Hours

Another characteristic unique to law firms, the billable hour, also negatively impacts creativity. Most law firms bill their clients by the hour. Accordingly, in order for associates to be profitable to the firm, they must bill enough hours to not only cover their salary and overhead, but also to make money for the firm. Accordingly, firms have an incentive to have associates bill as many hours as possible to generate as much revenue as possible for the firm. The minimum billable hours required typically range between 1700 and 2300 hours, although higher billable hour quotas are not uncommon.

Billable hours can act as a barrier to creativity because they adversely impact the associate’s psychological press. Frequently, firms establish bonus or penalty clauses to ensure that the associates meet their billable hour quota. Moreover, billable hours are one of the major factors employed to determine whether an associate will become a partner. Accordingly, rather than being intrinsically motivated by the task that they are working on, associates are extrinsically motivated by the reward or threat of recourse. Thus, creativity is inhibited.

Billable hours can also suppress creativity because they discourage some of the dimensions of a creative environment. For instance, the intense pressure to fulfill the billable hours required results in the lack of idea time. Associates, faced with the pressure of billing, are not encouraged to discuss their ideas with others.

The time pressure imposed by impossibly tight deadlines and billable hours also causes persistent stress. This “excess tension, in turn, shuts

459. Id.
460. Id.
461. Id.
462. See discussion supra Part III.B.3.b.
465. Amabile, supra note 453, at 22 (“A culture of evaluation leads people to focus on the external awards and punishments associated with their output, thus increasing the presence of extrinsic motivation and its potentially negative effects on intrinsic motivation.”).
466. Id.
467. See discussion supra Part III.B.3.a.
468. See supra notes 259-60 and accompanying text.
469. Rosenberry, supra note 403, at 438 (“In many . . . firms the most persistent stress is produced by a perceived lack of time to accomplish the tasks.”).
Thus, excessive stress caused by time constraints and billable hours inhibits creativity.

3. Rigid Hierarchy

The rigid hierarchy characteristic of law firms also serves as a barrier to creativity in legal practice. Typically, law firms have a definite hierarchy in place that is organized pursuant to each group’s ability to make money.\textsuperscript{471} Typically, equity partners are at the top of the hierarchy, with non-equity partners, senior associates, junior associates, and paralegals in descending rank order.\textsuperscript{472}

Accordingly, there exists a large “power distance index” between workers of different status.\textsuperscript{473} Communication flows from the top down in organizations with a rigid hierarchy.\textsuperscript{474} Thus, law firms with a rigid hierarchy assume that those at the top of the hierarchy should share their expertise with those lower in the hierarchy.\textsuperscript{475} Those at the lower end of the hierarchy, however, are not encouraged to share their thoughts and ideas with the senior members.\textsuperscript{476}

This rigid, hierarchical structure that encourages conformity, highlights status symbols, and discourages internal communication impedes creativity.\textsuperscript{477} Specifically, some of the dimensions that support a creative environment are compromised.\textsuperscript{478} For instance, the absence of open and straightforward communication thwarts the development of an atmosphere of trust and openness.\textsuperscript{479} Accordingly, individuals are hesitant to put forth new, and perhaps unconventional, ideas.\textsuperscript{480}

The restriction in the flow of information produced by the rigid hierarchy also impedes the dimension of debates.\textsuperscript{481} Only the few who are at the top of the pecking order are heard. Creativity is deterred because individuals are not comfortable sharing their ideas or challenging the ideas.

\textsuperscript{470}Id.
\textsuperscript{471}Will Law Help You Think Creatively?, SHOULD YOU BE A LAWYER?, http://www.shouldyoubealawyer.com/WillLawHelpYouThinkCreatively.htm (last visited Apr. 4, 2013) (noting that the ability to generate revenue is by and large determined by “seniority and ability to bring in clients”).
\textsuperscript{472}Id.
\textsuperscript{473}Id.
\textsuperscript{474}Rosenberry, supra note 403, at 427.
\textsuperscript{475}Id.
\textsuperscript{476}Id.
\textsuperscript{477}Id.
\textsuperscript{478}Id.; see also discussion supra Part III.B.3.a.
\textsuperscript{479}See supra notes 263-64 and accompanying text.
\textsuperscript{480}See supra note 264 and accompanying text.
\textsuperscript{481}See supra notes 270-71 and accompanying text.
of others.\textsuperscript{482} For similar reasons, the dimension of risk taking is inhibited.\textsuperscript{483}

\section*{VI. CONCLUSION}

``Creative thinking is the wellspring for change.''	extsuperscript{484}

``Thinking creatively is not just necessary for teaching and practice, it is necessary for life.''	extsuperscript{485}

In the wake of the Great Recession, ``the legal profession is . . . entering unchartered waters.''	extsuperscript{486} The economic downturn brought about significant economic changes to the legal profession.\textsuperscript{487} Coupled with sweeping technological and cultural changes, ``[t]he future for lawyers could be prosperous or disastrous.''	extsuperscript{488}

Lawyers who fail to recognize these changes and decide to maintain the status quo will struggle to stay alive. To survive, lawyers must develop creative responses to the evolving legal landscape.\textsuperscript{489} To prosper, lawyers need to adapt their traditional legal practices, expand the services offered, and adopt new technological tools and means of sourcing legal work.\textsuperscript{490}

The legal profession must equip future lawyers to provide legal services in novel ways that reflect the technological innovations, economic realities, and cultural shifts that the future holds.\textsuperscript{491} With creativity scores in the United States declining, the legal profession has an obligation to support—rather than discourage—creativity so that lawyers can generate

\begin{footnotesize}
\textsuperscript{482} See supra note 271 and accompanying text.
\textsuperscript{483} See supra notes 288-89 and accompanying text.
\textsuperscript{484} Puccio & Keller-Mathers, supra note 395, at 297.
\textsuperscript{485} Rosenberry, supra note 403, at 457.
\textsuperscript{486} Thies, supra note 24, at 599.
\textsuperscript{487} See discussion supra Part II.
\textsuperscript{488} SUSSKIND, supra note 11, at 269.
\textsuperscript{489} Id.; see also Copley & Copley, supra note 315, at 304 (``[I]t is a globally accepted awareness that right now any individual, company or country wishing to survive in the twenty-first century must develop the brain’s seemingly infinite capacity to create and to innovate.''). Suesskind notes: It is apparent that lawyers are heading for a time of great change and so we should ask whether and how lawyers, firms, and the profession might be the authors of this transformation. . . . For the law firm, there are three broad ways in which it can innovate: in the ways in which it delivers its services (perhaps through some groundbreaking online system); in the actual advice it offers (for instance, a novel form of contractual agreement); or in the way the business is run (for example, in the way in which graduates are recruited).
\textsuperscript{490} SUSSKIND, supra note 11, at 269.
\textsuperscript{491} Id.
\end{footnotesize}
novel, concrete solutions to the pressing issues facing the legal profession today. 492

492. Knake, supra note 404, at 850 (arguing that legal education has an obligation to offer the tools and cultivate the spirit for invention to flourish so that our students will be the ones to create new method of delivering legal services).