The Other Side of the Story: Using Graphic Organizers as Cognitive Learning Tools to Teach Students to Construct Effective Counter-Analysis (forthcoming 2010)

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THE OTHER SIDE OF THE STORY: USING GRAPHIC ORGANIZERS AS COGNITIVE LEARNING TOOLS TO TEACH STUDENTS TO CONSTRUCT EFFECTIVE COUNTER-ANALYSIS

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ABSTRACT

In law school, it is critical for students to look at issues from both sides, whether in responding to a law school exam hypothetical or in writing predictive memorandum assignments. In teaching students to engage in thoughtful legal analysis, therefore, professors should provide strategies to help students address counter-analysis as a critical component of the analysis. Developing a method for effectively teaching counter-analysis is important because good lawyering requires complex analysis that recognizes the subtleties of the situation being analyzed.

This article begins by defining counter-analysis generally and using social science and educational psychology theory to explain why the process is difficult. The article next examines relevant learning theory about cognition and illustrates how learning tools, such as graphic organizers, can assist with encoding analytical skills in the student’s long-term memory. The article then offers several examples for how law professors can apply cognitive learning theory to their classroom teaching of counter-analysis using graphic organizers. The article concludes by

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arguing that the teaching of counter-analysis, while difficult, is critical to fully develop a student’s analytic ability and should be taught using organized, systematic, active instructional techniques.

INTRODUCTION

“There are two sides to every story.”

Very little has been written about the construction and cognition of legal counter-analysis. This lack of literature should come as a surprise in light of the fact that good lawyers require themselves and are required by ethical rules to consider both sides of the legal and factual story they seek to advance. Law school professors routinely expect law students to look at issues from both sides, whether in responding to a law school exam hypothetical or in writing predictive memorandum assignments. Certainly,

1 The ideas in this paper originated in a presentation by Professor Lisa T. McElroy at the 2009 Rocky Mountain Regional Legal Writing Conference in Tempe, Arizona (March 14, 2009).

2 The original slogan for Wicked: The Musical, now a popular mantra for fans of the musical.


4 See, e.g., Model Rules of Prof’l Conduct R. 3.3 (2009); See also infra note 75; Stanchi, supra note 3, at 381-82; James Stratman, Investigating Persuasive Processes in Legal Discourse, 17 DISCOURSE PROCESSES 1, 7-13 (1994); Kathryn A. Sampson, Adverse Authority: Rationales and Methods for Using it to Strengthen Legal Argument, 1999 ARK. L. NOTES 93 (1999).

5 See, e.g., Kenney F. Hegland, On Essay Exams, 56 J. LEGAL EDUC. 140, 148 (2006) (“I tell my students to relish ambiguities, to force themselves to find latent inconsistencies in the ‘four elements,’ and, when they finally think they understand an area, to attack that understanding with counter-examples and tough hypos.”); Philip C. Kassam, Law School Examinations, 42 VAND. L. REV. 433, 440-41(1989) (“[O]ne] examination function requires the application of legal authorities to complex fact situations. . . [T]his process is often
in teaching students to engage in thoughtful legal analysis, professors should instruct them to address counter-analysis as a critical component of the analysis. While most students begin to grasp the fundamentals of primary legal analysis during the first weeks of law school, however, those same students are slower to learn to apply those same basic analytical skills to formulating counter-analysis. As a result of their failure to understand how the basic analytical process applies to and requires the inclusion of counter-analysis, many students advance unfounded – or even ridiculous – counter-analysis instead of considering concretely what opposite conclusion the court could reach.\(^6\)

Developing a method for effectively teaching counter-analysis is important because good lawyering requires complex analysis that recognizes the subtleties of the situation being analyzed.\(^7\) Students need to learn that effective counter-analysis - just like primary analysis - is based on the application of legal principles to a client’s facts, not on speculation or whimsy. In other words, if they predict that their client will prevail, they need to remember that the court could logically reach the opposite conclusion. Therefore, students should understand that, in the counter-analysis section of the organizational structure, they will be explaining what viable legal arguments would lead a court to reach a conclusion other than the one predicted in the primary analysis. They will then reiterate why their primary analysis is more firmly grounded in the facts and law.\(^8\)

This article begins by defining counter-analysis generally and using social science and educational psychology theory to explain why the process is difficult. The article next examines relevant learning theory referred to as ‘analysis,’ but the more basic notion of ‘rule application’ is probably a more accurate description of this intellectual function. The application of legal authority to a given situation can involve: (1) a straightforward integration or synthesis of a rule's complex elements to various facts; (2) the perception of ambiguity in the application of a general standard to specific facts, which allows for the construction of competing arguments about application of the rule; (3) the perception of ambiguous or contradictory facts, which also allows for constructing competing arguments . . . ”); see also Ruth Colker, \textit{Extra Time as an Accommodation}, 69 U. Pitt. L. Rev. 413, 465 (2008); Greg Sergienko, \textit{New Modes of Assessment}, 38 San Diego L. Rev. 463, 468 (2001).

\(^6\) Provenzao & Kagen, \textit{supra} note 3, at 177-82 (Appendix A); see infra note 34 and accompanying text.


\(^8\) Christine Nero Coughlin, Joan Malmud & Sandy Patrick, \textit{A Lawyer Writes} 153-60 (2008)(hereinafter “\textit{A Lawyer Writes}”).
about cognition and illustrates how learning tools, such as graphic organizers, can assist encoding analytical skills in the student’s long-term memory. The article then offers several examples for how law professors can apply cognitive learning theory to their classroom teaching of counter-analysis using graphic organizers. The article concludes by arguing that the teaching of counter-analysis, while difficult, is critical to fully develop a student’s analytic ability. It should, therefore, be taught using instructional techniques that are organized and systematic and involve active learning opportunities.

I. IDENTIFYING AND UNDERSTANDING THE DIFFICULTIES IN CONSTRUCTING EFFECTIVE COUNTER-ANALYSIS

Counter-analysis considers the alternative arguments and outcomes inherent to the legal question being considered. It “presents reasons why one’s position might not be true or advisable.” Specifically, it brings to light facts, law, and interpretations of each that might result in an outcome different from the one predicted, and discusses why, despite the weaknesses, the predicted outcome in the primary analysis is more likely.

In order to reach the logically strongest overall conclusion, “it is important for students also to learn to critically evaluate arguments and counter-arguments.” Counter-analysis, moreover, serves an additional rhetorical function. Specifically, it “enhances the writer’s credibility as an intelligent source of information . . . [and] it enhances the good will aspect


10 Moreover, constructing effective counter-arguments is not only important in law school but is an important skill in many “writing genres, including academic, business, expository and persuasive writing.” Nussbaum & Kardash, supra note 9, at 157.

11 E. Michael Nussbaum, Using Argument Vee Diagrams (AVDs) for Promoting Argument-Counterargument Integration in Reflective Writing, 100 J. OF EDUC. PSYCH. 549, 550 (2008) (discussing that argument-counterargument integration is “loosely based on neo-Piagetian views of reasoning development” and “[e]ffective argumentation also involves “metacognitive reflection, a ‘stepping back’ that allows one to view and weigh the merits of different arguments and counterarguments.”) Id. Moreover, “in a meta-analysis on audience response to persuasive messages . . . refutational two-sided messages [were] the most credible and persuasive.” Id.

of credibility."\textsuperscript{13}

While this process may sound relatively straight-forward, it is anything but easy. Social scientists have studied the theory of conceptual change,\textsuperscript{14} the corollary to counter-analysis in a non-legal context, and have recognized that this task involves the following steps: (1) thinking deeply about the alternative conception, (2) juxtaposing argument against the alternative, (3) explaining anomalous pieces of data, and (4) weighing issues and arguments.\textsuperscript{15} The process that allows a student to engage in effective counter-analysis involves "deep processing, elaborative strategy use and significant meta-cognitive reflection."\textsuperscript{16} Because of the difficulties inherent to this type of thinking, social scientists have recognized that students are "often not willing to engage in such heavy cognitive lifting . . . [because of] [lack of] interest, motivation, or unwillingness to extend sufficient cognitive effort."\textsuperscript{17}

Legal educators have identified similar trends in law students who are trying to understand the process and substance of counter-analysis.\textsuperscript{18} While there are certainly students who lack the interest or motivation or are otherwise unwilling to learn, even dedicated law students may have difficulty learning to use counter-analysis effectively for variety of additional reasons.

First, first-year students may feel a tension between their possible rhetorical roles.\textsuperscript{19} Beginning law students – even, we may suppose, beginning lawyers – may still lack the skills, insight or confidence to make

\textsuperscript{13} Id. See also generally Shailini J. George, The Three C’s: Counterarguments, Concessions and Credibility, MASS. LAW. WKLY. April 6, 2009.

\textsuperscript{14} See, e.g. Nussbaum & Kardas, supra note 9, at 157; Stella Vosniadou, What Can Persuasion Research Tell Us About Conceptual Change That We Did Not Already Know? 35 INT’L J. OF EDUC. RESEARCH 731, 733 (2001) (examining studies to show why the “psychological and philosophical research lines on persuasion and perceptual change have developed concurrently but separately) (internal citations omitted).


\textsuperscript{16} Nussbaum & Sinatra, supra note 15, at 385; E. Michael Nussbaum & Gregory Schraw, Promoting Argument-Counterargument Integration in Students’ Writing, 76 THE J. OF EXPERIMENTAL EDUC. 59, 60 (2007).

\textsuperscript{17} Nussbaum & Sinatra, supra note 15, at 385.

\textsuperscript{18} See generally Provenzano & Kagen, supra note 3, at 177-82.

\textsuperscript{19} See Robbins, supra note 7, at 516-23.
a legal prediction without attempting to persuade the reader that their prediction is correct. They may therefore become invested in their conclusion or in helping their client win and feel threatened by a strong counter-analysis, given the perceived potential that a reader may not be convinced by their primary analysis if convincing arguments exist that the court might reach the opposite conclusion.20

The mental process of coherence-based reasoning may help to explain why beginning law students and lawyers become invested in their conclusions to the point of having difficulty making effective counter-conclusions. According to this theory, because difficult decisions are intimidating in many ways, a legal decision-maker will unconsciously transform that decision into a “seemingly straightforward choice between a compelling alternative and a weak one.”21 In other words, in order to make a supportable and defensible decision, a legal decision-maker will transform “[a]mbiguous, equivocal, and conflicting variables . . . into coherent models, that is, lopsided and exaggerated mental representations in which the variables that support the emerging decision are strongly accepted while those that support the losing decision are dismissed, rejected, or ignored.”22

Similarly, cognitive dissonance theory, a popular psychological theory on decision-making for fifty years, explains that “[w]hen a person with a strong belief is challenged by contradictory evidence, he is less likely to discard the belief than to 'show a new fervor about convincing and converting other people to his view.'”23 According to one scholar, then, “if the pedagogic goal is to increase dissonance and thereby to increase

20 George, supra note 13. (“So, while it is always necessary to present strong arguments in our clients’ favor, it can also be very helpful to consider those arguments not in your favor and turn them into fuel for your analysis.”).

21 Dan Simon, 71 U. Chi. L. Rev. 511, 513 (2004). The theory of coherence-based reasoning may help to explain how judges and fact-finders “shun[] cognitively complex and difficult decision tasks by reconstructing them into easy ones, yielding strong, confident conclusions.” Id. at 512.

22 Simon, supra note 21 at 512.

23 Julie A. Seaman, Cognitive Dissonance in the Classroom: Rationale and Rationalization in the Law of Evidence, 50 ST. LOUIS U. L.J. 1097, 1111 (2006) (going on to say that “[s]tudents seek black letter answers to legal questions; teachers, courts, and scholars seek rational explanations for legal rules. An insistence that students focus on the inconsistencies in the rules, their rationales, and their application highlights the dissonance in the law and thereby creates a state of cognitive dissonance in the classroom. By doing this, teachers may be able to help students gain a deeper, more transformative understanding of the law.”)). Id. at 1114.
learning, it is important that students . . . feel the psychological discomfort created by the inconsistencies." 24 In other words, for students fully to understand legal analysis, they must become comfortable with the process of disagreeing with their own conclusions, even when doing so creates dissonance. Because of their lack of experience, beginning law students do not understand that their discomfort with an analysis that includes a strong counter-analysis, or dissonance, is actually a signal that their analytical process is strong and capable.

Second, due to the transition into professional school, beginning law students lack of experience and confidence in their emerging legal writing and analytical abilities can cause those abilities to revert back or deteriorate. 25 Particularly today, with the heavy emphasis on standardized testing, 26 the vast majority of students have been educated in environments where there is a right and wrong answer. Due to their intense awareness of their status as beginners, students may tend automatically to return to the mindset that there must be a “correct” response to the legal question presented. 27 Moreover, some studies report that there can be an actual deterioration in their prior skills during the transition period. 28 Quite simply, they lack courage and confidence, just as new doctors may not believe in themselves sufficiently to make a differential diagnosis on a patient.

Third, while many law students have experience with presenting oral counter-analysis through their education or prior experience with debate, the ability and skill to see both sides of the argument is not one that automatically transfers to writing. 29 As one scholar noted, “the cues to consider and respond to opposing viewpoints are missing . . . in written discourse. As a result, students tend to generate either narrative discourse, which requires fewer conversational cues, . . . or assertions with supporting

24 Seaman, supra note 23, at 1113.
25 S See Provenzano & Kagen, supra note 3, at 146 (discussing the fact that many students when transitioning from high school to college or college to graduate or professional school revert back or see a deterioration in their writing skills.)
27 See Provenzano & Kagen, supra note 3, at 146 (discussing the fact that many students when transitioning from high school to college or college to graduate or professional school revert back or see a deterioration in their writing skills.)
29 Nussbaum & Kardish, supra note 9, at 157.
reasons but without consideration of counterarguments and responses to counterarguments. 30

Fourth, beginning law students may not yet understand the source of counter-analysis – namely, that they can find legal foundation for the opposite conclusion in the legal rules they have synthesized from precedent cases, in the facts of those same cases, and in the reasoning the courts used in those cases. 31 While these concepts are intuitive for experienced lawyers, students may need explicit instruction in finding and outlining counter-analysis from these sources of authority. Because they are still struggling to find what certainly falls within the rule, they may not yet be able to see beyond the rule to what reasoning falls at its limits – or even beyond it – or the role of exceptions in relation to most legal rules.

Fifth, new law students typically do not yet understand their ethical and professional duties as lawyers. 32 It may take years to understand completely that their job requires them to alert supervising attorneys and clients to facts and law that may not work in their favor, and ascertain whether damage control, settlement, or even deciding to decline representation may be most appropriate under the circumstances. 33

While there are many reasons for students’ difficulty contemplating and considering counter-analyses, then, the errors made by law students tend to be similar in nature, taking one or more of the following forms: 1) suggesting that the court will disregard settled law out of concern about this particular set of facts; 2) suggesting that the court will make up a new rule in an area where the rule is well-settled; 3) suggesting that some completely unanticipated event will occur, causing the court to reach an unprecedented conclusion; 4) ignoring or devaluing other possible legal assessments of the client’s facts. 34

The following examples may serve to illustrate these types of

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30 Id.
31 A LAWYER WRITES, supra note 8, at 153-60.
32 See supra note 4 and accompanying text.
33 Id.
34 See, e.g., Provenzano & Kagen, supra note 3, at 177-82 (reporting that 44.91% of students in study bounce back and forth between each party’s argument rather than stating the primary argument, then the counter-argument, then the rebuttal; 15.8 % of students created unrealistic or weak counter-argument for the sake of having one; 15.47% of students gave incomplete explanations of the counter-argument; 14.3% of students presented an unconvincing rebuttal; 3.0% of students had an absence of counter-argument where necessary and legitimate; and 1.89% of students made a conclusion in the counter-argument contrary to that stated earlier in the brief answer or thesis).
analytical errors:

**Example 1:** Disregarding settled law out of concern about this particular set of facts. “Even though the rule states that, in order to qualify as a service animal, an animal must do more than make its owner feel better, the court will probably sympathize with our client and order the housing complex to allow him to keep his cat [even though the facts state that the cat does nothing more than lick its owner’s face regularly].”35

**Example 2:** Making up a new rule in an area where the law is well-settled. “The court may consider the tender age of the plaintiff in this case as a factor in deciding whether the conduct was extreme and outrageous [even though we don’t have a single case that says that age alone is a factor].”36

**Example 3:** Relying on the possible occurrence of some completely unanticipated and unprecedented event. “Because the Great Dane may turn out to have rabies [even though the facts state that it is up to date on its vaccinations and has had a recent veterinary examination], the court may find that the apartment complex does not have to allow the disabled tenant to keep it [even though the Great Dane qualifies as a service animal under state and federal law].”37

**Example 4:** Ignoring or devaluing other possible legal assessments of the client’s facts. “There is simply no way that the court could consider the coach’s statement that the boy was playing

35 See, e.g., Prindable v. Ass’n of Apartment Owners of 2987 Kalakaua, 304 F. Supp. 2d 1245, 1256-57, n.25 (D. Haw. 2003) (animal not a service animal if it merely provides “some comfort” and makes a person feel better).

36 See *Restatement (Second) of Torts* § 46 (1965).

37 See, e.g., 28 C.F.R. § 36.104 (defining “service animal”); 42 U.S.C. § 3601, 3604(3)(A) (Fair Housing Act); 24 C.F.R. § 100.204 (a) (“It shall be unlawful for any person to refuse to make reasonable accommodations in rules, policies, practices, or services, when such accommodations may be necessary to afford a handicapped person equal opportunity to use and enjoy a dwelling unit, including public and common use areas.”). Cf. 42 U.S.C. § 3601, 3604(9) (“Nothing in this subsection requires that a dwelling be made available to an individual whose tenancy would constitute a direct threat to the health or safety of other individuals . . .”)

like s**t to be merely rude or insulting [as opposed to atrocious or shocking the conscience] because swearing is outright unacceptable.”38

For professors to help students from avoid making these classic mistakes, it is helpful to understand learning theory relevant to students’ emerging analytical skills.

II. COGNITIVE LEARNING THEORY CAN OFFER INSIGHT INTO HELPING STUDENTS ACHIEVE AUTOMATICITY WITH THEIR COUNTER-ANALYSIS

In order to teach students a new construct for examining information – legal analysis – we need to understand why and how our students learn. 39 While educational psychologists have developed multiple theories on how humans learn,40 the cognitive school of learning closely correlates with the methodical process used in law school.41

Cognition “is the way we think about, approach, obtain, and process information.”42 Cognitive learning theory espouses that the memory system, with its short-term and long-term sorting and encoding components, guides the learning process.43 Learning is best achieved when the information is presented systemically and stored in the student’s brain in an “organized, meaningful and useable manner.”44

Learning in enhanced when the student is actively engaged in the

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39 See Kirsten Dauphinais, Valuing and Nurturing Multiple Intelligences in Legal Education: A Paradigm Shift, 11 WASH & LEE R. & ETH. ANC. L. J. 1 (2005); GERALD F. HESS & STEVEN FRIEDLAND, TECHNIQUES FOR TEACHING LAw (1999)
40 MICHAEL HUNTER SCHWARTZ, EXPERT LEARNING FOR LAW STUDENTS 21-24 (2005)
42 Lustbader, supra note 41, at 324.
44 Id.
process.\textsuperscript{45} According to cognitive learning theory, “[b]ecause it is the learner who must ultimately store and retrieve the learning, the crucial factor in learning is the ‘active’ involvement of the learner.”\textsuperscript{46} The more active the student in the sequenced learning process, the more likely the skill becomes encoded and moves from short-term to long-term memory.\textsuperscript{47} Once information is encoded in a student’s long-term memory, the goal is “automaticity,” which means that the student has “learned the material so well that [he] can recall it with minimal attention.”\textsuperscript{48}

With respect to learning within the law school environment, “[c]ognitivists emphasize ‘structuring, organizing, and sequencing information to facilitate optimal processing.’"\textsuperscript{49} Cognitivists believe that one way to emphasize structure, organization and sequence is to deconstruct material by use of graphic organizers to visually display “the hierarchies in

\textsuperscript{45} Robin A. Boyle, Employing Active-Learning Techniques and Metacognition in Law School: Shifting Energy from Professor to Student, 81 U. OF DET. MERCY L. REV. 1, 3 (2003).


\textsuperscript{47} Schwartz, supra note 40, at 21-24. “[L]aw professors should teach law students how to be active learners. . . . Students should be taught both the importance of encoding their learning and the many techniques available to facilitate their encoding efforts, such as . . . developing concept maps that visually express the relationships among the ideas under study [and] creating flow charts that depict logical flows in the analytical process . . .” See supra note 46, at 377.

\textsuperscript{48} Schwartz, supra note 40, at 22. In order to achieve automaticity, or the ability to automatically perform a skill without individually thinking about each component, cognitive theorists believe that the students must develop schemata which Michael Hunter Schwartz describes as:

- like entire computer programs in that the organized material includes structures that reflect how to perform skills. Thus, most adults who can play a musical instrument, such as the piano, have developed a schema for performing all the mental steps involved. These steps include identifying each mark on the sheet of music, knowing which each mark means and understanding the relationship among: the marks, the black and white keys, the necessary fingering to reach all the keys, the pedals below the keys and their feet.

Id. \textit{See also} Lustbader, supra note 41, at 325-26.

Specifically, graphic organizers are “a set of learning strategies which involve translating words expressed in linear form into [visual] structures.” When written material or difficult concepts are expressed graphically, the students can “develop alternative structures for understanding the course concepts.”

Graphic organizers also enhance students’ ability to learn to refute arguments. For example, in one study, educational psychologists asked eighty-four undergraduate students to write reflective essay on the topic “Does watching TV cause children to become more violent?” The students were provided, inter alia, with graphic organizers. The educational psychologists found that graphic organizers made the “arguments-counterarguments salient, so it [was] easy to pick arguments to support and refute.”

Moreover, in addition to being an established cognitive tool to promote learning, graphic organizers also aid students with differing learning styles in their quest to master legal analysis. There has been increasing attention paid to the role of learning styles in the law school classroom. Because

50 Schwartz, supra note 40, at 161-62.
51 Id.
52 Id.
54 Id.
55 Id.
56 Id. Note that the authors also found that specific criteria instruction was also helpful, perhaps even more so than the form of graphic organizer they chose to employ. The authors hypothesized, however, that the two interventions may have activated somewhat different argumentation schema and that changing the form of the graph could increase its utility. See Nussbaum, supra note 11, at 551; see also Nussbaum & Schraw, supra note 16, at 59.
57 Specifically, “[w]hile classroom lectures and discussion may aid aural and oral learners, no integral aspect of legal education aids the visual learner.” M. H. Sam Jacobson, How Law Students Absorb Information: Determining Modality in Learning Style, 8 J. LEGAL WRITING INST. 175, 181 (2002).
58 Kristin B. Gerdy, et al., Expanding Our Classroom Walls: Enhancing Teaching and Learning Through Technology, 11 J. LEGAL WRITING INST. 263, 268 (2005) (“With the introduction and acceptance of learning style theories, . . . overall education is improving – beginning with the individual student’s recognition of how he or she learns and progressing to the teacher’s ability, if not responsibility, to adjust teaching style to best facilitate learning.”).
many law students are visual, visual, or kinesthetic learners, teaching methods designed to meet their learning needs may help them grasp the early fundamentals of learning legal analysis. Professors who incorporate several different teaching methods into any given class will therefore will reach students with different types of strengths on a deeper level. More specifically, graphic organizers may help students learn analysis because they “let[] the writer visualize relationships, steps, or chronology by showing the spatial relationship between the ideas.” Further, “[g]raphic organizers permit visual modality preferent learners an opportunity to significantly improve construction of interrelational conceptual models.

59 Visual learners prefer to see concepts depicted graphically through their inter-relationships. These students gravitate toward all forms of graphic organizers, including flow charts, concept maps, hierarchy charts and comparison charts. These students need to translate written and spoken information into graphic form and then translate their graphics into the written and spoken word. Visual learners learn best through pictures or diagrams, not through written text. See Jacobson, supra note 57, at 178, n.11 (stating that 30% of author’s students at Willamette University College of Law are visual learners, a substantial increase over thirteen years). Cf. Robin A. Boyle & Rita Dunn, Teaching Law Students Through Individual Learning Styles, 62 ALBANY L. REV. 213, 227-29 (1998) (stating that only 8% of first-year students tested at St. John’s in 1998 were had high visual learning strengths). Jacobson says that “[a]fter verbal learning, the most common mode for absorbing information is visual” and attributes some of the increase in visual learners to the early use of computers. Jacobson, supra note 57, at 180.

60 Tactual (sometimes called “tactile”) learners prefer the written word. Tactual learners learn best if they physically write or draw, touch, manipulate. See, e.g., Jacobson, supra note 57, at 180 (stating that tactile and kinesthetic learners are the “least common learners in law school” but offering no empirical support for that proposition) They like to learn from texts and other written materials and to express themselves in writing as well. In one study at St. John’s Law School, 21% of the first-year law students tested were highly tactual learners. See Doyle & Dunn, supra note 59, at 228.

61 Of course, many students are also auditory learners, but the law school curriculum certainly has plenty of opportunities for students to learn through listening to a professor speak. See, e.g., Doyle & Dunn, supra note 59, at 227 (showing that 26% of first-year law students tested had high auditory learning strengths). Cf. generally ROY STUCKEY AND OTHERS, BEST PRACTICES FOR LEGAL EDUCATION (2007); WILLIAM M. SULLIVAN, ANNE COLEY, JUDITH WELCH WEGNER, LLOYD BOND & LEE S. SHULMAN, EDUCATING LAWYERS: PREPARATION FOR THE PROFESSION OF LAW (2007) (two landmark reports on legal education stating that law schools rely overly on lecture and Socratic formats).

62 Boyle & Dunn, supra note 59, at 216.


Students may have a much easier time understanding legal analysis, then, when they graph out and organize that analysis.

III. HELPING STUDENTS LEARN THE FUNDAMENTALS OF COUNTER-ANALYSIS: A GRAPHING STRATEGY

“The use of visual aids in the classroom is as old as the art of teaching itself—‘even Socrates drew diagrams in the sand.’”65

To help students achieve proficiency in formulating counter-analysis, professors will want to consider using learning methods recommended by experts in cognitive learning theory.66 Because graphic organizers may help students with different learning styles map out and organize their analysis, representing their legal analysis in graphic form may help them see the big picture of how the components of the analysis fit together. Moreover, because many students learn through interacting physically with learning material,67 actually drawing the graphs may help them internalize and express the analysis they are graphing. It may also help them decrease the dissonance they feel about countering their own predictions, as they will be able to see from their graphic organizers that they could logically reach more than one legal conclusion.68

Therefore, professors may find that students will benefit from using graphic organizers to situate the counter-analysis in analytic techniques and concepts they already know: rule synthesis, rule parameters, analogy and

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66 See supra notes 14-17 and 39-64 and accompanying text.
67 Id.
68 See supra notes 23-24 and accompanying text.
distinction, and weight of authority.

A. The First Step: Graphing Primary Analysis

In the first weeks of a basic legal analysis class, most professors teach students to synthesize legal rules from a variety of authorities. They then teach students to apply those synthesized rules to a hypothetical client’s facts. One important concept for new law students to grasp is that every rule is a continuum; it is just as important to know what does not fall within a legal rule as what does.69 We typically give this continuum concept a name: rule parameters.70

To help students grasp the rule parameter concept – one which they will need to use in formulating counter-analysis - we should instruct students to use a graphic organizer or visual aid. Rather than creating a visual aid and then showing it to the students, professors should allow students to engage physically with the law, to map out the rule synthesis and rule parameters in the form of a graphic continuum.71 Therefore, the professor might tell students to draw a line to represent the continuum of a legal rule.

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Once they have drawn the line, students should think again about the components of the rule and synthesize it to include explicit rule parameters. Writing out this synthesized rule in one or two sentences will help them boil the rule down to its essence.

Example 1: “Extreme and outrageous conduct is that which is regarded as atrocious and is utterly intolerable in a civilized community. It is not insults or rude comments.”72

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70 Id.

71 See supra notes 51-64 and accompanying text (simply perceiving a graph or picture may not cement an idea as concretely as actually creating that visual).

72 See, e.g., RESTATEMENT (SECOND) TORTS § 46 (1965) (“One who by extreme and outrageous conduct intentionally or recklessly causes severe emotional distress to another
Example 2: “A service animal is a common domestic animal that has some degree of training and that ameliorates the effect of the disability. It is not an animal that merely makes its owner feel better.”

Once they have been able to reduce the rule to a few sentences, they can use the line they have drawn to help them view the rule graphically. By physically mapping the rule out along a line segment, they can literally “see the big picture” of the rule.

is subject to liability for such emotional distress.”); see also RESTATEMENT (SECOND) TORTS § 46, cmt. d (1965) (“The liability clearly does not extend to mere insults, indignities, threats, annoyances, petty oppressions, or other trivialities. The rough edges of our society are still in need of a good deal of filing down, and in the meantime plaintiffs must necessarily be expected and required to be hardened to a certain amount of rough language, and to occasional acts that are definitely inconsiderate and unkind. There is no occasion for the law to intervene in every case where some one's feelings are hurt.”).

73 See, e.g., 28 C.F.R. § 36.104 (defining “service animal” to include individual training to “perform tasks for the benefit of an individual with a disability”); Bronk v. Ineichen, 54 F.3d 425, 429 (7th Cir. 1995) (discussing “ameliorating effects of the disability” standard under federal law); Prindable, 304 F. Supp. 2d at 1256-57, n.25 (D. Haw. 2003) (animal not a service animal if it merely provides “some comfort” and makes a person feel better).
Example 1:

<table>
<thead>
<tr>
<th>Is</th>
<th>Is Not</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atrocious</td>
<td>Insults</td>
</tr>
<tr>
<td>Shocks the conscience</td>
<td>Rudeness</td>
</tr>
</tbody>
</table>

Example 2:

<table>
<thead>
<tr>
<th>Is</th>
<th>Is Not</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ameliorates effects</td>
<td>Makes owner feel better</td>
</tr>
<tr>
<td>of disability</td>
<td></td>
</tr>
<tr>
<td>Has some training</td>
<td></td>
</tr>
</tbody>
</table>

By seeing and feeling how the law fits into a legal continuum, students may better understand the fact that legal rules are rarely black and white. Next, they must understand that, in analyzing a client’s case, they must decide what shade of gray it is: in other words, where on the continuum a client’s facts fit in relation to the rule. Therefore, the professor should ask students to mark an “X” on the continuum to show where their client’s facts fall in relation to the rule parameters. Do the facts fit better into what satisfies the rule, or what does not satisfy it? Students should also remember that it will be unusual for their client’s facts to fall perfectly at either end of the continuum; more likely, the “X” will fall somewhere in the middle of the line, but closer to one end than the other.

Example 1:

<table>
<thead>
<tr>
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<tbody>
<tr>
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<td>Rudeness</td>
</tr>
</tbody>
</table>

X
Example 2:

<table>
<thead>
<tr>
<th>Is</th>
<th>Is Not</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Ameliorates effects of disability

Has some training

Now that the students have graphed out their client’s legal position, they can use the graph as a visual guide to begin to draft their primary analysis by basing it on the law near which the “X” is situated. It will be helpful for them to note that where they place the “X” on the continuum will inform the strength and quality of their prediction. If the “X” is extremely close to one end of the continuum, the prediction may contain the words “probably (will/will not)” or “very likely (will/will not).” If the X is closer to the middle of the continuum, the prediction may contain the words “may” or “could.”

B. The Second Step: Using Primary Analysis Graphs to Create a Counter-analysis Formula

Students need to understand that formulating counter-analysis is not like throwing spaghetti at a wall⁷⁴ – it’s not about hoping it will stick. Counter-analysis, like primary analysis, is grounded in the law.⁷⁵ Therefore, students can follow the same analytical steps to formulate counter-analysis that they used to make their primary predictions. Using the primary analysis graph, then, students could mark an “X” somewhere near the other end of the continuum to show how the court could reach the opposite conclusion in relying on the other rule parameter.

⁷⁴ Common expression, source unknown.
⁷⁵ A LAWYER WRITES, supra note 8, at 153-60.
Example 1:

<table>
<thead>
<tr>
<th>Is</th>
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</thead>
<tbody>
<tr>
<td>Atrocious</td>
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</tbody>
</table>

Example 2:

<table>
<thead>
<tr>
<th>Is</th>
<th>Is Not</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ameliorates effects</td>
<td>Makes owner feel better</td>
</tr>
<tr>
<td>of disability</td>
<td></td>
</tr>
<tr>
<td>Has some training</td>
<td></td>
</tr>
</tbody>
</table>

It is important for students to remember that a court might not share their impression of the facts or evaluate them in the same way they do. It is appropriate – even part of the job description as a junior attorney - for them to make their own assessment of the facts and how the law applies to them; it is not appropriate for them to discount out of hand another feasible, supportable, and non-frivolous conclusion.\(^{76}\) Using the graph to help them

\(^{76}\) See, e.g., Model Rules of Prof’l Conduct R.3.1 (2009) (“A lawyer shall not bring or defend a proceeding, or assert or controvert an issue therein, unless there is a basis for doing so that is not frivolous. A lawyer may offer a good-faith argument for an extension, modification, or reversal of existing law.”); Fed. R. Civ. P. 11(b)(1) (“By presenting to the court a pleading, written motion, or other paper—whether by signing, filing, submitting, or later advocating it—an attorney or unrepresented party certifies that to the best of the person's knowledge, information, and belief, formed after an inquiry reasonable under the circumstances: (1) it is not being presented for any improper purpose, such as to harass, cause unnecessary delay, or needlessly increase the cost of litigation; (2) the claims, defenses, and other legal contentions are warranted by existing law or by a nonfrivolous argument for extending, modifying, or reversing existing law or for establishing new law; (3) the factual contentions have evidentiary support or, if specifically so identified, will likely have evidentiary support after a reasonable opportunity for further investigation or discovery; and (4) the denials of factual contentions are warranted on the evidence or, if specifically so identified, are reasonably based on belief or a lack of
formulate the analysis will help them avoid the pitfalls of inventing counter-analysis out of thin air;\(^77\) by laying out in picture form the alternative parameter, it will also encourage them to see that there is almost always another conclusion that a reasonable court could reach.\(^78\)

Therefore, students might begin to draft their counter-analysis by basing it on the law near which their second “X” is situated. And – just as was the case when graphing out the primary analysis – students should consider that where they place the counter-analysis “X” will inform the strength and quality of their counter-prediction.

C. The Third Step: Moving Beyond Simple Rule Parameters to Add in Analogy and Distinction

Once students have mastered the basics of using rule parameters to formulate counter-analysis, they are ready for the next step: adding in analogy and distinction as counter-analytic tools. In separating the use of rule parameters and analogy and distinction into separate steps, it is important to note explicitly that effective legal analysis would combines these two concepts. For beginning law students, however, it may be helpful to teach the concepts separately so that they can grasp each one fully, and then demonstrate how they work together.

Example 1:

- **Our facts:** A baseball coach told a player that he was “playing like s**t.”\(^79\)
• **Facts from Case A:** An employer called an employee by a racial slur on many separate occasions. The court held that the conduct could be extreme and outrageous because a reasonable jury could find that racist comments are not tolerable in a civilized society.  

• **Facts from Case B:** An employer told an employee that she was as lazy as an elephant at the zoo. The court held that the conduct, while rude and insulting, did not rise to the level of extreme and outrageous because it did not shock the conscience.

**Example 2:**

• **Our facts:** A man with social anxiety disorder uses a Great Dane as a service animal. The Great Dane keeps people at a distance by growling at them and thereby makes the client feel better.

• **Facts from Case A:** A dog is trained to pick up objects that a quadriplegic man needs. The court holds that, because the animal is trained to perform specific tasks that are not typical of the breed and that alleviate the effects of the man’s disability, it qualifies as a service animal.

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80 See, e.g., Wilson v. Lowe’s Home Ctr., 75 S.W.3d 229, 238 (Ky. App. 2001); Wagner v. Merit Distribution, 445 F. Supp. 2d 899, 917 (W.D. Tenn. 2006). Note that courts also take into account the authoritative relationship between the parties; for simplicity’s sake, however, in this example, we will only consider the nature of the conduct and not the relationship between the parties.

81 Invented case based on a Restatement Illustration. See Restatement (Second) Torts § 46 cmt. f, illus.13 (1965) (store clerk not liable to customer for intentional infliction of emotional distress when she tells the customer that she looks like a hippo in a dress, even when customer is embarrassed and broods over the incident.).

82 This hypothetical is a modification of one originally created by Professor Sheila Miller of the University of Dayton Law School. The memo problem was included in the 2008 LWI Idea Bank.

83 Invented case based on the requirements of 28 C.F.R. § 36.104 (“Service animal means any guide dog, signal dog, or other animal individually trained to do work or perform tasks for the benefit of an individual with a disability, including, but not limited to, guiding individuals with impaired vision, alerting individuals with impaired hearing to
• **Facts from Case B**: Two cats sit on a woman’s lap and purr frequently, relieving her anxiety. The court holds that the cats, while making the woman feel better, do not perform specific tasks atypical of the breed. Therefore, the cats do not qualify as service animals.84

To help students add factual analysis to the legal analysis they have already performed, they might consider which facts were material to the court’s holding in the precedent cases, then categorize these facts as corresponding to one end of the continuum or the other. Just as they did when establishing legal parameters, they should then write in the facts underneath the line they have drawn. By moving the law to the top of the line, they can see how the court’s legal rules and the facts to which those rules were applied correspond and relate to each other.

**Example 1:**

<table>
<thead>
<tr>
<th>Atrocious</th>
<th>Insults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shocks the conscience</td>
<td>Rudeness</td>
</tr>
<tr>
<td>Using a racial slur</td>
<td>Calling</td>
</tr>
<tr>
<td></td>
<td>someone lazy</td>
</tr>
<tr>
<td></td>
<td>Comparing</td>
</tr>
<tr>
<td></td>
<td>someone to a zoo animal</td>
</tr>
</tbody>
</table>

84 Invented case based on requirements of 28 C.F.R. § 36.104 (requiring animals to “perform tasks”) as well as Prindable, 304 F. Supp. 2d at 1256-57, n.25 (D. Haw. 2003) (case involving dog that made owner feel better).
Example 2:

<table>
<thead>
<tr>
<th>Ameliorates effects of disability</th>
<th>Makes owner feel better</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performs specific tasks not typical of breed</td>
<td></td>
</tr>
<tr>
<td>Picks up objects for someone who cannot</td>
<td>Sits on lap and purrs</td>
</tr>
</tbody>
</table>

After they have graphed out the law and facts of the precedent cases, students can consider their own client’s facts. They might ask themselves: Are my client’s facts more like the facts that did satisfy the rule, or more like the facts that did not? Then, just as they did when mapping out the legal rules, they might draw an “X” on the continuum to represent where their client’s facts would fall in comparison to those in precedent cases. This “X” will represent their primary analysis.

Example 1:

<table>
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</tbody>
</table>

<table>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Comparing someone to a zoo animal</td>
</tr>
</tbody>
</table>
Example 2:

<table>
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<th>Makes owner feel better</th>
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<tbody>
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<td></td>
</tr>
<tr>
<td>Picks up objects for someone who cannot</td>
<td>Sits on lap and purrs</td>
</tr>
</tbody>
</table>

After considering graphically that their client’s facts are just as gray in relation to the facts of the other cases as they were in relation to the legal rules, they can now mark an “X” somewhere near the other end of the continuum to show how the court could reach the opposite conclusion – in other words, their counter-analysis will likely predict that the court could see their client’s facts as more similar to those in the other set of cases.

Example 1:

<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
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<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Comparing someone to a zoo animal</td>
</tr>
</tbody>
</table>
Example 2:

Ameliorates effects of disability
Performs specific tasks not typical of breed

Picks up objects for someone who cannot

Makes owner feel better
Sits on lap and purrs

And, again, once they have used the graphic representation to help them visualize their counter-analysis, they can continue to draft their legal memorandum by including counter-analysis based on analogies and distinctions to the facts near which their new “X” is situated on the line and considering using the position of the “X” on the line to inform the quality of the prediction.

D. The Fourth Step: Formulating Counter-Analysis Through the Rule Explanation

As a last step in formulating counter-analysis, students should consider whether the controlling jurisdiction has binding law on point. If not, students will have to rely on persuasive authority in formulating the rule. Often, especially in a law school hypothetical, different jurisdictions will have competing and conflicting rules. The student’s job, therefore, is to explain each rule and its reasoning in the rule explanation, then decide which rule the court is more likely to follow (contrast this task to counter-analytic tasks described previously, where the counter-analysis is largely based in the application section of the organizational paradigm). Once they have predicted the rule the court will likely adopt, their counter-analysis will be predicated on the competing rule from the other jurisdiction(s).
Example:

**Rule #1:** Janush (N.D. Cal.): Even a non-service animal may still be necessary to accommodate a person with a disability. Federal regulations do not say anything about a relationship between an animal qualifying as a service animal and being necessary. Defendants “have not established that there is no duty to reasonably accommodate non-service animals.”


**Rule #2:** Prindable (D. Haw.): If an animal is not a service animal, it is not necessary as an accommodation for a person with a disability, because it does nothing to assist a disabled person in a relevant way.

86 Prindable, 304 F. Supp. 2d at 1245.

In the case of competing persuasive authority, students will use the line representing the rule continuum slightly differently. At one end of the line, they should write in one persuasive jurisdiction’s rule. At the other end of the line, they should write in the rule from the other persuasive jurisdiction.

Example:

<table>
<thead>
<tr>
<th>Necessary even if not s.a.</th>
<th>Not necessary if not s.a.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Janush</td>
<td>Prindable</td>
</tr>
</tbody>
</table>

Then, below the line segments, students should write in each court’s reasoning.
Example:

<table>
<thead>
<tr>
<th>Necessary even if not s.a.</th>
<th>Not necessary if not s.a.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Janush</td>
<td>Prindable</td>
</tr>
<tr>
<td>Nothing in reg.</td>
<td>Doesn’t help person with disability in relevant way</td>
</tr>
</tbody>
</table>

After graphing out their analysis, students should ask themselves which reasoning the court is likely to find persuasive and why. They should then draw an “X” nearer to the end of the continuum representing that reasoning.

Example:

<table>
<thead>
<tr>
<th>Necessary even if not s.a.</th>
<th>Not necessary if not s.a.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Janush</td>
<td>Prindable</td>
</tr>
<tr>
<td>Nothing in reg.</td>
<td>Doesn’t help person with disability in relevant way</td>
</tr>
</tbody>
</table>

In formulating their counter-analysis, then, they should consider why the court may find the other jurisdiction’s reasoning to be persuasive, then draw their “X” in an appropriate spot on the line to reflect the likelihood of the court reaching that conclusion.
Example:

<table>
<thead>
<tr>
<th>Necessary even if not s.a.</th>
<th>Not necessary if not s.a.</th>
</tr>
</thead>
</table>

And, after studying the graphic representation of the competing rules and their own analysis of how the current court will weigh those rules, students may write their counter-analysis by noting that the court could choose to base its holding and reasoning on the persuasive rule near which the new “X” is situated on the line.

E. The Final Step: Formulating Refutation

Many students remember to include counter-analysis in their use of the organizational paradigm, but they neglect to return to the primary analysis to refute the possibility that the court will reach the opposite conclusion. For a supervising attorney to predict accurately how a court might rule (whether for purposes of writing a brief, arguing a motion, or negotiating with opposing counsel), she must understand why the primary prediction is more grounded in the facts and law than the counter-prediction.

To help students formulate effective refutation, the professor might ask them to return to their graph of the primary analysis. Why did they place the “X” in the position on the line that they did? Making a list of their reasons for their primary predictions will help them order and organize their thinking.

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87 See supra note 24-28 and accompanying text.
Following the list, they can write their refutation by explaining in sentence or paragraph form the reasons they have articulated in their list. After visualizing the checklist, in fact, students may consider whether they want to place their “X” in a different point on the line. They may even decide that their counter-analysis should really be their primary analysis. This process leads to a deeper understanding of the materials and more thorough and credible analysis. Specifically, by giving students a checklist and asking them to graph their primary and counter-analysis, students will learn to apply to counter-analysis the basic legal analytic skills they have acquired: rule synthesis, rule parameters, analogy and distinction, and weight of authority.

CONCLUSION

The process of learning legal analysis is both challenging for new law students and continually evolving through law school and the practice of law. There are many psycho-social factors that may hinder a beginning law student’s ability to see and effectively write both sides of the story. Without the ability logically to consider alternative arguments, juxtapose alternatives against the primary argument, explain anomalies, and predict the outcome, however, law students will never reach their fullest analytic potential.

Social scientists who have studied argumentation and conceptual change theory have documented that using graphic organizers is helpful in teaching, at the very least, consideration and refutation of counterarguments. Through the use of the graphic representations of their analysis, students may find that they change their minds about which way the court is likely to decide the case. This process of decision-making and reformulation, however, is a critical component of the process of legal analysis. By following the sequence set forth by the authors, students will likely find their analysis is more well-grounded and nuanced. Law professors therefore would do well to incorporate cognitive theory and graphic organizers into their instruction.

88 See Ricks, supra note 3, at 14 (describing an assignment in which 15 of 42 students revised their predictions about the outcome of the hypothetical case).