Diagrammatics and the Proactive Visualization of Legal Information

Michael D. Murray

DIAGRAMMATICS AND THE PROACTIVE VISUALIZATION OF LEGAL INFORMATION

Michael D. Murray*

This article performs an analysis of one mode of visual legal communication: diagrammatics and the visualization of legal data and other information in legal instruments and communications, such as these two examples[1]:

1.   "Diagrammatics" refers to depiction "in the form of a diagram, graphic, or outline." Dictionary.com, "Diagrammatic," https://www.dictionary.com/browse/diagrammatic.   The images here are Michael D. Murray, *Graphical Rendering of Sales vs. Overhead Costs in Performance of a Contract* (2020) (*See* Example 3, *infra*, p. 20); Michael D. Murray, Chart reporting the data and analysis of *The Promise of Parentheticals: An Empirical Study of the Use of Parentheticals in Federal Appellate Briefs,* 10 LEGAL COMM. & RHETORIC: JALWD 229 (2013) (*See* Example 8, *infra*, p. 34).

I.   INTRODUCTION

The Proactive Law[2] movement and the Legal Design[3] movement each seek to transform legal instruments and documents to improve access to and comprehension of the communication of law to all persons. "All persons" includes both law-trained and non-law-trained persons and extends from the literate and educated all the way to disadvantaged, illiterate, and less-than-fully literate persons. The overall goal of the Proactive Law movement and a primary goal of Legal Design is to improve the understanding of legal rights, relationships, and obligations expressed in legal products, instruments, services, processes, and systems through illustration, simplification, engagement, and inclusiveness in the text and visual components of these instruments and communications.[4]

Both Proactive Law[5] and Legal Design use visualization as a means to improve accessibility and to further the goal of transparency to build

2. On the Proactive Law movement generally, *see* Helena Haapio, *Introduction to Proactive Law: A Business Lawyer's View*, in A PROACTIVE APPROACH, 49 SCANDINAVIAN STUD. IN L. 21–22 (Peter Wahlgren ed., 2006); George J. Siedel & Helena Haapio, *Using Proactive Law for Competitive Advantage*, 47 AM. BUS. L.J. 641 (2010); Gerlinde Berger-Walliser, *The Past and Future of Proactive Law: An Overview of the Development of the Proactive Law Movement*, in PROACTIVE L. IN A BUS. ENV'T 16 (Gerlinde Berger-Walliser & Kim Østergaard eds., 2012).

3. The Legal Design Alliance defines "legal design" as "an interdisciplinary approach to apply human-centered design to prevent or solve legal problems." LEGAL DESIGN ALLIANCE, www.legaldesignalliance.org (last visited Jul. 1, 2020). Through legal design, a document may be framed in a more accessible way using simpler language, and a number of design patterns can be used to make it more understandable. *See generally* LEGAL DESIGN ALLIANCE, *The Legal Design Manifesto* (v2), www.legaldesignalliance.org/#v2 (last visited July 1, 2020); Margaret Hagan, *Examples of Legal Communication Designs*, LEGAL COMM DESIGN, www.legaltechdesign.com/communication-design (last visited July 1, 2020); Margaret Hagan, LAW BY DESIGN, www.lawbydesign.com (last visited July 1, 2020); *Legal Design Pattern Libraries*, LEGAL COMM DESIGN, www.legaltechdesign.com/communication-design/legal-design-pattern-libraries (last visited July 1, 2020).

4. *See* Gerlinde Berger-Walliser, Thomas D. Barton & Helena Haapio, *From Visualization to Legal Design: A Collaborative and Creative Process*, 54 AM. BUS. L.J. 347, 351–54 (2017); Gerlinde Berger-Walliser & Paul Shrivastava, *Beyond Compliance: Sustainable Development, Business, and Proactive Law*, 46 GEO. J. INT'L L. 417, 436 (2015).

5. The Proactive Law and Proactive Contracting approaches that emerged in the Nordic countries, in the late 1990s and early 2000s, follow principles of forward-looking preventive law coupled with a goal to enable success and enhance opportunities for parties in a legal matter to achieve their goals in accordance with their will. *See* Helena Haapio, *Next Generation Contracts: A Paradigm Shift* 39 (Lexpert Ltd 2013). The contemporary Proactive Law movement shares many parallels with the Preventive Law movement in the United States in the 1950s. *See* LOUIS M. BROWN, MANUAL OF PREVENTIVE LAW: HOW TO PREVENT LEGAL DIFFICULTIES IN THE HANDLING OF EVERYDAY BUSINESS PROBLEMS (1950). The Proactive Law movement shares common and parallel goals with the Plain Language (or Plain English) movement and the movements to create "values-based contracts," "collaborative contracts," "conscious contracts," and "integrative contracts." *See* J. Kim Wright, *Reinventing Contracts*,

knowledge and understanding of the law in all audiences of legal works.[6] The goal with regard to contractual relationships and agreements is to better carry out the present will and intentions of the parties and to anticipate their future needs through legal instruments that secure a clearer understanding of terms of the relationship.[7] Because contracts always seem to be documents "written by lawyers for lawyers," they are often difficult to understand.[8] Robert de Rooy, the South African attorney and founder of Creative Contracts (Pty) Ltd, explains the motivation to use visuals in Proactive Contracting and Legal Design in the following way: "[Contracts] are dense, complex and hard to read if you are very literate, and nearly impossible if you have low literacy skills . . . ."[9]

> [If] everyone understand[s] the contracts they must sign . . . [this will] improve contractual relationships and outcomes. At the same time, no one should be subjected to the indignity of having to sign a contract that they cannot reasonably be expected to read or understand. The best way to achieve this purpose is . . . to make contracts understandable for everyone, [and] the more vulnerable people we will reach, [ ] the more meaningful will be the difference we can make.[10]

As will be discussed below, visualization in a Proactive Law approach and in Legal Design may be guided by principles of visual legal rhetoric and visual literacy.[11] In transactional documents, a significant goal of visualization is to reduce the reliance on "legalese," contract boilerplate, and backward-looking risk-avoiding conditions and disclaimers, and instead rely on visual diagrams, illustrations, and depictions that unpack the legal concepts of the document and make them accessible to a wider range of persons.[12] In

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ABA - LAW PRACTICE TODAY (June 14, 2019), https://www.lawpracticetoday.org/article/reinventing-contracts/.

6. Berger-Walliser, Barton & Haapio, *supra* note 4, at 372–73; Amanda Perry-Kessaris, *Legal Design for Practice, Activism, Policy and Research*, 46 J. L. & SOC'Y 185, 201–02 (2019).

7. Berger-Walliser, *The Past and Future of Proactive Law, supra* note 2, at 16; Haapio, *Introduction to Proactive Law: A Business Lawyer's View, supra* note 2, at 21–22.

8. Gerlinde Berger-Walliser, Robert C. Bird & Helena Haapio, *Promoting Business Success through Contract Visualization*, 17 J. L. BUS. & ETHICS 55, 56 (2011).

9. Robert de Rooy, *Why We Do It*, CREATIVE CONTRACTS, https://creative-contracts.com/why-we-do-it/ (last visited Nov. 14, 2020).

10. Robert de Rooy, *Our Story, Where to From Here?*, CREATIVE CONTRACTS, https://creative-contracts.com/our-story/ (last visited Nov. 14, 2020) (quoting Thomas D. Barton, Helena Haapio, Stefania Passera, & James G. Hazard, *Successful Contracts: Integrating Design and Technology*, in LEGAL TECH, SMART CONTRACTS AND BLOCKCHAIN 63, 65 (Marcelo Corrales et al. eds., 2019)).

11. *See infra* Section II.

12. *See* Jay A. Mitchell, *Whiteboard and Black-Letter: Visual Communication in Commercial Contracts*, 20 U. PA. J. BUS. L. 815, 851, 853, 857–58, 862 (2018). *See generally*

litigation and the access to justice effort in court systems, the goal is to design visuals that can assist the participants—actual and potential litigants, the jury, the judge, and even the attorneys—in understanding and accepting legal information regarding the working procedures of the courts and the content of laws, rules, and legal arguments in cases.[13] In every instance, the goal of visualization is the rhetorical goal of building knowledge and understanding within the needs and constraints of the rhetorical situation.[14]

In this article, I seek to inform and educate lawyers, judges, law students, and law professors about the need to become more visually literate in this contemporary visual, digital world of law practice, and then further to explain and demonstrate that visual literacy requires not only the ability to read and comprehend visual works, but also the skill to design works and critically analyze the meaning and implications of works offered by others. This article performs an analysis of examples of one mode of visual legal communication: diagrammatics and the visualization of legal data and other information in legal instruments and communications.[15] By legal data and information, I mean facts, processes, procedures, timelines and time periods, statistics, mathematical calculations, accounting, formulas, the quantitative and qualitative analysis of research, interviews, polls, surveys, and other scientific information.[16] My method of analysis[17] will examine diagrammat-

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Stefania Passera, Anssi Smedlund & Marja Liinasuo, *Exploring Contract Visualization: Clarification and Framing Strategies to Shape Collaborative Business Relationships*, 2 J. STRATEGIC CONTRACTING & NEGOT. 69 (2016); Robert Waller et al., *Cooperation Through Clarity: Designing Simplified Contracts*, 2 J. STRATEGIC CONTRACTING & NEGOT. 48 (2016); Thomas D. Barton, Gerlinde Berger-Walliser & Helena Haapio, *Visualization: Seeing Contracts for What They Are, and What They Could Become*, 19 J. L. BUS. & ETHICS 55, 57 (2011).

13. *E.g.,* Ayelet Sela, *E-Nudging Justice: The Role of Digital Choice Architecture in Online Courts*, 2019 J. DISP. RESOL. 127, 138–55 (2019); Ronald W. Staudt & Paula L. Hannaford, *Access to Justice for the Self-Represented Litigant: An Interdisciplinary Investigation by Designers and Lawyers*, 52 SYRACUSE L. REV. 1017, 1036–46 (2002).

14. Leigh Hunt Greenhaw, *To Say What the Law Is: Learning the Practice of Legal Rhetoric*, 29 VAL. U. L. REV. 861, 875–82 (1995); Michael D. Murray, *Visual Rhetoric: Topics of Invention and Arrangement and Tropes of Style*, 21 LEGAL WRITING: J. LEGAL WRITING INST. 185, 187 (2016) [hereinafter Murray, *Visual Rhetoric: Topics and Tropes*]; Michael D. Murray, *The Ethics of Visual Legal Rhetoric*, 13 LEGAL COMM. & RHETORIC: JALWD 107, 111 (2016) [hereinafter Murray, *Ethics of Visual Legal Rhetoric*]. *See also* Lloyd Bitzer, *The Rhetorical Situation*, 1 PHIL. & RHETORIC 1, 1–14 (1968), *reprinted in* CONTEMPORARY THEORIES OF RHETORIC 381, 384 (Richard L. Johannesen ed., 1971).

15. I acknowledge that contracts and transactional materials most often contain information that is not "law" nor "legal data" and therefore not normally thought of as a "legal communication." However, my aim is to discuss the contents of contracts as legal instruments, to be considered as a whole, and efforts to communicate the non-law matters through visuals also will improve the reader's access to and comprehensibility of the instrument as a whole. *See, e.g.,* Mitchell, *supra* note 12, at 821–22.

16. *See id.*; Murray, *Visual Rhetoric: Topics and Tropes*, *supra* note 14, at 210–11.

ics in legal instruments and communications through the lens of visual literacy studies,[18] visual rhetoric,[19] and mise en scène principles.[20] Specifically, for each example, I will employ the following methodology that I have created for the analysis of visual legal works[21]:

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17. I will employ the method of analysis described in Michael D. Murray, *A New Methodology for the Analysis of Visuals in Legal Works* 7–10 (forthcoming 2021), https://ssrn.com/abstract=3657663 [hereinafter Murray, *New Methodology for Analysis of Visuals*]. This method is used in each of my current works, Michael D. Murray, *Cartoon Contracts and the Proactive Visualization of Law* 16 U. MASS. L. REV. (forthcoming 2020), https://ssrn.com/abstract=3502568 [hereinafter Murray, *Cartoon Contracts*]; and Michael D. Murray, *Toward a More Universal Visual Language of Law* (forthcoming 2021) [hereinafter Murray, *Toward a Universal Visual Language*].

18. On visual literacy studies, *see, e.g.,* AMY K. ANDERSON, IMAGE/TEXT AND TEXT/IMAGE: REIMAGINING MULTIMODAL RELATIONSHIPS THROUGH DISSOCIATION 48 (2014), https://uknowledge.uky.edu/english_etds/11/ (unpublished Ph.D. dissertation, University of Kentucky); David S. Birdsell & Leo Groarke, *Toward a Theory of Visual Argument*, 33 ARGUMENTATION AND ADVOCACY, Summer 1996, at 1, 5 (1996); Murray, *Cartoon Contracts, supra* note 17, at 9–12; Murray, *Toward a Universal Visual Language, supra* note 17, at 19–21.

19. *See, e.g.,* Lucille A. Jewel, *Through a Glass Darkly: Using Brain Science and Visual Rhetoric to Gain a Professional Perspective on Visual Advocacy*, 19 S. CAL. INTERDISC. L.J. 237, 264–66, 269 (2010); Murray, *Visual Rhetoric: Topics and Tropes, supra* note 14, at 186, 193–200; Murray, *Ethics of Visual Legal Rhetoric, supra* note 14, at 108, 124–30, 142, 146, 149, 152–54; Richard K. Sherwin et al., *Law in the Digital Age: How Visual Communication Technologies are Transforming the Practice, Theory, and Teaching of Law*, 12 B.U. J. SCI. & TECH. L. 227, 260 (2006); Richard K. Sherwin, *A Manifesto for Visual Legal Realism*, 40 LOY. L.A. L. REV. 719 (2007); Kathryn M. Stanchi, *The Power of Priming in Legal Advocacy: Using the Science of First Impressions to Persuade the Reader*, 89 OR. L. REV. 305 (2010).

20. Mise en scène literally translates from the French as "setting the stage" in the sense of staging or placing a scene in a production, but with regard to visual media of all kinds, it refers to the elements of authorship of a visual, including framing, composition, perspective and point of view, lighting, and visual design. *See* MICHAEL ASIMOW & SHANNON MADER, LAW AND POPULAR CULTURE: A COURSE BOOK 11, 14 (2007); DAVID BORDWELL & KRISTIN THOMPSON, FILM ART: AN INTRODUCTION 112 (8th ed. 2008); TIMOTHY CORRIGAN & PATRICIA WHITE, THE FILM EXPERIENCE: AN INTRODUCTION 64 (3d ed. 2012); JILL MARSHALL & ANGELA WERNDLY, THE LANGUAGE OF TELEVISION 84 (2002); Gabe Moura, *Mise-en-Scène*, ELEMENTS OF CINEMA BLOG AND PODCAST (July 1, 2014), http://www.elementsofcinema.com /directing/mise-en-scene-in-films/; Michael D. Murray, *Mise en Scène and the Decisive Moment of Visual Legal Rhetoric*, 68 U. KAN. L. REV. 241, 251–58 (2019) [hereinafter Murray, *Mise en Scène*]; Kimberlianne Podlas, *The Tales Television Tells: Understanding the Nomos Through Television*, 13 TEX. WESLEYAN L. REV. 31, 41 (2006).

21. Murray, *New Methodology for Analysis of Visuals, supra* note 17, at 7–11.

Methodology for Analysis of Visuals in Legal Works	
Step	Description
A	**Immediate Visual Context**
1.	**Analysis of Meaning**
2.	**Taxonomy of Purpose and Function**
B	**Immediate Verbal Context**
C	**Visual Cultural Context**
D	**Mise en Scène and the Rhetorical Topic of Arrangement**
E	**Visual Rhetoric and the Ethical and Professional Propriety of the Work**

A.   Immediate Visual Context

Immediate visual context analysis examines the visual, non-verbal contents of the work as a whole and their placement with other visual components of the work. This step (and the terminology of "immediate visual context") is derived directly from visual literacy studies.[22] The analysis of immediate visual context has two parts: (1) an analysis of the meaning of the visuals in the work, and (2) the placement of the visuals within a taxonomy of function and purpose for visuals in a multimodal work (e.g., a work that includes both text and images).[23]

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22. *See* ANN MARIE SEWARD BARRY, VISUAL INTELLIGENCE: PERCEPTION, IMAGE, AND MANIPULATION IN VISUAL COMMUNICATION 15 (1997); Sabrina Bresciani, *Do You See What I See? The Effect of Culture on the Reception of Visual Communication*, *in* THEORETICAL TURBULENCE IN INTERCULTURAL COMMUNICATION STUDIES 82 (Saila Poutiainen ed. 2014); DONIS A. DONDIS, A PRIMER OF VISUAL LITERACY 18 (1973); TIMOTHY GANGWER, VISUAL IMPACT, VISUAL TEACHING: USING IMAGES TO STRENGTHEN LEARNING 24 (2009); Nevzat Özel, *Developing Visual Literacy Skills Through Library Instructions*, *in* INFORMATION VISUALIZATION TECHNIQUES IN THE SOCIAL SCIENCES AND HUMANITIES 37 (Veslava Osinska & Grzegorz Osinski eds., 2018); Glenda Rakes, Thomas A. Rakes, Lana Smith, *Teaching Visual Literacy in a Multimedia Age*, 43 TECHTRENDS 14–18 (1999); COLIN WARE, INFORMATION VISUALIZATION: PERCEPTION FOR DESIGN 2–6 (2d. ed. 2012). On the foundations of visual literacy, *see* John L. Debes, *Some Foundations for Visual Literacy*, 13 AUDIOVISUAL INSTRUCTION 961–64 (1968); John L. Debes, *The Loom of Visual Literacy*, 14 AUDIOVISUAL INSTRUCTION 27 (1969).

23.   Murray, *New Methodology for Analysis of Visuals*, *supra* note 17, at 7–24.

1.　*Analysis of Meaning*

In each example, I will attempt to discern as nearly as possible the plain meaning and message of the visual within the context of the discourse or narrative of the work in which it appears.[24] It is appropriate to apply a plain meaning analysis to visuals in contracts, transactional documents, and other legal works.[25] As stated by Professor Elizabeth Porter, "[t]he plain meaning rule comes as close as possible to representing the current prevailing interpretive method for images in law."[26] The plain meaning rule also applies to litigation documents including exhibits[27] and photographic and audiovisual works submitted in a legal proceeding.[28]

Nevertheless, with visuals, sometimes the meaning is more obvious than at other times. Visuals have a great capacity for communication, but because the full interpretation of a visual often relies on a viewer's visual cultural experience[29], the analysis should look for more subtle, sometimes nuanced, and sometimes ambiguous meanings.[30] Where the meaning appears to be ambiguous, or even contradictory from the text, I will note the ambiguity or the contradiction.[31]

24.　Murray, *New Methodology for Analysis of Visuals*, *supra* note 17, at 8–9, 15.

25.　*See* United States v. Corp, 668 F.3d 379, 389 (6th Cir. 2012) ("[T]he court must determine, based on the contents within the four corners of the image, [what] the circumstances being portrayed are . . . ."); Leader Commc'ns, Inc. v. Fed. Aviation Admin., 757 Fed. App'x 763, 770 (10th Cir. 2018) (applying plain meaning rule to "graphics, illustrations, and charts" in contract proposals).

26.　Elizabeth G. Porter, *Taking Images Seriously*, 114 COLUM. L. REV. 1687, 1778 (2014). *See also* James Durling, *Diagramming Interpretation*, 35 YALE J. ON REG. 325, 334–35 (2018) ("Courts may . . . diagram a contractual provision to establish a contract's plain meaning . . . .").

27.　Griffin Industries, Inc. v. Irvin, 496 F.3d 1189, 1206, 1210 (11th Cir. 2007); Ginsberg v. Lennar Fla. Holdings, Inc., 645 So. 2d 490, 494 (Fla. 3d Dist. Ct. App. 1994).

28.　*E.g.,* Scott v. Harris, 550 U.S. 372, 380–81 (2007) (lower court "should not have relied on such visible fiction; it should have viewed the facts in the light depicted by the videotape.").

29.　*Infra* Section IC.

30.　This "multiplication of meanings" is discussed in ROLAND BARTHES, IMAGE-MUSIC-TEXT 17–20 (1977), and JOHN BATEMAN, TEXT AND IMAGE: A CRITICAL INTRODUCTION TO THE VISUAL/VERBAL DIVIDE 5–49 (2014).

31.　*See* Mitchell, *supra* note 12, at 837–39 (discussing potential ambiguities in images in legal documents); Naomi Mezey, *The Image Cannot Speak for Itself: Film, Summary Judgment, and Visual Literacy*, 48 VAL. U. L. REV. 1, 2–15 (2013) (same). "Ambiguity" is used narrowly here as a label for messages in visual elements that send two or more non-complementary meanings that potentially could cause confusion or doubt as the meaning of the visual elements.

2. Taxonomy of Purpose and Function

This part of the analysis builds on earlier works that have created a taxonomy for the function and purpose of visuals within the overall work as a whole.[32] The point of a taxonomy is to explore the role of images in relationship to the text when the design of the work incorporates images in conjunction with text.[33] The taxonomy I am employing was developed by Marsh and Domas White,[34] and it was further refined in the form of the following concept map by Annola, Haapio, and Koskela[35]:

Concept map of the Relationships of Images to Text in Multimodal Works

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32. Emily E. Marsh & Marilyn Domas White, *A Taxonomy of Relationships Between Images and Text*, 59 J. OF DOCUMENTATION 647 (2003). Professors Vesa Annola, Helena Haapio, and Merja Koskela have created a very useful concept map visualization of the Marsh-Domas White taxonomy, in Vesa Annola, Helena Haapio & Merja Koskela, *Interpreting Images in Contracts*, pp. 5–6, draft chapter for RESEARCH HANDBOOK ON CONTRACT DESIGN (Edward Elgar, forthcoming 2021) (draft on file with author).

33. On the role and function of images in multimodal communication, *see generally* BARTHES, *supra* note 29, at 39–41; BATEMAN, TEXT AND IMAGE, *supra* note 29, at 5–49; JOHN BATEMAN, JANINA WILDFEUER, TUOMO HIIPPALA, MULTIMODALITY: FOUNDATIONS, RESEARCH AND ANALYSIS – A PROBLEM-ORIENTED INTRODUCTION 47–51 (2017); GUNTHER KRESS & THEO VAN LEEUWEN, READING IMAGES: THE GRAMMAR OF VISUAL DESIGN 15–18 (2006); GUNTHER KRESS & THEO VAN LEEUWEN, MULTIMODAL DISCOURSE: THE MODES AND MEDIA OF CONTEMPORARY COMMUNICATION (2001).

34. Marsh & Domas White, *supra* note 32, at 666–72.

35. Annola, Haapio & Koskela, *supra* note 32, at 6.

As will be demonstrated in the analysis of the examples below, the use of this concept map to categorize the roles and functions of images prompts the viewer to engage in a more careful analysis of the impact of the visuals on the message of the work. An image or series of images might play several functions,[36] such as *Exemplifying, Describing, Using Graphs, Emphasizing,* or *Contrasting* parts of the message of the text. This "meaning multiplication" explains in part the power and flexibility of multimodal communication.[37]

B.   Immediate Verbal Context

The term "immediate verbal context" also comes from visual literacy studies,[38] and it refers to the examination of the words of the work and how dependent the communication of the meaning and message of the work is on words separate from any visual elements.[39] Almost all legal works in any category—contracts, instruments, litigation documents, legal sources, informational materials—are highly dependent on words in addition to images.[40] The analysis first evaluates the meaning of the words themselves, anticipating any potential language or cultural difficulties regarding the anticipated audiences of the work.[41] Second, the analysis considers the entire work, words and images, in light of common goals and methods of Proactive Law and Legal Design (accessibility, illustration, simplification, engagement, inclusiveness).[42]

A completely visual, non-verbal legal instrument would most likely have to be extremely limited and simplified in its terms.[43] Multimodal communication using words and images in the same work has become the norm in contemporary media and is becoming more common in legal communication, as in the examples of legal works examined here in this Article. There-

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36.   Marsh & Domas White, *supra* note 32, at 652.

37.   *See* BATEMAN, TEXT AND IMAGE, *supra* note 30, at 5–49; Julia Kruk et al., *Integrating Text and Image: Determining Multimodal Document Intent in Instagram Posts*, Proceedings of the 2019 Conference on Empirical Methods in Natural Language Processing and the 9th International Joint Conference on Natural Language Processing 4622, 4624–26, 4630 (2019), https://www.aclweb.org/anthology/D19-1469.pdf.

38.   *See* sources cited *supra* note 22.

39.   Murray, *New Methodology for Analysis of Visuals*, *supra* note 17, at 9, 15.

40.   Gerlinde Berger-Walliser, Thomas D. Barton & Helena Haapio, *From Visualization to Legal Design: A Collaborative and Creative Process*, 54 AM. BUS. L.J. 347, 349–50, 372–73 (2017).

41.   *See* Murray, *New Methodology for Analysis of Visuals*, *supra* note 17, at 9, 15.

42.   *See* sources cited *supra* notes 2–4.

43.   *See* Murray, *Cartoon Contracts, supra* note 17, at 38–42.

fore, the analysis of immediate verbal context in addition to immediate visual context will be required in every example examined in this article.[44]

C.   Visual Cultural Context

The "visual cultural context" of a legal work also is a concept of visual literacy studies,[45] and a significant strand of the theory originates in the work of media theorists Marshall McLuhan and Quentin Fiore.[46] The concept has been expanded by sociologists who discuss the concept of a global "visual commons" where worldwide media allows the same or a very similar cultural experience of visuals and audiovisual sources for many people across the globe.[47] What this means for the analysis of visual cultural context for visual works in legal works is that the full interpretation and appreciation of a visual in a legal work may depend in part on the viewer's cultural experience.[48]

The concept of visual cultural experience contributing to cognition connects the analysis with the lessons of Gestalt psychology regarding the perception and cognition of visual media, wherein a viewer's life experience allows the person to expand the meaning and message of static media into a more complete narrative,[49] and contributes to the understanding of the con-

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44.   *See generally* JOHN A. BATEMAN, MULTIMODALITY AND GENRE: A FOUNDATION FOR THE SYSTEMATIC ANALYSIS OF MULTIMODAL DOCUMENTS (2008); GUNTHER KRESS & THEO VAN LEEUWEN, MULTIMODAL DISCOURSE: THE MODES AND MEDIA OF CONTEMPORARY COMMUNICATION 20 (2001); GUNTHER KRESS & THEO VAN LEEUWEN, READING IMAGES: THE GRAMMAR OF VISUAL DESIGN 177 (2d ed. 2006); Joddy Murray, *Composing Multimodality*, *in* MULTIMODAL COMPOSITION: A CRITICAL SOURCEBOOK (Claire Lutkewitte, ed. 2013); Ticien M. Sassoubre, *Visual Persuasion for Lawyers*, 68 J. LEGAL EDUC. 82, 91 (2018).

45.   *See* VISUAL CULTURE: IMAGES AND INTERPRETATIONS (Norman Bryson, Michael Ann Holly & Keith Moxey eds., 1994); MARGARITA DIKOVITSKAYA, VISUAL CULTURE: THE STUDY OF THE VISUAL AFTER THE CULTURAL TURN 47–84 (2005); CHRIS JENKS, VISUAL CULTURE (2017); NICHOLAS MIRZOEFF, HOW TO SEE THE WORLD 94–97 (2015); NICHOLAS MIRZOEFF, AN INTRODUCTION TO VISUAL CULTURE 1–31 (1999).

46.   MARSHALL MCLUHAN, UNDERSTANDING MEDIA: THE EXTENSIONS OF MAN xii-xiii (1964); MARSHALL MCLUHAN & QUENTIN FIORE, THE MEDIUM IS THE MASSAGE 63 (1968).

47.   *See* NICHOLAS MIRZOEFF, HOW TO SEE THE World 94–97 (2015); Nicholas Mirzoeff, *The Visual Commons: Counter-Power in Photography From Slavery to Occupy Wall Street*, *in* IMAGE OPERATIONS: VISUAL MEDIA AND POLITICAL CONFLICT (Jens Eder & Charlotte Klonk eds., 2016); Jussi Parikka, *The City and the City: London 2012 Visual (Un)Commons*, *in* POSTDIGITAL AESTHETICS: ART, COMPUTATION AND DESIGN 203–18 (David M. Berry & Michael Dieter eds., 2012).

48.   *See* sources cited, *supra* notes 45, 47.

49.   *See* RUDOLF ARNHEIM, ART AND VISUAL PERCEPTION: A PSYCHOLOGY OF THE CREATIVE EYE 4–6 (2004); E. BRUCE GOLDSTEIN, COGNITIVE PSYCHOLOGY: CONNECTING MIND, RESEARCH AND EVERYDAY EXPERIENCE 64, 71–72 (2014); Lisa Graham, *Gestalt Theory in Interactive Media Design*, 2 J. HUMANITIES & SOC. SCI. 1–2 (2008), https://pdfs. semanticscholar.org/4719/da4f55d4a4633b7f81ca1eea5571c5364504.pdf;   BRUNO

noted messages of the work.[50] This mental process is both immediate and unconscious. The Gestalt theory meshes with the findings of Nobel Prize winning psychologist Daniel Kahneman, who has described the speed of the non-cognitive functioning of the brain (referred to as the system 1 brain), which perceives visual information and immediately forms complete stories, impressions, and judgments about the input even with little or no background or contextual information.[51] Therefore, in this step of the analysis, works will be analyzed in light of the probable community and societal context of the target audiences of the work, which will influence the perception and interpretation of images.[52]

The works examined in this Article are graphical charts, tables, and diagrams, which may require the viewer to have had some exposure to the standard methods of visualization of data and other information in the modern world. Most examples are not highly pictorial,[53] but they do rely on the experience and knowledge of stock features of illustration and diagrammatics, such as the sequence and progression of panels in a multi-panel work (e.g., a comic strip), or the general flow of a timeline or decision tree in an infographic.[54] Some comics, cartoons, or illustrations used in the works here contain visually coded messages[55] that require the viewer to tap into the visual culture of images to make sense of the visual and multimodal communication of the work.[56]

D.   Mise en Scène and the Rhetorical Topic of Arrangement

Visualization in legal works is closely associated with the rhetorical topic of arrangement, and this is particularly true with the subject matter of this article, diagrammatics and the visualization of legal information.[57] In

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PETERMANN, THE GESTALT THEORY AND THE PROBLEM OF CONFIGURATION 29-39 (1999); PAUL THAGARD, COHERENCE IN THOUGHT AND ACTION 58–59 (2002).

50.   *See* BARTHES, *supra* note 30, at 17–20.

51.   DANIEL KAHNEMAN, THINKING, FAST AND SLOW 20–21, 50–52, 86–87, 93–95, 138–40, 211-12 (2013) (The processes are variously described as "associative coherence," "jumping to conclusions," the "What you see is all there is" effect, the "mental shotgun," and the "illusion of validity."). Note that Kahneman is not a Gestalt theorist, and he is not describing his experiments leading to the findings reported in his book as contributing to Gestalt psychology. Nevertheless, I have observed that the topics discussed in visual cultural context represent a great overlap in the concepts of Gestalt theory and "System 1 Brain" theory as expressed by Kahneman.

52.   *See* sources cited *supra* notes 45, 47.

53.   *But see infra* Example 4.

54.   *E.g., infra* Example 5.

55.   *E.g., infra* Example 4.

56.   *See* sources cited *supra* note 18.

57.   This step of the analysis will look at the "arrangement" aspects of visualization in legal works. It is possible that data itself or a comparison or analysis of information might be

classical rhetoric, the topic of *arrangement* (Latin *dispositio*; Greek *taxis*) pertains to the order and design of the discourse for proper communication and acceptance of the meaning and implications of the discourse.[58] Arrangement is driven by the context and purpose of the rhetorical situation.[59] Arrangement operates through two modes of *logos*-oriented communication and persuasion: the *Entechnic Pisteis* (Artistic) Modes and the *Atechnic Pisteis* or (Non-Artistic) Modes.[60] Put simply, artistic modes of arrangement are created (drafted, composed, or imagined) by the author, and non-artistic modes are not created by the author, but are found or identified by the author and employed in the discourse in furtherance of the author's goals.[61] Thus, the author may create her own charts, diagrams, maps, and illustrations of data, or use works created by others.

Mise en scène principles define superior vs. inferior works of visual communication in terms of their framing, composition, perspective, point of view, lighting, coloration, and other spatial and formal characteristics of the visual elements of the work, and their arrangement in juxtaposition with other elements of the work.[62] Therefore, this step of the analysis will look at the mise en scène elements of the images as well as their placement and arrangement within the overall work.

E.   Visual Rhetoric and the Ethical and Professional Propriety of the Work

The analysis of visual rhetoric considers the efficacy of the rhetorical topics and tropes used, particularly, topics of invention and arrangement and

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determined to be "the best available means of communication and persuasion" in a rhetorical situation, and thus the presentation of the data or information might be categorized as a rhetorical topic of invention. *Invention* (Latin *inventio,* Greek *heuristic* (Ευρετική)) parallels and overlaps arrangement, and includes the same categorial breakdown of the modes of argument and persuasion that are invented or created by the author—the *entechnic pisteis* or "artistic" or "artificial" proofs known as *logos, pathos*, and *ethos*—and the modes of argument and persuasion that the author does not or cannot invent, but that are discovered or found—the *atechnic pisteis* or "non-artistic" or "non-artificial" proofs, which include facts and data, statistics and reports, documents and contracts, sworn testimony (including expert testimony), interviews, polls, and surveys. Murray, *Visual Rhetoric: Topics and Tropes, supra* note 14, at 202. The substantive content reported or depicted in a visualization will be analyzed in step one (Visual Context) and step five (Visual Rhetoric, Ethics and Professionalism).

58. EDWARD P.J. CORBETT & ROBERT J. CONNORS, CLASSICAL RHETORIC FOR THE MODERN STUDENT 20 (4th ed. 1999); Michael Frost, *Introduction to Classical Legal Rhetoric: A Lost Heritage*, 8 S. CAL. INTERDISC. L.J. 613, 618–19 (1999); Murray, *Visual Rhetoric: Topics and Tropes*, *supra* note 14, at 211.

59. *See* sources cited *supra* note 14.

60. Murray, *Visual Rhetoric: Topics and Tropes, supra* note 14, at 202.

61. Murray, *Visual Rhetoric: Topics and Tropes*, *supra* note 14, at 202, 211.

62. *See generally* Murray, *Mise en Scène, supra* note 20.

tropes of style of visual communication or visual argumentation.[63] An effective communication is dependent on four elements working in conjunction: the Speaker, the Message, the Audience, and the Context for the communication.[64] This step of the analysis will discuss each element of the communication that is relevant to determining the potential efficacy and propriety of the design of the work. For example, it is critical to understand the intended audiences for a legal work because a multimodal visual work of a certain style may work well for one audience (e.g., courts and other tribunals, or government agencies), but not others (e.g., parties with no legal representation, or clients with limited verbal literacy skills).

In this step of the analysis, I have added a special focus on ethics and professionalism. The phrase "ethical and professional propriety" refers to *ethos,* which is a classic term in rhetoric to refer to the good will, fairness, credibility, and integrity communicated by a work, but the term is no less apt a label for the positive or negative effects on communication that might be wrought by applications of images in a work. In other words, a careful, thoughtful, and highly professional application will boost the *ethos* credibility of a work and its author, but a careless, thoughtless, improperly motivated, or deceptive application will detract from the *ethos* credibility of the work and its author.[65]

II. VISUALIZATION OF INFORMATION IN LEGAL AND NON-LEGAL WORKS

This section will apply the methodology to analyze several multimodal works. The initial example is non-legal in nature, but it is a fairly famous example of diagrammatics, and the application of the methodology to its analysis should reveal lessons about visualization that are relevant to all examples. After Example 1, the examples involve the communication of

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63.   Murray, *Visual Rhetoric: Topics and Tropes*, *supra* note 14, at 201–18.

64.   *See* Lloyd F. Bitzer, *The Rhetorical Situation*, 1 PHIL. & RHETORIC 1, 6–8 (1968); JAMES L. KINNEAVY, A THEORY OF DISCOURSE: THE AIMS OF DISCOURSE 19 (1971); Michael D. Murray, *After the Great Recession: Law and Economics' Topics of Invention and Arrangement & Tropes of Style*, 58 LOY. L. REV. 897, 900–01 (2012); Michael D. Murray, *The Great Recession and the Rhetorical Canons of Law and Economics*, 58 LOY. L. REV. 615, 632 (2012) [hereinafter Murray, *The Great Recession*]; Murray, *Mise en Scène*, *supra* note 20, at 248–50; JAKOB WISSE, ETHOS AND PATHOS FROM ARISTOTLE TO CICERO 7–8 (1989).

65.   *See* Derek H. Kiernan-Johnson, *The Potemkin Temptation or, the Intoxicating Effect of Rhetoric and Narrativity on American Craft Whiskey*, 15 LEGAL COMM. & RHETORIC: JALWD 1, 36–37 (2018); Murray, *The Great Recession, supra* note 64, at 634–35; Murray, *Visual Rhetoric: Topics and Tropes, supra* note 14, at 214; Michael D. Murray, *Rule Synthesis and Explanatory Synthesis: A Socratic Dialogue Between IREAC and TREAT,* 8 LEGAL COMM. & RHETORIC: JALWD 217, 236 (2011) [hereinafter Murray, *Rule Synthesis and Explanatory Synthesis*].

legal information, and in several instances, the examples communicate legal rights, obligations, or restrictions of the law to their target audiences.

Example 1: Multimodal Diagram of Geographic, Numeric, Meteorological, and Time Data
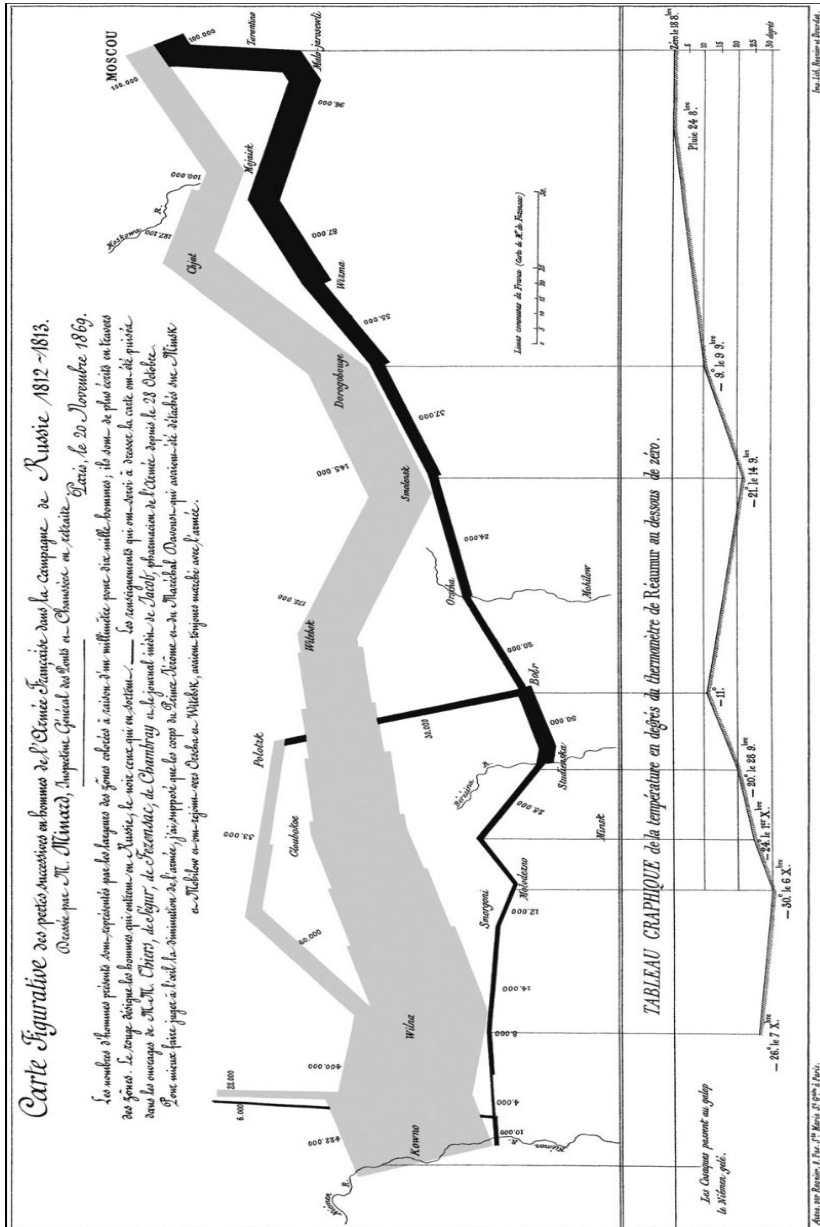
As a first example, consider the diagram on the following page (Carte Figurative, Russian Campaign 1812-1813) by Charles Joseph Minard[66] depicting the size of Napoleon's army marching to and from Moscow in 1812–1813.[67] This diagram was featured in Edward R. Tufte's work, *The Visual Display of Quantitative Information,*[68] as an excellent depiction of numeric data (troop count and temperature readings), as well as geography, a pathway of movement, and a timeline of a historic event. This chart tells a very powerful story about the effects of weather and geography (note the losses associated with each river crossing) on an army that went from 422,000 to 10,000 in a single campaign without losing a major field battle to its adversaries.[69]

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66. Charles Joseph Minard, Carte Figurative des pertes successives en hommes de l'armée française dans la campagne de Russie 1812–1813; Dressée par M. Minard, Inspecteur Général des Ponts et Chaussées en retraite. Paris, le 20 Novembre 1869 [Figurative Map of the successive losses in men of the French Army in the Russian campaign 1812–1813; Drawn up by M. Minard, Inspector General of Bridges and Roads in retirement. Paris, 20 November 1869.], https://commons.wikimedia.org/wiki/File:Minard.png.

67. This example is also presented and discussed in Murray, *Visual Rhetoric: Topics and Tropes*, *supra* note 14, at 212.

68. EDWARD R. TUFTE, THE VISUAL DISPLAY OF QUANTITATIVE INFORMATION 40 (1982), 176 (2d ed. 2001). The English translations of the French title, caption, and legend provided above are attributed to Edward Tufte and Dawn Finley. *Id.* at 40, 124; Frances Gagnon*, 13 Facts You Didn't Know About the Minard Map*, CHEZ VOILA INFORMATION DESIGN (Jul. 17, 2014), https://www.chezvoila.com/blog/minard-map.

69. The chart does not make any explicit notation to separately account for the field battles or casualties in combat, and only notes the losses by all causes: casualties of battle, disease, wounds, starvation, lack of fresh drinking water, desertion, drowning, and weather-related deaths. Of the causes, starvation and the lack of fresh drinking water are believed to be the greatest causes of the losses because the retreating Russians burned and destroyed all crops and food stores—and all towns and villages in the path of the French army, including Moscow itself—to deny their resources to the French when the French were advancing and subsequently retreating. *See* Lynch Bennett, *The Grand Failure: How Logistics of Supply Defeated Napoleon in 1812*, 1 PRIMARY SOURCE 1–2 (2011); Gagnon, *supra* note 68.

Carte Figurative des pertes successives en hommes de l'Armée Française dans la Campagne de Russie 1812–1813.

Dressée par M. Minard, Inspecteur Général des Ponts et Chaussées en retraite.

Paris, le 20 Novembre 1869.

TABLEAU GRAPHIQUE de la température en degrés du thermomètre de Réaumur au dessous de zéro.

Visual Context: The meaning of the visual elements of the work is that the gray (tan) area is meant to represent the army of 422,000 soldiers that crossed from Poland into Russia, and the dark black area is the army, then numbering 100,000 soldiers, that retreated from Moscow, of which 10,000 soldiers eventually made it back to Poland. The black area is charted above the temperature recordings during the retreat, intended to be read from right to left. In the **taxonomy** of function and purpose, the visual elements have a function of *Describing, Isolating, Using Graphs, Opening Perspective, Comparing, Being Parallel,* and *Condensing* in the category of functions having a close relationship to the text. It is arguable that, as explained below, the work also has a function of *Eliciting Emotion* and *Engaging* and *Motivating* the viewer regarding an anti-war or anti-waste of human life position. It is noteworthy that depicting the loss of human lives in an area graph and numbers is a rather de-*Humanizing* effort. It takes some imagination on the part of the viewer to consider the bitter cold temperatures and the massive losses suffered from each river crossing and put a more human face on the data.

Verbal Context: In addition to the title, here translated to English: "Figurative Map of the successive losses in men of the French Army in the Russian campaign 1812–1813; Drawn up by M. Minard, Inspector General of Bridges and Roads in retirement," the chart also has a verbal caption and legend that, translated to English, reads: "The numbers of men present are represented by the widths of the colored zones at a rate of one millimeter for every ten-thousand men; they are further written across the zones. The red [now tan] designates the men who enter into Russia, the black those who leave it."[70] Because the juxtaposition of army size over time and distance, and temperature are not a typical pairing, and the fact that part of the chart (army size moving toward Moscow) is to be read left to right, but other parts of the chart (army size retreating from Moscow, and the temperatures on this retreat) are to be read right to left, means that the chart requires a significant amount of verbal information to allow the viewer to comprehend what is being depicted. Without this verbal information in the caption and legend,

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70. https://commons.wikimedia.org/wiki/File:Minard.png. The caption and legend, translated to English, goes on to say: "The information which has served to draw up the map has been extracted from the works of M. M. Thiers, of Segur, of Fezensac, of Chambray, and the unpublished diary of Jacob, pharmacist of the army since October 28th. In order to better judge with the eye the diminution of the army, I have assumed that the troops of Prince Jerome and of Marshal Davoush who had been detached at Minsk and Moghilev and have rejoined around Orcha and Vitebsk, had always marched with the army. The scale is shown on the center-right, in "lieues communes de France" (common French league) which is 4444 m (2.75 miles). The lower portion of the graph is to be read from right to left. It shows the temperature on the army's return from Russia, in degrees below freezing on the Réaumur scale. (Multiply Réaumur temperatures by 1¼ to get Celsius, e.g. −30 °R = −37.5 °C). At Smolensk, the temperature was −21° Réaumur on 14 November."

viewers would not be able to understand the information depicted, nor draw from it any lessons regarding the depletion of an army from causes other than combat.

Visual Cultural Context: The chart is graphical, and not largely pictorial or representational, and so does not rely on common cultural depictions and illustrations from our collective "visual cultural commons."[71] Once the text is understood, and the general conceit of the map to show geographic, numeric, meteorological, and time data all on the same chart is further understood, then the viewer can comprehend the information shown.

Mise en Scène and Arrangement: The Minard chart is justifiably famous because it communicates so much information in a fairly easy to follow graphical format once the viewer understands the design principles and the presentation of content.

Visual Rhetoric, Ethics and Professionalism: Charles Joseph Minard, Inspector General of Bridges and Roads in retirement, turned in a very clever and professionally created chart of the losses during the Russian Campaign. Once the design is understood, the chart is both accessible and convincing in its detail and clever arrangement of information. The Minard chart also is famous for making a visual argument without explicit words. Although it presents straight numbers of troops represented graphically and on a combined time-geography-temperature pathway, in the Gestalt of the chart, the dwindling size of the army marked on a pathway of advance and retreat expresses a message about the consequences of warfare. The Minard map reports information about a historical event, drawing attention to the magnitude of the losses suffered. Tufte called it an "anti-war map" because of the way it stresses the catastrophic human losses above and to the exclusion of all other information about the Russian campaign.[72]

Turning to legal examples, the next examples will communicate information about the law or legal system in a graphical diagrammatic format. The examples below will begin with fairly simple charts, and continue to examples employing a pathway or flowchart (sometimes formed as a decision tree), swimlanes,[73] graphs, pictographs (i.e., icons) and ideographs (i.e.,

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71. On the concept of a "global village" and "visual cultural commons" as an aspect of visual culture created by contemporary world media, s*ee, e.g.,* MARSHALL MCLUHAN, UNDERSTANDING MEDIA: THE EXTENSIONS OF MAN xii–xiii (1964); MARSHALL MCLUHAN & QUENTIN FIORE, THE MEDIUM IS THE MASSAGE 63 (1968); NICHOLAS MIRZOEFF, AN INTRODUCTION TO VISUAL CULTURE 1–31 (1999); VISUAL CULTURE: IMAGES AND INTERPRETATIONS (NORMAN BRYSON, MICHAEL ANN HOLLY, & KEITH MOXEY, EDS. 1994); MARGARITA DIKOVITSKAYA, VISUAL CULTURE: THE STUDY OF THE VISUAL AFTER THE CULTURAL TURN 47–84 (2005).

72. EDWARD R. TUFTE, BEAUTIFUL EVIDENCE 135 (2006).

73. Swimlanes or swimlane diagrams are a graphical device that show parallel but separated paths (lanes) for two entities. The lanes might contain a flowchart or a decision tree. In a contract, the swimlanes might be assigned to the parties in an ongoing relationship, punctu-

small symbolic visual metaphors),[74] or a multimodal approach, using a combination of text and visual media (photographs or pictures).[75] In the examples below, pictographs and ideographs generally are used in a meaningful way, not simply for decorative purposes.[76]
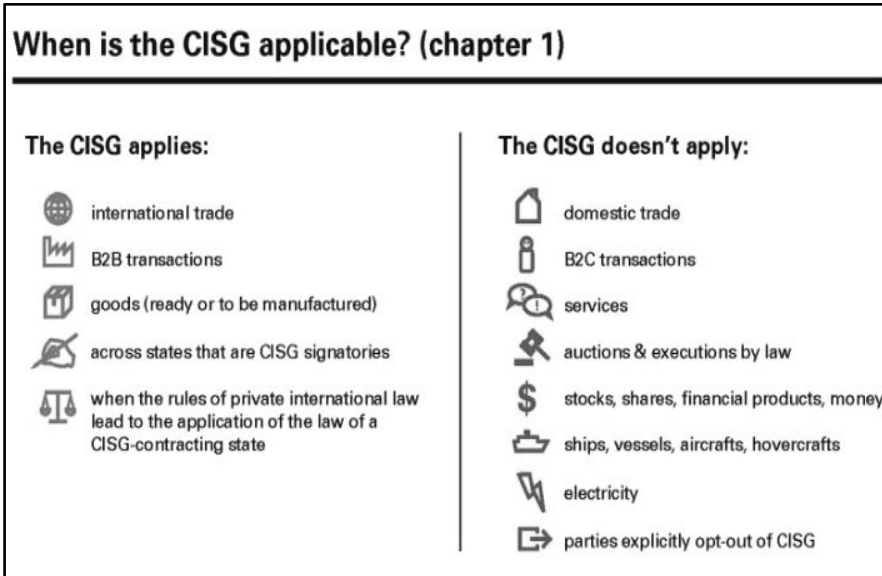
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ated by duties, responsibilities, events, or decision points, some of which are specific to one party and not the other, and others which are common to both where the relationships intersect or interact in a certain way. *See, e.g.,* Stefania Passera, *Flowcharts, Swimlanes, and Timelines – Alternatives to Prose in Communicating Legal-bureaucratic Instructions to Civil Servants*, 32 J. BUS. TECH. COM. 229, 239–41 (2018).

74. Pictographs or pictograms are iconic visualizations depicting the actual subject, be it a person, place, activity, or object, using simplified representations as symbolic imagery (For example, using an outline or silhouette of a padlock to represent an actual padlock). Ideographs or ideograms are one step more abstract than pictographs and attempt to visually communicate a concept or idea through a visual metaphor using a collage of symbols or shapes (For example, using an outline of a lock with a dollar sign on it, combined with an outline of a person whose hand is moving a key toward the lock to communicate the concept of "locking up your money" or "securing your investment"). Cambridge.org, *Pictograms and Ideograms*,   http://www.cambridge.org/features/linguistics/yule/downloads/sample_21.pdf (last visited Aug. 2, 2020); Ideograms, THE HISTORY OF VISUAL COMMUNICATION, https://www.historyofvisualcommunication.com/02-ideograms (last visited Aug. 2, 2020). *See also* Murray, *Toward a Universal Visual Language, supra* note 17, at 11.

75. Multimodal communication refers to communication through both words and images in the same work, and refers to works that might incorporate text, pictorial works, graphical devices and diagrams, hyperlinks to exterior content, audio, and audio-visual content. *See generally* JOHN A. BATEMAN ET AL., MULTIMODALITY AND GENRE: A FOUNDATION FOR THE SYSTEMATIC ANALYSIS OF MULTIMODAL DOCUMENTS (2008); GUNTHER KRESS & THEO VAN LEEUWEN, MULTIMODAL DISCOURSE: THE MODES AND MEDIA OF CONTEMPORARY COMMUNICATION 20 (2001); GUNTHER KRESS & THEO VAN LEEUWEN, READING IMAGES: THE GRAMMAR OF VISUAL DESIGN 177 (2d ed. 2006); Joddy Murray, *Composing Multimodality*, *in* MULTIMODAL COMPOSITION: A CRITICAL SOURCEBOOK (Claire Lutkewitte, ed. 2013); Ticien M. Sassoubre, *Visual Persuasion for Lawyers*, 68 J. LEGAL EDUC. 82, 90–91 (2018).

76. A "decorative" use of visual refers to a use on the continuum of decorative to transformative that pertains to uses of visuals that are extraneous to the analysis, and are only intended as eye candy to attract attention or perhaps make the work more attractive, as compared to transformative uses of visuals at the other end of the continuum that are highly effective at communicating the message of the legal communication. *See* Steve Johansen & Ruth Anne Robbins, *Art-iculating the Analysis: Systemizing the Decision to Use Visuals as Legal Reasoning*, 20 LEGAL WRITING: J. LEGAL WRITING INST. 57, 86–93 (2015); Murray, *Ethics of Visual Legal Rhetoric*, *supra* note 14, at 132-33. Transformative uses of visuals in a multimodal work potentially employ the Gestalt effect of allowing communication of a greater message than is communicated through the words or visual elements separately. Murray, *Mise en Scène*, supra note 20, at 296–97; Murray, *Toward a Universal Visual Language*, *supra* note 17, at 17–19, 26;sources cited *supra* note 22.

Example 2: Chart of When the Convention on Contracts for the International Sale of Goods (CISG) Applies to a Sale[77]

When is the CISG applicable? (chapter 1)

The CISG applies:
- international trade
- B2B transactions
- goods (ready or to be manufactured)
- across states that are CISG signatories
- when the rules of private international law lead to the application of the law of a CISG-contracting state

The CISG doesn't apply:
- domestic trade
- B2C transactions
- services
- auctions & executions by law
- stocks, shares, financial products, money
- ships, vessels, aircrafts, hovercrafts
- electricity
- parties explicitly opt-out of CISG

     Visual Context: This chart by a Legal Design Jam team that included legal design expert, Stefania Passera,[78] explains when the Convention on Contracts for the International Sale of Goods applies to a sale. The meaning of the visual content is that the chart shows two sides (labeled "Applies" – "Doesn't Apply") that divide conditions that trigger the application of the CISG from conditions that do not. Under the **taxonomy** of function and purpose, the chart plays a role of *Describing* and *Organizing* the message of the text. The pictographs (icons) are not *Decorative,* and instead are used to

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77. CISG Legal Design Group, *Visual CISG—A Prototype of Legal Information Design* (2013), http://legaldesignjam.com/wp-content/uploads/2016/03/visualCISG_booklet.pdf (© CISG Legal Design Jam Group @ Syros 2013); Licensing Disclaimer Graphic, CREATIVE COMMONS, http://creativecommons.org/licenses/by-nc-sa/3.0/) (last visited Dec. 22, 2020); Stefania Passera, *When is the CISG Applicable?* (CISG, Chapter 1), VISUALCISG (2013), https://stefaniapassera.com/portfolio/visualcisg/. The "VISUALCISG" was created in 2013 as part of a "Legal Design Jam" project at the Information Design Summer School in Syros, Greece. *See LDJ @ Syros Information Design Summer School*, LEGAL DESIGN JAM, http://legaldesignjam.com/syros_2013/ (last visited Nov. 22, 2020). The chart—"When is the CISG applicable?"—was the product of one working group; the projects of every group were collected in a prototype booklet called VISUAL CISG, cited above.

78. *See* Stefania Passera, Contract Design / Legal Design,_STEFANIAPASSERA.COM, https://stefaniapassera.com/project-type/legaldesign/; Stephanie Passera Portfolio, STEFANIAPASSERA.COM, https://stefaniapassera.com/portfolio (last visited Nov. 22, 2020). For information about the Legal Design Jam and the Visual CISG *see supra* note 77.

attract attention and *Engage* the viewer with the content.

Verbal Context: In this short chart, the actual message is communicated through words. The visual context makes the words more accessible and engaging. As noted above, the pictographs are meaningful, not decorative.[79] Some of the terms used are commercial or business jargon, such as B2B vs. B2C transactions (business to business, vs. business to consumer transactions). The general idea that there is an international convention on contracts for the sale of goods, what that means, and the implications of this law, of course are in-depth topics for those steeped in commerce and the legal culture, and they are not intended for the casual observer.[80]

Visual Cultural Context: Most of the icons chosen are recognizable depictions or symbols of the objects—globe (for international), lightning (for electricity), a gavel (for auction), a dollar sign (for monetary instruments), a ship (to represent ships and vessels excluded from CISG coverage). Others are less obvious and require the text to clarify the symbol—an outline of a house (for domestic trade), a factory (for B2B transactions), a round head on a slim cylinder (for B2C transactions), a hand holding a pen (for signatory nations of the CISG).

Mise en Scène and Arrangement: The CISG chart is a useful outline of the instances where the convention applies or does not apply, utilizing a simple but effective outline structure, and colorful yet meaningful icons to attract and engage the viewer.

Visual Rhetoric, Ethics and Professionalism: The CISG chart is smartly done and professional. For those desiring a quick reference on the application of the CISG, it should be effective and convincing.

Example 3 – Basic Graphs[81]

Visual Context: There are as many forms of graphs as there are ideas of what types of numbers or information should be reported graphically to improve viewers' access to and comprehension of the information. Visually, graphs are effective communication tools when they are not cluttered, when they do not try to communicate too many ideas in one graph, and when the

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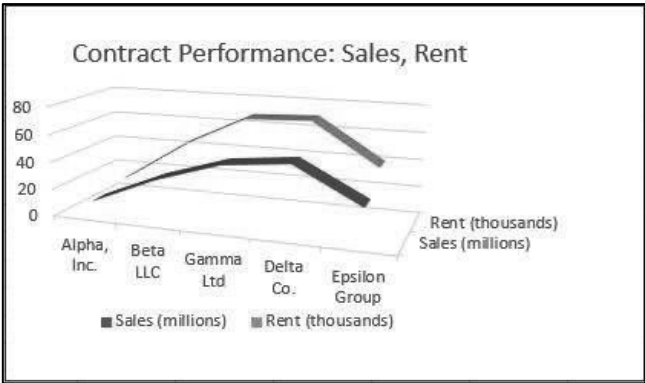
79. *See* sources cited *supra* note 77.

80. Of course, none of the examples in this article were designed for a "casual" observer, but it is important to note the audience for which a visualization is designed, and in this case, the chart most likely is designed for persons who at least have an awareness that they are engaging in purchase or sales contracts, and that there is a difference between international and domestic sales that might implicate a different set of laws.

81. Sources for first three graphs left to right: Amy Larson, *Hours per Lawyer Chart* (2011) (image on file with the author); ALM Intelligence, *Women in Law: A Summary of Statistics*, LEGAL MOSAIC (2019), https://www.legalmosaic.com/graph-1/ (last visited Jan. 17, 2021); Karen Sloan, *Women in the Legal Profession by Decade* (2019) (image on file with the author).

spatial or linear relationships or comparisons are instantly recognizable and understood without a great deal of textual explanation. The seven graphs below have different **meanings**. The first three report various information about the legal profession. The last four are different styles of graphs visualizing a report of contract performance tracking sales in conjunction with rents. [82] The **taxonomy** functions of the works include *Using Graphs*, of course, but also *Comparing,* and *Relating* the information presented.

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82. Sources of last four graphs: Michael D. Murray, *Four Graphical Renderings of Sales v Overhead Costs in Performance of a Contract* (2020). These graphs were created by the author for illustration purposes only. The first two of the four graphs, Sales & Rent, and Contract Term: Overhead Costs, also incorporate pictographs accessed through Microsoft Excel.

Verbal Context: Each graph above follows the general principle of less text is more, reserving text for the titles, legends, and labels of the information reported in the graphs.

Visual Cultural Context: Graphs are a commonly used form for visualization of data and other information, and should be recognized and understood by most viewers as graphs. If only one language is used for the verbal portions, then language and literacy barriers might remain in the compre-

hension of the verbal titles, legends, and labels used to identify the information reported in the graph.

Mise en Scène and Arrangement: I specifically chose the first three graphs of this example for the simplicity of their message and content, and because they each communicate their message well. They are not cluttered, and the text readily identifies the contents without excessive legal jargon. I created the four graphs that follow the first three to demonstrate different graphical methods that might be employed to communicate the same information. All four of my graphs are based on the same, very limited set of data. Each lacks an important component—"time," as in sale or rents over a specified time period—solely to keep the visuals simple and uncluttered.

Visual Rhetoric, Ethics and Professionalism: Graphs can be an effective visualization tool to communicate a discrete amount of information and still make important comparisons and contrasts to explain the information or open new perspectives on correlation or causation regarding the information reported. Graphs can be professional and effective, but as with other tools of visualization, the information and the lessons to be revealed should be honestly collected and reported so as to not obfuscate, distract, or distort the facts.

Example 4 – Illustrated Infographic (Flowchart, Pathway, Decision Tree, Timeline) on Immigration Law
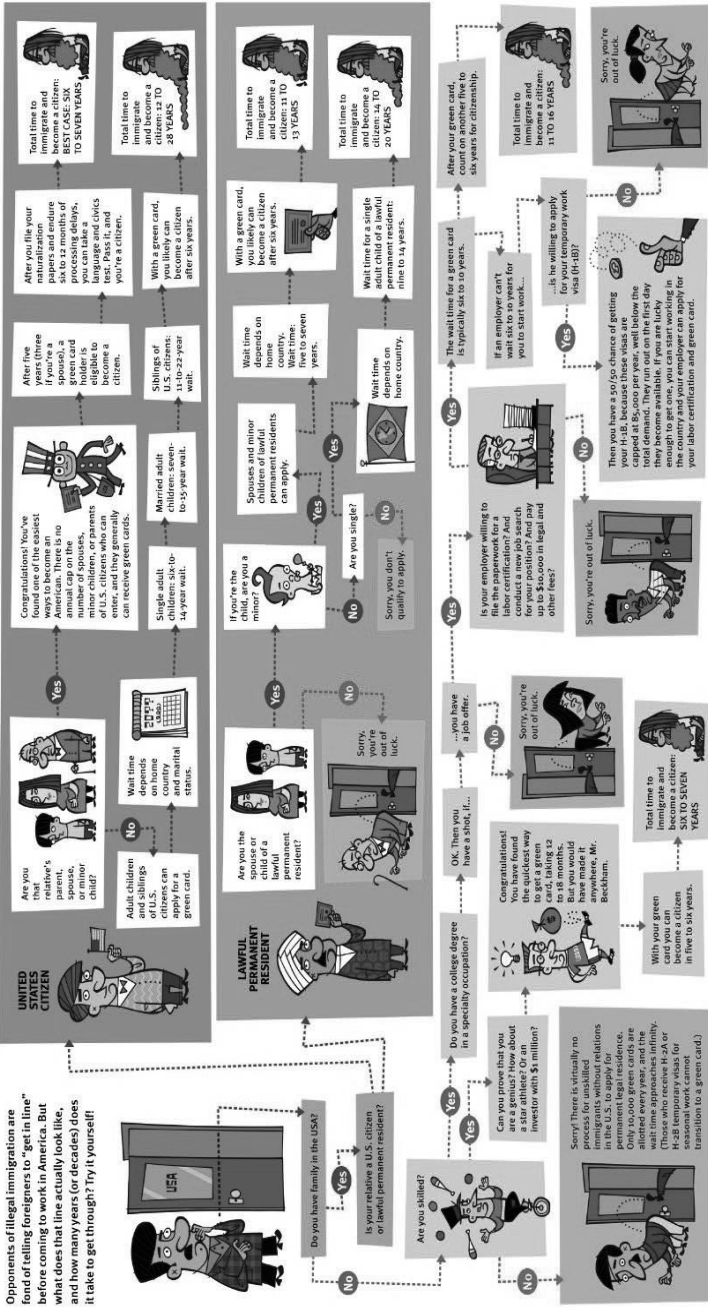
The work on the following page, *What Part of Legal Immigration Don't You Understand*[83]—is difficult to categorize because it incorporates elements of a flowchart, an information pathway, and a decision tree. I will call it an "illustrated infographic" because the pictorial elements—the artistic, cartoon-like depictions—are so integral to the overall look and feel of the work. There even is a sort of illustrated timeline where the different steps of immigration are presented in linear chronological order with a discussion of the time frame for various options, and each timeline is further illustrated by a repeated cartoon image of a man whose beard grows longer or shorter relative to the length of time of an immigration option.

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83. Mike Flynn, Shikha Dalmis, & Terry Colon, *What Part of Legal Immigration Don't You Understand?*, Reason (Oct. 2008), at 32–33, http://www.openlawlab.com/wp-content/uploads/2011/10/IMmigration-Law-Comic-Terry-Colon-Reason.jpg.

Visual Context: The **meaning** of the work is to communicate the different pathways to legal immigration into the United States, how you might succeed or fail on these paths, and the relative time frame involved in each path. Just focusing on the visual context of the work is a significant task, because the illustrator, Terry Colon, has worked in so much visual content, and yet manages to deliver a work that is readable and usable by a verbally and visually literate audience. The work employs a color scheme that has organizational meaning, directing a viewer's attention to the separate pathways of the communication. From there, the elements of a flowchart of information become evident, and a decision tree component with "Yes-No" navigation is employed to take the viewer through the pathway of information depending on whether the viewer's answers are "Yes" or "No" to the questions presented in the flowchart. The infographic uses cartoon images and illustrations of the persons following the various immigration paths, and further illustrates the dispositions of most of the paths (i.e., failure to obtain citizenship through the pathway, or a period of waiting time). There are many clever visual elements, such as a flag similar in design to Brazil's flag, but the center element is replaced by a clock face to indicate that different countries have different waiting times for applicants who are single adult children of U.S. citizens (*see image* at right). Other pictographs are more common, such as using a calendar to show a period of time (here, waiting time of an application), a coin flip to indicate a 50/50 chance, and an actual green card to indicate a "Green card." The cartoon illustrations of persons do not seem integral to the message, but most likely they were included to make the work more approachable and engaging to persons of different nationalities and ethnicities—i.e., the different persons depicted indicate that the chart is not directed solely to Asian, African, Middle Eastern, Latinx, or European immigrants. The general look and feel of the work are more "fun" because of the bright colors and cartoon-like depictions of applicants in the several pathways to citizenship.

The **taxonomy** of function and purpose also is rich and diverse. The chart performs primary functions related to the text of *Describing, Defining, Translating* (as in translating complex legal terms and concepts into plainer, more accessible language), *Comparing, Contrasting,* and *Humanizing* (by placing humans—albeit cartoon characters—into the pathways and at each juncture and decision point). The work also performs tasks that go beyond the text, such as *Interpreting* and *Emphasizing* the text's message concerning immigration law. Arguably, the choice to present the information in the context of colorful comic strip graphics and characters is *Decorative,* but the

intent was almost assuredly to make the work more *Engaging* and accessible to a wider range of audiences. Perhaps the work would be *Motivating* to some who had little idea about possible pathways to legal immigration, and after reading this highly accessible chart, would be more inclined to try one.

Verbal Context: All of the information about court processes and procedures is provided in text, and in one language only, English. The text is straightforward and does not require the viewer to have attained an advanced reading level in order to grasp the information. There is no explicit legalese in the form, although the very nature of the topic (immigration law) does require a facility with vocabulary that is not used in day-to-day conversational English (e.g., lawful permanent resident, temporary visa, etc.). More likely than not, the intended audiences for this communication—applicants for U.S. citizenship or persons investigating the lawful pathways to citizenship—either know these terms or will soon learn them in the course of investigating the application process.
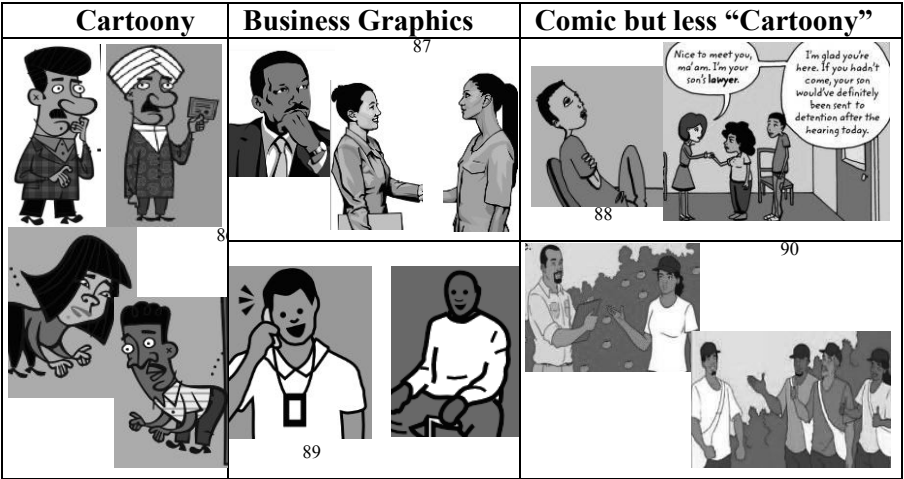
Visual Cultural Context: The above section revealed the verbal challenges of the work for persons whose native language is not English, and the specific challenges that the vocabulary of immigration law will present to a less-than-fully-literate reader of English. The pictorial elements of the infographic, although attractive and potentially engaging to viewers, are not essential in communicating the core message about the different immigration pathways to citizenship. That said, the particular illustrations used should be readily identifiable: a viewer will recognize that the persons depicted are from several different cultures, races, or ethnicities; the objects depicted present fairly common imagery (calendars, clocks, calendars, bag of money); the two ideographs (visual metaphors) used should be readily comprehended (a juggler on a unicycle indicates a skilled person; a lightbulb over a person's head indicates a good idea).

Mise en Scène and Arrangement: Overall, the visual arrangement and mise en scène of the work as a whole show excellent design and execution. There is a great deal of verbal and visual content, and yet the illustrator manages to deliver a work that is readable and usable by employing a color scheme that directs a viewer's attention to the separate pathways of the communication, and keeping each element of the designated pathways and decision points (yes vs. no consequences) separate and readable. The overall look of the work is fun and friendly, which is generally regarded as a good attribute in legal design because fun and friendly works are more accessible and engaging as legal communications, compared to the average unfriendly and intimidating contract or legal instrument.[84]

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84. *See generally* Gerlinde Berger-Walliser, Robert C. Bird & Helena Haapio, *Promoting Business Success Through Contract Visualization*, 17 J. L. BUS. & ETH. 55, 68–70 (2011); Berger-Walliser et al., *From Visualization to Legal Design*, *supra* note 4, at 352; *see also*

Visual Rhetoric, Ethics and Professionalism: This illustrated info-graphic is eye-catching, interesting, engaging, and ultimately very informative. I received comments from a reviewer of this Article who had been through the legal immigration process, and she reported that the pathways are described very accurately.[85]

My one significant critique of the work pertains to the decision to employ a very "cartoony" comic style in the depictions of the applicants for immigration. A cartoony style exaggerates facial features, accentuates differences in dress or demeanor, and tends to play into visual stereotypes of different races and ethnicities of persons. It is part and parcel of the cartooning process, but it is less sensitive and inclusive than other alternatives. Compare the depictions of persons of different races, ethnicities, and national origins in the Immigration work ("Cartoony") to the business graphics-style depictions and a less "cartoony" comic style of depiction below:

Cartoony	Business Graphics	Comic but less "Cartoony"

Stephanie Kimbro, *What We Know and Need to Know About Gamification and Online Engagement*, 67 S.C. L. REV. 345, 362–64 (2016).

85. Comments of Milva Finnegan, on file with author.

86. All examples in the left column are excerpted from Flynn, et al., *supra* note 83.

87. The examples in the center column, top cell are royalty-free business graphics clip art from COOLCLIPS.COM.

88. The examples in the right column, top cell are excerpted from *I Got Arrested! Now What?*, CENTER FOR URBAN PEDAGOGY (2010), http://www.welcometocup.org/Store?product_id=14.

89. The examples in the center column, bottom cell are excerpted from *Vendor Power! A Guide to Street Vending in New York City,* CENTER FOR URBAN PEDAGOGY (2009), http://welcometocup.org/Store?product_id=17.

90. The examples in the right column, bottom cell are excerpted from Robert de Rooy, *Clemen Gold Employment Contract*, CREATIVE CONTRACTS (2016), https://creative-contracts.com/clemengold/.

The visual rhetorical implications of the cartoony comic style are that the works are funnier, but perhaps less culturally and racially sensitive. The characters of the cartoony examples also are subjected to exaggerated cartoony actions, being repeatedly and unceremoniously "kicked out the door" of the immigration process literally and figuratively. This treatment is undignified and somewhat disrespectful considering the gravity of the immigration situation of migrants, which was poor in 2008 when the immigration infographic was created and is now much worse in 2020 in different times and under a different presidential administration. The business graphics examples and the less-exaggerated comic examples depict persons from different races, ethnicities, and national origins in a more dignified and respectful manner. All of the examples make the works appear more friendly and potentially engaging because of the "fun factor" gained from using pictorial illustrations, but the overall *ethos* of the work might be affected by the choice to include humor in the depiction of the subjects involved in the legal communication.

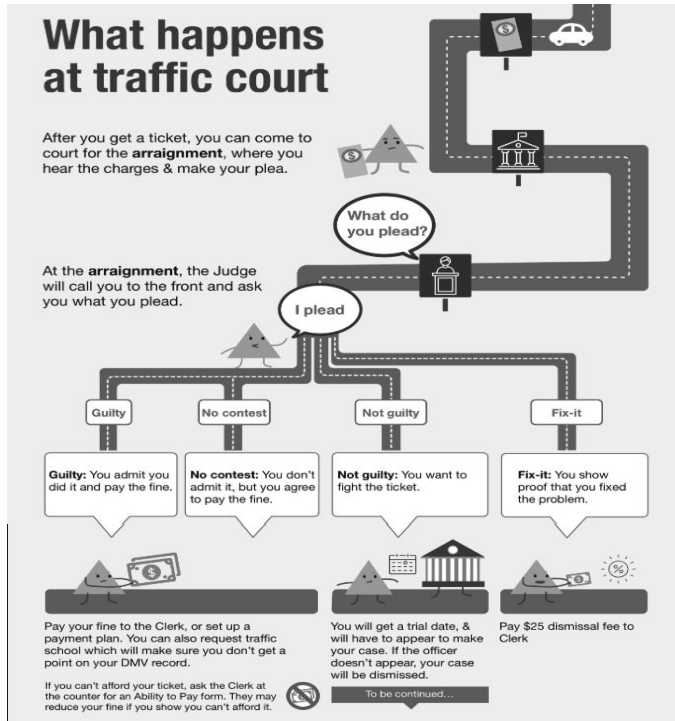**Example 5 – Pathway and Instructions for Traffic Court**[91]

Example 5, "What happens at traffic court," from Stanford's Justice Innovation-Legal Design Lab (displayed on the following page), reports the steps and decision points for a person receiving a traffic ticket. The jurisdiction is not identified, but the information concerning the steps might be applicable in multiple states.

Visual Context: The **meaning** of the visual components of this infographic chart is to illustrate the process and procedures for traffic court. The infographic makes use of a pathway visual in the form of a highway, which certainly is apropos of the topic of the chart, "What happens in *traffic court*."

Friendly and inclusive icons are used in the form of a non-gender-specific, non-racially-suggestive triangle for the motorist, a rectangle with a dollar sign on it for the "ticket," and some simplified symbols of a car, two different courthouses, a judge sitting at her or his bench, money, and a calendar (representing a date in time). In the **taxonomy**, the function of the graphics is to *Describe, Exemplify,* and *Concretize* the text, for example, by not just saying in words, "Then you would go to traffic court and appear before a traffic court judge," but actually showing an image of the court building and a judge on the pathway toward resolution of a ticket. As with

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91. Stanford Law School Legal Design Lab, *What Happens at Traffic Court,* JUSTICE INNOVATION, http://justiceinnovation.law.stanford.edu/wp-content/uploads/2018/10/Traffic-Court-visual-guide-what-happens-at-traffic-court-pleading.png (last visited Nov. 22, 2020).

most legal works that are designed for a non-law-trained audience, there is a certain amount of *Interpreting* and *Translating* of the law into a more accessible and understandable format that is occurring in this chart. The graphics are light on *Decoration*, as each image has a specific function to explain the process of resolution of a ticket.

Verbal Context: Aside from the attractive highway pathway and decision tree, and the friendly, inclusive icons, all of the information about court processes and procedures is provided in text, and in one language only, English. The text is straightforward and does not require the viewer to have attained an advanced reading level in order to grasp the information. There is no explicit legalese in the form; it is most likely too hard to avoid using the term "arraignment," and the infographic used "no contest," in lieu of "nolo contendere."

Visual Cultural Context: By intentionally using an inclusive, non-gender-specific, and non-racially-suggestive icon for the motorist, the infographic avoids excluding or alienating any viewer of the work; no-one should explicitly or implicitly be turned away because the information is not for them or not about them. The choice of a triangle is a very neutral shape, and the minor personification elements (arms, legs, facial expressions) are also rendered in a neutral, broadly inclusive manner. Persons of most cul-

tures should read the facial expressions of the triangle as those of a "concerned" motorist, perhaps one that is "determined" to get through the system, and little else. There is no further indication that the "triangle" is a reckless, irresponsible, or shameful person, and there is no suggestion that the "triangle" is fearful of using the governmental system to work through this traffic matter.

Mise en Scène and Arrangement: The design of this infographic chart is excellent. I have previously mentioned that the infographic makes use of a pathway visual in the form of a highway, which certainly is apropos of the topic of the chart, "What happens in *traffic* court." The icons and images used are friendly and inclusive, and complement the text, for example, by not just saying in words, "Then you would go to traffic court and appear before a traffic court judge," but actually showing an image of the court building and a judge on the pathway toward resolution of a ticket. The imagery of a highway allows the message to neatly fork into different outcomes in a decision tree arrangement.
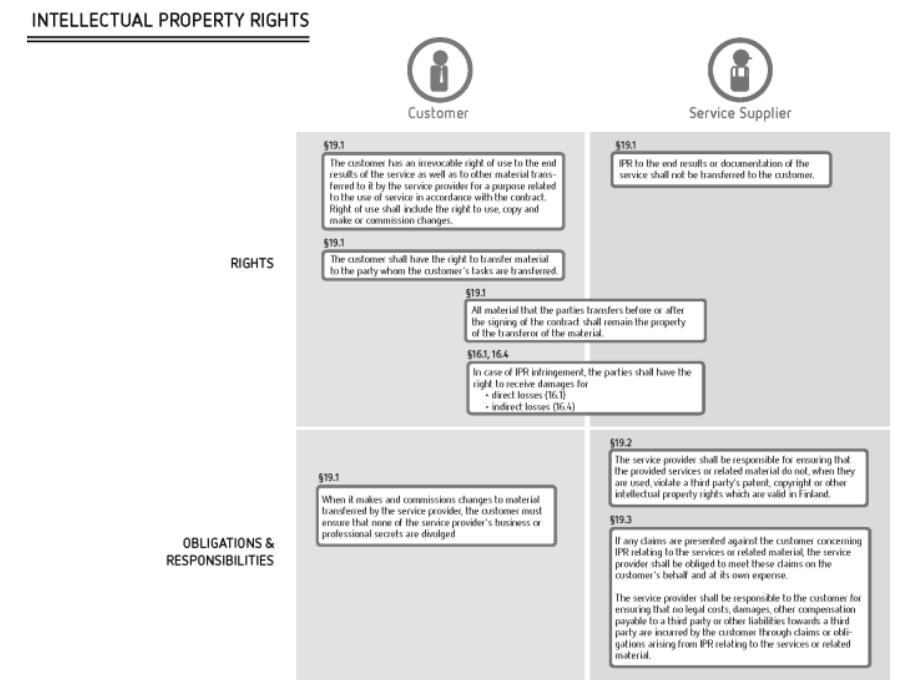
Visual Rhetoric, Ethics and Professionalism: As discussed above, a goal of visualization is to make legal works accessible to a broader range of audiences. Sometimes that means illiterate and less-than-fully literate audiences, and sometimes it means vulnerable and disadvantaged audiences. The graphical elements of this chart are inviting and potentially engaging, welcoming partially literate persons to look at and look into the information on the chart, and the design elements welcome the potentially vulnerable or disadvantaged viewer with inclusive, non-gender-specific, and non-racially-suggestive icons, to help them stay engaged. There is no mention of police at all, in words or symbolically, nor is the ticket discussed or depicted as a crime or violation of law, which perhaps suggests to the viewer that the processes and procedures are routine and do not involve a heavy-handed governmental enforcement of "criminal" law and suppression of "illegal" behavior. It is true that the words "charges," "plea," "plead," and "guilty" are mentioned, but not in the context of the words "crime," "conviction," or "offense."

The category of diagrammatics includes infographics with highly visual content such as the above work of Stanford's Legal Design Lab.[92] The work incorporates a pathway and flowchart formed as a decision tree, and it provides meaningful pictographs (car, motorist, money, courts, judge) and ideographs (i.e., paying the fine or fee for a ticket) in its communication. Visualization attempts to frame and present information in a manner that allows immediate recognition of parties, roles, requirements, paths or course

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92. *See generally* The Legal Design Lab, *Legal Design + Tech We're Building,* STANFORD LAW SCHOOL, https://law.stanford.edu/organizations/pages/legal-design-lab/ (last visited Nov. 22, 2020).

of action. In transactional works, legal diagrammatic elements may include swimlanes that show paths for two parties in a relationship, punctuated by tasks or decision points for each party, and events where the relationships intersect or interact in a certain way. One example is shown below.

Example 6: Swimlanes Diagram regarding Finnish Public Procurement Terms[93]

Visual Context: The **meaning** of this example of Stefania Passera's work is that the diagram shows the parallel intellectual property rights and obligations in the relationship of the Customer (Finnish governmental enti-

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93. Stefania Passera, *Swimlane Diagram From the JYSE Visual Guide (Visual Guide to the Terms and Conditions for the Public Procurement of Services in Finland),* STEFANIAPASSERA.COM (2009), https://stefaniapassera.com/portfolio/jyse-visual-guide/ [hereinafter Passera, *Swimlane Diagram]*. The JYSE Visual Guide is copyright © 2013 by Aalto University & Suomen Kuntaliitto ry. The work is licensed under the Creative Commons Attribution-NoDerivs 3.0 Unported License, http://creativecommons.org/licenses/by-nd/3.0, see page 2 of the Guide at https://www.kuntaliitto.fi/sites/default/files/media/file/PRO2ACT_JYSE_2009_PALVELUT_kayttaamisopas.pdf. *See also* Stefania Passera, *Flowcharts, Swimlanes, and Timelines – Alternatives to Prose in Communicating Legal-bureaucratic Instructions to Civil Servants*, 32 J. BUS. TECH. COM. 229, 239–41 (2018).

ties) and the Service Supplier (persons or entities selling goods and services to the Customer). The swimlanes are a color-coded visual metaphor to indicate that for the most part each party is to follow its own course (stay in its own lane), except where a right or obligation is shared under the terms and conditions. Each text box summarizes the sections of the procurement terms, some of which are directed to the government entities (Customers) and some to the service providers. In addition, small pictographs of a customer (civil servant wearing a tie) and a service provider (person wearing a cap and suspenders) also are provided. Under the **taxonomy**, the swimlanes perform *Defining, Condensing, Interpreting,* and *Translating* (to more understandable language) roles.

Verbal Context: If you follow the Worldwide Web URL provided with the source in the footnote below, you should see that the text boxes are essential to the communication of the chart because that is the only place that the actual terms are discussed and summarized. It is evident from Passera's explanation of the work[94] that her summary of the terms required a great deal of rephrasing and simplification of the terms into plainer, more accessible language, so that the constituent audience of her work—government civil servants and service providers—could actually follow the terms and conditions. Thus, although the text still is somewhat challenging, this should be attributed to the subject matter being legal terms and conditions, and, in the example above, intellectual property rights, which defy wording at an elementary reading level.

Visual Cultural Context: As noted above, even though the procurement terms and conditions were rephrased, summarized, and simplified into plainer, more accessible language, the text still is somewhat challenging. Only persons with a well-developed literacy in the language of the work (Finnish) would be able to understand the text boxes in the swim lanes. (The excerpt I borrowed from Passera's online portfolio has been translated into English). The visual elements themselves—lanes representing parallel pathways in an ongoing relationship—are not culturally specific. The chart is graphical, and not largely pictorial or representational, and so does not rely on common cultural depictions and illustrations from our collective "cultural commons."[95] Once the text is understood, and the general conceit of the lanes being a metaphor for parallel pathways in an ongoing relationship is accepted, then the diagram can be understood by many viewers.

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94. Passera, *Swimlane Diagram, supra* note 93. Although the text in my excerpt is impossible to read, it is the visual arrangement of the text into a swim lanes scheme that is the most relevant feature in regard to the analysis of this article, and that arrangement is evident from the excerpt.

95. *See* sources cited *supra* note 22.

Mise en Scène and Arrangement: The swimlanes arrangement neatly separates differing rights and obligations and maintains a course or pathway (the lanes) for revealing the information of the work.

Visual Rhetoric, Ethics and Professionalism: The JYSE Visual Guide was created for a client to solve a specific problem of communication: neither the civil servants buying goods and services for governmental entities and agencies, nor the vendors and service providers selling the goods and services, could make sense of the terms and conditions.[96] The visual guide made the situation better for buyers and sellers, so the guide should be credited as a success of visual rhetoric and professionalism.

Example 7: City of Yonkers Explanation and Illustration of a Red Light Camera Ticket[97]

The visualization of a legal communication might adopt a multimodal approach, using a combination of text, pictographs, and visual media (photographs or pictures), as in the example on the following page from the City of Yonkers explaining a Red Light Camera traffic ticket.

Visual Context: The **meaning** of this visual work is that the City of Yonkers, New York, has chosen to illustrate its Red Light Camera tickets with a multimodal visual and textual illustration of contents. Particular elements to consider are the photographs of the ticket recipient's license plate and vehicle at and moving through the red light, and the graphical/numbered pictographs (arrows) pointing clearly to the four items of information on the ticket that must be provided when referring to or paying the ticket. Under the **taxonomy**, the illustrated ticket *Defines, Describes,* and *Interprets* the ticket. Unlike other examples above, it does not attempt to *Translate* the laws referenced into simpler, more accessible language.

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96. *See* Passera, *Swimlane Diagram*, *supra* note 93.
97. Red Light Camera Ticket, CITY OF YONKERS (2020), https://www.yonkersny.gov /services/make-a-payment/tickets.

Verbal Context: To be sure, there is much information on the ticket it-self that is communicated in words, including the identifying information of the ticket recipient, the text of the code provision violated, the description of the infraction and fine, and other instructions, and there is no particular ef-fort to phrase these items differently from the normal "legal" wordings of the actual laws and rules

Visual Cultural Context: The target audience of this communication is drivers, and more specifically, drivers who receive a ticket, and for drivers from any country or culture that has even minimal laws and regulations on

the operation of motor vehicles, the concepts of a license plate, traffic lights, and traffic tickets should be understandable. The Yonkers Red Light Camera Ticket gains the enormous rhetorical communicative and persuasive advantage of using visual photographic illustration[98] that conveys the means, method, and justification for the issuance of the ticket. It would be difficult to misinterpret or rebut the message of "That's your car. That's a red light. That's your car going through the red light," when shown in three photographs. Beyond that, the simple use of pointer arrows and numbering from 1 to 4 should be readily comprehended by persons from many cultures, especially those persons who are in a position to operate a motor vehicle and would be required to follow arrows, numbers, and other signage on a daily basis.

Mise en Scène and Arrangement: The arrangement of legal regulations with photographic evidence of one's infraction strikes me as a beneficial arrangement for communicating the violation and quashing any resistance to accepting the charge. The example above makes the parts of the ticket plain and understandable with colorful graphic directional elements (arrows) and numbering.

Visual Rhetoric, Ethics and Professionalism: The multimodal approach taken by Yonkers in this Red Light Camera Ticket is informative and persuasive. Although there are many words, and there is no particular effort to make the words themselves more accessible and engaging regarding the information they convey (the text of the code provision violated, the description of the infraction and fine, and other instructions), the main point of the ticket is communicated very well by the photographs, and the use of the numbered directional arrows assists the viewer in properly following the instructions and handling the ticket.

All of the subjects of analysis in this section sought to build knowledge and understanding in new audiences through illustration, augmentation, explanation, or simplification of the content of legal communication. Therefore, they all furthered the goals of rhetoric, to create knowledge and understanding in an audience. But there is a possible use of diagrammatics and the visualization of legal data that does not solely or even primarily seek to build knowledge and understanding, but rather to persuade an audience by borrowing the *ethos* of the appearance of scientific and mathematical forms of communication in the communication of non-mathematical information,

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98. I refer here both to the general power of visual rhetoric, *see, e.g.*, Murray, *Mise en Scène*, *supra* note 20, at 250–52, and the specific power of realistic media, such as photography, in instantly obtaining the recognition and acceptance of the truth of the communication through the heuristic known as naïve realism or cognitive illiberalism. *See, e.g., id.* at 252–54; Murray, *Ethics of Visual Legal Rhetoric*, *supra* note 14, at 123–25.

or to use charts and diagrams as a visual metaphor for a visual argument. This use is discussed in the next section.

III. VISUALIZATION OF LEGAL INFORMATION AS A RHETORICAL TROPE OF STYLE

In the examples above, the form and contents of each visualization were chosen and created substantively to improve the communication of information, and in some instances to compare or draw particular attention to aspects of the information for the benefit of the intended audience. Thus, these works above used visualization as a rhetorical topic of *invention* or *arrangement* for the optimal rhetorical purpose of building knowledge and understanding in an audience.[99]

Style in rhetoric (Latin *elocutio*; Greek *lexis*) pertains to the composition and wording of the discourse, including grammar, word choice, and figures of speech.[100] In classical rhetoric, figures of speech were divided into schemes (artful deviations from the ordinary arrangements of words), and tropes (creative variations on the meanings of words).[101] Diagrammatics may be used as a visual trope of style—for example a visual metaphor—that either states a visual argument separate from the statistical, mathematical, or quantitative analysis apparent in the diagrams used, or that borrows the rhetorical power and persuasiveness of mathematical and scientific diagrammatics in service of a communication that does not in and of itself involve statistical, mathematical, or quantitative analysis, but merely appears to. Visual mathematical forms (graphs, charts, diagrams, four-quadrant tables, algebraic formulas, etc.) suggest rhetorically a certain level of rigor that bolsters the *ethos* appeal of the presentation.[102] These forms can stimulate thought and imagination, constructing knowledge and understanding of the information when used as a rhetorical topic of arrangement, but the very nature of their appearance as mathematical forms also can help to convince the audience of the truth and value of the information, aiding the persuasiveness of the discourse.[103]

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99. *See* sources cited *supra* note 17.

100. *See generally* Michael R. Smith, *Rhetoric Theory and Legal Writing: An Annotated Bibliography*, 3 J. ALWD 129, 133–34 n.2 (2006) (collecting sources on style in classical rhetoric); Kristen K. Robbins-Tiscione, *A Call to Combine Rhetorical Theory and Practice in the Legal Writing Classroom*, 50 WASHBURN L.J. 319, 335–36 (2011).

101. Linda L. Berger, *Studying and Teaching "Law as Rhetoric": A Place to Stand*, 16 LEGAL WRITING 3, 51 n.179 (2010).

102. Murray, *Visual Rhetoric: Topics and Tropes*, *supra* note 14, at 213.

103. Murray, *The Great Recession, supra* note 64, at 634–35; Murray, *Rule Synthesis and Explanatory Synthesis, supra* note 65, at 236.

To compare substantive versus stylistic uses of diagrammatics, consider Example 8 below, which presents three graphs and a table to illustrate the calculations and analysis of an empirical study of the use of parentheticals in federal appellate briefs and U.S. Supreme Court opinions[104]:

Example 8 – Diagrams on the use of parentheticals in federal appellate briefs and U.S. Supreme Court opinions

Visual Context: Example 8's **meaning** is to illustrate the calculations and analyses of an empirical study of the use of parentheticals in federal appellate briefs and U.S. Supreme court opinions.[105] Its **taxonomy** purposes are to *Use Graphs, Describe, Compare, Condense,* and *Interpret* the information.

Verbal Context: The graphs and table use a minimal number of words, reserving text for the titles, legends, and labels of data in the works.

Visual Cultural Context: The topic here is fairly specialized—parenthetical usage in appellate level briefs and Supreme Court opinions—requiring some background information in advocacy and litigation practice. But the visuals themselves have no culturally specific references or depictions.

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104. These charts report the data and analysis of Michael D. Murray, *The Promise of Parentheticals: An Empirical Study of the Use of Parentheticals in Federal Appellate Briefs,* 10 LEGAL COMM. & RHETORIC: JALWD 229 (2013).

105. Murray, *Visual Rhetoric: Topics and Tropes, supra* note 14, at 211.

Mise en Scène and Arrangement: Like the other graphs discussed above (*see* Example 3), the graphs and table in Example 8 are fairly simple tools to report data as data, and quantitative analysis as quantitative analysis. The visualization into pie graphs and various bar graphs aids in the comparisons of data and in understanding the lessons that can be drawn from the data.

Visual Rhetoric, Ethics and Professionalism: Example 8 shows a substantive use of rhetorical arrangement. The same information can be presented in text only—a list or paragraph of numbers, followed by verbal comparisons in text. But the graphs aid the reader in understanding the comparisons of parenthetical usage in the different categories of documents, and the lessons that can be drawn from the analysis of these uses. This message was the intended substantive message of the communication, and the graphs and table used were an *artistic* (in rhetorical terms) way of communicating the information.

Now consider several examples of stylistic uses that do not primarily communicate the substance of scientific data or mathematics, but still employ the diagrammatics of math and science.[106]

Example 9 – Ratings of Challenges to Business in Russia

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106. I have reproduced these charts that were originally used in Murray, *Visual Rhetoric: Topics and Tropes, supra* note 14, at 213–18; and in MICHAEL D. MURRAY & CHRISTY HALLAM DESANCTIS, ADVANCED LEGAL WRITING AND ORAL ADVOCACY: TRIALS, APPEALS, AND MOOT COURT, at ch. 2 (2d ed. 2014).

Visual Context: This **meaning** of this graph is that it attempts to visually communicate data reported by the Coalition for Intellectual Property Rights (CIPR)[107] that discussed "Ratings of Challenges Facing Successful Operations of a Business in Russia (Among Selected Major Brandholders and Trademark Owners Doing Business in Russia)."[108] It was offered to demonstrate that intellectual property protection was perceived to be a primary challenge confronting international companies doing business in Russia.[109] Purportedly, its **taxonomy** purposes are to *Use Graphs, Describe, Compare, Condense,* and *Interpret* the information.

Verbal Context: The graph itself limits its words to the title, legend, and labels of data. In the overall report, the methodology and findings of the study were described verbally in the following way:

In the survey, respondents were asked to rate a series of "challenges confronting the successful operations of your business in Russia" using a five-point scale, where one meant "least important" and five meant "most important." More than one-half (52%) of selected major brandholders and trademark owners doing business in Russia gave a rating of five to intellectual property protection. This ranks intellectual property protection on virtually the same high level of concern as customs (54%) and taxes (52%)—which have historically been perceived as presenting the greatest challenges to business success in Russia.[110]

The example here graphs the information provided in the verbal paragraph. Could the verbal explanation have sufficed? Perhaps, but as discussed here, there is another reason to use the mathematical diagrammatic form to graph the data.

Visual Cultural Context: Although part of the report of CIPR commented on cultural differences that made it more difficult to do business in Russia, there is nothing in the chart itself that contains specific cultural imagery or depictions. A bar graph and variable line graph should be recognizable to many persons from many cultures, at least in the developed or developing world. All the words used are in English, which of course affects whether the viewer can take away the message of the chart or the accompanying verbal report.

Mise en Scène and Arrangement: A bar graph and variable line graph are used in this example to report fairly simple survey information. A bar graph and variable line graph normally are used for mathematical or statistical comparison or contrasting of data.

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108. The chart and supporting information previously was found at http://www.cipr.org/activities/ surveys/top50/index.htm (Jan. 25, 2011), but now is on file with the author. I recreated the chart using the same data for presentation here.

109. *See id.* (text on file with author).

110. *Id.* (text on file with author).

Visual Rhetoric, Ethics and Professionalism: I consider this chart to be a non-substantive use of a mathematical form, in other words, a trope of style, a visual metaphor, not a substantive topic of arrangement. Nothing in this chart is particularly mathematical except the fact that the author added up some survey numbers to produce the chart, but the demonstration of the data in a bar graph with a super-imposed variable line graph makes the presentation seem all the more authoritative in a rhetorical sense because it appears that a complicated mathematical formula was applied to data to produce this graph.

Example 10 – Chart on the Procedure for Acquiring a Firearm in Quebec

Visual Context: The flowchart on the following page,[111] part of which is designed as a decision tree with Yes-No navigation, visually charts the steps, procedures, and code provisions for obtaining a firearm in Quebec, Canada. According to the designer or publisher of the chart, the **meaning** of the chart is that it summarizes and translates into graphical form forty-two pages of Canada's Criminal Code.[112] The charting makes the steps visible all at once in a manner that could not be communicated in simple text. Perhaps a verbal bullet point list would have revealed the number of steps, but the flow and connection between steps revealed in the chart gives an idea of the complexity of the journey, and the time that will be required in passing all of the steps. The visual arrangement greatly supports the small notation in the legend at the bottom right of the flowchart that reports that the time required to obtain a permit for a rifle or shotgun in Quebec is three to six months, and for a handgun it is six to twelve months.

Visual Cultural Context: There is very little visual, pictorial content to the work other than the structure of a flowchart and decision tree, and that general structure should be recognizable to persons from most countries and cultures, at least in the developed and developing world. No part of the work requires a certain cultural knowledge or experience to grasp the number and connection of steps of the process reported.

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111. H. Taylor Buckner, *Gunlaw.jpg*, TBUCKNER.COM, http://www.tbuckner.com/GunLaw.JPG (last visited Jan. 17, 2021). *See* H. Taylor Buckner, *Concordia's "Gun Control" Petition: Ignorance of the Law Is the Only Excuse*, TBUCKNER.COM (June 14, 1994), http://www.tbuckner.com/IGNOLAW.HTM.

112. Buckner, *Concordia's "Gun Control" Petition*, *supra* note 111.

Procedure for Acquiring a Firearm in Quebec, Canada

For hunting with rifle or shotgun.

Canadian Firearms Safety Course $57 — Pass Exam? — Yes / No — Retake Exam

Quebec Hunter Safety course $30 — Pass Exam? — Yes / No — Retake Course

For Target Shooting with Rifle, Shotgun, or Olympic Air Rifle.

Apply for Firearms Acquisition Permit

Quebec Pistol Safety Course $35 — Pass Exam? — Yes / No — Retake Exam

For Pistol Target shooting or collection.

6 Letters of Reference
35 Questions
2 Photos
Certified Cheque $50
Completed Application
Police Records Check
Interviews with Referees, Neighbours, Employer, Spouse as required

F.A.C. Granted? — No — Apply to Court within 30 days of Refusal — F.A.C. Granted? — Yes / No

F.A.C. Issued after mandatory 28 Day Wait.

Purchase Rifle or Shotgun With F.A.C. Lock Gun up. — Purchase Hunting Permit With Hunter Safety Card. — Go Hunting

Hunting

Purchase Rifle, Shotgun or Air Rifle with F.A.C. Lock Gun up. — Find a safe place to shoot, or join a shooting club. — Long Gun Target Shooting

Join Pistol Shooting Club
Purchase Pistol w/FAC Leave at Dealer.
Apply to R.C.M.P. to Register Pistol
RCMP Form C-300

6 Letters of Reference
Apply for Carry Permit to take Gun to Club
Reapply every year

Police Records Check
Interviews with Referees, Neighbours, Employer, Spouse as required
Quebec Registration Form.

Carry Permit Granted? — Yes — Apply For Transport Permit to get gun from store to take home. — No

Registration issued? — Yes / No

Transport Permit Granted? — Yes — Pick up gun, lock gun, lock gun box, take home, lock in safe. — No

Pistol Target Shooting or collecting.

TIME REQUIRED

	MINIMUM	NORMAL
Rifle, Shotgun	3 Months	6 Months
Handgun	6 Months	12+ Months

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NOTES:

a. As required by Canadian Criminal Code (C.C.)
b. Quebec Minister of Envionment and Wildlife and Quebec Wildlife Federation Course.
c. Quebec Shooting Federation Course.
d. C.C. 106 (8) two references, specified persons
e. Quebec 4 additional specified references.
f. C.C. 106 (11) Photo Required on F.A.C.

g. C.C. 106 (9.1) Interviews and investigation.
h. C.C. 106 (15) Appeal F.A.C. refusal to Court.
i. C.C. 106 (1) Minimum 28 day waiting period.
j. C.C. 109 (3) (c) (i) Registration Certificate Application.
k. C.C. 109 (3) (c) (i) Protect life (Rarely given)
   (ii) Lawful Profession (Security Guard)
   (iii) & (iv) Target Shooting at Recognized Club.
l. C.C. 109 (3) (d) Collection (Records & Safe Storage)
m. C.C. 110 (2) (c) Carry (to Club) Permit.
n. C.C. 110 (3) Transport (to home) Permit.
   C.C. 116 (1) (g) Annexed Storage Regulations.

Verbal Context: The words, all in English, are essential to the communication of the steps. There is very little visual, pictorial content to the work other than the structure of a flowchart and decision tree. The subject matter requires a certain knowledge of firearms vocabulary, as well as some law and legal code knowledge (e.g., what C.C. (Canadian Criminal Code), F.A.C. (Firearms Acquisition Certificate), and R.C.M.P. (Royal Canadian Mounted Police), refer to).

Mise en Scène and Arrangement: This flowchart,[113] part of which is designed as a decision tree with Yes-No navigation, arranges the data in a fairly complicated and extremely detailed spatial formation that is difficult to read. The chart looks dense and cluttered at a glance, but as explained below, this complicated and extremely detailed arrangement could very well have been the intended goal for the presentation of the information, and not because the goal was to make the information easier to access.

Visual Rhetoric, Ethics and Professionalism: I consider example 10 to be an excellent example of using visual scientific charting (taking the form of an informational flow chart and decision tree) to make a larger and purely rhetorical point: "The procedure for acquiring a firearm in Quebec is extremely complicated, probably too complicated; just look at it." This argument is not based on the substance of the text, or the number of steps, or even the terms of the code provisions, but rather on the Gestalt of the process communicated visually through this chart.

Example 11 – Ngram of References to Cities in Books, 1750-2008

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113. Sources cited *supra* note 111.

This Google Ngram does not discuss a legal topic, but the point of the analysis here is to examine a potentially deceptive metaphorical use of mathematical diagrammatics:

Visual Context: The graph's **meaning** in Example 11[114] is to discuss the rise and fall (i.e., the changing numbers of mentions) of particular city names in English language literature. A viewer would not know this without reading the verbal explanation accompanying the graph that states that this Google Lab graph reports the results of a search of city names in the vast amount of literature that Google has scanned and compiled for searching.[115] Given the lack of information or interpretation presented in the visual itself, I believe the **taxonomy** functions of the visual simply are to *Use Graphs* and *Compare* data.

Verbal Context: There is almost no verbal content in the graph itself, except for the labels and instructions. As noted in the section above, the explanation for the graph, and what it purports to show is not presented in the visual itself. The graph itself and the source cited do not discuss the design of Google Lab's Ngram generator that taps into the biggest (or certainly one of the biggest) collections of data assembled by the search engine giant, namely its massive database of forty million digitalized books.[116]

Visual Cultural Context: Google's Ngrams are basically a colored line graph designed to report longitudinal changes in variables (values) chosen from the database, graphed together for comparison of the variables over an extended time period. It may take a few minutes to figure out the labels and values, but after that, the basic line graph form should be recognizable to persons from most countries and cultures, at least in the developed and developing world.

Mise en Scène and Arrangement: The "N" in Ngram simply stands for "number"[117] as in the statistical reference to the "n" meaning the number

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114. Erick Schonfield, *The Fall and Rise of Twitter in English Literature*, TECH CRUNCH (Dec. 17, 2010), http://techcrunch.com/2010/12/17/twitter-english-literature/ (last visited July 11, 2020).

115. *Id.*

116. *Ngram Viewer*, GOOGLE BOOKS, https://books.google.com/ngrams/info (last visited July 11, 2020); Marziah Karch, *How to Use the Ngram Viewer Tool in Google Books*, LIFEWIRE (Feb. 9, 2020), https://www.lifewire.com/google-books-ngram-viewer-1616701 (last visited July 11, 2020). As of October 2019, the database contained at least 40 million books in over 400 languages. Haimin Lee, *15 Years of Google Books*, THE KEYWORD (Oct. 17, 2019), https://www.blog.google/products/search/15-years-google-books/ (last visited July 11, 2020). At the time of the creation of the Ngram shown in this example, in 2010, the author reported that the Google Books database had 5.2 million books. Schonfield, *supra* note 114.

117. Karch, *supra* note 116.

of data points (cases, references, individuals, etc.) in a sample.[118] The author of this graph suggests that the graph can tell us something about "the relative importance of different centers of power in the public imagination."[119] The author could have stated quite simply in words: "When searching for Paris, London, New York, Boston, and Rome, in the scanned English literature from 1750 to 2008, interest in London remained steady and at a higher level than Paris, Boston, and Rome, while interest in New York started at a very low point but grew steadily, surpassing London in approximately 1910, and continued to rise in popularity until 1980, when it began a steady decline." This would have accurately stated the purported findings, but the graphing of the information sends a very different rhetorical message—that something scientific was done to produce the results the readers see before them.

Visual Rhetoric, Ethics and Professionalism: My interpretation of this visual is that the Ngram line graph is not simply intended to communicate facts, data, statistics, or other information. It is a visual metaphor intended to suggest that something scientific and mathematical was performed to obtain the results reported in the graph. There was no quantitative analysis to report, and the actual information (i.e., the exact percentage of references to one city or another in books in various decades of years from 1750–2008), is for most intents and purposes an idle curiosity. But with the trappings of math and science on display, the graph looks important, and it looks like the product of a careful study. Hence my designation of this graph as a trope of style, not a topic of invention or arrangement where the actual data and findings would have been the star. Here, the data and findings (if any) are not the star, and instead it is the costume the data wears that is the main attraction.

Mathematical and scientific forms are an effective if not indispensable tool for visualization of data, calculations, and analysis.[120] It often is the case that a purely verbal explanation of quantitative and statistical analysis of empirical studies will fall on deaf ears, and the impact of the analysis will be lost.[121] Consider the following example[122]:

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118. *Common Statistical Formulas*, STATISTICS SOLUTIONS (2020), https://www.statisticssolutions.com/common-statistical-formulas/.

119. Schonfield, *supra* note 114.

120. *See generally* Murray, *Visual Rhetoric: Topics and Tropes, supra* note 14, at 216–17. *See also* Murray, *After the Great Recession*, *supra* note 63, at 907-23.

121. *See generally* Lee Epstein, Andrew D. Martin, Matthew M. Schneider, *On the Effective Communication of the Results of Empirical Studies, Part I*, 59 VAND. L. REV. 1811, 1814–16 (2006).

122. Table 1, Nancy C. Staudt, *Modeling Standing*, 79 N.Y.U. L. REV. 612, 617 (2004). This table was critiqued by Professors Epstein and Martin, and Dr. Schneider, in the work, *On the Effective Communication of the Results of Empirical Studies, supra* note 121, at 1812–16.

Example 12:

Table 1

	Federal Taxpayer N = 120
Spending	β = -1.345 S.E. = .544 p = .013*
Spending and Establishment Clause	β = 1.212 S.E. = .501 p = .015*
Party of the Appointing President	β = .148 S.E. = .485 p = .760
Plaintiff Politics	β = 1.141 S.E. = .488 p = .019*
Plaintiff Sought Standing on More Than One Ground	β =-.240 S.E. = .447 p = .591
Court Discussed Standing	β =-.973 S.E. = .583 p = .095
Case Decided After *Flast v Cohen*	β =.098 S.E. = .574 p = .941
Constant	β =.806 S.E. = .978 p = .409

Table 1: Results of Nancy C. Staudt's analysis of the decision to grant standing (coded 1) or not (coded 0) to federal taxpayers. Each cell contains coefficient estimates from a logistic regression model, (asymptotic) standard errors, and p-values. * indicates that p < .05.

This example does contain a visual form, a topic of arrangement in the form of a table with two columns and nine rows, but the findings are reported verbally. There are verbal labels and statistical symbols next to results. But that is as far as the reading can take most viewers, except for the truly anointed viewers who have a Level 1 rhetorical understanding[123] of the language of statistics. Epstein, Martin, and Schneider try to fix the chart in Table 1 above with their own graph,[124] and the results are better:

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123. Level 1 rhetorical understanding refers to the level of understanding of a communication that would be attained by the members of the discipline, as compared to Level 2 rhetorical understanding, which refers to acceptance of the persuasiveness of the communication by understanding the reliability of the support, versus Level 3 rhetorical understanding, which refers to persuasion by the internal consistency and methodology of the communication. *See* Wayne C. Booth, *1987 Ryerson Lecture: The Idea of a University as Seen by a Rhetorician,* (1987), http://iotu.uchicago.edu/booth.html. *See also* Murray, *After the Great Recession, supra* note 64, at 720–24.

124. *See* Figure 1 from Epstein et al., *supra* note 121, at 1815. As noted by Epstein, et al., the findings of the Staudt study can be reported in a more readily understood visual format,
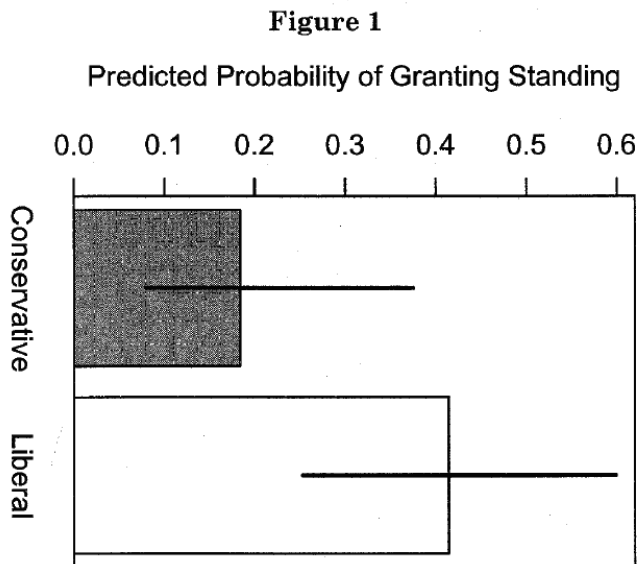
Example 13:

Figure 1

Predicted Probability of Granting Standing

Figure 1: Predicted probabilities of being granted standing for conservative and liberal plaintiffs, from the results in Table 1. We held all dichotomous covariates at their sample modes and all others at their sample means. The vertical (error) bars represent 95% confidence intervals for the predicted probabilities.

This time it is more apparent that so-described "liberal" taxpayers have a better chance of gaining standing than so-described "conservative" taxpayers—their chances appear to be more than twice as good. But the underlying meaning or implications of this observation, and even the meaning of the designations "liberal" and "conservative" in regard to taxpayers in this context, require additional verbal explanation.[125]

In general, legal discourse, the use of mathematical and scientific forms and schemes as a metaphorical or stylistic device comes with a word of caution:

The rhetorical power of a mathematical proof or a demonstration of a scientific deduction or induction lies in the openness and transparency of the demonstration. The premises (major and minor) and the nature of the hypothesis induced from the comparison of genus and species of data must be fully disclosed and described so as to allow the presentation to be analyzed and rebutted. The assertions made in reference to the information displayed must be falsifiable. Tautological explication (wherein the information is presented as self-evident or self-established, or in simpler terms, that the

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although the verbal caption provided under Figure 1 below still is bound to a Level 1-Rhetoric explanation of the statistical analysis performed.
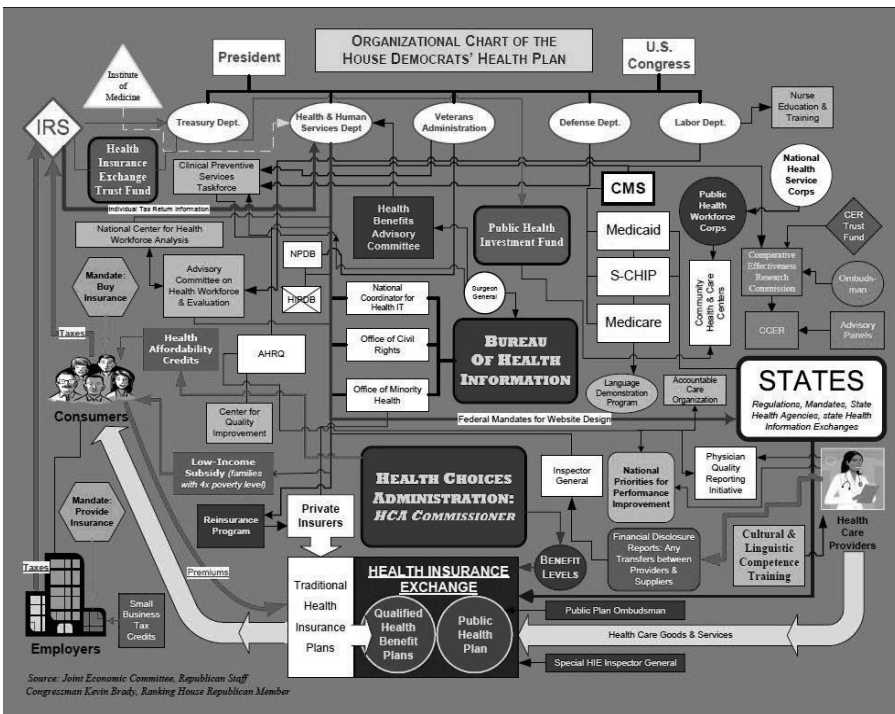
125.   Which is provided in Epstein et al., *supra* note 121, at 1812–15.

information is what it is) adds nothing to meaning or understanding and does not contribute to the mode of persuasion that points to truth.[126]

Therefore, the tool—be it a table, graph, chart, or diagram—is only as good as the designer, and the designer must be careful about proper uses in proper situations.[127]

Using mathematical forms as a trope of style, a figure of speech or visual metaphor, simply to dazzle or confuse the audience or obfuscate the relevant information pertinent to the issue is the worst form of trickery. Consider the following flowchart of the Obama Health Care Reform initiative:[128]

Example 14:

Perhaps the content of this flowchart was 100% accurate at a certain stage of President Obama's Affordable Care Act proposal. I could critique the visual rhetoric and mise en scène design as being too cluttered and con-

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126. Murray, *Visual Rhetoric: Topics and Tropes, supra* note 14, at 217.

127. *See* Epstein et al., *supra* note 121, at 1827–34.

128. Image was originally available at Paul Ibrahim, POLITICS, ECONOMICS, AND MORE BLOG, http://www.paulibrahim.com/blog/2009/7/16/get-well-soon-health-care-bureaucracy-chart.html (last visited Jan. 25, 2011). The source is currently available at https://fareastfling .files.wordpress.com/2014/09/dems_health_plan_organizational_chart.jpg.

fusing to be an effective visual communication of the plan. But one might question whether the author of this chart intended to make clear the processes and available options offered under the ACA health care reform initiative, or simply to make a visual argument that the proposal was outlandish, ridiculously complicated, and unworkable.

IV.   CONCLUSIONS

My primary motivation for the visual legal rhetoric scholarship I have researched and published to date[129] is to inform and educate lawyers, judges, law students, and law professors about the need to become more visually literate in this contemporary visual, digital world of law practice, and then further to explain and demonstrate that visual literacy requires not only the ability to read and comprehend visual works, but also the skill to design works and critically analyze the meaning and implications of works offered by others. That is why in my works I use the same steps of analysis[130] I have developed to examine not only the visual elements of works (visual context and mise en scène design) but also the verbal context of multimodal works (text plus visuals), and the visual cultural context (the ability of works to be understood across language and cultural barriers).

Attorneys and law students may believe that visualization in law is a wonderful embellishment of legal communications in a transactional or litigation context, and if a client or fellow counsel wants to invest in it, the attorney always can hire outside experts to do the actual planning and design. But this abdicates the responsibility to become visually literate so as to analyze, interpret, critique, and ultimately confront the visual designs offered by opponents in litigation or the other parties in transactions or negotiations.[131] The world is growing increasingly visual in every form of media,[132] and the legal world is catching up in every area of practice.[133] Attorneys and judges

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129.   *See generally* sources cited *supra* notes 10, 12, 15, 83, and 84.

130.   *See* Murray, *New Methodology for Visual Analysis, supra* note 17, at 7–11. *See also* Murray, *Cartoon Contracts*, *supra* note 17, at 11–16; Murray, *Toward a Universal Visual Language*, *supra* note 17, at 25–26.

131.   *See* Murray, *Mise en Scène*, *supra* note 20, at 244 n.13.

132.   *See* Richard K. Sherwin et al., *Law in the Digital Age: How Visual Communication Technologies Are Transforming the Practice, Theory, and Teaching of Law*, 12 B.U. J. SCI. & TECH. L. 227, 230–34 (2006); RICK WILLIAMS & JULIANNE NEWTON, VISUAL COMMUNICATION: INTEGRATING MEDIA, ART, AND SCIENCE xv-xvi (2007). *See also* SHANI ORGAD, MEDIA REPRESENTATION AND THE GLOBAL IMAGINATION 50–51 (2014).

133.   *See generally* NEAL FEIGENSON & CHRISTINA SPIESEL, LAW ON DISPLAY: THE DIGITAL TRANSFORMATION OF LEGAL PERSUASION AND JUDGMENT (2009); Lenora Ledwon, *Understanding Visual Metaphors: What Graphic Novels Can Teach Lawyers About Visual Storytelling*, 63 DRAKE L. REV. 193, 237 (2015); Richard K. Sherwin, Neil Feigenson, & Christina O. Spiesel, *Law in the Digital Age: How Visual Communication Technologies are Transforming the Pratice, Theory, and Teaching of Law,* 12 B.U. J. Sci & Tech. L. 227, 231

who are not visually literate will be at a disadvantage in evaluating the visual works they will encounter on a more frequent basis as this trend plays out in the practice of law.

Diagrammatics are not likely to supplant text in the totality of legal communications, but as noted several times above, purely verbal presentation of facts, data, calculations, and analyses often fail to communicate meaning to anyone other than those with the Level 1 rhetorical understanding of members of the discipline. In addition, the method of depiction or illustration—be it a table, graph, chart, or diagram—is only as effective in communication as its designer, and visual works can be cluttered, confusing, misleading, and just as opaque as classic legalese and boilerplate.

The Proactive Law movement uses visualization to make contracts and other legal works more open and transparent to the parties and readers who are impacted by the works. By using the techniques analyzed in this Article, Proactive Law can enable and empower lawyers and non-lawyers to craft agreements that will meet the goals of the parties and anticipate and address problems before they become deal-wrecking issues because the terms of the agreements will not be buried in text that only a law-trained reader could hope to understand.

Legal Design is a movement that also makes use of visualization to open up legal works to a wider range of audiences. The visuals used in Legal Design generally are more friendly and welcoming than dense text, and the works are generally designed to avoid the complicated wording of more "traditional" legal works. All of the works analyzed in this Article showed a great deal of design and thought. Some of them had modest goals to draw attention or improve access to works and make the works more engaging. Others divided verbal content into figures and pathways that would improve the ability of viewers to comprehend the work. Even the works that I believe had an ulterior motive to use the trappings of heavy mathematical or statistical calculation to bolster their message still revealed facts in a manner that would be more engaging and understandable to viewers than if the same information had been communicated solely in words. And that is a worthy goal for any legal communication.

(2006); Richard K. Sherwin, *A Manifesto For Visual Legal Realism*, 40 Loy. L.A. L. Rev. 719, 724–36 (2007).