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WHITEBOARD AND BLACK-LETTER: VISUAL COMMUNICATION IN COMMERCIAL CONTRACTS

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Scholars are increasingly exploring the intersections of visual expression with law and legal practice. This attention is welcome. Visual thinking and communication are unusually valuable tools for lawyers, including lawyers who plan transactions, design and draft contracts, and advise clients about their performance. Commercial relationships are often complex, the individuals involved of diverse backgrounds and roles, and the documents difficult to comprehend. Visual methods, as demonstrated through research in a number of fields, facilitate comprehension by individuals and collaboration across disciplines and social communities. That said, visual executions are not often observed in contract documents, and formal use of visual presentation by commercial lawyers faces substantial cultural and practical hurdles. This Article begins taking on those challenges. It explains why visual methods are useful in transactional work, identifies barriers to use of visual executions in contracts, and assesses recent scholarship encouraging such use in view of a characterization of contracts as managerial objects that operate across multiple inter-firm, intra-firm, and interdisciplinary communities over time. The Article then examines two core questions about the use of visual presentation in contracts and related materials: treatment under contract interpretation and evidentiary principles, and characteristics of transactional situations where visual executions may be especially helpful. It concludes by suggesting a number of research streams, model creation, and other actions intended to build the case for such use. Visuals work in deal work; we should use the best tools for the job.

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INTRODUCTION

Visuals and contracts go well together.

Business people work at whiteboards during negotiations. Transaction structure diagrams appear in banker pitch books. Real property agreements include parcel maps and plans. Product supply agreements include technical drawings. Estate planners draw schematics for clients contemplating entry into trust agreements. Lawyers closing financings prepare funds flow charts. In-house lawyers prepare compliance timelines. Partners introduce associates to deals by drawing diagrams. Professors illustrate contract law doctrines through flow charts.

Visuals work; people who deal with contracts deal in pictures.

What isn't often observed, though, are visuals in the body of a contract itself, embedded with the formal text, or graphics used in exhibits to convey or illustrate core commercial terms. On the one hand, this isn't surprising. Contracts are what we think when we think of legal documents: dense blocks of text, technical language, defined terms, all based on precedents and intricate drafting principles. The occasional table is as visual as it gets. On the other hand, it is interesting that a technique widely used throughout the contracting process, and one generally welcomed by just about everybody, isn't used in the core product itself, the product that formally shapes and governs performance by the parties. This seems, on its face, a missed opportunity. Why don't we use all the tools we have to communicate

complex information and help our clients carry out a new business relationship?

Scholars in recent works are exploring this question. A group of European authors is leading the inquiry.¹ They are not alone in thinking

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1. See Stefania Passera, *Beyond the Wall of Contract Text: Visualizing Contracts to Foster Understanding and Collaboration Within and Across Organizations* (June 29, 2017) (Ph.D. dissertation, Aalto University) [hereinafter Passera, *Beyond*] (reviewing literature and providing wide-ranging analysis of contract visualization). See also Gerlinde Berger-Walliser, Thomas D. Barton & Helena Haapio, *From Visualization to Legal Design: A Collaborative and Creative Process*, 54 AM. BUS. L.J. 347 (2017) [hereinafter Berger-Walliser et al., *Visualization*] (exploring how visualization continues to evolve in the legal profession); Stefania Passera, *Flowcharts, Swimlanes, and Timelines: Alternatives to Prose in Communicating Legal-Bureaucratic Instructions to Civil Servants*, J. BUS. & TECHNICAL COMM. (forthcoming 2018), available at https://stefaniapassera.files.wordpress.com/2017/02/jbtc_submission.pdf [<https://perma.cc/7RK2-PCUP>] [hereinafter Passera, *Flowcharts*] (exploring the development and the experimental evaluation of a highly diagrammatic guide for public procurement Terms & Conditions, addressed to civil servants); Stefania Passera, Anne Kankaanranta & Leena Louhiala-Salminen, *Diagrams in Contracts: Fostering Understanding in Global Business Communication*, 60 IEEE TRANSACTIONS ON PROF. COMM. 118-46 (2017) [hereinafter Passera et al., *Diagrams*] (suggesting that integrating diagrams in contracts can result in faster and more accurate comprehension, for both native and non-native speakers of English); Helena Haapio & Margaret Hagan, *Design Patterns for Contracts*, in NETWORKS: PROCEEDINGS OF THE 19TH INTERNATIONAL LEGAL INFORMATICS SYMPOSIUM IRIS 2016, ÖSTERREICHISCHE COMPUTER GESELLSCHAFT OCG 381-88 (Erich Schweighofer et al., eds., 2016) [hereinafter Haapio & Hagan, *Design Patterns*] (proposing adopting design patterns from fields outside the law to create repeatable solutions to common problems); 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) [hereinafter Passera et al., *Exploring*] (describing a case study of how a sales team created visualizations to improve the clarity and the ease-of-negotiation of outsourcing contract documents); Robert Waller et al., *Cooperation Through Clarity: Designing Simplified Contracts*, 2 J. STRATEGIC CONTRACTING & NEGOT. 48 (2016) [hereinafter Waller et al., *Cooperation*] (discussing an innovative contract simplification project); 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 47 (2013) [hereinafter Barton et al., *Seeing Contracts*] (describing how visualization could improve the effectiveness of contracts); Stefania Passera & Helena Haapio, *Transforming Contracts from Legal Rules to Usercentered Communication Tools: A Human-Information Interaction Challenge*, 1 COMM. DESIGN Q. 38 (2013) [hereinafter Passera & Haapio, *Transforming*] (illustrating how merging contract design with information design, especially visualization, can improve contracts); Gerlinde Berger-Walliser, Robert C. Bird & Helena Haapio, *Promoting Business Success Through Contract Visualization*, 17 J.L., BUS. & ETHICS

about visuals and law; the “contract visualization” literature appears in parallel with recent writing, experimental, and commercial activity involving the intersections of information design and visual expression with law,² legal

55 (2013) [hereinafter Berger-Walliser et al., *Promoting Success*] (discussing the value of contract visualization in promoting business success); Stefania Passera, Helena Haapio & Michael Curtotti, *Making the Meaning of Contracts Visible – Automating Contract Visualization*, in TRANSPARENCY: PROCEEDINGS OF THE 17TH INTERNATIONAL LEGAL INFORMATICS SYMPOSIUM IRIS 443-450 (Erich Schweighofer et al., eds., 2014) [hereinafter Passera et al., *Automation*] (exploring automating contract visualization). There also appear to be consulting firms who develop contract visuals for clients. See, e.g., SIFT VISUALS, <http://www.siftvisuals.com/> [https://perma.cc/7ACE-7UAH] (promoting a consulting service which uses visual representations to clarify complex information for clients); VISUAL CONTRACTS B.V., <https://www.visualcontracts.eu/> [https://perma.cc/GD63-T379] (promoting a service which transforms complex legal documents into accessible visualizations).

2. There is an emerging “legal design” practice and literature that places emphasis on the actual consumers of legal products and use of design thinking methods in developing advice and legal products. See, e.g., MARGARET HAGAN, *LAW BY DESIGN* (2017), <http://www.lawbydesign.co/en/home/> [https://perma.cc/RM8L-QLBC] (exploring how design can improve the world of legal services and legal practice); see also Berger-Walliser et al., *Visualization*, *supra* note 1, at 348–49 (discussing legal design literature).

practice,³ legal documents,⁴ disclosure,⁵ lawmaking,⁶ evidence,⁷ legal research,⁸ contract law instruction,⁹ legal writing and lawyering skills

3. See, e.g., JAY A. MITCHELL, *PICTURING CORPORATE PRACTICE* (2016) (describing visual expression as a thinking, communication, and collaboration tool for corporate lawyers); Kevin Conboy, *Diagramming Transactions: Some Modest Proposals and a Few Suggested Rules*, 16 *TRANSACTIONS: TENN. J. BUS. L.* 91 (2014) (proposing rules for how lawyers diagram business transactions and other legal matters).

4. For example, there are books and articles about the relevance of information and graphic design principles, including attention to layout and typography and use of graphics, to the production of briefs, corporate governance materials, contracts, and other legal documents. See MATTHEW BUTTERICK, *TYPOGRAPHY FOR LAWYERS* (2010) (discussing essentials of typography for legal document production); Jay A. Mitchell, *Putting Some Product into Work-Product: Corporate Lawyers Learning from Designers*, 12 *BERKELEY BUS. L.J.* 1 (2015) (discussing how corporate lawyers should learn from designers in conceiving and creating work product); Adam L. Rosman, *Visualizing the Law: Using Charts, Diagrams, and Other Images to Improve Legal Briefs*, 63 *J. LEGAL EDUC.* 70 (2013) (discussing improving legal briefs through charts and diagrams); Derek H. Kiernan-Johnson, *Telling Through Type: Typography and Narrative in Legal Briefs*, 7 *J. ALWD* 87 (2010) (exploring how typography might be used in legal briefs to reinforce, complement, and independently create narrative meaning).

5. See, e.g., Arianna Rossi & Monica Palmirani, *A Visualization Approach for Adaptive Consent in the European Data Protection Framework*, 159 2017 *INTERNATIONAL CONFERENCE FOR E-DEMOCRACY AND OPEN GOVERNMENT*, LOS ALAMITOS, CA, IEEE (2017), https://www.academia.edu/33177615/A_Visualization_Approach_for_Adaptive_Consent_in_the_European_Data_Protection_Framework [<https://perma.cc/56FA-PEU2>] (presenting research relating to the use of visuals in privacy and other consumer communication); Margaret D. Hagan, *User-Centered Privacy Communication Design*, *PROCEEDINGS OF THE SYMPOSIUM ON USABLE PRIVACY AND SECURITY (SOUPS)* (June 22, 2016), <https://ssrn.com/abstract=2981075> [<https://perma.cc/ECT9-7VT5>] (introducing design concepts to aid technology companies in creating user-friendly disclosure policies).

6. See, e.g., Elizabeth G. Porter & Kathryn A. Watts, *Visual Rulemaking*, 91 *N.Y.U. L. REV.* 1183 (2016) (discussing visualization in lawmaking).

7. For example, there is writing about the treatment by courts of images, videos, computer simulations, and other visuals as evidence. See, e.g., NEAL FEIGENSON & CHRISTINA SPIESEL, *LAW ON DISPLAY: THE DIGITAL TRANSFORMATION OF LEGAL PERSUASION AND JUDGMENT* (2009) (analyzing how visual technologies continue to shape the landscape of American law); Elizabeth G. Porter, *Taking Images Seriously*, 114 *COLUM. L. REV.* 1687 (2014) (advocating for the law's cautious embrace of multimedia technology as an advocacy tool); Richard K. Sherwin, *Visual Jurisprudence*, 57 *N.Y.L. SCH. L. REV.* 11 (2012) (calling for adequate training in visual literacy for lawyers, judges and jurors).

8. For example, there are businesses focused on the use of visualization techniques in legal research. See, e.g., RAVEL, <http://ravellaw.com/> [<https://perma.cc/SAV9-8YNY>] (offering a legal research tool that uses visualization to “find cases hidden by traditional tools”) and LEX MACHINA, <https://lexmachina.com/> [<https://perma.cc/4VAP-B3GX>] (offering a legal research tool using visualization techniques to “discove[r] and communicat[e] meaningful patterns in data”).

9. See, e.g., FRANK J. DOTI, *CONTRACT LAW FLOWCHARTS AND CASES: A VISUAL GUIDE TO UNDERSTANDING CONTRACT LAW* (4th ed. 2016) (using visuals to illustrate contract doctrine).

instruction,¹⁰ and legal education generally.¹¹

The recent and wide-ranging focus on visual expression and law is welcome. Visual thinking and communication are unusually valuable tools for lawyers, including lawyers who plan transactions, design and draft contracts, and advise clients about their performance. Commercial relationships are often complex and the documents difficult to comprehend. The individuals involved are of diverse backgrounds and roles and come to the contract at different times in different contexts with different agendas. Visual methods, as demonstrated through research in a number of fields and as is familiar from everyday experience, facilitate comprehension by individuals and collaboration across disciplines and social communities. Few business people will prefer contract text over a timeline, diagram, or process map.

That said, visuals are not often observed in contract documents, and

10. See, e.g., Steven J. Johansen & Ruth Anne Robbins, *Art-iculating the Analysis: Visuals as Legal Reasoning*, 20 LEGAL WRITING 57 (2015) (suggesting lawyers should strategically root legal arguments in analytical visuals); Ellie Margolis, *Is the Medium the Message? Unleashing the Power of E-communication in the Twenty-First Century*, 12 LEGAL COMM. & RHETORIC: JALWD 1 (2015) (assessing how new technologies have and will continue to change the fundamental nature of legal analysis and communication); Michael D. Murray, *Leaping Language and Cultural Barriers with Visual Legal Rhetoric*, 49 U. SAN FRAN. L. REV. 61, 68 (2015) (suggesting the tools of legal education and law practice must become more visual by following principles of visual legal rhetoric and visual narrativity).

11. See, e.g., Cody Thornton, *Experience the Future: Experiential Education in Law/Shared Visions of Design and Law in Professional Education*, 6 NE. L.J. 21 (2013) (suggesting law schools learn from the design profession and utilize the contemporary studio and studio courses). The 2018 annual meeting of the Association of American Law Schools included a panel discussion titled “Visual and Popular Culture Imagery in Legal Education.” The conference program noted: “Law schools must begin to prepare students to make use of the visual representations as these forms shape social norms and expectations for effective communication. Moreover, visual representations are quite effective as teaching devices because they are so vivid and because our students are intimately familiar with popular culture. Popular culture media are often used . . . in teaching traditional law school courses, such as evidence or professional responsibility. Increasingly, legal educators teach students how to utilize visual images or pop culture narratives in their future law practice (for example, in arguing to juries). Still other instructors teach courses in law and popular culture itself, exploring the intersection of popular culture with law, lawyers, and legal institutions. The Journal of Legal Education will publish a symposium of short articles discussing all three of these different uses of visual representations in legal education. This program consists of presentations by six of these authors, followed by a wide-ranging discussion of the uses of visual imagery in legal education.” Association of American Law Schools, *112th Annual Meeting Program* 29 (2018), <https://www.aals.org/wp-content/uploads/2017/12/2018AMmainProgram.pdf> [<https://perma.cc/U5MZ-9CRP>]. The contract visualization literature also appears, of course, against a backdrop of statutes, judicial opinions, secondary authorities, scholarship, and educational publications regarding contract interpretation, standardization and innovation in contract terms, and contract drafting. See *infra* Parts II and IV.

formal use of visual presentation by commercial lawyers faces substantial cultural and practical hurdles. Form and precedent documents don't include examples of visuals, lawyers work under intense time and cost pressure, and there is little legal authority or guidance on point. Inclusion of visual executions in actual contract documents may be a great thing in concept — but at a practical level presents a rather challenging case.

This Article begins taking on those challenges. The intent is to encourage sustained research on, and development of, the use of visual methods in transactional work, with a view toward creation of visuals of sufficient sophistication for use in commercial settings but that are executable by lawyers in the real world. Such legal and design work should yield multiple ideas, examples, and inspirations for use of an effective communication technique not only in contract documents but also, and perhaps more importantly, in planning, negotiation, advisory, training, and other activities both before and after contract signature. It may also increase lawyer comfort with and confidence in the technique and encourage deeper awareness in lawyers of client contract implementation needs.

Visuals work in deal work. We should create and use the best tools for the job.

The Article proceeds as follows. Part I describes why visual methods are useful in transactional work, and why visuals are not often observed in commercial contracts. Part II provides an overview of and assesses the existing scholarship regarding visual methods and contracts. Part III explores the treatment of visuals under United States contract interpretation and evidentiary principles and identifies characteristics of transactional situations where use of visual expression may be especially helpful. Part IV proposes a number of legal and empirical research, model creation, and other actions intended to build the case for, and facilitate use by practitioners of, such visual executions. Part V concludes.

I. VISUALS AND TRANSACTIONAL WORK

A. *Diagrams and Deals*

Consider the nature of transactional work. It is a world of entities, structures, relationships, processes, time periods, and movements of money, property rights, and information. Lawyers and other participants take into account multiple commercial, legal, and other considerations. They deal with abstract legal, accounting, tax, and contractual concepts. The work is collaborative in nature; transactions routinely involve individuals of varied disciplines and cultures. The participants are tasked with creating concrete plans and products that reflect and accommodate those many factors. The

products they create – commercial contracts – are often long, dense, and difficult to comprehend. And then the parties need to carry out the agreements captured in those contracts.

Now consider visual thinking and expression. Imagine deal participants at a meeting. On the whiteboard, they draw blue squares for relevant entities and green arrows for money flows. They make a timeline and, with an orange marker, identify key events in the relationship and related consequences. The participants point at the diagram and identify potential legal concerns; those are noted in red, underlined twice, and punctuated by an attorney jabbing her finger against the whiteboard. Something in the sketch prompts an idea; one square gets erased and is replaced with a circle, and the tax person is now happier. A deal feature under consideration is captured with a dotted line. A possible extension of the relationship to a different region is noted, way over in the corner, with a little dotted-line box. At the end of the meeting several participants take pictures of the whiteboard with their phones, a polished-up version of which is used later by one party as a briefing tool. Everybody says they now have a good sense of what's going on in the deal and what they need to do. On the flight back home, a lawyer reading *The New York Times* studies an infographic presenting voting patterns and comes away with a much better understanding of the election.

This simple scene reflects the value of visual methods. There is a vast literature, from psychology, cognitive science, engineering, architecture, design, art, user experience, and other disciplines, demonstrating the cognitive, collaboration, and communication benefits of visual thinking and expression. As described in the literature, visuals can spark the imagination, capture and make thoughts visible, convey abstract ideas, reveal big picture relationships, show passage of time, speed comprehension, and facilitate comment by others including individuals of different disciplines.¹² People say “sketch it out for me” or “let me get a picture in my head” for good reason.¹³

Visualization, as described by one group of scholars, “is a useful strategy for discovering structure and organizing information efficiently,”¹⁴ which, on reflection, is not a bad way of thinking about the work of

12. See MITCHELL, *supra* note 3, at 13–22, 190–91 (describing cognitive, collaboration, and communication benefits of drawing and use of visual communication). The discussion in Part I.A is adapted in part from this book. The book describes in more detail why visual methods are useful in transactional work, offers a number of examples of their use across the practice, and provides references to the literature.

13. Everyday experience as well as research confirms the effectiveness of visual expression. Its use is widely observed in a variety of business and professional settings. Just think about a work session with an investment banker, or a tax lawyer, or a management consultant, much less a technology executive, architect, designer, or engineer of any stripe.

14. DANIEL L. SCHWARTZ ET AL., *THE ABCS OF HOW WE LEARN* 277 (2016).

contracting and transactional lawyers generally.

Beyond its deeper benefits, the medium itself is well-suited to deal work. Visual executions have tremendous capacity for conveying information. The creator can use shape, color, line, line weight, line effects (dashes, dots, arrows), white space, and proximity to present information and convey importance. There are a variety of formats: diagram, timeline, process map, flow chart, table. Creators can work in pencil, on a whiteboard, or on an iPad. They can execute visuals at different levels of resolution, from simple concept sketches to formal technical drawings. The medium nicely accommodates the mechanical nature of the work and yet provides a platform for the imagination.¹⁵

Such capacity and versatility means that visuals can be deployed in a variety of ways at a variety of points throughout the contracting process and other transactional activities. They can capture both the big picture of a commercial relationship and illustrate the operation of individual provisions. A visual can describe a transaction at a high-level to a board of directors or stockholders being asked to vote on the transaction,¹⁶ or present intricate pricing mechanics and reporting requirements. Visuals can be used to display entity structures, show actors and the flows of assets among them, convey the passage of time, set out decision-making processes, and present termination scenarios. Visuals can also facilitate working through facts or difficult documents, and show how documents relate to one another, how one deal fits with others, and how a deal fits into a strategic plan.¹⁷ A picture

15. MITCHELL, *supra* note 3, at 22 (“Anything that has such practical utility for creative and collaborative problem-solving ought to be of interest to folks who are paid to think about complicated things, deal with subtle concepts, engage with individuals from other disciplines, come up with workable solutions, and build products. . . help you move from vision to artifact which (like architects and engineers) is what we have to do in this job.”).

16. *See, e.g.*, DowDuPont Inc., Registration Statement (Amendment No. 3 to Form S-4), 4–5 (June 7, 2016) (outlining merger proposal between Dow Chemical Company and E.I. du Pont de Nemours Company). Transaction structure diagrams, for example, are routinely observed in a variety of commercial, legal, and educational settings. Courts even include such diagrams in opinions. *See, e.g.*, Williams Cos., Inc. v. Energy Transfer Equity L.P., No. 12168-VCG, 2016 WL 3576682 (Del. Ch. June 24, 2016), *aff’d*, 159 A.3d 264 (Del. 2017) (referencing diagrams illustrating a proposed merger); *see also* Meso Scale Diagnostics, LLC v. Roche Diagnostics GmbH, 62 A.3d 62 (Del. Ch. 2013) (using diagrams to show the relationship of defendants and the licensing scheme); Sterling v. Beneficial Nat’l Bank, No. 91C-12-005, 1994 WL 315365 (Del. Super. Ct. Apr. 13, 1994) (providing a diagram of the loan, payment arrangement, and agreement at issue).

17. *See* MITCHELL, *supra* note 3, at 96–101, 104–05 (discussing use of visual methods in understanding, planning, and drafting documents). A Silicon Valley technology transactions lawyer reflects this versatility in his description of how he uses visuals to “build internal strategies and make deals happen”: “Producing solid visualizations was essential to (a) business model development and vetting; (b) internal contract design; (c) effective translation of “legalese” for the benefit of the business team (and to elicit business input on

in some cases may in fact be worth a thousand words. Or, in today's practice environment, 40,000 words.¹⁸

At bottom, drawing (verb) is an activity that facilitates thinking; a drawing (noun) is an effective platform for collaboration and communication.¹⁹ Visual expression can be a powerful tool in a context where the lawyer is tasked with designing and describing a complex commercial relationship, and where busy business people are tasked with comprehending and carrying it out.²⁰

points that would otherwise be overlooked); (d) subtle advocacy of a favorable "deal narrative" during negotiations; and (e) post-mortem contract analysis." The lawyer then called out some examples of his use of visuals: "Mapping (by section) a number of related but non-adjacent contract terms. Illustrating different categories of intellectual property being sold, retained, or shared during an acquisition or divestiture, and matching each "bucket" with the appropriate set of rights. Tracking revenue flow and timing throughout a commercial relationship. Analyzing individual bundles of rights granted in a group of interrelated licenses. Dissecting a contract with a long train of amendments to illustrate the current state of rights/obligations. Visualizing open-source software contamination and the nature/extent of flowdown obligations." E-mail from Robin J. Lee, Lecturer in Law, Stanford Law School, to Jay Mitchell, Professor of Law, Stanford Law School (January 18, 2018, 02:14 PM PST) (on file with author).

18. As described by Cathy Hwang and Matthew Jennejohn: "Recent research has shown that contracts, with their many provisions, have grown over time, in both length and complexity. In recent work that examines 20 years' worth of data, John Coates showed that acquisition agreements have more than doubled in size — from 35 pages to 88 pages. Coates also finds that acquisition agreements have also become linguistically more complex — linguistic complexity increased approximately ten grade levels between 1994 and the 2010s, from approximately grade 20 to over grade 30." Cathy Hwang & Matthew Jennejohn, *Deal Structure* 15–16 (Rock Ctr. for Corp. Governance, Working Paper Series No. 231, 2017), <https://ssrn.com/abstract=3043860> [<https://perma.cc/D47P-BMTU>] (citing John C. Coates, IV, *Why Have M&A Contracts Grown? Evidence from Twenty Years of Deals* (Harvard Law Sch. John M. Olin Ctr. for Law, Econ. & Bus., Discussion Paper No. 889, 2016), <https://ssrn.com/abstract=2862019> [<https://perma.cc/H5RN-VUZ7>]). Hwang and Jennejohn also note that recent research suggests that "complexity is not only increasing within the boundaries of individual, self-contained contracts. Rather, scholars have recently begun to recognize that complexity has caused commercial relationships to burst out of neat contractual seams and into multiple agreements and contracts." Hwang & Jennejohn, *supra* note 18, at 16. Such bursting suggests the value of a technique that can capture, in an efficient way, what's covered where.

19. Joshua Brewer, a designer, observed in a blog post about sketching that "[t]he sketch is not the end goal. The end goal of the drawing process is what you learn *while* sketching." Joshua Brewer, *Sketch, Sketch, Sketch*, 52 WEEKS OF UX, <http://52weeksofux.com/post/346650933/sketch-sketch-sketch> [<https://perma.cc/L3LZ-WLEW>].

20. Authors of contract drafting texts and practitioner guides recognize this utility: "After the client has explained the transaction and counsel has filled in any gaps in his or her understanding, counsel is in a position to diagram the transaction. It is very important to do this (especially a complex transaction) to illustrate who the parties are and what the deal is. When multiple parties are involved, it is helpful to diagram the rights and obligations each has to the others. This tool will assist counsel greatly in understanding the transaction,

B. *If Visuals are so Great, Why Aren't They Used in Contracts?*

Visuals are widely used in the contracting process but, at least in the United States, rarely find their way into formal contract documents themselves. They may appear in the proxy statement relating to approval of a merger, but not in the merger agreement itself. The authors of practitioner resources may recommend their use in the planning process, but they do not advocate actual use in the documents.²¹ Searches for commercial contracts incorporating graphics yield few examples.²²

assessing the legal issues it raises, and structuring the necessary agreements.”

CALIFORNIA CONTINUING EDUCATION OF THE BAR, DRAFTING BUSINESS CONTRACTS: PRINCIPLES, TECHNIQUES, AND FORMS § 4.5 (2017) [hereinafter DRAFTING BUSINESS CONTRACTS]. A leading contract drafting text encourages lawyers to draw diagrams of transactions to prepare for meetings. TINA STARK, DRAFTING CONTRACTS: HOW AND WHY LAWYERS DO WHAT THEY DO 407–09 (2d ed. 2014); see also DANIEL D. BRADLOW & JAY GARY FINKELSTEIN, NEGOTIATING BUSINESS TRANSACTIONS 116, 181 (2013) (recommending that lawyers “draw a diagram of the transaction. You will be amazed at how much easier it is to evaluate a transaction after drawing a simple diagram to show the relationships among the parties . . . a PowerPoint slide depicting your organizational or structural proposals will more readily convey your thoughts [in a negotiation] than a lengthy explanation, which may be subject to interruption, misinterpretation, or simply be difficult to follow.”); Conboy, *supra* note 3, at 91 (noting that use of “diagrams is the most common way to train a new lawyer, or to introduce a new lawyer to a deal, a concept, a structure, or a case”).

21. For example, the indices in two California practice guides relating to contracts do not include the terms “diagram” or “visual.” See CALIFORNIA CONTINUING EDUCATION OF THE BAR, CALIFORNIA LAW OF CONTRACTS (2017) (lacking the terms “diagram” and “visual” in its index); DRAFTING BUSINESS CONTRACTS, *supra* note 20 (lacking the terms “diagram” and “visual” in its index). Two leading contract drafting texts do not address inclusion of diagrams or other visuals in contracts; see KENNETH A. ADAMS, A MANUAL OF STYLE FOR CONTRACT DRAFTING (4th ed. 2017) (discussing drafting numbers and formulas but not use of visuals); STARK, *supra* note 20 (discussing drafting numbers and formulas but not use of visuals). This pattern of encouraging lawyers to use diagrams in their planning and analytical work but not in their work products is not limited to transactional practice. As Porter notes about books containing advice on brief writing: “There are thousands of pages of advice to lawyers on how to craft effective pleadings and briefs . . . Yet to this day most books on the subject lack even a reference guide entry for “figure,” “graphic,” “illustration,” “photograph,” or “picture.” One book suggests that lawyers preparing to write a brief “[spend] a few minutes with a diagram as part of your analysis”—but makes no mention of including such a diagram in the final product. Another urges lawyers to “create pictorial clarity” with subheadings, lists, and columns, but never mentions actual pictures.” Porter, *supra* note 7, at 1714–15.

22. The principal databases of commercial contracts do not permit users to directly search for contracts containing visuals, instead requiring users to formulate keyword searches with terms alluding to diagrams or visuals. A search for documents containing relevant words revealed few examples. For example, in the DealMaker Precedent Documents & Clauses database on Bloomberg Law, which contains over a million documents from EDGAR filings, of those documents containing the term “agreement” in the document title, thirty-three documents contain the exact phrase “following diagram,” 3 documents contain the exact phrase “following flowchart,” nine documents contain the exact phrase “following graphic,” and forty-six documents contain the exact phrase “following timeline.” Of those documents

This comes as no surprise. Including visuals in contract documents just feels different than using them as a planning tool, disclosure aid, or post-closing cheat sheet. There are formidable practical challenges to changing conventional ways of working. The “stickiness” of standard contract terms, language, and formats is well-established, and lawyers routinely, and sensibly, use forms and rely on precedent documents.²³ There are no form books for contract visuals. Legal research databases do not accommodate

containing the term “agreement” in the document title, thirty-seven documents include a sentence containing both the term “diagram” and either “illustrates” or “depicts,” no documents include a sentence containing both the term “flowchart” and either “illustrates or “depicts,” sixteen documents include a sentence containing both the term “graphic” and either “illustrates” or “depicts,” and two documents include a sentence containing both the term “timeline” and either “illustrates” or “depicts.” Additional searches, similar to those described above using terms such as “infographic,” “visual,” and “proposal graphics” do not yield relevant results. The diagrams, flowcharts, and graphics in all of the agreements where the governing law is a state within the United States appear in either an Exhibit, Schedule, Appendix, or Annex to the contract, not in the body of the contract. Timelines located in the body of a contract are expressed using words and sentences. This search has its limitations. EDGAR filings generally include only “material contracts” to which a reporting company is a party, and material contracts for many companies do not include outsourcing, product purchase, licensing, and other commercial agreements. That said, the minimal appearance of the term “diagram” in such a large data set is striking.

23. There is substantial scholarly literature regarding the use and persistence of standard contract terms and forms. A leading contracts scholar explains:

“Standardization has a long tradition in transactional legal practice Rather than writing from scratch, lawyers typically reuse contract provisions from previous transactions [T]hey store and retrieve documents from past deals and follow procedures for standardizing best practices for different types of transactions. By serving large numbers of clients, a law firm may realize economies of scale from using the same or similar “best practice” contract provisions across different transactions Standardized contract terms are enormous cost savers [S]tandard contract terms are often sticky or locked-in practices. A party who departs from contract standards loses the benefits of network and learning externalities. For example, deal partners are generally suspicious of and expend additional resources to understand novel terms. They also discount the value of a contract that includes unfamiliar contract terms or language. Moreover, a standard term is more likely to have been interpreted by a court, so the prospective enforcement of that provision is more certain and less costly. The greater certainty of enforcement and familiarity of standard provisions [support such transferability]. Many contracts are more valuable if they can be readily assigned or traded to third parties.” George C. Triantis, *Modularity, Technology, and Innovation in Contract Design: A New Path for Transactional Practice*, 18 STAN. J. L. BUS. & FIN. 177, 186 (2013); see also MITU GULATI & ROBERT E. SCOTT, THE THREE AND A HALF MINUTE TRANSACTION: BOILERPLATE AND THE LIMITS OF CONTRACT DESIGN 151 (2013) (explaining lawyer resistance to changing standardized language); John F. Coyle & W. Mark C. Weidermaier, *Interpreting Contracts Without Context* 3 (2017), http://www.law.nyu.edu/sites/default/files/Interpreting%20Contracts%20Without%20Context_John%20Coyle%20and%20Mark%20Weidemaier.pdf [<https://perma.cc/V435-W9YH>] (discussing use of forms); Margolis, *supra* note 10, at 15 (discussing lack of innovation in legal documents).

visual executions, making it difficult to find examples.²⁴ There is little case law or other authority relating directly to the use of visuals in contracts.²⁵ Deals are done under meaningful time pressure; adding visual executions to documents would add time and cost. Software applications commonly used to produce contract drafts have limited graphics capability.²⁶ Lawyers doubt both their drawing skills and technical abilities.²⁷ Law schools teach contract drafting, not contract drawing. There is today neither the culture nor the infrastructure for widespread use of visual expression in transactional work.

The consequence is that lawyers are not using all the tools they have to capture the deal and create more accessible products for their clients. It is understandable but unsatisfying, particularly in view of the comprehension challenges of traditional contracts, the lack of attention by lawyers to contract implementation generally,²⁸ the increasing attention to visual expression and design in legal practice, and the prevalence of visual

24. For example, contracts containing graphics or diagrams retrieved from the DealMaker Precedent Documents & Clauses database on Bloomberg Law contain only placeholder icons to indicate that the documents contain graphics or images. On Westlaw, law journal articles containing visuals include a note stating, “TABULAR OR GRAPHIC MATERIAL SET FORTH AT THIS POINT IS NOT DISPLAYABLE.” On Lexis Advance, law journal articles include only external links to where the visuals can be viewed elsewhere instead of embedding the visuals in the articles. Images and graphics are sometimes embedded in cases on Westlaw, but Westlaw does not offer users the ability to search for and retrieve only cases containing images or graphics. Instead, finding these cases requires conducting keyword searches alluding to the presence of these visuals, such as an advanced search for *diagram/s* “reproduced below.” Some cases on Lexis Advance include embedded visuals, but images and graphics are frequently omitted from cases with a note indicating, “Graphic Omitted.” Porter in her article about the treatment of images in litigation quotes the Westlaw language noted above and makes this observation: “This all-caps, impersonal dismissal of all things visual is a metaphor for the neglect of images more broadly in our conception and practice of written law, whether that writing is scholarly or part of practice. But databases’ refusal to display images is not only a metaphor: It is also a real injury. Deletion impoverishes works that contain or analyze images. It also prevents us from noticing the increasing role that images are beginning to play in litigation outside of trial. Image-driven written argument represents a sea change in legal discourse, yet thus far we typically do not see it, and we fail to notice it when we do.” Porter, *supra* note 7, at 1691–92 (citations omitted).

25. See *infra* Part III.A (explaining that there are no contract interpretation principles for visual executions, but there are also no principles of visual interpretation generally).

26. Passera notes that the contract professionals she interviewed “complained that software available on their work computers [including PowerPoint] was not easy enough to use to create appealing visualizations,” which they viewed as a source of inefficiency and a constraint on execution quality. Passera, *Beyond*, *supra* note 1, at 147.

27. Passera notes the biggest barriers to use of visuals reported by her interviewees were concerns about individual ability and how to create visual executions in a “way that would not require too great an investment in terms of effort, time, money, or acquiring new skills.” *Id.* at 29.

28. *Infra* note 39 and accompanying text.

communication in modern culture.

The work of the European scholars examining this situation combines a wide-ranging critique of formal contracting with experimental and field studies centered on the use of specific visual executions in legal documents. These scholars offer a number of thoughtful observations about the nature, design, and use of contract documents. The work is published primarily in communication journals and appears to have limited visibility in American scholarly and practitioner communities.²⁹ For these reasons, Part II reviews the literature in some detail. The limitations of the literature help shape the agenda for further development of the concept, as reflected in Parts III and IV of this Article.

II. CONTRACT VISUALIZATION LITERATURE

A. *Contract as an Imperfect Communications Tool*

The contract visualization literature frames contracts as business tools shaped and then used over time by diverse actors. Contracts are communication devices as well as platforms for capturing commercial arrangements and legal characterizations; they convey, and involve human interaction with, information.³⁰ They serve as plans and instructions for the parties, and “support collaboration, [and] sensemaking.”³¹ Contracts consist of “layered information, each layer being relevant for different users [I]nformation relevance changes over time, depending on what is required in different stages of the business relationship.”³² They involve implementation; contract content must be translated into action by the parties.³³

Negotiation and implementation of contracts often involves multiple people from multiple disciplines and often from multiple countries:

Contracts are . . . produced and used in varying social contexts, often at the boundaries between different communities of experts. Complex business processes and several professional groups are involved in the production, negotiation and implementation of contracts Contracts have a different role and mean different things across

29. For example, according to HeinOnline Scholar Check, Haapio’s articles on contract visualization have been cited by authors other than herself or Passera, Barton, or Berger-Walliser — with whom she has co-authored articles on contract visualization — a total of seven times by six unique law or law-related publications.

30. Passera & Haapio, *Transforming*, *supra* note 1, at 38.

31. Passera, *Beyond*, *supra* note 1, at 24.

32. Passera & Haapio, *Transforming*, *supra* note 1, at 38.

33. *Id.* at 39.

professional communities, but at the same time contracts allow the communities to coordinate their efforts around the specific deal at hand.³⁴

As such, contracts can be conceived as *boundary objects*, “a focal point in collaboration” that ideally are “flexible enough to be interpreted, contextualized and used in different ways, as well as robust enough to maintain shared meanings and bridge the cognitive gap across communities.”³⁵

Contracts as conventionally designed and executed are imperfect boundary objects. They are not conceived or designed from a communications perspective. They often overwhelm the user. “[T]he complexity of contract documents . . . increases the information-processing costs associated with reviewing and understanding them”; review results in “cognitive overload” for the user.³⁶ Comprehension errors are a problem in a setting where “shared understanding and accurate execution are essential in delivering what was promised.”³⁷ The nature of the conventional contract document only adds to the “difficulty of communicating specialist knowledge and insights across occupational boundaries.”³⁸

Lawyers, as the principal producers of contracts, are principal contributors to the problem. Lawyers have an incomplete understanding of and appreciation for the product and for their task:

34. *Id.* at 38-39.

35. *Id.* The boundary object notion comes from sociology. As described in a recent article arguing that patents serve as boundary objects: “The concept of the boundary object has emerged from sociological research to become ubiquitous across a wide range of disciplines, but the concept has had surprisingly little purchase in law. In general, boundary objects may be defined as artifacts that have sufficiently definite meaning to be useful in disparate social worlds, but which simultaneously are sufficiently ambiguous to become objects of collaboration between such disparate social worlds.” Dan L. Burk, *Patent Silences*, 69 VAND. L. REV. 1603, 1605–06 (2016) (citations omitted). See also Michael J. Madison, *The End of the Work as We Know It*, 19 J. INTELL. PROP. L. 325, 353–54 (2012) (discussing copyrighted works as boundary objects). The article originating the concept described them as “objects which are both plastic enough to adapt to local needs and the constraints of the several parties employing them, yet robust enough to maintain a common identity across sites They have different meanings in different social worlds but their structure is common enough to more than one world to make them recognizable means of translation. The creation and management of boundary objects is key in developing and maintaining coherence across intersecting social worlds.” Susan Leigh Star & James R. Griesemer, *Institutional Ecology, ‘Translations’ and Boundary Objects: Amateurs and Professionals in Berkeley’s Museum of Vertebrate Zoology*, 19 SOC. STUD. SCI. 387, 393 (1989).

36. Passera, *Beyond*, *supra* note 1, at 20.

37. *Id.*

38. Passera & Haapio, *Transforming*, *supra* note 1, at 44.

The drafters of contracts seldom view themselves as working in the field of communication. While they produce documents with the intent of capturing and transferring information – work with text for an audience – they do not define their role in terms of communication. For lawyers, the focus is on producing legally sound and predictable content, rather than communicating messages effectively to the key persons in charge of implementation. Instead of focusing on the needs of implementation teams, they optimize contracts to be used in court, an event that marks a failure of the project and the relationship.³⁹

Lawyers see contracts in abstract terms as legal safeguards, with “specific . . . scenarios of use in mind: for lawyers and judges in courts, involved in adversarial proceedings” after problems have arisen.⁴⁰ They don’t imagine or concentrate on comprehension and implementation of the contract by a diverse group of non-lawyers. Lawyers fail to appreciate contracts as material objects “in interactions with their users,” as artifacts whose design “has psychological and social consequences for their users.”⁴¹ In essence, “[a]s long as contracts are seen only from a legal perspective, their design and communication issues will not be noticed, and thus their full potential as boundary objects will not be harnessed.”⁴²

39. *Id.* at 39. This criticism is echoed by Triantis: “Efficiencies in the midstream of the contract lifecycle are often neglected by both lawyers and their clients [T]he legal language of contract documents must be translated into operationally meaningful terms, so that the lay employees of the parties can understand and perform their company’s obligations accurately and in a timely manner [Such steps] reduce[] the risk of inadvertent breach and thereby lower[] expected dispute resolution and enforcement costs” Triantis, *supra* note 23, at 190.

40. Passera, *Beyond*, *supra* note 1, at 20. Passera observes that a similar criticism can be made of traditional legal scholarship. Such scholarship: “[f]ocuses on legal rules governing contracts, rather than studying contracts themselves and is concerned with case law and contract interpretation by lawyers and judges in court, rather than by organizational actors outside court. [Economic analyses] have stressed their control and enforcement functions above all else [Relational contract theory] focuse[s] instead on non-contractual social norms that complement or substitute formal governance mechanisms. These influential streams of literatures do not seem to problematize the formal contract document itself: the focus of interest has almost always been on something else, whether contract doctrine or transactional attributes and governance mechanisms.” *Id.* at 35 (citations omitted). The visualization proponents take a “keen interest in communication, and on how both the content and presentation of contracts can be designed strategically to create and sustain relationships.” *Cf.* MITCHELL, *supra* note 4 (encouraging lawyers to view their work-product as “products,” and to take in account their design and other physical attributes)..

41. Passera, *Beyond*, *supra* note 1, at 24.

42. Passera & Haapio, *Transforming*, *supra* note 1, at 39. The contract visualization writers ground their work in what they call the “preventive” approach to law: “A contract designed according to the idea of proactive law aims, first of all, at helping the parties reach their objectives so as to implement their strategy and business plan in the way they themselves

B. *Improving Contracts Through Use of Visuals*

The visualization proponents describe ways to improve contract design and utility. Use of visuals — diagrams, flow charts, timelines, and other visual presentations—can provide a variety of benefits. At one level, they can convey deal information efficiently: flows of value, event sequences, performance dates, and approval processes. Visuals can also provide broader benefits:

[T]he boundary-bridging power of visualizations resides in their ability to clearly encode interdependencies and relationships between parts and wholes — of a product, a group, a process. . . . In meetings, visualizations help in finding common ground and seeing the big picture, and decreasing personal and communication conflict. Even simple visualizations . . . are powerful coordination tools that offer common, concrete representation of the project and one’s role in it — which then can be better discussed, managed and negotiated. The result is a more effective mobilization of resources.⁴³

Several studies tested the use of visuals across varied settings. One study found that such use can help bridge “three knowledge gaps in the contracting process: interfirm; cross-professional; and between contracting phases.”⁴⁴ Another study concluded that use of diagrams in contracts yields greater comprehension of contract terms written in English by both native and non-native speakers of English.⁴⁵ A third study found that visual

want The proactive law approach changes the focus from *contract law* to *contract implementation* and the *contracting process* Here, business managers, not lawyers, are the owners of the process, and the contract becomes more of a management tool than a legal tool. A proactive contract is crafted for the parties, especially for the people in charge of its implementation in the field, not for a judge who is supposed to decide about the parties’ failures.” Berger-Walliser et al., *Promoting Success*, *supra* note 1, at 61, 94; *see also* Passera, *Beyond*, *supra* note 1, at 21–22 (describing the preventive approach as conceptualizing contracts as “managerial-legal tools rather than purely legal tools,” encouraging that they be “created thinking primarily about business, and secondarily about the eventuality of court proceedings”; and encouraging contract design to be “carried out as a multidisciplinary endeavor” with “information clarity, concision, and actionability . . . [being] as important as legal enforceability and precision”) (citations omitted). Passera notes that, in this view, “contract design . . . [should be] seen as an exercise in balance: balance between managerial and legal functions of contracts, but also between technical precision and effective communication.” *Id.* at 36 (citations omitted).

43. Passera et al., *Exploring*, *supra* note 1, at 74 (citations omitted). This description of the nature and effectiveness of visual communication is consistent with the literature on drawing and visual thinking found in a variety of disciplines; *see, e.g.*, MITCHELL, *supra* note 3, at 13–22, 190–91 (collecting references).

44. Passera et al., *Exploring*, *supra* note 1, at 69.

45. Passera et al., *Diagrams*, *supra* note 1, at 2. The author observed that: “We found

presentations of procurement terms improve reader receptivity and uptake.⁴⁶

The proponents claim that use of visuals may have a positive impact on trust and relationship building:

[Subject company desires that its] documents should not only appeal to the rationality of their counterparts, but should also promote non-calculative, visceral judgments conducive to positive interpretations of the emerging relationship, and ultimately to collaborative behaviours. In this sense, visualizations in contracts become highly symbolic: they demonstrate commitment to clear communication; they seek to give salience to the managerial and coordination aspects of contracts, over their legal and control features; and they try to make contracts look less dense, and more accessible and inviting.⁴⁷

As reported in one article, “empirical evidence suggests that a company using contract visualization is perceived by contract readers as trustworthy, respectful of its counterparty, collaborative, and appreciative of honesty and clarity in business.”⁴⁸ This benefit is central to the proponents’ argument; use of visuals can not only promote comprehension but also help shape the relationship itself.⁴⁹

The literature generally reads as if it centers on use of visuals as “official” elements of contracts themselves, but the proponents sometimes describe a narrower use. Visuals are not seen as “a binding legal element of the contract, but rather an illustration of the scope and terms and a means of communication between different professions, especially lawyers and non-lawyers.”⁵⁰ The proponents also note that the formal contract is not the only

that integrating diagrams into contracts support faster and more accurate comprehension of contracts; unexpectedly, legal background and different cognitive styles do not interact with this main effect. We also discovered that both native and non-native speakers of English benefit from the presence of diagrams in terms of accuracy, but that this effect is particularly strong for non-native speakers. The implication of the study is that adding diagrams to contracts can help global communicators to understand such documents more quickly and accurately.”

46. Passera, *Flowcharts*, *supra* note 1, at 1 (noting in abstract that study results “show that the diagrammatic format, in comparison to prose, significantly enhances comprehension accuracy and answering speed, and is perceived as more appealing and functional by the users”).

47. Passera et al., *Exploring*, *supra* note 1, at 94.

48. Passera, *Beyond*, *supra* note 1, at 50.

49. Passera also notes that visual presentation can serve as a quality control on substantive contract terms design and articulation. Its use can “prevent inconsistencies in contract drafts: in order to be able to visualize a clause in the first place, contract authors would need to audit their own thinking more carefully[.]” Passera et al., *Exploring*, *supra* note 1, at 92.

50. See, e.g., Berger-Walliser et al., *Promoting Success*, *supra* note 1, at 57 (highlighting

worthy venue for visual executions; they acknowledge their value elsewhere in the contracting process.⁵¹ Both of these statements reflect an emphasis on communication not legal obligation.

* * * * *

Use of visual executions in contract documents, in sum, will have “a number of positive cognitive and emotional effects: it increases document comprehension, it improves user experience of contract use, and it contributes to building shared understanding and more collaborative relationships across professional domains and between organizations.”⁵² It prompts clearer thinking and produces a more effective boundary object. A better document presumably contributes to better contract performance.

Contracts, in the proponent’s view, fall short of their potential. The legal community needs to understand that “successful communication, task completion, learning and collaboration is found in how humans interact with information[.]”⁵³ Contract design, they say, should be seen as both content and presentation.⁵⁴ Use of plain language is not enough: “the perspective of legal writing must widen into the domains of design, and borrow the lessons learnt in the fields of information design and user-centered design about users, content and information display.”⁵⁵ A central lesson from those fields

why it is so important for non-lawyers involved in contract negotiations to understand the terms to which they are agreeing). *See also Passera, Beyond, supra* note 1, at 40 (proponents do “not advocate for completely substituting contract texts with images, but rather complementing them, so as to make best use of the relative strengths of both modes of communication”) (citation omitted). Passera notes that: “Visualizations and traditional text are envisioned to co-exist in multimodal documents, designed with the deliberate goal of supporting clear and actionable communication between the parties. Haapio and Passera (2012) analyzed several examples of contract visualizations, and suggested that often the semiotic role of the visual element is to elaborate and enhance the message carried by the text, as well as engage and motivate the audience.” *Id.*

51. Barton et al. note that visualizations could have several homes in contract documents: “Such techniques could be used directly in a contract, as part of the drafting process. On the other hand, visualization can be about a contract, a separate document that assists all those who are involved in the planning, review, or approval of a contract or in monitoring or implementing its terms.” Barton et al., *Seeing Contracts, supra* note 1, at 48 (emphases omitted).

52. Passera, *Beyond, supra* note 1, at 153.

53. Passera & Haapio, *Transforming, supra* note 1, at 44.

54. Passera et al., *Exploring, supra* note 1, at 71; *cf.* Passera & Haapio, *Transforming, supra* note 1, at 44 (“Disregarding the aspects that can increase user-centeredness in documents does not simply lead to a missed improvement, but it becomes itself a source of complexity that hinders successful communication across the boundaries of professional communities”).

55. Passera & Haapio, *Transforming, supra* note 1, at 39; Stefania Passera, Helena Haapio & Thomas D. Barton, *Innovating Contract Practices: Merging Contract Design with*

is the power of visual expression.

C. *Some Reactions*

1. Characterizations and Criticisms

The visualization proponents offer a thought-provoking set of observations about contracts and contracting. Whether or not one accepts all the benefits claimed for use of visuals or the broader critique and conception of contracting, their description of knowledge gaps in the contract process, characterization of contracts as boundary objects, organizational actors coming to the contract for different purposes and at different times, and observations about contracts as material objects, should generate moments of reflection for contract drafters. The notion that “[e]ffective contract design . . . is not only a matter of content and transactional attributes, but also of actual design: language, information structure, and visual information display,”⁵⁶ is a valuable reminder that contracts are read and used by regular people of varied backgrounds. The case they present for use of visuals provides useful framing and inspiration for continuing research and development.

The visualization proponents are also on target in their criticisms of those who draft contracts. Contracts are business documents that are often difficult for business people to use. Lawyers could do a better job of preparing contracts or other materials in a way that makes them better guides for the individuals responsible for carrying out the arrangement contemplated by the contract. (Indeed, in view of the difficulty we have with words — “[c]ontract interpretation remains the most important source of commercial litigation and the least settled, most contentious area of contemporary contract doctrine and scholarship”⁵⁷ — it may be time to try a different, or at least additional, way of capturing and communicating

Information Design, in Proceedings of the 2013 Academic Forum on Integrating Law and Contract Management: Proactive, Preventive and Strategic Approaches (2013), <http://scholarlycommons.law.cwsl.edu/fs/73/> [<https://perma.cc/66VQ-GJNU>]; see also Passera, *Flowcharts*, *supra* note 1, at 37 (“The proposed conceptualization of ‘contracts as instructions’ suggests the opportunity for technical communicators and information designers to lend their skills to the field of law, and explore solutions beyond layout and plain language.”).

56. Passera, *Beyond*, *supra* note 1, at 52.

57. Ronald J. Gilson, Charles F. Sabel & Robert E. Scott, *Text and Context: Contract Interpretation as Contract Design*, 100 CORNELL L. REV. 23, 25 (2014); see also Coyle & Weidermaier, *supra* note 23, at 2 (“A contract is an attempt to translate the ideas underlying a bargain into words. Much can get lost in this act of translation, for ideas are more complex and nuanced than the words available to represent them.”).

contractual arrangements.)⁵⁸ Lawyers have much to learn from the design community in how to go about creating legal documents; it seems odd that producers of information products such as contracts rarely seem to study the work of information designers.⁵⁹

2. Limitations of the Literature

That all said, the visualization literature is limited.⁶⁰ Its theoretical and practical gaps illustrate the real-world challenges of achieving widespread use by lawyers of visual methods. For example:

- The articles touch on concerns about enforceability and judicial reaction to the presence of visuals in contracts, but do not address those doctrinal concerns in detail.
- The authors do not engage meaningfully with the extensive scholarship relating to contract interpretation.
- The literature describes some possible cases that are suited for use of visual executions and provides ideas about suitable types of visuals for specific contracting topics,⁶¹ but neither topic is addressed in a comprehensive way, and the examples provided (for example, outsourcing relationships and timeline-based executions)

58. The visualization work aligns in some ways with other scholarly and commercial developments. For example, as noted, there is momentum behind the integration of design sensibilities and methods — including close attention to the user of the work-product as well as attention to information design and use of visual methods — into legal and commercial work. There is also emerging interest in alternative forms of contractual expression. *See, e.g.*, Matthew Roach, *Toward a New Language of Legal Drafting*, 17 J. HIGH TECH. L. 43 (2016) (proposing that lawyers author contracts in machine readable markup language).

59. *Cf.* Mitchell, *supra* note 4 (discussing adoption of design sensibilities and techniques by corporate lawyers).

60. The visualization writers recognize that their work is in an early-stage. They did not anticipate rapid and widespread use of visual executions by commercial and legal actors. Instead, they described a “Visualization Project” and their hope to launch a “common enterprise of exploration” involving “decentralized investigation, assessment, and possible contract reform.” Barton et al., *Seeing Contracts*, *supra* note 1, at 48. Passera, in her dissertation, recognizes the limitations in the work and proposes a detailed research agenda. *See infra* note 104.

61. *See, e.g.*, Passera et al., *Exploring*, *supra* note 1, at 78–79 (explaining that accounting rules can be represented through tables and that pricing models can be demonstrated through X/Y axis diagrams); Waller et al., *Cooperation*, *supra* note 1, at 64–65 (suggesting that color coding and checklists may help convey information to contracting parties); Passera et al., *Automation*, *supra* note 1, at 4–6 (providing an example of a timeline as a means of illustrating the term and termination of a given contract).

reflect a relatively narrow set of commercial circumstances.

- The literature underplays the legal functions of contracts that do not relate to deal plan, relationship failure, and dispute resolution. Contracts, for example, can help achieve a desired legal status or accounting or tax result, reflect compliance with (or contract around) background law, demonstrate diligence, help avoid conflicts with other contracts, and help avoid imputed or derivative liability arising from the conduct of the other party. There is more to the document than a description of future interactions or a set-up for future litigation.
- The literature does not reflect an appreciation that a core goal and value-add for a lawyer is to leverage contract functionality across multiple dimensions to the client's advantage. The multiple functions of a contract mean that a fair amount of often technical, non-operations-focused text is likely unavoidable in commercial contracts. It's hard to imagine that these provisions would enthrall a client. It's also hard to imagine that clients would favor eliminating them.⁶²

Finally, the literature does not grapple as hard with implementation barriers as it should. It encourages lawyers to increase their visual skills⁶³ and to collaborate with information designers, and it explores the potential of automation,⁶⁴ but it doesn't dig very deeply into cost, expertise,

62. There are other shortfalls in the literature. For example, the observations that business people prefer a diagram or timeline to a 90-page contract, or that individuals more readily grasp concepts if a visual presentation accompanies a dense textual description, are not surprising. The visualization writers place considerable emphasis on the contract document itself for the definition, performance, and outcome of a commercial relationship. The contract document of course is important, but everyday experience, as well as substantial scholarship, makes clear the importance to contractual relationships of non-document factors such as effects on reputation and prospects of future business. They do not test their core assumption that contract documents should be viewed as business documents, directly relevant to day-to-day activities, as compared to a legal instrument that has relevance only in the case of serious dispute. (This may be a non-issue. Businesses need *something* to help them deal with a difficult document and achieve the goals of the relationship described in that document; why not get the contract to do double-duty as both commercial tool and legal document?) The comments about lawyers are sweeping and, to some extent, off-putting. Not every lawyer is blindly unaware of the challenges of implementation or of work-product design, and indeed lawyers listen closely to clients in order to shape terms and text such that the client can actually carry out its responsibilities at an acceptable cost.

63. Passera & Haapio, *Transforming*, *supra* note 1, at 44.

64. Passera et al, *Diagrams*, *supra* note 1, at 48; *see also supra* note 55 (describing the benefits of enlisting information designers in assisting with designing contracts).

infrastructure, and other practical limitations to widespread adoption by lawyers. Those barriers are real; the wall of contract text is high, and it's thick.

* * * * *

The balance of this article begins to address three of these limitations. Part III.A considers the treatment of visuals under U.S. contract law: what would a court do? Part III.B sets out characteristics of transactional situations where visual executions may be especially helpful: when should we use them? Part IV then discusses future work with a particular emphasis on the development of model visual executions and related materials for practitioners.

The focus on these topics is easy to explain. First, if visuals are in the contract itself, they are part of the contract. If they are used in a standalone business document, they may be offered as evidence. They have legal significance either way. Second, creation of a visual requires time and resources. Not every contractual situation is likely to need or be susceptible to useful visual depiction. When is the investment most justified? Third, lawyers work from forms and precedents. There are few visual models out there that combine sufficient sophistication with practical doability. Even if motivated, it seems unlikely that lawyers would make meaningful use of visuals, in contracts or related business documents, in the absence of comfort with how courts would treat them in litigation, knowledge of the circumstances where they are best employed, and credible and executable models.

III. CONTRACT LAW AND CONTRACTING SCENARIOS

A. *Lawyer Worries: What Would A Court Do?*

The visualization proponents recognize that lawyers may be concerned about judicial reaction to and legal enforceability of contracts containing graphics:

What if the text and the pictures contradict or do not exactly mirror each other? What happens in this case if a dispute arises? Even though some companies are willing to adopt visualizations in their contracts, this is not yet a mainstream practice and obviously we cannot predict how this would work in court – even though our main goal is to avoid going to court completely, by cultivating

more transparent relationships.⁶⁵

The first step in the legal analysis is to recognize that contract parties can use visuals in multiple ways and, as a result, visuals may surface in litigation in a variety of ways. For example, they may be embedded in the contract text itself or in an exhibit to the definitive agreement. They may be outside the formal contract documents — a planning and negotiation aid created before contract entry, a photo of a whiteboard sketch, or a separate, implementation-oriented tool for use by one party after contract execution — and offered as evidence. Visuals may be used to convey a substantive term, or to illustrate a contract term or process. They may be offered as extrinsic evidence, to address an ambiguity in the text, or to prove intent. The analytical challenge is increased, of course, by the fact that visuals today are not often used in commercial documents — and thus, are not a frequent subject of litigation or commentary.

1. Back to Basics

A starting point for dealing with such diversity and lack of information is to set out several foundational observations:⁶⁶

- A visual in the contract itself presumably is assessed under contract interpretation principles. A visual outside the contract presumably is assessed under the parol evidence rule and general evidence admissibility principles.
- Contract interpretation principles as stated in statutes and core secondary authorities do not squarely address non-textual expressions in a contract. On the one hand, the terms “diagram,” “visual,” and “visualization” are not used in the California Uniform Commercial Code or the division of the California Civil Code relating to interpretation of contracts.⁶⁷ The terms are also not used

65. Passera & Haapio, *Transforming*, *supra* note 1, at 44; *see also* Passera et al., *Exploring*, *supra* note 1, at 95 (noting that “an important issue to consider . . . is how visualized contracts would work in a case of a conflict between the parties, or in court . . . [and] how other user groups (e.g., courts) would react to their presence in contracts”).

66. These observations are preliminary in nature and high-level. They are based principally on California statutes, the Restatement (Second) of Contracts, and contracts and evidence treatises and practitioner resources. As noted in Part IV, further research should include the study of statutes, cases, and resources in New York and other jurisdictions that may differ from California’s approach to contract interpretation and evidence.

67. An advanced search on Westlaw for *adv: (diagram OR diagrams) OR (visual OR visuals) OR visualization* within the Uniform Commercial Code Official Text retrieved no results. Searches of state codes that include titles or chapters concerning contract interpretation, including codes in Louisiana, Montana, North Dakota, Oklahoma, and South

in the Restatement (Second) of Contracts⁶⁸ or in leading contract law treatises.⁶⁹ Those authorities refer to “words” and “language” in the contract.⁷⁰ On the other hand, the authorities also refer to “terms,” “portions,” “parts,” and “writings,” without always defining what those mean.⁷¹ Nothing in these core authorities seems to preclude or otherwise taint the treatment of a visual as part of the contract.

- Contract law authorities set out principles that suggest respect for every expression in a contract. For example, Section 1641 of the California Civil Code provides that “[t]he whole of a contract is to be taken together, so as to give effect to every part, if reasonably

Dakota, indicate that none of those codes use the term “diagram” or “visual,” in either singular or plural form.

68. The Restatement (Second) of Contracts does not use the term “visualization” or “visuals.” An advanced search on Westlaw for *adv: visualization OR visuals OR visual* within the Restatement (Second) of Contracts retrieved twelve sections where the singular term “visual” appears. However, “visual” only appears in case citations to the Restatement (Second) of Contracts, not in any of the statements of the black letter law, Comments, Illustrations, or Reporter’s Notes. Additionally, the case citations where “visual” appears do not address the issue of interpreting diagrams or visuals in the body of a contract. For instance, “visual” appears in the case citations to §§ 17, 24, and 347 because it is a word in a party’s name, and it appears in the case citations to §§ 153, 154, 205, and 241 as an adjective to describe a type of inspection (“visual inspection” or “visual site inspection”). An advanced search on Westlaw for *adv: diagram OR diagrams* within the Restatement (Second) of Contracts retrieved two results in which the term “diagram” appears in the case citations to the Restatement (Second) of Contracts. “Diagram” does not appear in any of the statements of the black letter law, Comments, Illustrations, or Reporter’s Notes. The two case citations containing the term “diagram” do not address the issue of interpreting diagrams or visuals in the body of a contract.

69. The term “visualization” does not appear in either *Williston on Contracts* (4th ed.) (available on Westlaw) or in *Corbin on Contracts* (rev. ed. 2017) (available on Lexis Advance). The terms “diagram” and “visual” (in singular or plural form) appear only in irrelevant or unrelated contexts in these contract treatises — for instance, the terms may be used as an adjective (*e.g.*, “visual inspection,” “visual impairment,” etc.) or as a noun in a case name. The terms “visual,” “visualization,” and “diagram” do not appear in the index of a text about contract interpretation, and a Google Books search for those terms revealed no instance of use. STEVEN J. BURTON, *ELEMENTS OF CONTRACT INTERPRETATION* 227-236 (2009).

70. RESTATEMENT (SECOND) OF CONTRACTS § 202 (AM. LAW INST. 1981).

71. In an instance where a definition is provided, the California Commercial Code defines “term” to mean a “portion of an agreement that relates to a particular matter.” CAL. COMM. CODE § 1201(41). *Cf.* CAL. EVID. CODE § 250 (“‘Writing’ means handwriting, typewriting, printing, photostating, photographing, photocopying, transmitting by electronic mail or facsimile, and every other means of recording upon any tangible thing, any form of communication or representation, including letters, words, pictures, sounds, or symbols, or combinations thereof, and any record thereby created, regardless of the manner in which the record has been stored.”).

practicable, each clause helping to interpret the other.”⁷² Contracts should not be read to render any provision superfluous or without meaning.⁷³

- There seem to be rather few contract interpretation cases involving diagrams and other visuals. Those that do exist involve use of maps or other exhibits, not graphics used to capture substantive terms.⁷⁴
- An opinion in one of the few such cases reflects the interpretative principles noted above. The United States Court of Claims noted that the court would “[not] accept an interpretation of a contract that requires it to read away an entire diagram on a drawing. The court may only accept a contract interpretation that gives meaning to all of its terms.”⁷⁵ Other authorities acknowledge that contracts may have exhibits containing visuals and that the exhibits are part of the

72. CAL. CIV. CODE § 1641 (2017); WITKIN, 1 SUMMARY OF CAL. LAW § 769 (11th ed. 2017)

73. See RESTATEMENT (SECOND) OF CONTRACTS § 203 (AM. LAW INST. 1981) (“In the interpretation of a promise or agreement or a term thereof . . . an interpretation which gives a reasonable, lawful, and effective meaning to all the terms is preferred to an interpretation which leaves a part unreasonable, unlawful, or of no effect[.]”); CALIFORNIA CONTINUING EDUCATION OF THE BAR, CALIFORNIA LAW OF CONTRACTS § 5.9 (2017) (“Courts should interpret a contract in such a way as to give force and effect to every provision, with each clause helping to interpret the others, and should avoid interpretations that render part of a contract surplusage, inoperative, or meaningless.”); see also CAL. CIV. PROC. CODE § 1858 (2018) (In constructing an instrument, “where there are several provisions or particulars, such a construction is, if possible, to be adopted as will give effect to all.”); 11 WILLISTON ON CONTRACTS § 32:5 (4th ed. 2017) (“A contract will be read as a whole and every part will be read with reference to the whole An interpretation which gives effect to all provisions of the contract is preferred to one which renders part of the writing superfluous, useless or inexplicable.”). Interestingly, a comment in the Restatement (Second) of Contracts states that the “preference for an interpretation which gives meaning to every part of an agreement does not mean that every part is assumed to have legal consequences. Parties commonly direct their attention to performance rather than breach, and it is enough that each provision has meaning to them as a *guide to performance*.” RESTATEMENT (SECOND) OF CONTRACTS § 203 cmt. b (AM. LAW INST. 1981) (emphasis added).

74. A Westlaw search across all state and federal cases (last conducted on January 19, 2018) for *adv: diagram! /s (contract OR agreement) /s interpret!* retrieved only eighteen cases including a sentence containing each of the following terms: (1) “diagram” (in singular or plural form); (2) “contract” or “agreement”; and (3) and a variation of “interpret” (i.e., “interpretation,” “interpreting,” or “interpret”), but these cases involved diagrams as exhibits to contracts, not diagrams in the body of a contract. A Westlaw search across all state and federal cases (last conducted on January 19, 2018) for *adv: “diagram in the contract” OR “diagram in a contract”* retrieved only four cases containing one of these exact phrases, but these cases do not specifically address interpreting diagrams in the body of a contract.

75. King Fisher Co. v. United States, 51 Fed. Cl. 94, 100 (2001).

contract.⁷⁶ In addition, as noted above, courts with deep commercial experience include diagrams in opinions to show transaction structures and relationships.⁷⁷

- As recognized by the visualization proponents, parties concerned about the primacy of text over visual can always address that concern directly. One article observes that “[a]n easy solution would be to assign priority, in case of inconsistencies, to the text of the agreement. This approach is already used when a contract in more than one language exists: the parties agree which language version prevails.”⁷⁸ Lawyers in situations involving multiple related documents routinely provide that one document controls over the others.
- In practice, other types of non-textual expressions are found in contracts. For example, use of formulas and other mathematical expressions is common enough that contract drafting texts address it,⁷⁹ and tables routinely appear in credit and other agreements.⁸⁰
- The use of demonstrative evidence such as diagrams, timelines, flow charts, and maps is common.⁸¹ Courts have considerable experience

76. For example, a California jury instruction relating to interpretation of a construction contract (which often involve a standard form and a set of plans or drawings) notes that contracts can incorporate additional documents and that “[a]ll of the referenced [and incorporated] documents are part of the contract and all of the contract documents must be interpreted together in determining the obligations of [the parties].” 6 CALIFORNIA FORMS OF JURY INSTRUCTION MB4500A.72 (2018); *see also* DRAFTING BUSINESS CONTRACTS, *supra* note 20, at § 17.15 (discussing use of exhibits).

77. *See supra* note 16. An advanced search on Westlaw within Delaware state cases for *adv: diagram! /s (illustr! OR depict!)* retrieved 31 cases. Thirteen of these cases contained diagrams or visuals, a number of which pertained to commercial transactions.

78. Passera & Haapio, *Transforming*, *supra* note 1, at 44.

79. *See, e.g.,* ADAMS, *supra* note 21, at 445-52 (discussing drafting numbers, formulas, and mathematical equations); STARK, *supra* note 20, at 325-331 (discussing how to draft mathematical formulas in contracts).

80. *See, e.g.,* AMC Networks Inc., Current Report (Form 8-K), Exhibit 10.1 (July 28, 2017) (showing an example of tables in a credit agreement); STARK, *supra* note 20, at 354-55 (noting and demonstrating the use of tables in contracts).

81. *See, e.g.,* 2 WITKIN, CAL. EVIDENCE § 25 (5th ed. 2017) (“use of diagrams, maps, models, and computer animations has expanded enormously in recent years”); 5 FEDERAL EVIDENCE § 9:24 (4th ed. 2017) (“Drawings, charts, diagrams, maps, and models are among the most common examples of demonstrative evidence. They are particularly useful in helping the jury visualize scenes or follow along with figures or calculations described by a witness.”); MCCORMICK ON EVIDENCE § 214, at 18 (7th ed. 2016) (“It is today increasingly common to encounter the use of demonstrative aids throughout a trial. These aids are offered to illustrate or explain the testimony of witnesses, including experts, or to present a summary

with such materials. Practitioner guides and other practice materials encourage lawyers to use visual aids in such cases.⁸²

- Courts in interpreting contracts accept other (seemingly muddier) evidence, including witness testimony regarding contract meaning, the circumstances prevailing at the time of contract entry, and the parties' conduct following contract entry.⁸³

At the most fundamental level, a court is to interpret the contract “[so] as to give effect to the mutual intention of the parties as it existed at the time of contracting, so far as the same is ascertainable and lawful.”⁸⁴ Given that charge, the clarity and accessibility of diagrams, and the care presumably reflected in a visual included in a commercial contract, it seems likely that a court may welcome a visual as a resource for determining such intent — and is free to do so under applicable contract interpretation and evidence principles.⁸⁵

It is also useful to take a step back. There is no requirement, even for contract formation and term content, that contractual terms be expressed only in words used by the parties in a written contract. Oral contracts are

or chronology of complex or voluminous documents.”). One practitioner notes that including a visual in an exhibit to a contract facilitates the treatment of the visual as real, not demonstrative, evidence, and thus permissible for review by the jury in the jury room: “If you plan ahead when drafting a contract, your client’s trial counsel might later be able to sneak a demonstrative aid or two into the jury room through the back door — no, through the front door, but at the back of the contract — as ‘real’ evidence, not just as a demonstrative exhibit, to help the jurors understand what the parties agreed to. Ask yourself: *Is there anything I’d want the jurors to have tacked up on the wall in the jury room* — for example, a time line of a complex set of obligations? If so, think about creating that time line *now*, and including it as an exhibit to the contract. The exhibit will ordinarily count as part of the ‘real’ evidence; it should normally be allowed back into the jury room without a fuss.” D.C. Toedt III, *Sneak Some Demonstrative Aids into the Jury Room – By Making Them Contract Exhibits*, ON CONTRACTS (Feb. 12, 2010), <http://www.oncontracts.com/sneak-some-demonstrative-aids-into-the-jury-room-by-making-them-contract-exhibits/> [https://perma.cc/LR8W-2TYD].

82. See, e.g., 1 CALIFORNIA FORMS OF JURY INSTRUCTION MB300B.06 (2018) (“If the case involves multiple documents, as is true of most commercial cases, the use of visual aids is critical. Many contracts are bulky documents with only a few pages or phrases that are important to the case. Good courtroom graphics can isolate and highlight the key portions during testimony and closing argument.”).

83. CAL. CIV. PROC. CODE § 1856(g) (West 2017); CAL. CIV. CODE § 1647 (West 2017).

84. CAL. CIV. CODE § 1636 (West 2018).

85. The preventive law proponents see a freedom of contract dimension to the use of visuals. Parties are free to choose content (including applicable law) and style, and to set out rules for the interpretation of their contract; such freedom includes the ability to choose format and form of expression as well. See Passera, *Beyond*, *supra* note 1, at 22 (explaining freedom of contract).

generally enforceable.⁸⁶ Promises can be inferred from conduct.⁸⁷ Terms can be implied⁸⁸ or supplied by courts.⁸⁹ Trade usage, course of dealing, and course of performance can be used to supply or interpret terms.⁹⁰ These are sources of contract terms and meaning not expressed in words on the page, and, unlike a diagram incorporated in contract text or exhibit, they are not even in the written agreement itself.

2. Tentative Conclusions

Diagrams may exist in a gray world between “words” and “other sources,” and visuals may not have their own canons of contract interpretation (“squares have precedence over circles,” etc.). But doctrinal principles support the notion that, even in the most fraught case—a diagram or other visual in a contract itself — a visual is a legitimate part of the contract, to be treated as such whether or not it appears in the body of the text or in an exhibit. These principles also support the notion that visuals presented as evidence in a contract case should be treated no differently than visuals offered in any other case.

That all said, the absence of a doctrinal taint does not mean that judicial interpretation of a visual is a simple matter. There are not only no contract interpretation principles for visual executions, but there are also no principles of visual interpretation generally, and judges bring no particular expertise to the task. As Porter notes:

[I]n stark comparison with our rich tools for dealing with the inherent problems of text[,] law lacks tools and traditions for mitigating the risks of image-driven communication. By education and practice, lawyers and courts take language seriously. There are no corresponding traditions in law to guide the interpretation of images, no training that forces viewers to treat images as “entit[ies] with a complicated relationship to the real.”⁹¹

86. CAL. CIV. CODE § 1622 (West 2018).

87. *Id.* at § 1619; RESTATEMENT (SECOND) OF CONTRACTS § 4 (AM. LAW INST. 1981).

88. CAL. CIV. CODE § 1619.

89. RESTATEMENT (SECOND) OF CONTRACTS § 204.

90. CAL. COMM. CODE § 1303(d) (2018).

91. Porter, *supra* note 7, at 1756 (citations omitted). She continues: Lawyers are trained to be attuned to the way that a particular word or a subtle shift in a sentence’s emphasis can influence or even alter a reader’s understanding. Yet in the realm of visual argument, lawyers are laypeople. Visual literacy is not part of legal education or training, and no canons exist to provide lawyers with rules of thumb in the skeptical interpretation of multimedia legal argument. . . . In comparison with the finely calibrated tools and rich traditions with which we interpret and argue about language, our profession has no comparable sophistication in the realm of the visual. *Id.* at 1695–96, 1782 (citations omitted).

The work of Porter and others who study “visual persuasion” centers on litigation advocacy and particularly on the use of photographs, drawings, and the like in briefs and in the courtroom. They note the risk that “implicit biases and naïve realism — the belief that an image represents a transparent window into a single truth — will infect judges’ decisions.”⁹²

Interpreting, say, a smartphone photograph of an accident scene or criminal defendant seems a considerably more delicate exercise than dealing with a diagram that is expressly identified as a device for illustrating the operation of a business arrangement described in detailed text. Timelines and flow charts — especially those accompanied by thousands of words and a provision providing that text controls over visual — are different than photos and video clips. But the point is well taken: today there aren’t any rules for interpretation of even these milder versions of visual expression.

* * * * *

In short: a carefully prepared diagram, timeline or other graphic is considerably more concrete than a lot of other evidence courts deal with in deciding contract cases. The observations here are based on preliminary research; more work needs to be done, and the lack of canons of any sort may be concerning. But it seems, at least initially, that the contract and evidence law foundations for use of visuals in contracts are firmer than one might expect. Legal concerns and lawyer worries should arise more from lack of experience with visuals in contracts than from their inherent deficiency as expressions or evidence of mutual intent.

B. *Use Cases: When Should We Use Visuals?*

Visualization proponents acknowledge a possible limitation on use of visuals in contracts:

The [outsourcing] transaction [described in our study] . . . is long-term, asset-specific, high-stake and characterized by a high level of novelty and uncertainty. The willingness to engage in clarification and framing efforts through visualizations may be strong in similarly complex exchanges, since increased communication and trust lead to decreased transaction costs and more resilient relationships. However, it may be absent in simpler, one-off, or short-term transactions, where the time and effort to

92. *Id.* at 1694. Porter continues, noting the risk that “images will warp the allocation of decision-making power between the judge and jury, and between appellate courts and trial courts; and finally, the risk that images will vitiate legal discourse by sacrificing depth for flash—turning legal arguments into memes”.

create visualizations would not be justified.⁹³

This is an important point: the nature and complexity of the relationship affects the utility and practicality of use of visuals in contract documents. There may well be a broad range of transactions where the game simply is not worth the candle; the cost savings from improved communication do not exceed the cost of preparation of the visual. Initial observations about use cases are set out below.

1. Nature of the Relationship

One of the field studies conducted by the proponents focused, as noted, on business outsourcing relationships. Collaboration is critical, and coordination is at a premium. This is a decidedly more complex context than that of a one-shot, signed-and-performed goods purchase.

Other business relationships have characteristics similar to those of an outsourcing relationship. Consider a commercialization agreement for a pharmaceutical product. Such a contract may include development plans, governance structures, and decision-making regimes such as steering, development, and scientific committees, all features contemplating regular interaction between diverse party representatives. It may set out different roles and financial responsibilities with respect to development, clinical testing, regulatory approvals, manufacturing, marketing and sales, and patent prosecution and litigation. Performance of the contract may involve multiple organizational functions across both organizations over an extended period of time.

Or imagine a trademark license for a consumer product. Licenses may include multiple review and approval protocols setting out lead time, design coordination, and response requirements. They address core business concerns such as product design, marketing plans, commencement of new sourcing locations, and entry into new customers. The brand owner is risking its reputation on the performance by the licensee.

These cases, like outsourcing, and like joint ventures, technology transactions, complex supply chain arrangements, and corporate alliances of varied flavors, are characterized by a long duration, operating detail, regular interaction at multiple levels, coordination across organizational functions, complex economics, and material dependencies and exposures. One can easily imagine a visual that presents a high-level view of the relationship, and a series of more granular diagrams or timelines that capture specific decision-making, economic or other elements of the relationship.⁹⁴ Tools

93. Passera et al., *Exploring*, *supra* note 1, at 93 (citations omitted).

94. An example of a high-level visual depiction of a commercialization agreement

that facilitate contract comprehension and communication between the parties, across the functions inside of each party, and by organizational actors who come to the arrangement later in its life, seem worthy of investment. And, if their use also contributes to creation of a sense of trust and shared commitment, all for the better.

2. Contracting for Innovation

Another approach to identifying potential use cases is prompted by the emerging scholarship about “contracting for innovation.”⁹⁵ As described in that work, in technology, life sciences, and other fields, parties collaborate in an environment of meaningful uncertainty.⁹⁶ The parties cannot specify outcomes in the contract; instead, the contract is “process- rather than outcome oriented.”⁹⁷ It is designed to “define[] a *process of collaboration*— typically a regime of ongoing review and information exchange by which the parties mutually evaluate their capacities and intentions.”⁹⁸ As noted in one article:

Rather than relying primarily on the threat of legal enforcement, this collaboration rests on a governance structure that, over time, creates confidence in the capabilities and trust in the character of the counterparty. Trust and confidence are extremely valuable commodities: Not only do they motivate each party to invest in the relationship but they also make the prospect of abandoning the relationship in order to collaborate with others much less attractive.⁹⁹

One scholar sums up the work:

A growing literature in contract law also focuses on formal and informal arrangements among firms that enable collaborative research. This literature pays close attention to informal norms that facilitate dealings between firms, but the emphasis in this line of scholarship is on the creation of informal bonds of trust through formal contractual mechanisms and on the informal enforcement

appears in MITCHELL, *supra* note 3, at 99. The diagram combines a timeline format with information about oversight committees, development and commercialization plans, key events including regulatory approvals, and milestone payments.

95. Gillian K. Hadfield & Ira Bozovic, *Scaffolding: Using Formal Contracts to Support Informal Relations in Support of Innovation*, 2016 WISC. L. REV. 981, 1019 (2016).

96. Gilson et al., *supra* note 57, at 63.

97. *Id.* at 64.

98. *Id.* (emphasis added).

99. Robert E. Scott, *Contract Design and the Shading Problem*, 99 MARQ. L. REV. 1, 28 (2015).

of these formal contractual promises.¹⁰⁰

This is interesting reading for those advocating use of visual executions in contracts. Process — information exchange, decision-making mechanics, and so on — is a central concern. Trust development and relationship building are core goals. Given these facts, if the claims by the visualization advocates are true, then lawyers working in innovation settings should find the visualization literature equally interesting reading. Indeed, the terms “diagram” and “visual” aren’t used in the innovation literature, but one can practically hear the squeaking of the marker.

A quote from an individual interviewed by Hadfield and Bozovic is nicely suggestive: “The reasons you do things on the whiteboard [with the lawyers] is to establish an agreement beforehand that will govern the relationship and you can call each other on it.”¹⁰¹

3. Complexity and Comprehension

A third approach centers on complexity of the commercial terms. Some relationships, such as pharmaceutical commercialization, involve both a complex ongoing relationship as well as complexity in individual terms. A commercialization agreement includes provisions reflecting the intellectual property license elements of the relationship: technology definitions, patent ownership, field of use, territory, branding, and so on. It may provide for different terms for different territories. The economics set out in the contract are tied to achievement of specified milestones such as regulatory approvals in key markets, and the contract may provide for different economics depending on the presence of a competitive product in the territory or the expiration of a patent.¹⁰²

Other commercial agreements, including common contracts such as credit agreements and office leases, involve less day-to-day interaction between the parties but are typically lengthy and dense, and present meaningful comprehension challenges and implementation demands across an organization.

Take, for example, the covenants in a loan agreement. They typically

100. Laura G. Pedraza-Farina, *Spill Your (Trade Secrets): Knowledge Networks as Innovation Drivers*, 92 NOTRE DAME L. REV. 1561, 1566 (2017); see also Matthew Jennejohn, *The Private Order of Innovation Networks*, 68 STAN. L. REV. 281 (2016) (criticizing and building on this scholarship).

101. Hadfield & Bozovic, *supra* note 95, at 1010.

102. Trademark license agreements similarly have terms with multiple moving parts. They typically define field of use, territory, term, and distribution channel. They often include royalty arrangements that reflect minimums, different royalty rates for different products, and rate adjustments based on volumes, time periods, and geographies.

are written in technical and sometimes seemingly impenetrable language. Covenants may regulate borrower investments, acquisitions and asset sales, dividends and share repurchases, debt incurrences (broadly defined), liens, related party transactions, leases, corporate structure, and other operating and financial matter. They employ multiple defined terms whose definitions involve computations for specific financial measurement periods. The covenants may regulate borrower behavior, adjust pricing, or base borrowing availability on the basis of ratios of one factor to another, percentages, a rate of change over time, or the existence of absolute amounts, and they may require monitoring and reporting to the lender about these measures. They may provide for changes in methodology over time or include a sweeping proviso based on a quantitative measurement. They routinely cross-reference other provisions that include exceptions and provisos and require even more computations.

Or consider the office lease. It typically will provide for a lengthy initial term and multiple options for extension. The lease will provide for rent adjustments over time, which are often formula-based. It may provide flexibility for both expansion and reduction of the leased space. The lease may have detailed rules relating to operating expense definitions, computations, and sharing, and to tenant improvement funding. The underlying legal regime — landlord-tenant, environmental, occupant health and safety, accessibility, energy efficiency and so on — is complex.

The cognitive loads created by these contracts are substantial. It is no wonder that business people ask for summaries, diagrams, flow charts, and cheat sheets in dealing with such arrangements.¹⁰³

4. Tentative Conclusions

The attributes of outsourcing, commercialization, innovation, and licensing relationships suggest, at least tentatively, the use cases where visuals may be particularly relevant and helpful. The archetypal relationship is complex and full of dependent variables. It is difficult to comprehend. It

103. Individual contract provisions from contracts used in other settings can share features with complex commercial relationships. For example, indemnification provisions in an acquisition agreement may set out different rules for different types of claims. They may set caps for some claims and not others; the caps may be based on percentages of the sale price or the like. The provisions may include a “basket” or a “tipping” arrangement, both of which are forms of deductibles. They may include different time limitations for asserting different sorts of claims. These provisions typically are captured in a single section. Purchase price earn-out provisions and preferred stock terms similarly contain multiple moving parts. These arrangements are difficult to understand, but they rarely directly involve business operations, and they are typically negotiated and managed by lawyers and finance persons with deep technical expertise. The commercial case for investment in visuals seems less strong.

is deeply tied to business facts; the contract is, on a relative scale, largely custom-built. It lasts a long time. It requires trust and ongoing information exchange, communication, and joint decision-making by the parties. It may involve cross-border interaction. It requires meaningful understanding and actions across multiple functions in the business. It is serious in nature; a failure in outsourcing shuts down the business, and a failure in collaborative research, product design, or marketing strategy dooms the product.

Other situations, which have many but not all of these characteristics, represent a second tier of possible use cases. Loan and commercial lease relationships require and reflect close attention to specific business facts. They can be complex and difficult to understand; understanding loan covenants, and then applying them to real world facts, can be a meaningful intellectual challenge. They involve multiple functions inside the borrower or tenant. The consequences of non-compliance — default on the loan or eviction from the building — are severe. At the same time, there is less of a need for interaction and coordination between contract parties. There is a culture of (and market rationale for) use of standardized terms and documents. The setting is not one of uncertainty in the sense described by the innovation writers, and bargaining power is often skewed to one party. That set of facts makes it harder to imagine the use of visual executions in the contract documents. But it is easy to imagine their use internally by the borrower or tenant to help educate the organization and evaluate proposed actions that may present compliance concerns.

The more a relationship or contractual relationship exhibits the attributes of the archetypal case, the more useful the visual is in both the design and implementation stages of the relationship and the better the case for investing in its creation. Another way to think about it is to imagine situations where, as described by the visualization proponents, the conditions addressed by visuals are present. In cases where there is a high need for managerial coordination, meaningful boundary crossing (between firms, within firms, and over time), and complexity, then the investment case is stronger.

In cases lacking these attributes — one-shot sales, standardized terms, modest complexity, limited implementation demands, single-discipline or other narrow sets of users, shorter in duration — the need for visuals is less strong. Complexity and comprehension difficulties may be effectively addressed through visual presentation, but the commercial case for investment is not as compelling in contexts where coordination needs, and operational impacts are less significant.

IV. RESEARCH, DEVELOPMENT, AND SUPPORT IDEAS

Visual executions have meaningful cognitive and communicative benefits. The contracting context is well-suited to the use of visual expression. It is especially valuable in situations involving ongoing and complex commercial relationships.

There is much to be said for the use of visuals in the design and drafting of contracts. At the same time, there are real legal and economic benefits to use of standardized templates and terms, and there are real practical barriers to widespread use of visuals and non-standard formats in contracts.

In view of these realities, and in line with the visualization proponents' invitation for ongoing investigation and assessment, this Part IV offers some ideas for additional research and experimentation.¹⁰⁴ The focus here is largely a practical one; the ideas center on near-term to medium-term use by U.S. lawyers in settings involving ongoing commercial relationships and the creation of related intellectual and professional infrastructure. The focus is also on proof of concept; the program described here will test the workability of the visualization notion and require the proponents to sharpen and operationalize their case in a practical and tangible way.

A. *Research*

1. Use Cases

Visualization proponents should continue working out the best cases for use of visuals in contract documents. The inquiry is two-fold. The first element, as described in Part III.B, is identifying contextual and other attributes of commercial relationships that justify investment in preparation of visual executions. The second element operates at a more micro and practical level: are there characteristics of contractual features—the nature of the arrangement they describe or information they present—that make them amenable to visual depiction?

104. Passera's research agenda focuses on four topics. First, she proposes study of the "clarification and framing effects of all contract document design dimensions in concert – visualization, typography, language, content, and information structure." Second, she suggests additional field studies intended to "expand our understanding of the needs and priorities of the actors involved in the contracting lifecycle, and better reveal the hurdles to and opportunities for more effective contract design practices." Third, Passera sees a need for "a more fine-grained understanding of how visual representations are interpreted – cognitively and socially – within different business cultures[.]" Finally, she proposes research "at the interface between technology, contracts, and design" in view of the fact that "[d]igital technologies will increasingly transform and disrupt what contracts are and how they are used[.]" Passera, *supra* note 1, at 172–74.

The visualization proponents are engaged to some extent in that second inquiry. They have explored the “types of visualizations [that] are suitable for representing the types of information encoded in contracts,” the “knowledge-related problems . . . contract creators [are] trying to solve by employing visualizations,” and “approaches [that] can facilitate contract creators in . . . deploying visualizations in contracts.”¹⁰⁵ They have developed thoughtful analyses of “[v]isual representation patterns,”¹⁰⁶ “design pattern libraries,” “pattern language approaches,” “visual templates,” and the possibilities presented by automation.¹⁰⁷ These studies focus on appropriate vehicles for conveying different types of information.¹⁰⁸

A next step is to reflect upon and generalize common features and individual provisions with an awareness of available, useful, and doable visual vehicles. For example:

- Many contract provisions have *time or time-and-response* elements: term, renewal, milestone, exclusivity, approval, range, problem response, and post-termination survival of provisions, as well as multi-step procedural arrangements such as option, first refusal, first offer, tag-along, drag-along, registration right, and notice-cure period. Such provisions seem receptive to a timeline or other linear presentation.
- Terms that *vary based on performance* (such as an interest rate margin tied to earnings, financial covenants in a loan agreement, royalty rates linked to volume, or charges for performance delays) and deals involving *bundles of rights* (such as licenses with duration, exclusivity, field of use, territory, and distribution channel elements)

105. Passera, *supra* note 1, at 153, 158–59.

106. *Id.* at 124.

107. *Id.* at 160–61; *see also* Haapio & Hagan, *supra* note 1 (discussing design pattern concept); Waller et al., *supra* note 1, at 64–65 (discussing concept and providing “[s]ome design patterns for contract design”).

108. Passera identifies what she and Haapio identified from a literature review as “the six most distinctive, recurrent, and widely applicable patterns for contracts”: “Timelines – a representation of time or duration, or a sequence of events taking place within a certain timeframe; [f]lowcharts – step-by-step representation of a workflow, a process, or sequence of events; [t]ables – a systematic way to arrange facts and figures in rows and columns, so that information can be searched and skimmed more easily. Swimlanes – a representation which shows the parties’ areas of responsibility as columns, where roles, tasks, obligations etc. are assigned. Companion icons – synthetic, minimal graphic symbols that accompany texts to represent their meaning, function, or theme in an immediate way. Delivery diagrams – a representation of the place, time and modality in which a delivery takes place, and when risk and cost are transferred from supplier to buyer.” Passera offers an example of each such pattern and a table identifying “contracting topic” and suggested “type of visualization” for each such topic. Passera, *supra* note 1, at 124–25, 145.

are well-suited to tabular presentation.

- Arrangements that involve *layers* (such as debt tranches, indemnification baskets and caps, and some loan covenants), situations involving *overlapping agreements* (such as loans of different maturities), and situations involving both *shared and exclusive rights or responsibilities* (such as commercialization agreements) may be captured in charts or combinations of chart and timelines.
- Diagrams are useful for depicting *mechanical and spatial* arrangements of all sorts, from periodic money and information flows and multi-party product distribution arrangements to tenant expansion rights, as well as more familiar examples such as merger, entity, tax planning, and funds flow structures.

Review of real-world documents, discussions with practitioners, and even study of legal glossaries and the like¹⁰⁹ will serve as useful inspiration for identifying contractual features, characterizing their nature, and envisioning visual presentation.

2. Legal Research

Widespread use of visuals by lawyers is unlikely (and unwise) absent the demonstration of a solid legal foundation for such use. The contract law discussion in this article is high-level and preliminary in nature. Proponents should invest in deeper legal research on at least three fronts. First, they should study the rules in multiple jurisdictions, to take into account different contract interpretation and evidence rules and orientations. Second, they should go on the offensive and build the case for why use of visuals is not a source of concern but instead a good thing from a legal point of view. In principle, use of visuals should provide an effective and accessible resource for determining mutual intent as well as a practical tool for reducing dispute risk. Third, they should examine how litigators today employ visuals as evidence in contract litigation and arbitration and how they would view — and challenge — visuals included in contracts.

109. See, e.g., LATHAM & WATKINS LLP, THE BOOK OF JARGON: US CORPORATE AND BANK FINANCE (2015), <https://www.lw.com/bookofjargon-apps/boj-us-corporate-and-bank-finance> (providing definitions for corporate and bank finance nomenclature).

3. Contracts Scholarship

The visualization writers propose both a novel form of expression for use in contracts and a broader view about contracting itself. But they do not engage with existing contract law scholarship in a systematic way. This is a missed opportunity. The contract innovation literature discussed in Part III.B is an example; it provides a useful angle of approach to identifying use cases. There are other examples:

- The huge number of cases concerning contract interpretation, and the extensive scholarship in the area, seem reason enough to consider a study of how visualization and its underlying rationales fit into the ‘text versus context’¹¹⁰ debate and theoretical frameworks set out in that and related scholarship.
- New ideas may emerge from taking into account contract implementation costs, as well as ex ante and ex post costs, in contract design analysis.
- Contracts scholars who study the role of trust may provide a useful perspective on the proponents’ claim that use of a specific technique builds such trust.
- The literature concerning relational contracting may provide useful perspective on actual business use of contract documents and suggest ideas for use cases.¹¹¹
- The scholarship regarding images and evidence,¹¹² and the work regarding contractual aspects of website design,¹¹³ privacy policy communication, and the like, may be instructive in thinking about interpretative principles applicable to visual executions in contracts, effective formats for conveying different types of information, and whether the law should encourage use of visuals in legal documents.

110. For an overview of that debate, see Gilson et al., *supra* note 57, at 252; see also Cathy Hwang, *Unbundled Bargain: Multi-Agreement Dealmaking in Complex Mergers and Acquisitions*, 164 U. PA. L. REV. 1403, 1443–44 (2016) (discussing situations where parties’ intent spans not just multiple provisions in one contract but multiple contracts).

111. A recent discussion of the relational contracting literature appears in Hadfield & Bozovic, *supra* note 95.

112. *Supra* note 7.

113. See, e.g., Woodrow Hertzog, *Website Design as Contract*, 60 AM. U. L. REV. 1635 (2011) (exploring treatment of website features as sources of contractual obligations and notion of “design as promise”).

These are all early and undeveloped ideas. Deeper encounters with mainline research may not bear them out. Such study, though, may generate additional useful ideas, and may also result in greater scholarly interest in the use of visual expression in contracts and in transactional work generally. Both are good things in terms of establishing a firmer foundation for the approach.

4. Empirical Research

Visualization proponents should continue their research into the use of visuals not only in litigation but in real-world commercial practice and legal education. The work could include review of publicly-available contract documents and surveys of general counsels and law firm lawyers and professional development staff. Ideally, the research would include review of documents that are not public. Such materials include marketing and business development materials used by businesses, deliverables prepared by management consulting firms, investment banks, accounting firms, and tax advisors, training materials prepared by corporate legal departments, and law firm transactional training and education materials.

The focus should be on works where communication and education, not status as a legal artifact, is the goal of the document. Such broad-ranging research may further demonstrate the value of visuals in dealing with commercial relationships. It may also prompt ideas about models for particular commercial transactions and contract provisions. Designers seeking inspiration routinely explore work of all sorts; there is no reason that should not be true of lawyers as well.

B. *Model Creation and Building Blocks*

In a world of forms, precedents, and adherence to conventional formats, model and guideline development seems essential to increasing the awareness, acceptance, and use of visual executions in contracts.

A resource targeted to practitioners might best be organized around deal nature and contract provision, rather than type of visual presentation. It could cover use cases; model executions for common transaction structures, commercial relationships, and individual contractual provisions; and commentary regarding the legal foundation. It might suggest design choices such as use of the space above and below a timeline to convey different types of information, or guidelines for diagram preparation.¹¹⁴ Such a resource

114. *Cf.* Conboy, *supra* note 3, at 99–105 (suggesting a set of “rules” for diagramming entity and transaction structures).

might also discuss legal and design considerations relating to different uses: informal sketch for planning purposes, slide presented to a counter party at the commencement of a negotiation, illustrative example included in contract exhibit, technical visual included in body of contract, or overview used in internal briefing or training session. The goal would be to provide a set of basic building blocks for adaptation and use by practitioners.

Such a work — the creation of which requires integration of meaningful legal and design expertise — would provide an essential contribution to the professional infrastructure. Corporate lawyers need models, and they need tools.

1. Practical Considerations

Model creation work runs immediately into practical questions including an obvious one: should visuals be part of the *contract itself*, alongside the text, or are they best used in a different way? The is-it-in-the-contract question leads to additional questions:

- A visual included in the contract is part of the contract and evaluated under contract interpretation principles. That avoids possible objections based on parol evidence or general evidence admissibility grounds. On the other hand, inclusion in the contract also necessitates (at least in the mind of the typical lawyer) greater investment in design and execution, with the same attention to precision and polish as given to the text. Which cases, in terms of purpose, subject matter, significance, and format, are best suited for such placement and investment?
- If one goal of visual use is better contract implementation and a closer relationship between the parties, is inclusion in the actual contract, as opposed to shared use by the parties as a business document, essential to achieving the benefits described by the proponents? Does inclusion in the contract package itself (vs. a separate “implementation guide” or the like) better focus the business people on the visual? Does that truly give the visual more potency as a relationship builder? Or would a standalone, and lower-resolution, document work just as well?
- Are the practical costs of inclusion outweighed by the reduction in risk of conflict between (in the contract) text and (outside the contract) diagram?

A similar practical question concerns *location* of the visual in the contract. If it is important to include the visual in the contract, then why not include it as an exhibit rather than incorporating it in the body of the text?

From a production point of view, law firms and companies use Microsoft Word or other word processing programs in drafting contracts. These applications do allow the user to insert and manipulate shapes, lines, text boxes, and other useful design elements, but they are not optimized for visual presentation, and the typical lawyer may well lack familiarity with such features other than the table function. It is simply easier and, given deal pressure, more realistic to include a sentence in the contract text to the effect of “the operation of this Section 6.8 is illustrated in the document attached as Exhibit D,” create a diagram or timeline in a separate PowerPoint document, and then attach that document as an exhibit.

On the other hand, the effectiveness of the visual as a communication device may be diminished by the physical separation of text from graphic. It is better, from a text comprehension point of view, to have the visual directly alongside the relevant text rather than appearing on an exhibit 60 pages further back in the document. A separate exhibit, though, allows the businesspeople to more easily find the relevant presentation; they can go straight to the exhibit without having to search in the text. The question then is: how important is it for the business people — those implementing the contract — to engage with the actual text?

There are additional practical dimensions to this question. For example, the exhibit approach reinforces the notion that the “text shall control” should there be conflict between text and visual. It enables lawyers to continue to use their forms and precedents while still introducing visual executions to their way of working and documents. But, the exhibit approach makes it harder to use multiple visuals to supplement contract text because the documents end up with more pages and an incrementally greater physical disconnect between text and graphic. The exhibit approach also reduces the incentive for lawyers to rethink the overall design of their documents. They can stick with the same formats they’ve always used, and perhaps end up with better but still sub-optimal products.

These sorts of physical and other practical realities necessarily form part of the agenda for model development. In dealing with these questions, it is important to recognize that the goal of the work is *not* the use of visuals *in* the contract, whether in text or exhibit. The goal is to encourage lawyers to consider using visual expression as a tool in designing, documenting, and describing deals (whether in the contract itself or elsewhere), and to do a better job of helping clients navigate the mid-stream in understanding and carrying out contractual arrangements.

2. Model Approach

Development of a comprehensive resource for lawyers presents a three-pronged design task.

First, the creators of the resource need to work through the substantive issues noted in Part IV.B and then create a set of model executions. This is a substantial technical exercise from both legal and design points of view. A payment milestone scheme is relatively easy to create; a visual depicting the operation of a restricted covenant in a loan agreement seems doable but considerably more difficult. (That doesn't mean the investment is misguided; drafting contracts is hard, too. How many drafting books, exactly, are in publication? Doesn't every law school offer drafting classes?) It may be smart to start small by first producing models for common provisions and relatively simple situations, and then build from there.

Second, the resource is a tool for use by people who are under time pressure, have limited technical expertise and resources, and may doubt their ability. As such, those creating models should view "doability" as a core design requirement. They should start, notwithstanding the limitations of the applications, with formats that can be executed in Microsoft Word or PowerPoint applications. They should use basic elements: shape, line, line effects, arrows. (And, in recognition of the context, they should avoid icons or similar features that may be received skeptically by corporate lawyers working in traditional settings.)

Third, and a lower-order but practical concern, the creators should consider designing the resource in a manner such that it could be disseminated through Bloomberg Law, Westlaw, Lexis, or other platform that is widely available to, and trusted by, practitioners.

These requirements are constraining, but if the goal is to encourage use of visuals in a context where there are real barriers to such use, then the proponents should be prepared to sacrifice sophistication and elegance for accessibility and efficiency. This is a case where a core tenet of design thinking — deep study of and empathy with the user — will be essential to the success of the project.

3. Three Cautions

A guide to the use of visual executions in contracts would be useful for practicing lawyers.¹¹⁵ At the same time, such a work should avoid prescriptive approaches. The visualization proponents share this concern.

115. Model development will also help those working on privacy, credit, and other disclosures for consumers, and legal educators looking for effective tools to support student learning.

Passera observes that:

It is tempting to try to identify the most effective form of visualization. However, this is an ill-framed question: each visualization is a solution used for a different purpose, and in most cases they are not interchangeable. It is thus misleading to think about a “best type of visualization” in absolute terms.¹¹⁶

She notes that “a normative and rigid categorization of visualization techniques is counter-productive because it would limit scholars and professionals in discovering and proposing best practices to real, recurrent communication problems in contracting.”¹¹⁷ There is also a lot to be said for the thinking, learning, relationship building, and ownership that occurs when transacting parties at a whiteboard sketch out a diagram or process map that may or may not find its way into the finished product. The goal should be to provide information and ideas, but not to dictate or suggest that the only valuable use of a visual is a polished diagram in the contract itself, or that squares always mean X and circles always mean Y.

Second, the scope of work and specifications for the guide are challenging. That should not discourage the design effort. A systematic research and development exercise may or may not yield executable models of sufficient precision for use in commercial contracts themselves. But the effort will generate tools and inspirations for the planning, negotiation, and implementation phases of the contracting process. Sophisticated use case identification, legal analysis, and model creation should contribute to greater openness of lawyers to employing visual methods in their work and in their interactions with clients. The close attention to information presentation may also have value in encouraging deeper awareness of client information and contract implementation needs. Getting lawyers to grab a marker more often, or to think about alternative ways to communicate with a client, would be good things in and of themselves.

Finally, the focus on visual executions should not distract from investment in core document design improvements. Modest attention to

116. Passera, *Beyond*, *supra* note 1, at 155.

117. *Id.* at 160. She continues: “For this reason, we stress the need to adopt a pattern language approach, where model solutions to recurring problems emerge from use, and are reused over and over again because of their effectiveness, even though this repetition is never a mere copy-paste, but an adaptation. Patterns evolve as robust, tested practices in use, and can eventually be collected in pattern libraries, collections of solutions which allow easy aggregation and sharing of effective solutions created by and for a community of practice.” *Id.* (citations omitted). The concern echoes advice given to lawyers new to working with form and precedent documents: there are many benefits to using them, but they should not be used “reflexively and uncritically.” Instead, forms need to be “adapted creatively and responsibly” to fit the “client’s particular purposes.” ALICIA ALVAREZ & PAUL R. TREMBLAY, INTRODUCTION TO TRANSACTIONAL LAWYERING PRACTICE 187 (2013).

even basic document design, layout, and typographical considerations can yield substantial improvements in the accessibility and utility of legal documents. Changes in margin width and titling conventions are easy to implement and are likely less worrisome, to a lawyer versed in traditional practice, and may help build the case for adopting more radical changes in contract formats.¹¹⁸

C. *Motivation and Confidence*

1. Client Demand

If a barrier to the use of visuals is the resistance of law firm lawyers, on cost, time, or expertise grounds, then a next step is to take the case to general counsels. In-house lawyers both purchase legal services (and thus can demand different types of work-products from firms) and regularly assist business people in understanding and operationalizing contractual and compliance obligations. They know what it takes to educate and coordinate across an organization. They will be cost-focused but also in a position to assess whether the time and cost associated with creation of visuals is less than the time and cost associated with figuring out and communicating the deal after the contract is signed — or dealing with misunderstandings. In addition, at a practical level, they may have examples of materials prepared internally that may spark ideas for model development.¹¹⁹

2. Competence and Confidence

If a barrier to use is a lack of lawyer confidence in their ability to create visual presentations, then a next step is to help them learn.¹²⁰

Model and guideline development will help. Business lawyers can collaborate with lawyers and others working on access to justice, consumer protection, privacy, and other initiatives involving use of visual

118. That said, even typographical change can be challenging. *Cf.* ADAMS, *supra* note 21, at § 16.57 (“Most drafters, and most law firms and law departments, have a conservative, no-frills approach to document design — they’re unlikely to have any interest in adjusting line spacing and margins or experimenting with different fonts.”).

119. A second possible source of support are trade associations who generate model documents and other materials for their members, and who are familiar with communication practices in specific sectors. *See* Kevin E. Davis, *The Role of Nonprofits in the Production of Boilerplate*, 104 MICH. L. REV. 1075 (2006) (explaining that trade associations and other nonprofits play substantial roles in producing standard contract forms and terms).

120. *Cf.* Passera & Haapio, *Transforming*, *supra* note 1, at 44 (encouraging development by lawyers of “basic visual skills”); MITCHELL, *supra* note 3, at 13–22 (encouraging corporate lawyers to try visual methods and including examples of use across the practice).

communication and legal design methods. Law firms might engage their branding, marketing, and professional development teams to assist in developing template visuals and training associates.

Law schools can offer exposure and instruction in design and visual methods, as some are starting to do.¹²¹ Scholars studying the treatment of visuals in evidence, copyright, administrative law, and other areas can join with commercial law and experiential instructors on pedagogical approaches for strengthening visual literacy in their students. Scholars might also consider creating visual summaries of their work; one can imagine infographic accompanying articles that set out typologies or analytical frameworks.

This is a case where the firms and the law schools can learn from one another in both tangible and intangible ways. Materials developed for teaching purposes may be useful as models for practitioners, and materials from the commercial world may give teachers ideas and motivation. Simply exposing law students and lawyers to infographics and other visual executions should create awareness of their value and prompt ideas about their use.

* * * * *

These suggestions for additional research and development are conservative in nature; they largely involve technical work focused on use of visuals in commercial contracting to supplement or explain text, and to facilitate planning, negotiation, and performance. One can imagine an even more adventuresome effort to re-imagine contract documents — including replacing, not just supplementing, text in some cases — but such a project seems unlikely to gain traction in the business context without there being a solid legal foundation, guidelines, and successful prototypes of less

121. For example, the law school at Brigham Young University recently launched a “legal design lab.” See *Introducing LawX, BYU Law’s New Legal Design Lab*, BYU L. (June 19, 2017), <http://www.law2.byu.edu/news2/introducing-lawx-byu-law-new-legal-design-lab> [<https://perma.cc/9KCQ-PGTU>] (introducing the launch of LawX, a legal design lab that will create products and other solutions to address the pressing issues relating to access to legal services). Stanford Law School offers several courses centered on legal design that include use of visual techniques. See, e.g., *Course Description, Introduction to Legal Design*, STAN. L. SCH. (2017), <https://law.stanford.edu/courses/introduction-to-legal-design/> [<https://perma.cc/MN4E-D6U3>] (providing a list of courses with focus on visual techniques). Legal educators outside of dedicated design settings can demonstrate use of visuals as tools for doing legal work and their deployment not just in finished work-products but also for a variety of tasks across the practice. Cf. Jay A. Mitchell, *Drawing Pictures* (2017), <https://www.aals.org/wp-content/uploads/2017/01/Mitchell-transactional-law-and-skills-handout.pdf> [<https://perma.cc/P76X-QYAP>] (discussing use of visuals in transactional practice and related teaching suggestions).

ambitious models in place.

CONCLUSION

There are multiple occasions to use visual executions in the contracting setting, from a simple whiteboard sketch at a transaction kick-off meeting to a detailed drawing depicting a business process.

There are multiple reasons to use visuals. Their effectiveness as tools for analysis, collaboration, and communication is well-established in literature from a variety of disciplines, and well-known from everyday experience. There is momentum behind the incorporation of design methodologies into legal work. Even traditional practitioner guides encourage use by lawyers of visuals in studying commercial situations and interacting with clients. The legal assessment of use of visuals in contract documents requires further research, but the initial evaluation is more positive than a corporate lawyer might expect. The technique reminds one of the Restatement (Second) characterization of some contract provisions as “guide[s] for performance.”¹²² A good visual is a good such guide.

There are multiple reasons to explore changes in the conventional approach to contract documents and legal service delivery. The parties paying for legal documents often don't find them helpful as tools for shaping performance. A contract may be used by actors of widely-varied occupational, professional, and cultural backgrounds. Businesses are collaborating and contracting in new ways. Scholars and businesses are exploring novel methods of contract creation and expression.

There are boundaries to be crossed if lawyers are to prepare better boundary objects. Cost and time pressures are real. Lawyers rely on and take comfort in forms and precedents. Lawyers are not trained to create visual depictions of contractual arrangements. There is meaningful intellectual challenge in creating such presentations. The concept needs greater reduction to practice in line with real world constraints, and the development of a culture and infrastructure to support it.

These practical barriers are substantial. And it may be that visuals only rarely get past the whiteboard or business tool and into the formal contract documents. That does not represent a failure of the concept; the point here is not that all contracts should have visuals, but that visuals are a powerful tool for dealing with contracts and can help lawyers do a better job of creating products for their clients. Sustained research and development on the hardest cases — visuals of sufficient sophistication for inclusion in commercial contracts and that are executable by time-pressured lawyers —

122. RESTATEMENT (SECOND) OF CONTRACTS § 203 cmt b (AM. LAW INST. 1981).

will yield multiple ideas and examples for use both before and after contract signature, for both formal and informal executions, and for productive deployment in a variety of commercial and educational settings.

Scott describes a “design space for contracting: key features in the transactional environment that incline contracting parties to choose a particular regime and a complementary form of adjudication to govern their relationship.”¹²³ The contracts community — business persons, lawyers, and scholars — should consider imagining the design space to include form of expression as well. We already go to the whiteboard and draw a picture to “get everyone on the same page”; perhaps now is the time to try getting it onto the page itself.

123. Scott, *supra* note 99, at 6.