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Symposium: Construction Law in the Legal Academy

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We proudly present Volume 75, Issue 2 of the Arkansas Law Review *for the benefit of all who learn and advance the law, whether judge, advocate, professor, or student. We have carefully developed these materials to elicit informed discussions and provide intellectual and practical assistance to members of the legal community.*

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2021-2022

CONSTRUCTION LAW: ITS HISTORICAL ORIGINS AND ITS TWENTIETH CENTURY EMERGENCE AS A MAJOR FIELD OF MODERN AMERICAN AND INTERNATIONAL LEGAL PRACTICE

Philip L. Bruner*

I. INTRODUCTION TO CONSTRUCTION LAW

"Construction Law" is a rapidly emerging "capstone" legal field that over the past century has subsumed principles from many traditional fields of law and has contextually created new implied rights and obligations unknown to such traditional fields. Construction law's emergence has been driven by the extraordinary modern growth in global construction activity, which in 2020 accounted for 13% (US$10.7 trillion) of the global gross domestic product and which by 2030 is expected to grow by another 42%.[1] This growth in construction activities engages

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1. *See* Graham Robinson et al., *Future of Construction*, CONSTR. L. LETTER, Jan.-Feb. 2022 at 1, 1 (the authors, members of Oxford Economics of London, opine that "a cumulative total of US$135 trillion in construction output is forecast [globally] in the decade to 2030" and that the US is expected to contribute 11.1% or approximately US$14.9 trillion of that global sum).

millions of firms and persons and has increased considerably the technical complexity and rapidity of changes in construction design, materials, methods, and dispute resolution.[2] In recent years, the judiciary has begun to recognize construction law as a "separate breed of animal".[3]

II. CONSTRUCTION: HALLMARK OF HUMAN CIVILIZATION[4]

Construction and construction law both have an ancient heritage. For more than 4500 years construction has been a hallmark of the advancement of human civilization, from primitive Mesopotamian fire-brick and Egyptian cut-stone construction to the extraordinary structures of the modern built

2. Philip L. Bruner, *The Historical Emergence of Construction Law*, 34 WM. MITCHELL L. REV. 1, 9, 11-12 (2007) [hereinafter Bruner, *The Historical Emergence of Construction Law*]. Today, even homebuilding is viewed as complex. *See* Erlich v. Menezes, 981 P.2d 978, 987 (Cal. 1999) ("The [owners] may have hoped to build their dream home and live happily ever after, but there is a reason that tag line belongs only in fairy tales. Building a house may turn out to be a stress-free project; it is much more likely to be the stuff of urban legends—the cause of bankruptcy, marital dissolution, hypertension and fleeting fantasies ranging from homicide to suicide. As Justice Yegan noted below, '[n]o reasonable homeowner can embark on a building project with certainty that the project will be completed to perfection. Indeed, errors are so likely to occur that few if any homeowners would be justified in resting their peace of mind on [its] timely or correct completion . . . .' The connection between the service sought and the aggravation and distress resulting from incompetence may be somewhat less tenuous than in a malpractice case, but the emotional suffering still derives from an inherently economic concern.").

3. *See* Paul Hardeman, Inc. v. Ark. Power & Light Co., 380 F. Supp. 298, 317 (E.D. Ark. 1974) ("[C]onstruction contracts are a separate breed of animal; and, even if not completely *sui generis*, still . . . [the] law must be stated in principles reflecting underlying economic and industry realities. Therefore, it is not safe to broadly generalize. True, general principles of contract law are applied to construction contracts, but they are applied under different operative conditions. Care must be taken, then, not to rely too uncritically on such cases as those arising from the sale of real or personal property. And even within the larger rubric of 'construction contracts' it is manifest that the law, if sensitive to the underlying realities, will carefully discriminate between, say, a contract to construct a home and a contract to construct a fifty-story office building; between a contract to build a private driveway and a contract to construct an interchange on an interstate highway. This is what one would expect *a priori*; this is, generally, what one finds when he reviews the actual development of the law.").

4. Footnotes 5-17 and accompanying text are partially excerpted from Bruner, *The Historical Emergence of Construction Law*, *supra* note 2, at 1-4.

environment.[5] Construction encouraged broad human socialization by causing people to work together to build projects and ultimately by making cities livable.[6] Mankind's oldest surviving epic poem, written in cuneiform script on clay tablets by an unknown author, described the hallmarks of Uruk's construction advancements by about 2750 BC:

> This is the wall of Uruk, which no city on earth can equal. See how its ramparts gleam like copper in the sun. Climb the stone staircase, more ancient than the mind can imagine, approach the Eanna Temple, sacred to Ishtar, a temple that no king has equaled in size or beauty, walk on the wall of Uruk, follow its course around the city, inspect its mighty foundations, examine its brickwork, how masterfully it is built, observe the land it encloses: the palm trees, the gardens, the orchards, the glorious palaces and temples, the shops and marketplaces, the houses, the public squares.[7]

Mankind's socialization led to the promulgation of rudimentary principles of law to regulate human rights and obligations arising out of societal interaction, and principles of law were promulgated to govern the built environment and the construction process. The earliest known principles of construction law were primitive and punitive. The Code of Hammurabi is said to have been created about 1792-1750 B.C.E.

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5. 1 PHILIP L. BRUNER & PATRICK J. O'CONNOR, JR., BRUNER AND O'CONNOR ON CONSTRUCTION LAW § 1:1 (2021) (reviewing the historical changes in law and industry practices that have enhanced construction's complexity).

6. *Id*.; *see also* PLUTARCH, PERICLES (John Dryden trans., Internet Classics Archive 1994-2000) (75 A.C.E.), [https://perma.cc/7UTR-AZLB] ("That which gave most pleasure and ornament to the city of Athens, and the greatest admiration and even astonishment to all strangers, and that which now is Greece's only evidence that the power she boasts of and her ancient wealth are no romance or idle story, was [Pericles's] construction of the public and sacred buildings.").

7. *See* STEPHEN MITCHELL, GILGAMESH: A NEW ENGLISH VERSION 198-99 (2004); *see also Looted Gilgamesh Tablet, One of World's Oldest Surviving Works of Literature, Returns to Iraq*, PBS NEWSHOUR (Dec. 8, 2021), [https://perma.cc/5ZPU-XC7W]. Twentieth-century archaeological excavations and modern non-invasive exploratory techniques confirm that Uruk, the ruins of which lie in the Middle East's "fertile crescent" near Basra in modern Iraq, was first settled about 7,000 years ago and went on to become the largest city on earth around 3,000 years ago. *See* Andrew Lawler, *The Everlasting City*, ARCHAEOLOGY, Sept./Oct. 2013, at 26, 26; *The Epic of Gilgamesh: Map & Timeline*, ANNENBERG LEARNER, [https://perma.cc/N2VH-SZXZ] (last visited Mar. 16, 2022). "At Uruk's peak, in about 2900 B.C., more than 50,000 people crowded into almost two-and-a-half square miles." Lawler, *supra* note 7, at 28.

and to be based upon even older collections of Sumerian and Akkadian laws.[8] Under its "eye for an eye" system of justice, Hammurabi's Code dictated that builders be punished for injuries to others caused by collapse of their buildings.[9] The code provisions pertinent to construction state:

> (229) If a builder build [sic] a house for some one, and does not construct it properly, and the house which he built fall [sic] in and kill [sic] its owner, then that builder shall be put to death.
>
> (230) If it kill [sic] the son of the owner the son of that builder shall be put to death.
>
> (231) If it kill [sic] a slave of the owner, then he shall pay slave for slave to the owner of the house.
>
> (232) If it ruin [sic] goods, he shall make compensation for all that has been ruined, and inasmuch as he did not construct properly this house which he built and it fell, he shall re-erect the house from his own means.
>
> (233) If a builder build [sic] a house for some one, even though he has not yet completed it; if then the walls seem toppling, the builder must make the walls solid from his own means.[10]

As classical antiquity gradually civilized the built environment, so too did it refine the law governing the built environment. By the reign of Rome's Caesar Augustus,[11] construction risks inherent in building upon unsuitable soils[12] or

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8. *Code of Hammurabi: Babylonian Laws*, BRITANNICA, [https://perma.cc/ZM6F-66VA] (last visited Mar. 14, 2022).

9. *See The Code of Hammurabi*, AVALON PROJECT §§ 229–33, [https://perma.cc/68N9-D5VJ] (last visited Mar. 15, 2022).

10. *Id.*; *see generally* Martha T. Roth, *Mesopotamian Legal Traditions and the Laws of Hammurabi*, 71 CHI.-KENT L. REV. 13 (1995). Hammurabi (circa 1810-1750 B.C.) was the sixth king of Babylonia and conquered and absorbed most of the middle east into the Babylonian Empire. *See* Johannes M. Renger, *Hammurabi: King of Babylonia*, BRITANNICA, [https://perma.cc/Y4MY-SYKM] (last visited Mar. 6, 2022).

11. Gaius Julius Caesar Octavianus (63 B.C.–14 A.D.), great nephew of Julius Caesar, became Rome's first emperor and took the name Augustus by the Roman Senate. *See* COLIN WELLS, THE ROMAN EMPIRE 11-12, 14 (2d ed. 1992); Michael Grant, *Augustus*, BRITANNICA, [https://perma.cc/CB96-FQZH] (last visited Mar. 16, 2022).

12. Jesus of Nazareth, who is said to have practiced carpentry as a boy, employed widely understood metaphors in his sermons and concluded His Sermon on the Mount (circa 30 A.D.) in *Matthew* 7:24-27 (New Revised Standard Version) with this admonition:

in providing incompetent management and cost control[13] were widely recognized. Good construction practice under Roman law favored careful contractual articulation of the scope of work and allocation of construction risks.[14] Roman builders had good

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> Everyone then who hears these words of mine and acts on them will be like a *wise man who built his house on a rock*. The rain fell, the floods came, and the winds blew and beat on that house, but it did not fall, because it had been founded on rock. And everyone who hears these words of mine and does not act on them will be like a *foolish man who built his house on sand*. The rain fell, and the floods came, and the winds blew and beat against that house, and it fell—and great was its fall!

Matthew 7:24-27 (New Revised Standard Version) (emphasis added); *see* Jaroslav Jan Pelikan, *Jesus*, BRITANNICA, [https://perma.cc/VQ3S-WZMQ] (last visited Mar. 16, 2022); THE ONE YEAR CHRONOLOGICAL BIBLE: NEW LIVING TRANSLATION (Tyndale House Publishers, Inc. ed., 2d ed. 2013).

13. *See* MARCUS VITRUVIUS POLLIO, VITRUVIUS: THE TEN BOOKS ON ARCHITECTURE 282 (Morris Hicky Morgan trans., 1960) (1914) (c. 20 B.C.). Known to history as "Vitruvius," he was chief engineer to Julius Caesar and Emperor Augustus. John H. Lienhard, *Engines of Our Ingenuity: No. 580: Vitruvius*, UNIV. OF HOUSTON, at 00:28, [https://perma.cc/VQP7-D9RW] (last visited Mar. 20, 2022) (University of Houston College of Engineering radio broadcast). Thus, in his time, he was the "chief engineer of the civilized world." *Id.* Vitruvius wrote a ten-volume treatise for Augustus on Roman construction practices, which survived the ravages of time to influence the architecture of the European Renaissance. *Id.* at 00:45. Among other things, Vitruvius proposed to Augustus that Rome resurrect an ancient ancestral law of the Greek City of Ephesus:

> 1. In the famous and important Greek City of Ephesus there is said to be an ancient ancestral law, the terms of which are severe, but its justice is not inequitable. When an architect accepts the charge of a public work, he has to promise what the cost of it will be. His estimate is handed to the magistrate, and his property is pledged as security until the work is done. When it is finished, if the outlay agrees with his statement, he is complimented by decrees and marks of honour. If no more than a fourth has to be added to his estimate, it is furnished by the treasury and no penalty is inflicted. But when more than one fourth has to be spent in addition on the work, the money required to finish it is taken from his property.
>
> 2. Would to God that this were also a law of the Roman people, not merely for public, but also for private buildings. For the ignorant would no longer run riot with impunity, but men who are well qualified by an exact scientific training would unquestionably adopt the profession of architecture. Gentlemen would not be misled into limitless and prodigal expenditure, even to ejectments from their estates, and the architects themselves could be forced, by fear of the penalty, to be more careful in calculating and stating the limit of expense, so that gentlemen would procure their buildings for that which they had expected, or by adding only a little more.

Id.

14. VITRUVIUS, *supra* note 13, at 10 ("[P]rinciples of law . . . should be known to architects, so that, before they begin upon buildings, they may be careful not to leave disputed points for the householders to settle after the works are finished, and so that in

reason to exercise care in contracting because the Roman legal doctrine of *pacta sunt servanda* ("contracts must be honored") imposed strict contractual liability unless non-performance was excused under the doctrine of *rebus sic stantibus* ("provided the circumstances remain unchanged").[15] These ancient principles undergird the modern law of contract and its legal doctrines of sanctity of contract, force majeure, and impracticability.[16]

For 1900 years following the advent of Augustus's Imperial Rome—through Europe's Dark Ages, Renaissance, and Industrial Revolution—construction law was subsumed by broader and more generalized fields of law and by perceptions of construction as local and parochial, invoking primarily the "law of the shop" rather than the "law of the courts."[17] Then, in the nineteenth and twentieth centuries, public demand for new construction increased exponentially and construction became the largest segment of the production sector of the global economy.[18]

"Building upon primitive construction techniques limited to wood, stone and masonry materials, the 19th and 20th centuries witnessed a veritable explosion in construction knowledge: new techniques, materials technologies, geotechnical exploration methods, soils classification and environmental monitoring facilities theretofore unknown."[19] This explosion of knowledge led to the demise of the "master builder" of old and to the creation

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drawing up contracts the interests of both employer and contractor may be wisely safe-guarded. For if a contract is skillfully drawn, each may obtain a release from the other without disadvantage.").

15. 5 PHILIP L. BRUNER & PATRICK J. O'CONNOR, JR., BRUNER AND O'CONNOR ON CONSTRUCTION LAW § 15:22 (2021).

16. *See id.*; *see also* RESTATEMENT (SECOND) OF CONTS. ch. 11 intro. note (AM. L. INST. 1981) ("Contract liability is strict liability. It is an accepted maxim that *pacta sunt servanda*, contracts are to be kept."). These ancient Roman laws undergird the more recent common law principle of Sanctity of Contract. *See* Dermott v. Jones, 69 U.S. (2 Wall.) 1, 7 (1864) ("It is a well-settled rule of law, that if a party by his contract charge himself with an obligation possible to be performed, he must make it good, unless its performance is rendered impossible by the act of God, the law, or the other party. Unforeseen difficulties, however great, will not excuse him.").

17. *See generally* HENRY OF BRACTON, ON THE LAWS AND CUSTOMS OF ENGLAND (Samuel E. Thorne trans., c. 1230), [https://perma.cc/U4S5-9TU7]; 2 WILLIAM BLACKSTONE, COMMENTARIES, [https://perma.cc/6SQ5-VUZG].

18. *See* 1 BRUNER & O'CONNOR, JR., *supra* note 5, at § 1:1; Bruner, *The Historical Emergence of Construction Law*, *supra* note 2, at 11.

19. 1 BRUNER & O'CONNOR, JR., *supra* note 5, at § 1:1.

in its place of a host of specialized architectural, engineering, and project management disciplines and:

> construction trades to design, manufacture and build [our] modern [built environment]—geotechnical exploration, high-strength steel, reinforced concrete, heating and ventilating, plumbing, electricity, lighting, telephones, fiber optic cables, deep caissons, elevators and escalators, fire retardation, building controls, curtainwall, roofing, and sealants, and to manufacture modern materials, such as high-strength steel, glass, plastics, and aluminum.[20]

"Advances in construction knowledge also could be observed in new types of construction projects: hundred-story office towers, interstate highways with cloverleaf interchanges, massive dams and power plants, airports and street lighting, and subways and tunnels," as well as 3D printed bridges and homes.[21]

"One consequence of the increased size and complexity of construction projects by the early 20th century was a heightened concern for public safety that in turn lead to governmental regulation of construction industry practices through legislative imposition of minimum qualifications" and standards enforced through designer and contractor licensing laws, building code permitting requirements, and construction-safety laws and regulations, and resulted in management of the complex construction process by distinct governmentally licensed architectural and engineering specialties—civil, structural, mechanical, electrical, geotechnical, acoustical and others—as well as a host of licensed specialty trade contractors and tradesmen to perform the work.[22] Today, construction is the largest single segment of the production sector of the global economy,[23] and its economic importance and technical complexity continue to grow.

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20. Bruner, *The Historical Emergence of Construction Law*, *supra* note 2, at 4-5; 1 BRUNER & O'CONNOR, JR., *supra* note 5, at § 1:1.

21. 1 BRUNER & O'CONNOR, JR., *supra* note 5, § 1:1; Mikahila L., *The Most Impressive 3D-Printed Bridges Projects*, 3D NATIVES (Nov. 5, 2021), [https://perma.cc/BBV6-5T6E].

22. 1 BRUNER & O'CONNOR, JR., *supra* note 5, at § 1:1; Bruner, *The Historical Emergence of Construction Law*, *supra* note 2, at 4.

23. Maria João Ribeirinho et al., *The Next Normal in Construction: How Disruption is Reshaping the World's Largest Ecosystem*, MCKINSEY & CO., June 2020, at 1, 4.

Such extraordinary technical and managerial advances fundamentally changed the industry. New inventions led to electrification, indoor plumbing, space heating at controlled temperatures, new building materials and machinery, better structural and curtainwall systems, increased knowledge of soils characteristics, and advances in geotechnical and structural engineering and in a host of other disciplines.[24] The complexity of the construction process and numbers of participants in the construction process required greater overall project management skills and more careful communication among project participants.[25] A major challenge on every project has been the accurate communication of technically complex information to the myriad parties involved in the construction process, and the management of known and unknown uncertainties.[26] Construction's technological complexity was amplified by the invariably unique conditions under which projects usually are performed—most every project is unique, built to a unique design, on a unique site, by a unique aggregation of companies, operating without economies of scale in an uncontrolled environment, where productivity is affected by weather, geology, local labor skills and availability, local building codes, and site accessibility.

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24. Bruner, *The Historical Emergence of Construction Law*, *supra* note 2, at 1.

25. *Id.* at 11, 13.

26. John W. Hinchey, *Visions for the Next Millennium*, *in* 1 CONSTRUCTION LAW HANDBOOK 31, 32 (1999) ("Construction is an inherently complex business. Even casual observers of the construction process are struck by the enormous amount of information required to construct a project. Hundreds, even thousands, of detailed drawings are required. Hundreds of thousands of technical specifications, requests for information, and other documents are needed. Complex calculations are used to produce the design. For years, this complexity dictated a labor-intensive, highly redundant methodology for doing the work. Projects were fragmented and broken into many parts. Different entities undertook different parts of a project, both for design and construction. Therefore, the construction industry became exceptionally fragmented. On a project of even average complexity, there may have been from 5 to 15 firms involved in design. From 40 to 100 companies may have been engaged in construction. Many more companies supplied materials, professional services, and other elements necessary for completion of the project. It was effectively impossible to convey the sum of knowledge necessary to construct a facility in a set of plans and specifications. Stated another way, the information technology traditionally used for construction is inadequate.").

III. "CONSTRUCTION LAW"—WHAT IS IT?

Prior to the twentieth century no such subject as "construction law" was recognized by courts or law schools anywhere in the world. Contracts were construed strictly in accordance with their textual terms under the Doctrine of Sanctity of Contract.[27] Disputes arising in the construction field were deemed to be subsumed by the ancient legal fields of contract law, tort law, equity law, surety law, and such statutory law as was applicable.[28] Even as little as fifty years ago those lawyers who represented parties in the construction field would joke that the "construction law" practice included everything except the practice of dentistry.

"Construction Law" owes its modern recognition as a separate field of law to the judiciary's acceptance of the Doctrine of Contextual Contract.[29] As construction's increasing technological and managerial complexity came to be recognized, some common law courts turned away from strict interpretation of language within the four corners of a contract and moved toward recognizing a more liberal interpretation based on the construction industry's own experience, customs, practices, implied conditions and duties, and the factual context underlying

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27. *See* Dermott v. Jones, 69 U.S. (2 Wall.) 1, 2, 7-8 (1864) (finding that this covenant was to complete the building "*ready for use and occupation* . . . . [I]t was [the contractor's] duty to fulfil, and he was bound to do whatever was necessary to its performance. Against the hardship of the case he might have guarded by provision in the contract. Not having done so, it is not in the power of this court to relieve him . . . . The principle . . . rests upon a solid foundation of reason and justice. It regards the sanctity of contracts."); *see also* Stephen A. Hess, *The Sanctity of Construction Contracts*, 1 AM. COLL. CONSTR. LAWS. J. 1, 1 (2021).

28. 1 BRUNER & O'CONNOR, JR., *supra* note 5, at § 1:3.

29. *See id.* at §§ 3.1, 3.2; United States v. Lennox Metal Mfg. Co., 225 F.2d 302, 310 (2d Cir. 1955) ("Even if a word in a written agreement is not ambiguous on its face, the better authorities hold that its context, its 'environment,' must be taken into account in deciding what the parties mutually had in mind when they used that verbal symbol."); *see also* CARL J. CIRCO, CONTRACT LAW IN THE CONSTRUCTION INDUSTRY CONTEXT 61-62 (2020); Karen Eggleston et al., *The Design and Interpretation of Contracts: Why Complexity Matters*, 95 N.W. U. L. REV. 91, 93 (2000) ("[L]awyers, judges, and legislatures cannot evaluate contract rules without understanding the contracts that these rules are supposed to regulate. Yet the law review literature on contracts is almost completely devoid of the positive analysis of contracts.").

the meaning of the contract.[30] Courts thus began to journey along the road leading from "text" to "context".[31]

The late 1800s and early 1900s:

> witnessed the emergence of a primary judicial vehicle for development of construction law principles: the modern theory of "contextual contract," which elastically allowed the judiciary to add contractual terms, conditions, and warranties implied by the transaction's surrounding circumstances and complexity, and to interpret express contractual language in conformance with industry usage, custom, and practice.[32]

Today, common law jurisdictions and some civil law jurisdictions recognize construction contracts as including a host of duties and conditions implied in the contract as a matter of law, such as: (1) the parties' mutual implied duty of good faith and

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30. *See* Carl J. Circo, *The Construction Industry in the U.S. Supreme Court: Part 1, Contract Law*, CONSTR. LAW., Spring 2021, at 6, 6 [hereinafter Circo, *The Construction Industry in the U.S. Supreme Court: Part 1*]; Bruner, *Historical Emergence of Construction Law*, *supra* note 2, at 7, 13.

31. *See* Circo, *The Construction Industry in the U.S. Supreme Court: Part 1, supra* note 30, at 6; Carl J. Circo, *The Construction Industry in the U.S. Supreme Court: Part 2, Beyond Contract Law*, 41 CONSTR. LAW., no. 3, 2021, at 5, 7-12 [hereinafter Circo, *The Construction Industry in the U.S. Supreme Court: Part 2*] (reviewing the nineteenth and early twentieth century construction cases decided by the U.S. Supreme Court that move from text to context).

32. Bruner, *Historical Emergence of Construction Law*, *supra* note 2, at 7. Oliver Wendell Holmes, one of America's most influential Justices of the United States Supreme Court in the late nineteenth and early twentieth centuries, reminded the legal profession that:

> The life of the law has not been logic: it has been experience. The felt necessities of the time, the prevalent moral and political theories, intuitions of public policy, avowed or unconscious, even the prejudices which judges share with their fellow-men, have had a good deal more to do than the syllogism in determining the rules by which men should be governed. The law embodies the story of a nation's development through many centuries, and it cannot be dealt with as if it contained only the axioms and corollaries of a book of mathematics. In order to know what it is, we must know what it has been, and what it tends to become.

O.W. HOLMES, JR., THE COMMON LAW 1 (1881); *see also* O. W. Holmes, *The Path of the Law*, 10 HARV. L. REV. 457, 466 (1897) ("You always can imply a condition in a contract. But why do you imply it? It is because of some belief as to the practice of the community or of a class, or because of some opinion as to policy, or, in short, because of some attitude of yours upon a matter not capable of exact quantitative measurement, and therefore not capable of founding exact logical conclusions. Such matters really are battle grounds . . . where the decision can do no more than embody the preference of a given body in a given time and place. We do not realize how large a part of our law is open to reconsideration upon a slight change in the habit of the public mind.").

fair dealing; (2) the parties' mutual duty of cooperation and non-hindrance; (3) the employer's implied duties of detailed design, document adequacy, and full disclosure of facts critical to construction; and (4) the contractor's implied duty of inquiry.[33] Thus, the content of the complex construction contract extends beyond its express written terms and conditions, plans and specifications, and related documents that are incorporated therein by reference.[34] Those who believe that a full understanding of the parties' rights and obligations can be gained merely by reading the four corners of the express contract are mistaken. Reading the express contract is only the beginning, and not an end, of gaining full comprehension of the parties' legally enforceable contractual rights and obligations.

"Rarely can even well-drafted construction contracts be said to be 'complete' in all respects, because contracts often fail to include provisions covering all conceivable contingencies and routinely are construed to include judicially implied terms arising from the contract's 'context' interpreted in accordance with special trade customs and practices."[35] "'Context' is the judicial 'gloss' applied to express contracts to determine intent and judge compliance."[36]

> Such contextual "gloss" arises out of (1) judicial *interpretation* of contract terms in accordance with accepted rules of interpretation and industry customs and

33. *See* 1A BRUNER & O'CONNOR, JR., BRUNER AND O'CONNOR ON CONSTRUCTION LAW § 3.4; CARL J. CIRCO, CONTRACT LAW IN THE CONSTRUCTION INDUSTRY CONTEXT 45-46 (2020).

34. *See* Carl J. Circo, *The Evolving Role of Relational Contract in Construction Law,* CONSTR. LAW., Fall 2012, at 16, 16-17 ("[R]elational principles mean, for example, that construction lawyers should take note of behavior that reflects certain norms characteristic of contractual or exchange relationships, such as customs and expectations, reciprocity, and a commitment to harmonize conflict and to preserve relationships, even when those values require some sacrifice of individualistic interests. And they suggest that we should ask relational questions: To what extent are the relationships founded on past experiences and the prospects for ongoing or future dealings? . . . Broadly speaking, a relational approach counsels litigants, courts, arbitrators, and mediators to look past formal legal rules to explore and grapple with the relational context of a construction dispute. For example, when contrasted with traditional contract law, relational contract is more committed to the duties of good faith and fair dealing, the significance of industry customs, and the availability of detrimental reliance remedies.").

35. 1A BRUNER & O'CONNOR, JR., *supra* note 33, at § 3.2.

36. *Id.*

> usages; and (2) judicial imposition as a matter of law of *implied* rights and obligations, conditions and warranties that assure fairness within the context of the parties' expressly contracted responsibilities.[37]

"Construction law today is a primordial soup in the 'melting pot' of the law—a thick broth consisting of centuries-old legal theories fortified by statutory law and seasoned by contextual legal innovations reflecting the broad factual 'realities' of the modern construction process."[38] It is the "contextual" environment of construction that gives the construction contract uniqueness among the wide world of contracts.[39] Given their unique transactional contexts, construction contracts are recognized by the world of contract law as a "separate breed of animal".[40] Moreover, jurisdictions such as the states of Florida, Texas, and Arizona and the Province of Ontario, Canada, recognize "Construction Law" as a sufficiently complex and unique legal specialty that is worthy of specialized professional bar certification.[41]

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37. *Id.*

38. Bruner, *The Historical Emergence of Construction Law*, *supra* note 2, at 13-14.

39. *See* Thomas Stipanowich, *Restructuring Construction Law: Reality and Reform in a Transactional System*, 1998 WIS. L. REV. 463, 480–81 (1998) ("The concept of a law of construction contracts, separate and apart from the mainstream [] contract, gained acceptance only in recent decades with the emergence of large national and international engineering and construction companies, a corps of practitioners specializing in construction contract matters, and the beginning of a body of pertinent scholarship. Reinforcing these historical realities may be the traditional robust individualism of construction contractors. More significant may be the construction industry's heavy reliance upon internal sources of norms, embodied chiefly in the standardized contract and adherence to private 'governance mechanisms' such as arbitration and mediation that acknowledge and serve relational interests and concerns.").

40. Paul Hardeman, Inc. v. Ark. Power & Light Co., 380 F. Supp. 298, 317 (E.D. Ark. 1974).

41. *See Construction Defect Law Specialization*, STATE BAR OF ARIZ., [https://perma.cc/EE24-6KNL] (last visited Mar. 11, 2022); *Construction Law*, TEX. BD. OF LEGAL SPECIALIZATION, [https://perma.cc/3W65-77RR] (last visited Mar. 11, 2022); *see also* Amend. to the Rules Regulating the Fla. Bar, 875 So. 2d 448, 540-41 (2004) (mem.), which establishes standards by which a Florida lawyer may become a "Board Certified Construction Lawyer" and which defines "Construction Law" as follows:

> "Construction law" is the practice of law dealing with matters relating to the design and construction of improvements on private and public projects including, but not limited to, construction dispute resolution, contract negotiation, preparation, award and administration, lobbying in governmental hearings, oversight and document review, construction lending and insurance,

Under the weight of a century of contextual experience, "construction law" has become:

> a "capstone" subject, a towering legal edifice built out of modern statutes, "contextual" common law principles of and foundational legal concepts sustaining and binding the multitude of parties—architects, engineers, contractors, subcontractors, material suppliers, material manufacturers, sureties, insurers, code officials, and tradesmen—typically engaged in varying degrees on construction projects.[42]

The types of unique legal relationships in the construction industry include:

> (1) express and implied contractual relationships among multiple parties engaged on the same project;
>
> (2) tort relationships, rights, and obligations where contractual privity does not exist or professional or public duties supersede;
>
> (3) suretyship relationships invoking equitable principles governing rights and duties under construction bonds and bonded construction contracts;
>
> (4) insurance relationships invoking principles applicable to products insuring construction and design risks, such as builders' risk policies;
>
> (5) agency principles applicable to construction industry participants and their representatives;
>
> (6) design professional rights and liabilities created by common law and statutory duties;

> construction licensing, and the analysis and litigation of problems arising out of the Florida Construction Lien Law, section 255.05, Florida Statutes, and the federal Miller Act, 40 U.S.C. § 270.

See also THE L. SOC'Y OF ONT., STANDARDS FOR CERTIFICATION CONSTRUCTION LAW 1 (2018), [https://perma.cc/Z46B-FKUV], which defines the "Construction Law Specialty" as follows:

> The practice of construction law encompasses the representation of participants in the construction industry and includes the negotiation and formation of contracts, provision of legal advice on construction and infrastructure matters, representation with regards to tenders or proposals, preparation of documents, representation in proceedings and the resolution of disputes including, alternative dispute resolution and litigation.

42. Bruner, *The Historical Emergence of Construction Law*, *supra* note 2, at 14.

> (7) construction lender-borrower relationships and liabilities pertaining to project financing;
>
> (8) special rights and obligations created by statutes governing mechanic's liens, public contractor bonds, and award of public contracts by bidding or negotiation;
>
> (9) special rights and obligations arising under the Uniform Commercial Code governing relationships for the purchase of construction materials and equipment; [and]
>
> (10) special public duties created by building codes, licensing laws, and health and safety laws[.][43]

"Some academicians view 'construction law' incorrectly as mere 'advanced contract law'—a misunderstanding that arises from viewing 'construction law' through the prism of a historically narrow academic discipline rather than through the kaleidoscope of complex legal and factual issues inherent in the construction process itself."[44] Construction contracts necessarily must be construed in transactional context, because they address a host of complex issues unique to construction, such as:

> (1) Originality of each construction project as to siting, design objectives, construction requirements, design and construction professionals, and ownership;
>
> (2) Novelty of construction risks such as unforeseen site conditions, scheduling and coordination of numerous subcontractors and material suppliers, frequent changes in project design, deviations in construction work and specialized payment security afforded by surety bond and mechanics lien laws;
>
> (3) Rapid technological advances in building materials, systems, techniques and equipment;
>
> (4) Statutory mandates promoting competition and various social objectives in the award of public contracts;
>
> (5) Use of multiple project delivery methods, such as competitive sealed bidding, which invokes legal principles of "firm bid" and promissory estoppel in unique applications, or other more collaborative project delivery

43. *Id.* at 15 (reproduced with permission of the author and the William Mitchell Law Review. Quotations within the list are omitted for readability).

44. *Id.* at 14.

methods unique to construction such as teaming, partnering, alliancing and design-build and its variants, which may add responsibilities and risks for financing, operation and maintenance obligations, cost reimbursement with or without a guaranteed maximum price, and contract negotiation;

(6) Different design standards, building codes and licensing requirements applicable in different jurisdictions and types of projects;

(7) Unusual varieties of construction contract pricing arrangements, such as fixed price, force account, time and material, cost reimbursement with or without a guaranteed maximum price, unit prices based on estimated quantities, and contract clauses authorizing price adjustments for extra work or other compensable events, all of which can be paid either in partial payments as work progresses or in a single lump sum upon completion;

(8) Special construction cost principles and job cost accounting procedures;

(9) Complex "critical path" concepts for measuring construction time, scheduling the work, and determining causation and compensability of delay and entitlement to additional time;

(10) Legal principles unique to construction damage measurement, such as substantial performance, betterment, economic waste, accepted formulas for extended home office overhead and extended usage of contractor-owned equipment, and unsegregated damage approaches that recognize construction's imperfect world;

(11) Legal "fault lines" between common-law legal theories of contract, tort, and equity, as applied to the same claims;

(12) Legal "fault lines" dividing common-law and statutory principles applicable to different aspects of construction contracting, such as between general common-law principles governing design and construction, and the Uniform Commercial Code governing the purchase of construction equipment and materials;

(13) Judicial or legislative public policy prohibitions in some jurisdictions against the use of certain stringent clauses such as those addressing "no damage for delay," indemnification,

> "pay if paid" clauses and other provisions invoking penalties or forfeitures;
>
> (14) Multitude of parties involved in the construction process, each with its own written or oral contract;
>
> (15) Use of massive contract documents typically involving hundreds of pages of specifications and blueprints to describe the work to be performed;
>
> (16) Customs and practices unique to the construction industry;
>
> (17) Construction contract formation necessarily is dependent upon and must be preceded by selection of a project delivery method aimed ultimately at achieving the owner's fundamental objectives of price, quality, and time amid the uncertainties and complexities of the construction process; and
>
> (18) If ambiguous, the contract will be interpreted under long-standing "contextual" trade customs and practices;
>
> (19) The extraordinary variety of "implied conditions" and "implied warranties" that are found in construction contracts;[45]
>
> (20) technical issues of scope of work, changes, and proof of causation of delay and of loss; and
>
> (21) issues unique to dispute resolution by arbitration, mediation, adjudication, dispute review boards, structured negotiation, and other dispute resolution methods.

IV. IMPACT OF MULTIPLE HUMAN MINDSETS THAT ADD TO CONSTRUCTION'S COMPLEXITY[46]

Modern construction's factual and legal complexity and contextual considerations require broad industry education among all participating members of such complexity to avoid communication problems among the different segments of the construction industry. One extraordinary non-legal characteristic of the construction industry that differentiates it from other fields

45. 1A BRUNER & O'CONNOR, JR., *supra* note 33, at § 3:2 (reproduced with the author's permission. Quotations within the list are omitted for readability).

46. Part IV is excerpted from 1 BRUNER & O'CONNOR, JR., *supra* note 5, at § 1:2.

of human endeavor and adds complexity to the construction process has been the marked differences among its participants in mindset, training, and approach to construction problems—psychological and cultural considerations that have contributed significantly to the construction industry's litigiousness in the twentieth century. Contractors characteristically are practical, independent, and hard-headed personalities who enjoy "getting their hands dirty." Architects, more often than not, are perceived as ethereal "right brain" visionaries in search of aesthetic beauty in architectural design, uncomfortable with the "hurly-burly" of the construction process and willing, in the face of modern complexities and risks of liability, to abdicate their ancient role as "master builder." In contrast to architects, engineers typically are perceived as viewing the world from the "left brain," thinking of problem-solving as a mathematical exercise, and having a perceived literal outlook. Owners usually are less experienced with the construction process than the other participants, and can be inflexible, assertive, and demanding because they bear substantial risks in financing the project, look to design professionals and construction managers to protect their interests, and expect completion of the project strictly conforming to their requirements.

In contrast to these mindsets, lawyers and judges rarely view disputes as all black or all white, inevitably identify different shades of gray in their search for fairness and equity, and ponder amid the shifting sands of construction industry practices and mores whether circumstances warrant enforcement of or excuse from contractual obligations willingly assumed. To construction parties, desirous of clarity and even literalism in their legal relationships, the uncertainty created by such shades of gray has raised to mythical status, the celebrated "one-armed lawyer", a lawyer who gives straightforward advice without saying "on the one hand . . . but on the other hand . . . ." The fundamental differences in mindsets, outlooks and approaches to contract interpretation between construction industry participants and lawyers were highlighted by Max E. Greenberg, one of the mid-twentieth century "deans" of the American Construction Bar, in a classic construction law lecture entitled "It Ain't Necessarily So":

> There is a basic difference in the training and thinking of lawyers and engineers. It is a difference which you must understand, if you want to comprehend how and why lawyers—which includes judges—arrive at conclusions which may appear to you to be entirely contrary to the clear and express provisions of a contract.
>
> Engineers deal basically, with the immutable laws of nature. You are taught to look a fact in the face and to accept it without equivocation. Steel has certain qualities. It has certain defined stresses and strains, and while you may devise means to employ its qualities to your purpose, you can't change it. You accept it for what it is. It is a fact. Wood has certain qualities which you employ, but can't change. It's a fact. The varying types of soil have definite qualities. You may employ them within the limitations of those qualities. You cannot change it. It's a fact.
>
> Lawyers, however, deal with vagaries of the human mind. We seek an indefinable, elusive something, called Justice. Justice depends merely on our sense of fairness. It may mean different things in different ages, or different things in the same age under different circumstances; it may mean different things to different people in the same age and circumstances.
>
> In a situation where transportation may mean survival and the sole means of transportation is a horse, the stealing of a horse may have serious consequences and hanging may be considered just. However, in a society depending primarily on automobiles, tractors and power equipment, the same act of stealing a horse, does not have serious consequences; hanging would not be considered just. In a community where its economic life depends on the ready transferability of title to lumber, it may be considered just that the title to stolen lumber conveyed to an innocent purchaser be deemed valid, although in another community, in which lumber does not form the basis of its economic life, the transfer of title to stolen lumber may not be deemed valid.[47]

47. Max E. Greenberg, *It Ain't Necessarily So*, 40 MUN. ENG'RS. J. 50, 50-51 (1954) (a speech presented on April 28, 1954 to the municipal engineers of the City of New York).

Using as one of many examples a contractual "no damage for delay" clause, Greenberg observed:

> Now when you, as engineers, read a contract which in plain understandable English states the [owner] shall not be liable for damages for delays, resulting from any cause whatsoever and that the sole remedy of the contractor shall be an extension of time, that, to you, with your type of background and training is a fact; it means what it says. But to us, as lawyers "It ain't necessarily so." Our sense of fairness may impose limitations on the effectiveness of that clearly expressed provision.
>
> [T]he effectiveness of a contract provision excusing the owner from liability for damage for delays . . . must yield when it conflicts with a basic, though perhaps not expressed, rule of law which implies that the owner will do its share toward getting the contract completed within the time specified. Every contract imposes obligations on both sides. The [owner], when it requires a contractor to perform within a set period, by that fact alone, itself assumes the obligation to give the contractor the site on time to approve drawings or samples within the time one ought normally expect them to be approved, to let its other independent contracts in such time and to require the performance thereof in such periods as will enable all the coordinated contracts to be completed within the time specified; to have adequate funds available to proceed with the work.
>
> In other words, we as lawyers, do not consider it fair, that simply because it is provided that the owner shall not be liable for delays, that it can thereby take an unfair advantage of the situation and thereby impose expense on the contractor due to the owners failure to diligently and fairly maintain its share of the bargain.[48]

Those people in the construction industry who look for certainty within the four corners of the contract, without focusing on the factual complexities of the construction process or the legal complexities and context imposed by judicially created implied contractual conditions outside the four corners of the written contract often have been sources of, rather than solutions to,

48. *Id.* at 51-52.

problems. Thus, differences in perspective, outlook, training and objectives of the parties simply exacerbate an already technologically complex construction process.

V. CONSTRUCTION LAW AND THE NATIONAL AND INTERNATIONAL CONSTRUCTION BAR

> For much of the 20th century, lawyer specialization in construction law was self-taught under the necessity of providing adequate legal representation to construction industry clients. The extent of specialization depended upon the number of such clients and the frequency of their legal matters. Lawyers representing contractors, design professionals, owners and sureties typically learned "construction law" from the unique perspectives of the clients they served.[49]

For more than 100 years, the impact of construction's complexity upon courtroom trial of construction disputes has been well recognized. Both lawyers and judges inexperienced in construction[50] acknowledge frustration in dealing with

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49. 1 BRUNER & O'CONNOR, JR., s*upra*, note 5, at § 1:5.

50. *See* E. C. Ernst, Inc. v. Manhattan Constr. Co., 387 F. Supp. 1001, 1006 (S.D. Ala. 1974), *aff'd in part, vacated in part*, in which a federal judge offered parties before him at a pretrial conference this sage advice:

> Being trained in this field [of construction], you are in a far better position to adjust your differences than those untrained in [its] related fields. As an illustration, I, who have had no training whatsoever in engineering, had to determine whether or not the emergency generator system proposed to be furnished . . . met the specifications, when experts couldn't agree. That is a strange bit of logic. . . . The object of litigation is to do substantial justice between the parties litigant, but the parties litigant should realize that, in most situations, they are by their particular training better able to accomplish this among themselves.

See also Blake Constr. Co. v. C. J. Coakley Co., 431 A.2d 569, 575 (D.C. App. 1981) ("[E]xcept in the middle of a battlefield, nowhere must men coordinate the movement of other men and all materials in the midst of such chaos and with such limited certainty of present facts and future occurrences as in a huge construction project such as the building of this 100 million dollar hospital. Even the most painstaking planning frequently turns out to be mere conjecture and accommodation to changes must necessarily be of the rough, quick and *ad hoc* sort, analogous to ever-changing commands on the battlefield. Further, it is a difficult task for a court to be able to examine testimony and evidence in the quiet of a courtroom several years later concerning such confusion and then extract from them a determination of precisely when the disorder and constant readjustment, which is to be expected by any subcontractor on a job site, bec[a]me so extreme, so debilitating and so

construction's complexities.[51] The messiness and complexity of construction disputes are legendary.[52] Prior to the mid-twentieth century, the organized bar played no role in the development of construction law.[53] "The American Bar Association, which was organized in the 19th century, offered no committee focusing

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unreasonable as to constitute a breach of contract between a contractor and a subcontractor. This was the formidable undertaking faced by the trial judge in the instant case . . . .").

51. *See* Kiewit-Atkinson-Kenny v. Mass. Water Res. Auth., No. 011920BLS, 2002 WL 31187691, at *12 (Mass. Sept. 3, 2002), in which the court expressed its frustration at the parties' request for the court to interpret technical contract language:

> The contract language . . . is sprawled over hundreds of pages and contained in several documents, not all speaking consistently with one another; and the "record" is massive, covering literally thousands of pages. The burden placed upon this Court is immense, and, it fears, after all of its attempts to give fair attention and correct rulings to the various issues, whichever side does not prevail will first seek reconsideration and thereafter will ultimately appeal, and may well argue that material facts remain in dispute. In short, this memorandum and the orders it produces may turn out to be an exercise in futility driven by a hugely over-litigated case. . . . Here, a single judge—not a panel of experts in the subject of tunnel construction—is asked to resolve the issues because the parties themselves refuse to accept the decisions of their contractually assembled team of experts.

52. See Decker & Co. v. West, 76 F.3d 1573,1575 (Fed. Cir. 1996), in which the court noted the messiness common to construction disputes:

> This is one of those messy government [construction] dispute cases in which, during the performance of the contract, neither of the parties acquitted themselves with pure grace. Working through the detailed record of such a case causes one to understand better the ancient curse of a plague o' both their houses.

53. *See* Stipanowich, *supra* note 39, at 490–91 (opining at great lengths on this issue and providing the following: "Early in the history of the Republic, commercial lawyers came to dominate the ranks of the American bar. The alliance of the bar with mercantile interests had an immediate, profound impact on procedures for trying commercial cases, including a dramatic curtailment of the use of juries and a clear identification of commercial law with the universal law of nations. Bar organizations and prominent practitioners played pivotal roles in the evolution of the UCC; roles that have continued to the present day. By way of contrast, the organized bar played no significant role in the historic development of construction contract law for the simple reason that a national construction bar did not coalesce until the period following World War II. Prior to this time, it appears, there were relatively few lawyers specializing in construction. In the post-war era the expanding volume of public and private construction, the development of new technologies, and changes in the law (such as reforms to third-party practice and limitations on privity defenses) dramatically increased the volume of construction-related litigation. The effect of these trends was exacerbated by increasing competition, which often caused bidders to take projects at unreasonably low prices, as well as economic downturns such as the energy crisis of the early 1970s. Finally, the development of the interstate highway system permitted many contractors to perform more work in strange communities, where there were fewer personal and professional relationships encouraging informal solutions to job problems.").

specifically upon construction law until the mid-20th century, when" a small group of surety counsel and lawyers in the Tort and Insurance Practice Section organized the Fidelity and Surety Law Committee "for the purpose of meeting annually to review developments in the law of suretyship, a subject sufficiently broad to encompass construction bonds, fidelity bonds and other surety instruments."[54] "In 1965, the American Bar Association organized a new section, the Public Contract Law Section, to focus on issues of federal and state procurement" through committees addressing procurement of construction, supplies, military hardware and other objects of public procurement[55]

"Taking its cue from the Public Contract Law Section['s]" organization of a Construction Committee, "the American Bar Association's Litigation Section thereafter organized a Construction Litigation Committee."[56] By the mid-1970s, lawyers in the Fidelity and Surety Law Committee, the Public Contract Law Section and the Construction Litigation Committee all recognized that the American Bar Association needed an organization that focused upon all issues and aspects of "construction law," not just public contracts, surety bonds or construction litigation."[57] "In February 1976 . . . the American Bar Association formed the Forum Committee on the Construction Industry[58] (now called Forum on Construction Law)."[59] "From its original 1976 membership of 168 lawyers, the Forum's membership comprised about 6,000 as of 2015."[60] Many state bar associations have also formed construction law sections or committees.[61] The total membership of the American

54. 1 BRUNER & O'CONNOR, JR., *supra* note 5, at § 1:5.

55. *Id.*

56. *Id.*

57. *Id.*

58. *See* Ralph Kaskell, Jr., *The Genesis of the ABA Forum Committee on the Construction Industry*, CONSTR. LAW., Jan. 1988, at 15, 15.

59. 1 BRUNER & O'CONNOR JR., *supra* note 5, at §1.5.

60. *Id.*

61. Construction law sections or committees have been formally organized by state bar associations in more than half of the states (Arizona, California, Colorado, Connecticut, Florida, Georgia, Illinois, Indiana, Iowa (*Construction Law Section*, IOWA STATE BAR ASS'N, [https://perma.cc/FDB2-XMS7] (last visited Mar. 12, 2022)), Kentucky, Louisiana, Minnesota, Missouri, Montana, Nebraska, New Jersey, New York, North Carolina, Ohio, Oregon, South Carolina, Tennessee (*Construction Law Section*, TENN. BAR ASS'N,

construction law bar as of 2015 appears to exceed 35,000 lawyers.[62]

The formation in 1989 of The American College of Construction Lawyers illustrated the development of construction law as a recognized area of legal specialization.[63] Fifty-six preeminent American construction lawyers founded the College to recognize those "who have demonstrated skill, experience and high standards of professional and ethical conduct in the practice, or in the teaching, of construction law, and who are dedicated to excellence in the specialized practice of construction law."[64] Internationally, "construction law" also has become recognized as a global legal specialty, as evidenced by the formation in 2014 of the International Academy of Construction Lawyers,[65] a professional group comprised of distinguished lawyers and

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[https://perma.cc/SYL6-2QYM] (last visited Mar. 12, 2022)), Texas, Utah, Virginia, Washington, and Wisconsin, *see* 1 BRUNER & O'CONNOR JR., *supra* note 5, at §1.5); and by various county and local bar associations (e.g., Atlanta, Austin, Boston, Chicago (*Construction Law & Mechanics Lien Subcommittee*, CHI. BAR ASS'N (Feb. 7, 2022), [https://perma.cc/2XLP-M7E2]), Columbus (*Construction Law Committee*, COLUMBUS BAR ASS'N, [https://perma.cc/4N9M-6U82] (last visited Mar. 6, 2022)), Dallas, Houston, Jacksonville (*Construction Law*, JACKSONVILLE BAR ASS'N, [https://perma.cc/YH2V-62L8] (last visited Mar. 12, 2022)), Kansas City, Philadelphia (*Construction Law Committee*, PHILA. BAR ASS'N, [https://perma.cc/98DL-Y25U] (last visited Mar. 12, 2022)); San Diego, San Francisco, Allegheny County, Los Angeles County (Teresa Hillery, *Real Property Section*, L.A. CNTY. BAR ASS'N., [https://perma.cc/U27T-BEKA] (last visited Mar. 12, 2022)), New York City (*Construction Law Committee*, N.Y.C. BAR ASS'N, [https://perma.cc/V539-ZR25] (last visited Mar. 12, 2022)), Maricopa County, Marin County (*Section: Construction Law*, MARIN CNTY. BAR ASS'N, [https://perma.cc/EPS4-LCMT] (last visited Mar. 12, 2022)), Nassau County (*NCBA Committees*, NASSAU CNTY. BAR ASS'N, [https://perma.cc/PY6B-8WDR] (last visited Mar. 12, 2022)), Orange County (*Construction Committee*, ORANGE CNTY. BAR ASS'N, [https://perma.cc/L836-5KEA] (last visited Mar. 12, 2022)), Palm Beach County (*Construction Law Committee*, PALM BEACH CNTY. BAR ASS'N., [https://perma.cc/Z7RX-XB27] (last visited Mar. 12, 2022)), Westchester County (*Construction Law Committee*, WESTCHESTER CNTY. BAR ASS'N, [https://perma.cc/7MZ6-SY5K] (last visited Mar. 12, 2022)), *see* 1 BRUNER & O'CONNOR, JR., *supra* note 5, at §1.5).

62. Thousands upon thousands of American lawyers hold themselves out as practicing "construction law," as evidenced by a search for "construction lawyers" on FindLaw or Martindale, or for "construction law" or "construction lawyers" on search engines such as Google, Yahoo, or MSN. 1 BRUNER & O'CONNOR, JR., *supra* note 5, at §1.5.

63. *See History/Mission*, AM. COLL. CONSTR. LAWS., [https://perma.cc/Z3UC-UT3A] (last visited Mar. 12, 2022).

64. *Welcome*, AM. COLL. CONSTR. LAWS., [https://perma.cc/6ZJN-ZU7L] (last visited Mar. 12, 2022).

65. INT'L ACAD. OF CONSTR. LAWS., [https://perma.cc/8KYC-A94C] (last visited Mar. 13, 2022).

judges from around the world. Moreover, construction lawyers in various countries have formed professional construction law associations, such as The Canadian College of Construction Lawyers,[66] Society of Construction Law of the United Kingdom,[67] Society of Construction Law (Gulf),[68] Society of Construction Law Singapore,[69] Society of Construction Law Australia,[70] Society of Construction Law Hong Kong,[71] and the European Society of Construction Law.[72] National bar associations have organized construction law committees (e.g., Canadian Bar Association, International Bar Association);[73] and, international law associations have formed construction committees (e.g., International Bar Association, Inter-Pacific Bar Association).[74] With the rise of such professional colleges, associations, and committees, lawyer listing organizations have recognized "construction law" as a specialty for ranking law firms and lawyers.[75] The beginnings of "construction law" as a recognized field of legal practice and study, and the development

66. THE CANADIAN COLL. OF CONSTR. LAWS., [https://perma.cc/PY6L-DY37] (last visited Mar. 13, 2022).

67. SOC'Y OF CONSTR. L., [https://perma.cc/4YNB-D9TK] (last visited Mar. 13, 2022).

68. SOC'Y OF CONSTR. L. (GULF), [https://perma.cc/3DMC-2D4X] (last visited Mar.13, 2022).

69. SOC'Y OF CONSTR. L. SING., [https://perma.cc/UUH6-REAY] (last visited Mar. 13, 2022).

70. SOC'Y OF CONSTR. L. AUSTL., [https://perma.cc/BPG6-YGR4] (last visited Mar. 13, 2022).

71. SOC'Y OF CONSTR. L. H.K., **[**https://perma.cc/2248-PPVS**]** (last visited Mar. 13, 2022).

72. EUR. SOC'Y OF CONSTR. L., **[**https://perma.cc/6AKH-YMYK**]** (last visited Mar. 13, 2022).

73. *Construction and Infrastructure Law*, THE CANADIAN BAR ASS'N, **[**https://perma.cc/R34V-53JM**]** (last visited Mar. 13, 2022); *International Construction Projects Committee*, INT'L BAR ASS'N, [https://perma.cc/CCN2-BJBC] (last visited Mar. 13, 2022).

74. *International Construction Projects Committee, supra* note 73; *International Construction Projects*, INTER-PACIFIC BAR ASS'N, **[**https://perma.cc/8K5B-5W32**]** (last visited Mar. 13, 2022).

75. *Best Lawyers for Construction Law in America*, BEST LAWS., **[**https://perma.cc/S43K-C4BZ**]** (last visited Mar. 14, 2022); *USA—Nationwide Construction Legal Rankings*, CHAMBERS & PARTNERS, **[**https://perma.cc/67KL-6QA8] (last visited Mar. 14, 2022); *Construction Litigation Law Super Lawyers Related Attorneys*, SUPER LAWS., **[**https://perma.cc/8WT3-9ZJK] (last visited Mar. 14, 2022); *Construction 2020—Legal Marketplace Analysis*, WHO'S WHO LEGAL (Apr. 3, 2020), **[**https://perma.cc/QK77-A9Q8].

of an American "construction law bar" thus properly can be identified with the last half of the twentieth century. From these beginnings, the construction law bar has steadily developed.

A major reason for construction law specialization is that construction's factual complexity has caused difficulty for lawyers and many judges not skilled in the field to understand the factual and legal underpinnings of construction disputes, a perception that has led the construction industry to resolve disputes by arbitration, mediation, and other forms of Alternate Dispute Resolution ("ADR").[76] Arbitration has been and continues to be the dominant dispute resolution forum for construction disputes in international construction and in many local controversies.[77] In 1985, United States Supreme Court Chief Justice Warren E. Burger reaffirmed judicial support for arbitration in this sage advice given to the American legal profession:

> The obligation of the legal profession is, or has long been thought to be, to serve as healers of human conflicts. To fulfill that traditional obligation means that there should be mechanisms that can produce an acceptable result in the shortest possible time, with the least possible expense and with a minimum of stress on the participants. That is what justice is all about. . . . My overview of the work of the courts from a dozen years on the [D.C.] Court of Appeals and now 16 in my present position, added to 20 years of private practice, has given me some new perspectives on the problems of arbitration. One thing an appellate judge learns very quickly is that a large part of all the litigation in the courts is an exercise in futility and frustration. A large proportion of civil disputes in the courts could be disposed of more satisfactorily in some other way. . . . My own experience persuades me that in terms of cost, time, and human wear and tear, arbitration is vastly better than conventional litigation for many kinds of cases.[78]

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76. Philip L. Bruner, *Rapid Resolution ADR*, CONSTR. LAW., Spring 2011, at 6, 6-7 [hereinafter Bruner, *Rapid Resolution ADR*].

77. *Id.* at 13.

78. Warren E. Burger, *Using Arbitration to Achieve Justice*, 40 ARB. J. 3, 3-4, 6 (1985) (remarks before the American Arbitration Association and the Minnesota State Bar

Since Chief Justice Burger's clarion call, use of arbitration and other forms of ADR have expanded considerably.[79]

VI. CONSTRUCTION LAW AND ACADEMIA

Not until the twentieth century did a few legal academicians take note of "construction law" as a field distinct from "contract law" and urge more significant study of its issues.[80] For much of the twentieth century, most academic works touching on construction law were prepared for instruction of design or engineering professionals rather than for the education of lawyers.[81] Although popular contract case books and the Restatement (Second) of Contracts contained references to numerous cases involving construction contracts and disputes, the cases were considered only from the general perspective of "contract law."[82] The decades-old call for more significant academic study of the construction industry continues to be voiced in the present:

> Legal and economic scholars have devoted little attention to an industry—construction—that seems to offer valuable lessons about the organization of economic activity. Major construction projects are generally initiated, and

Association on August 21, 1985). One of those many kinds of cases surely is Construction Law.

79. Bruner, *Rapid Resolution ADR*, *supra* note 76, at 8-9.

80. For example, in 1931, Professor Edwin W. Patterson of Columbia Law School noted the need for construction law scholarship because of "[t]he economic importance of the building industry, the frequency of litigation involving this type of contract, and the inadequacy of judicial analyses of the complex problems of [construction] damages . . . ." *See* Edwin W. Patterson, *Builder's Measure of Recovery for Breach of Contract*, 31 COL. L. REV. 1286, 1287 (1931).

81. *See generally* Justin Sweet, *A View from the Tower*, CONSTR. LAW., July 1999, at 41 (1999) [hereinafter Sweet, *A View from the Tower*]. Justin Sweet, Professor Emeritus of the Boalt Hall School of Law at the University of California-Berkeley, was one of the early pioneers in gaining recognition of construction law as a distinct legal subject. He authored JUSTIN SWEET, SWEET ON CONSTRUCTION LAW (1997) and co-authored with Mark Schneier, JUSTIN SWEET & MARC M. SCHNEIER, LEGAL ASPECTS OF ARCHITECTURE, ENGINEERING AND THE CONSTRUCTION PROCESS (9th ed. 2013). When he first began to take an interest in construction law, Professor Sweet was struck by the dearth of legal scholarship and legal treatises, and the absence of law course offerings on Construction Law.

82. *See, e.g.*, RESTATEMENT (SECOND) OF CONTS. § 347 (AM. L. INST. 1981) (citing Limbach Co.v. Ten Hoeve Bros., 126 F.Supp.3d 105 (D.D.C. 2015)); *id.* (citing Marchesseault v. Jackson, 611 A.2d 95 (Me. 1992)).

> proceed, without governmental central planning, without organized, formal markets for the exchange of services, and without hierarchical top-down control within a single firm. Many of the characteristics that have long been associated with the construction industry are now increasingly observed in outsourcing by traditional firms and, by the extension of that process, in the virtual firm. Construction projects reflect a system of economic organization involving a high degree of contracting, both formal and informal, rather than formal integration. This contracting may take place under conditions of high uncertainty; conditions may be constantly changing and ex ante specification of rights and obligations is often difficult at best. Construction projects also provide insights into the role of teams of individuals from different firms; into the networks of relationships that produce such teams; into a "culture of collaboration" that seems vital to successful teamwork; into trust, reputation, and other such informal, nonlegal mechanisms that affect collaboration; and, in a minor way in this study, into the role of written contracts.[83]

Academia's benign neglect of the study of construction law has been attributed variously to:

> (1) The perceived uniqueness and local nature of the construction industry;
>
> (2) The industry's trade customs and practices that require consideration of contextual issues, specialized knowledge and legally implied rights and duties;
>
> (3) The perception that construction's technical disputes involve the "law of the shop" rather than the "law of the courts," to be settled either by architects as quasi-judges or by arbitrators;
>
> (4) The variations in applicable "construction law" legal principles between and among different jurisdictions;
>
> (5) The construction industry's historic preference for mandatory arbitration or other non-judicial dispute

83. William A. Klein & Mitu Gulati, *Economic Organization in the Construction Industry: A Case Study of Collaborative Production Under High Uncertainty*, 1 BERKELEY BUS. L.J. 137, 138-39 (2004).

> resolution methods involving peer experience and expertise;[84] and
>
> (6) The unwillingness of legal academicians to master the factual complexities of construction and the legal complexities created by its numerous disjointed contractual and legal relationships.[85]

"[A]cademic scholars in the early 21st century still play an insignificant role in the development of construction law."[86] Some universities outside the United States, such as Kings College London, University of Strathclyde, and University of Melbourne Law School, offer graduate degree programs in construction law, and some foreign law schools offer an undergraduate course on construction law.[87]

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84. 1 BRUNER & O'CONNOR, JR., *supra* note 5, at § 1:4 (reproduced with the author's permission. Quotations within the list are omitted for readability).

85. *Id.*; *see also* Justin Sweet, *Standard Construction Contracts: Academic Orphan*, CONSTR. LAW., Winter 2011, at 38, 41 ("Much of this lack of scholarly interest is traceable to the methods law schools use to gather a staff. Young teachers, particularly at the national and top-ranked state schools, are recruited from the Ivy League schools. These recruits increasingly have advanced degrees and, as a rule, have been clerks to outstanding judges. Most have not had any practical law firm experience. They are not likely to have any experience in construction law planning or disputes. You will have to look far and wide to find a full-time law professor who devotes his research to construction law. Most construction law courses at law schools are taught by practitioners as adjuncts or lecturers.").

86. 1 BRUNER & O'CONNOR, JR., *supra* note 5, at § 1:4; *see also* Paula Gerber, *The Teaching of Construction Law and the Practice of Construction Law: Never the Twain Shall Meet?*, 20 LEG. EDUC. REV. 59, 59-60 (2010) ("The overwhelming majority of major law firms in the United States and Australia promote construction law as one of their areas of expertise. However, the overwhelming majority of law schools in these two jurisdictions do not offer construction law as a subject in their JD or LLB programs. How can it be that an area of law, that is so widely practised, is not widely taught? The dearth of construction law courses in law schools is in stark contrast with the plethora of construction law offerings in the engineering, architecture and building facilities. It appears that universities are producing construction professionals who have an understanding of the law regulating their industry, but not lawyers who have the knowledge to advise and represent clients on construction-related issues.").

87. *See* Matthew Bell & Paula Gerber, *Passing on the Torch of Learning in the 'Primordial Soup' of Construction Law: Reflections from the Construction Law Academic Forum, 2012*, CONSTR. L. INT'L, Oct. 2012, at 26, 27-28 (summarizing an academic forum on construction law and the growth in construction law teaching and scholarship around the globe); *see also SCL International Construction Law Courses Worldwide*, SOC'Y OF CONSTR. L., [https://perma.cc/U5T2-QK82] (last visited Mar. 16, 2022) (listing colleges outside the United States offering construction law); *LL.M. in Construction Law*, LLMGUIDE, [https://perma.cc/5PAT-D9HV] (last visited Mar. 4, 2022).

"As for the teaching of construction law in American law schools, as of 2010 only about 26 out of 233 law schools accredited by the American Association of Law Schools offer any course on construction law."[88] At those twenty-six schools, it appears that only two United States law schools offer construction law courses taught by full-time faculty,[89] and the remainder are taught as third-year electives by adjunct professors. The adjunct professors universally are legal practitioners who have specialized in construction law during their careers.[90] The complexities of construction law and the construction process have generally been viewed by all but a handful of full-time legal scholars as a morass to be avoided. Pepperdine University Law School Professor Thomas Stipanowich, who along with Professor Justin Sweet of the University of California Berkeley, have been among the few full-time academics to tread into the complexities of construction law. Professor Stipanowich has aptly observed:

> Th[e] scholarly and pedagogical obliviousness [of academia], while not confined to construction contracts, cannot be explained on the basis that such transactions are unimportant—the construction industry has for some time been the largest single production activity in the United States—or less academically rich than other commercial fields. Unless the explanation is a perverse form of intellectual snobbery, it must be a pervading ignorance of the practical significance of and academic challenge presented by the field of construction law—or a reflection of the inherent complexity (real and perceived) of principle and practice in this arena. Although today's attorneys and

88. 1 BRUNER & O'CONNOR, JR., *supra* note 5, at § 1:4; *see also* Gerber, *supra* note 86, at 61.

89. University of Arkansas, *Recently Offered Courses*, UNIV. OF ARK. SCH. OF L., [https://perma.cc/R5FL-HA2L] (last visited Mar. 16, 2022); University of Detroit Mercy, *Troy Harris*, UNIV. OF DETROIT MERCY, [https://perma.cc/VG4X-L3ZK] (last visited Mar. 16, 2022).

90. *See* John W. Ralls, *Teaching Construction Law*, CONSTR. LAW., Summer 2009, at 3, 3; Allen L. Overcash, *The Case for Construction Law Education*, CONSTR. LAW., Summer 2009, at 5, 5; Lawrence C. Melton, *What We Teach When We Teach Construction Law*, CONSTR. LAW., Summer 2009, at 8, 8. All three authors were practicing lawyers serving as adjunct professors, and their articles were published in a special edition of the ABA Forum on Construction Law publication, *The Construction Lawyer*, to address the subject of teaching by Forum lawyers serving as adjunct professors.

> industry actors have much greater access to treatments of pertinent legal subjects than their predecessors, much more can be done to enhance the level of scholarly treatment and interdisciplinary discussion of legal rules.[91]

"Construction law is ideally suited to be taught as a 'capstone' or a 'transition' course to third year law students because of its [broad] focus on problems cutting across numerous principles of common law and statutory law well beyond" merely "contract law."[92] Legal academicians are beginning to call for a restructuring of the entire approach to legal education by requiring law students in their third year to take "capstone" or "transition" courses, such as construction law, that compels students to address complex issues in discrete fields of law just as they will in the actual practice of law.[93] In recent years, American law schools have begun to recognize the importance of broadening law school curricula to stay current with society's development. From the perspective of the Academy, law schools are expected to stay current in educating students about major newly developing fields of law. As Elena Kagan, now Associate Justice of the U.S. Supreme Court, said when she became the new Dean of Harvard Law School and presented her "State of the School" Address on September 17, 2003:

> [T]he world is changing, and in response to those changes, the law is changing and becoming ever more specialized and complex. We need to expand the faculty because the world

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91. *See* Stipanowich, *supra* note 39, at 496-97.

92. 1 BRUNER & O'CONNOR, JR., *supra* note 5, at § 1:4; *see generally* Bruner, *The Historical Emergence of Construction Law*, *supra* note 2.

93. *See* Troy Harris, *Training International Construction Lawyers: A Proposal*, CONSTR. L. INT'L, Mar. 2012, at 41, 41-43; Jon Sonsteng et. al., *A Legal Education Renaissance: A Practical Approach for the Twenty-First Century*, 34 WM. MITCHELL L. REV. 303, 450-51 (2007) (proposing that third year law students should be required to take twenty-eight credits of "Transition Courses," which will add "substantial value to [their first and second year] experience by requiring students to be responsible professionals, address complex and real-world challenges, and produce substantial, concrete manifestations of their learning. [The transition course will provide] the finishing touch to the law school experience."); Jeffrey E. Lewis, *"Advanced" Legal Education in the Twenty-First Century: A Prediction of Change*, 31 U. TOL. L. REV. 655, 658-59 (2000) ("Students [in transition courses] will develop an expertise as a result of a systematic and progressively sophisticated study of a discrete area of practice, and what better opportunity for the development of the fundamental skill of 'thinking like a lawyer!' Substance and method can be taught and learned in a thoroughly harmonious and complimentary fashion.").

of law is expanding and we need to cover everything important that is happening in it.[94]

VII. CONSTRUCTION LAW'S TRENDS TOWARD GLOBAL HARMONIZATION[95]

The exponential growth of international commerce in the worldwide free market economy over the last half of the twentieth century has highlighted the need for a harmonized set of legal principles governing the relationships of parties involved in the design and construction of projects located anywhere in the world.[96] The search for this "holy grail" of harmonization is following eight principal paths:

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94. *Kagan Delivers 'State of the School' Address*, HARV. L. TODAY, Jan. 2004, at 4, 4. Justice Kagan left Harvard in 2009 to become U.S. Solicitor General under President Obama and became an Associate Justice of the Supreme Court in 2010. *See Associate Justice of the U.S. Supreme Court—Elena Kagan*, COMM. ON THE JUDICIARY, [https://perma.cc/SQC9-AY86] (last visited Mar. 18, 2022). Harvard has yet to offer courses related to Construction Law. *Harvard Law School Course Catalog: 2021-2022 Academic Year*, HARV. L. SCH., [https://perma.cc/PSM8-TC6K] (last visited Mar. 20, 2022).

95. Part VII is partially excerpted from 6 PHILIP L. BRUNER & PATRICK J. O'CONNOR, JR., BRUNER & O'CONNOR ON CONSTRUCTION LAW § 20:3 (2021).

96. *See* James D. Wilets, *A Unified Theory of International Law, the State, and the Individual: Transnational Legal Harmonization in the Context of Economic and Legal Globalization*, 31 U. PA. J. INT'L L. 753, 755-56 (2010) (proposing a "unified theory of international law" that recognizes linkages between the law of international institutions and private commercial law in order to harmonize legal rules and norms for both sovereign entities and individuals); Matthew Bell & Jeremy Coggins, *Beyond the Nutcracker Suite: International Harmonisation of Construction Industry Payment Legislation*, 32 INT'L CONSTR. L. REV. 186, 187 (2015); Donald Charrett, *"A Common Law of Construction Contracts"—Or Vive La Différence*?, 29 INT'L CONSTR. L. REV. 72, 72 (2012); John S. Vento & Carina Y. Ohara, *Practical Considerations and Risks for U.S. Companies Contracting Across Borders*, *in* INTERNATIONAL CONSTRUCTION LAW: A GUIDE FOR CROSS-BORDER TRANSACTIONS AND LEGAL DISPUTES 13, 13-38 (2009) (examining from the United States' perspective key issues and legal concepts applicable to international construction contracts); Louis F. Del Duca, *Developing Global Transnational Harmonization Procedures for the Twenty-First Century: The Accelerating Pace of Common and Civil Law Convergence*, 42 TEX. INT'L L.J. 625, 627-33 (2007) (discussing transnational harmonization trends in and among different legal systems as the result of UNIDROIT, UNCITRAL, the International Chamber of Commerce, the Council of Europe, the European Union, the Hague Conference, and others); Michael Douglas, *The Lex Mercatoria and the Culture of Transnational Industry*, 13 U. MIAMI INT'L & COMP. L. REV. 367, 383-85, 389-92 (2006); MOHAMED A.M. ISMAIL, GLOBALIZATION AND NEW INTERNATIONAL PUBLIC WORKS AGREEMENTS IN DEVELOPING COUNTRIES: AN ANALYTICAL PERSPECTIVE (2011) (discussing the impact of globalization of project delivery methods, primarily in civil law jurisdictions governing construction services in the Middle East).

> (1) compilation of comparative studies to assure understanding of the similarities and differences of legal concepts originating in different regions and countries and publication of such comparative studies in scholarly journals, such as The International Construction Law Review;[97]
>
> (2) development by international organizations of model legislation for adoption by individual nations;[98]
>
> (3) development of standard international construction contract forms by private international organizations such as FIDIC [("Fédération Internationale Des Ingénieurs-Conseils" or "International Federation of Consulting

97. Numerous comparative law articles on issues important to international construction have been published in *The International Construction Law Review,* which was founded by Humphrey J. Lloyd, former Judge of England's Technology and Construction Court. *See His Honour Humphrey Lloyd QC*, ATKIN CHAMBERS, [https://perma.cc/8JYW-E4NK] (last visited Mar. 18, 2022). Other important journals include *The International Lawyer*, (*About The International Lawyer*, INT'L L. REV. ASS'N, [https://perma.cc/JHS7-T7FD] (last visited Mar. 18, 2022)); *The International Journal of Legal Information* (*International Journal of Legal Information*, CAMBRIDGE UNIV. PRESS, **[**https://perma.cc/V9H6-PD2U] (last visited Mar. 18, 2022)); *Construction Law International* (*Construction Law International*, INT'L BAR ASS'N, [https://perma.cc/E6TT-SBN5] (last visited Mar. 18, 2022) (published by the IBA International Construction Projects Committee)); and a host of other international law journals published in the United States and around the world. Other publications abound. *See* INTERNATIONAL CONSTRUCTION LAW: A GUIDE FOR CROSS-BORDER TRANSACTIONS AND LEGAL DISPUTES (Wendy Kennedy Venoit et al., eds. 2009) (a 400-page compendium addressing the major issues in cross-border transactions arising in the construction field).

98. *See* U.N. Comm'n on Int'l Trade L., UNCITRAL Model Law on Public Procurement (2014), [https://perma.cc/4DPK-5LQN] [hereinafter UNCITRAL Model Law on Public Procurement]; U.N. Comm'n on Int'l Trade L., UNCITRAL Model Legislation Provisions on Privately Financed Infrastructure Projects (2004), **[**https://perma.cc/PU4V-V2ZG] [hereinafter UNCITRAL Model Legislation Provisions]; U.N. Comm'n on Int'l Trade L., UNCITRAL Model Law on Procurement of Goods, Construction and Services with Guide to Enactment (1994), [https://perma.cc/G85Q-YPGU] [hereinafter UNCITRAL Model Law on Procurement of Goods]; U.N. Comm'n on Int'l Trade L., UNCITRAL Model Law on Procurement of Goods and Construction (1993), [https://perma.cc/JHX8-QBGB] [hereinafter UNCITRAL Model Law on Procurement of Goods and Construction] (offering a model procurement code). *See also International Construction Measurement Standards: Global Consistency in Presenting Construction Costs*, INT'L CONSTR. MEASUREMENT STANDARDS COAL. (July 2017), **[**https://perma.cc/32C3-AK2X].

Engineers")],[99] ENAA,[100] and ICE[101] and by private national organizations whose forms are used internationally, such as JCT,[102] AIA,[103] EIC [("European International

99. As an organization comprised of consulting engineers from over seventy countries, the FIDIC documents are the most widely accepted in the world. These documents include among others the (1) *Client/Consultant Model Services Agreement 5th Ed (2017 White Book)*, INT'L FED'N OF CONSULTING ENG'RS, [https://perma.cc/XUB4-TY9E] (last visited Mar. 18, 2022); (2) *Construction Contract MDB Harmonised Ed (Version 3: June 2010 Harmonised Red Book)*, INT'L FED'N OF CONSULTING ENG'RS, [https://perma.cc/7XBE-SUBX] (last visited Mar. 18, 2022); (3) *Works of Civil Engineering Construction 4th Ed 1987 Red Book*, INT'L FED'N OF CONSULTING ENG'RS, [https://perma.cc/3EF3-S99Y] (last visited Mar. 18, 2022) (the "Red Book"); (4) *Electrical and Mechanical Works*, INT'L FED'N OF CONSULTING ENG'RS, [https://perma.cc/AD2G-GJY4] (last visited Mar. 18, 2022) (the "Yellow Book"); (5) *Design-Build and Turnkey 1st Ed (1995 Orange Book)*, INT'L FED'N OF CONSULTING ENG'RS, [https://perma.cc/YD84-JC7Q] (last visited Mar. 18, 2022) (the "Orange Book"); (6) *EPC/Turnkey Contract 2nd Ed (2017 Silver Book)*, INT'L FED'N OF CONSULTING ENG'RS, [https://perma.cc/NN6U-WQ9F] (last visited Mar. 18, 2022) (the "Silver Book"); (7) *Works of Civil Engineering (1987 Red Book) Subcontract 1st Ed (1994)*, INT'L FED'N OF CONSULTING ENG'RS, [https://perma.cc/3XP8-BYZ9] (last visited Mar. 18, 2022); and (8) *DBO Contract 1st Ed (2008 Gold Book)*, INT'L FED'N OF CONSULTING ENG'RS, [https://perma.cc/7ZT9-QGCZ] (last visited Mar. 18, 2022) (the "Gold Book").

100. The Engineering Advancement Association of Japan, Toranomon, Takagi Building 7-2, Inshi-shinbashi T-chome Minato-ku, Tokyo 105, Japan. *Engineering Advancement Association of Japan*, ENNA (Mar. 18, 2019), [https://perma.cc/2D47-9XN7]. ENAA [annually] publishes its International Contract for Process Plant Construction and International Contract for Power Plant Construction. *See generally* A R (Tony) Marshall, *Process Plant Construction: The ENAA Model Form of Contract (2010 Edition)—Comments and Comparisons*, 28 INT'L. CONSTR. L. REV. 138 (2011).

101. The Institute of Civil Engineers. *Institution of Civil Engineers,* INST. OF CIV. ENG'RS, [https://perma.cc/G9VC-9B8Q] (last visited Mar. 18, 2022). ICE publishes the Engineering & Construction Contract, also known as the "New Engineering Contract," which includes (1) an engineering and construction contract between the project owner and prime contractor, (2) an engineering and construction subcontract, (3) a professional services contract between the project client and all design professionals, and (4) an adjudicators contract under which an adjudicator is retained to decide disputes arising under the other contracts. *See* Mathias Fabich et al., *The NEC4 Contract—Fit for Purpose for International Use?*, 35 INT'L CONSTR. L. REV. 28 (2018) (discussing the NEC4 contracts from the perspective of European International Contractors ("EIC")); *NEC Contracts*, INST. OF CIV. ENG'RS, [https://perma.cc/QF8J-HZYM] (last visited Mar. 18, 2022).

102. Joint Contracts Tribunal, comprised of the Royal Institute of British Architects, Royal Institution of Chartered Surveyors, Association of District Councils, and Association of Consulting Engineers in the United Kingdom. *About JCT*, JOINT CONTS. TRIBUNAL, [https://perma.cc/WT9V-J43G] (last visited Mar. 18, 2022). JCT Documents, promulgated for use in the United Kingdom, have influence elsewhere. *See id.*

103. American Institute of Architects, 1735 New York Avenue, N.W., Washington, D.C. 20006-5292. AIA contract documents are the most widely used private building contract documents in the United States. *See About AIA*, AM. INST. OF ARCHITECTS, [https://perma.cc/DE4N-HGUR] (last visited Mar. 18, 2022); *see also Industry Forms of Agreement*, DLA PIPER, [https://perma.cc/QU6H-LZD5] (Apr. 1, 2021).

Contractors")][104] and MBA [("Master Builders of Australia")],[105] and ICC [("International Chamber of Commerce")];[106]

(4) promulgation of financing requirements, which mandate the use of specified standard international construction contract forms, by international financing organizations such as the World Bank[107] and its regional development banks for Europe, Asia, Inter-America and Africa;

(5) publication of contracting guidelines by international organizations, such as UNCITRAL [("United Nations Commission on International Trade Law")][108] and OECD [("Organisation for Economic Co-operation and Development")];[109]

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104. *Contract Conditions*, EUR. INT'L CONTRACTORS, [https://perma.cc/8FTQ-7R9V] (last visited Mar. 18, 2022).

105. *ABIC Suite*, MASTER BUILDERS OF AUSTL., [https://perma.cc/F78X-KKSH] (last visited Mar. 18, 2022) (in conjunction with the Australian Institute of Architects).

106. *See* Volker Mahnken & Martin Kurtze, *Plant Construction and the ICC Consortium Agreement*, CONSTR. L. INT'L, Mar. 2018, at 25, 26 (discussing the recent ICC Model Contract Consortium Agreement published by the International Chamber of Commerce in 2016).

107. *What We Do*, THE WORLD BANK, [https://perma.cc/NS3C-UYWM] (last visited Mar. 18, 2022). The World Bank's financing requirements mandate that all projects financed through the World Bank, the International Bank for Reconstruction and Development, or the International Development Association be governed by the World Bank's standard bidding documents for works. *See Standard Procurement Documents: An Overview for Practitioners*, THE WORLD BANK (Nov. 1, 2016), [https://perma.cc/A27P-R7Z5].

108. U.N. COMM'N ON INT'L TRADE L., [https://perma.cc/7ZT8-KU9S] (last visited Mar. 18, 2022). UNCITRAL has been in the forefront of the development of international trade law and, pertinent to construction law. *See* UNCITRAL Model Law on Public Procurement, *supra* note 98; UNCITRAL Model Legislative Provisions, *supra* note 98; UNCITRAL Model Law on Procurement of Goods, *supra* note 98; UNCITRAL Model Law on Procurement of Goods and Construction, *supra* note 98 (offering a model procurement code); U.N. COMM'N ON INT'L TRADE L., UNCITRAL LEGAL GUIDE ON DRAWING UP INT'L CONTS. FOR THE CONSTR. OF INDUS. WORKS, U.N. Sales No. E.87.V.10 (1987).

109. *Who We Are*, ORG. FOR ECON. COOP. AND DEV., [https://perma.cc/MTC2-NME7] (last visited Mar. 19, 2022).

(6) standardization of legal rights and obligations by international treaty, such as CIGS,[110] IGSLC,[111] and the New York Convention;[112]

(7) creation of international "restatements" of contract law, such as the UNIDROIT principles of international commercial contracts[113] and the CECL Principles of European Contract Law,[114] which are intended to provide guidance to legislative and judicial bodies for enactment of contract law or for the interpretation of contracts;[115] and

(8) "Transjudicialism" among jurisdictions.[116]

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110. United Nations Convention on Contracts for the International Sale of Goods (1980) which, although applying only to the sale of goods and not to construction contracts, has established basic legal principles accepted by many of the world's major trading nations. U.N. COMM'N ON INT'L TRADE L., U.N. CONVENTION ON CONTS. FOR THE INT'L SALE OF GOODS, U.N. Sales No. E.10.V.14 (2010); *see also United Nations Convention on Contracts for the International Sale of Goods (Vienna, 1980) (CISG)*, U.N. COMM'N ON INT'L TRADE L., [https://perma.cc/ESE9-LWY3] (last visited Mar. 19, 2022). The convention is one of the crowning achievements of UNCITRAL.

111. United Nations Convention on Independent Guarantees and stand-by letters of credit, which has focused on differences between the European approach to direct bank guarantees and the American approach to stand-by letters of credit. U.N. COMM'N ON INT'L TRADE L., U.N. Convention on Independent Guarantees and Stand-By Letters of Credit (1996), [https://perma.cc/LX9R-96K6].

112. U.N. COMM'N ON INT'L TRADE L., U. N. Convention on the Recognition and Enforcement of Foreign Arbitral Awards (1958), [https://perma.cc/G9JV-75ZW].

113. The UNIDROIT Principles are available on the worldwide web at INT'L INST. FOR THE UNIFICATION OF PRIV. L., UNIDROIT PRINCIPLES OF INTERNATIONAL CONSTRUCTION CONTRACTS (4th ed. 2016), [https://perma.cc/44JT-QMRW]; *see also* Donald Charrett, *The Use of Unidroit Principles in International Construction Contracts*, 30 INT'L CONSTR. L. REV. 507, 507 (2013).

114. COMM'N ON EURO. CONT. L., PRINCIPLES OF EUROPEAN CONTRACT LAW PARTS I AND II 2 (2000). Principles of European contract law may be found at EURO. UNION, THE PRINCIPLES OF EUROPEAN CONTRACT LAW 2002 (PARTS I, II, AND III) 1 (2002), [https://perma.cc/84UN-BNVC].

115. 6 BRUNER AND O'CONNOR ON CONSTRUCTION LAW, *supra* note 95, at § 20:3.

116. "Transjudicialism"—consideration of law from foreign jurisdictions in deciding local disputes—is of increasing interest to the world's national judiciaries and administrative regulators. *See* ANN MARIE SLAUGHTER, A NEW WORLD ORDER 75-78 (2004). Networks of national government regulators and lawyers are beginning to develop "transnational networks" with respect to various areas of law. *See id.* at 1-4; Symposium, *The Rise of Transnational Networks*, 43 INT'L LAW. 137, 137, 175-76, 205 (2009); *see also* Justice Sandra Day O'Connor, *Keynote Address*, 96 AM. SOC'Y INT'L L. 348, 350-51 (2002) ("Although international law and the law of other nations are rarely binding upon our decisions in U.S. courts, conclusions reached by other countries and by the international community should at times constitute persuasive authority in American courts. This is sometimes called 'transjudicialism.' . . . While ultimately we must bear responsibility for interpreting our own laws, there is much to learn from other distinguished jurists who have

The collective influence of these eight paths on the development of principles of international construction law is far larger than the sum of its parts, as they all are converging on a common goal of a harmonious global construction law. Although much work remains to be done, the end is not in doubt:

> [T]he construction industry is becoming increasingly international in scope. As it does, its focus is shifting towards large infrastructure projects in developing countries. As a general practice, the law applicable to construction contracts has tended to be that of the place of performance, that is, the law of the country where the construction project is located. . . . The lack of a well-developed body of construction law in [developing] countries capable of handling the kinds of disputes that arise in large international projects makes it more desirable that the governing law of international construction contracts be a body of law common to, and understood by, the international construction community—a sort of *lex constructionis*. Having such a body of law operate within the international construction community would ameliorate the uncertainty that results from subjecting the parties to inadequate national construction law. In turn, greater certainty and predictability would facilitate more participation in international construction projects.[117]

VIII. LEGAL TREATISES ON CONSTRUCTION LAW[118]

To bring a semblance of understanding and harmony to the great mass of construction law precedent and statutes is the function of a legal treatise, which can be of significant value to judges, academicians and practicing lawyers in getting to the heart of relevant legal principles and issues. A "treatise" has a

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given thought to the same difficult issues that we face here [in the United States]. . . . The fact is that international and foreign law are being raised in our courts more often and in more areas than our courts have the knowledge and experience to deal with. There is a great need for expanded knowledge in the field, and the need is now.").

117. Douglas, *supra* note 96, at 383-84.

118. Footnotes 118-28 and accompanying text are excerpted from 1 BRUNER & O'CONNOR, JR., *supra* note 5, at § 1:7.

dictionary meaning of a "systematic, usually extensive written discourse on a subject."[119]

Legal treatises have played a vital role in the development of the common law for more than eight centuries. Of the origins and purposes of treatises, Sir Winston S. Churchill, in his distinguished work, *The Birth of Britain*, reminds us:

> About the year 1250 a Judge of Assize named Henry of Bracton produced a book of nearly nine hundred pages entitled *A Tract on the Laws and Customs of England*. Nothing like it was achieved for several hundred years, but Bracton's method set an example, since followed throughout the English-speaking world, not so much of stating the Common Law as of explaining and commenting on it, and thus encouraging and helping later lawyers and judges to develop and expand it. Digests and codes imposed in the Roman manner by an omnipotent state on a subject people were alien to the spirit and tradition of England. The law was already there, in the customs of the land, and it was only a matter of discovering it by diligent study and comparison of recorded decisions in earlier cases, and applying it to the particular dispute before the court.[120]

Bracton's treatise[121] was followed centuries later by those of Coke, Blackstone,[122] and other legal luminaries whose early works laid a general foundation upon which were built the specialized edifices we know today. None of the early treatises over a 500-year span, however, made any mention of legal principles of construction law. In Blackstone's case the omission is particularly telling, because he was trained as an architect prior to going into law and frequently used architectural metaphors in his legal writings.[123]

Over the centuries construction law appears to have been viewed as a local and parochial branch of contract and real estate law, with disputes resolved informally consistent with a "law of

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119. *See* THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE 1906 (3d ed. 1992).

120. SIR WINSTON S. CHURCHILL, THE BIRTH OF BRITAIN 224 (10th prtg. 1966).

121. *See* HENRY OF BRACTON, *supra* note 17.

122. *See* 2 WILLIAM BLACKSTONE, *supra* note 17.

123. *See* Wilfrid Prest, *Blackstone as Architect: Constructing the* Commentaries, 15 YALE J. L. & HUMANS. 103, 123-24 (2003).

the shop" rather than under a recognized "law of the courts." Without the benefit of treatises or of codifying statutes, the law has tended to evolve somewhat haphazardly because of the judicial tendency to grasp at any legal principle—not always the most appropriate principle—likely to produce a fair result under the circumstances and within the time available. Over 100 years ago in a time of few statutes and fewer treatises, American philosopher William James observed:

> Law courts, indeed, have to decide on the best evidence attainable for the moment, because a judge's duty is to make law as well as to ascertain it, and (as a learned judge once said to me) few cases are worth spending much time over: the great thing is to have them decided on *any* acceptable principle, and got out of the way.[124]

Not until the nineteenth century did commercial law become sufficiently specialized to encourage authors to write treatises about the law of different fields of commerce having contextualized norms for specialized types of transactions. Construction was one such specialized commercial field of endeavor, and authors responded in the late nineteenth century. The first nineteenth century American treatise to address construction was written by Augustus Parlett Lloyd, who published in 1888 a 480-page work entitled, *A Treatise on the Law of Building and Buildings*, of which about half was devoted to building contracts and what might be considered "construction law" in today's parlance while the balance addressed leases, easements and other real estate matters. Lloyd noted the dearth of scholarly writing on the subject of building in observing:

> Possibly the most remarkable omission in the literature of law in this country is the absence of any work upon buildings, building contracts, and leases. The subject is one of great importance, not only to the legal profession, but to fully three fourths of the general population, who are interested in building operations, whether as purchasers, architects, artificers, or contractors. Numerous books have

124. William James, *The Will to Believe*, *in* THE WILL TO BELIEVE AND OTHER ESSAYS IN POPULAR PHILOSOPHY 20 (1897). Oliver Wendell Holmes, Jr. is suspected of being the "learned judge."

> appeared from time to time containing theoretical, historical, and artistical views of architecture and the art of building, but no American writer has yet compiled the building laws of our country to any practical extent.[125]

Lloyd's treatise was followed shortly thereafter by T. M. Clark's treatise, *Architect, Owner and Builder Before the Law* (1894). Clark was a Fellow of the American Institute of Architects and also had earned a law degree. In 1894, he authored a 400-page treatise on the law applicable to building contracts, the preface of which begins with this acknowledgement of the factual and legal complexities of construction disputes and of the unsuitability of courtroom litigation generally as a method for resolving such disputes:

> It seems to be agreed among lawyers that no controversies, as a rule, are tried before courts with so little satisfaction to the litigants and their counsel as building cases. The lawyer finds them usually so technical as to require an amount of special study on his part quite disproportionate to their importance; while the parties to the controversy often suffer, or think they suffer, as much through what they regard as their counsel's inability to understand building matters as through what their counsel, with more reason, considers their own inexcusable ignorance and neglect of the legal principles relating to their business. These difficulties are, obviously, such as can be relieved, to a considerable extent, by means of a book presenting the most important decisions of the courts in building cases, with the principles on which the decisions are based.[126]

In England, the earliest construction treatise was *Hudson's Building and Engineering Contracts* (1891),[127] an 800-page work

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125. A. PARLETT LLOYD, A TREATISE ON THE LAW OF BUILDING AND BUILDINGS iii (1888).

126. T.M. CLARK, ARCHITECT, OWNER AND BUILDER BEFORE THE LAW iii (1894).

127. *See* Philip L. Bruner, *Book Review: Hudson's Building and Engineering Contracts, 12th Edition*, 28 INT'L CONSTR. L. REV. 379 (2011) (book review). An 1891 review note of *Hudson's* in London's *The Law Journal* offered this observation:

> This book is an attempt to treat exhaustively a highly complicated and technical subject, but, owing to the double training which the author has undergone, first as architect, and, secondly, in his present profession [as a lawyer], he is perhaps the only writer who could have treated it so successfully.

written by an author who was both an architect and lawyer. The treatise presented some legal principles we recognize today as within the field of "construction law"—the over-arching field of jurisprudence encompassing the law governing the rights and obligations of participants engaged in the building and construction process: employers, contractors, subcontractors, sureties, architects, engineers, material and equipment suppliers, code officials, insurers, and others—and the conditions under which they worked. *Hudson's* is now in its fourteenth edition.[128] Another highly authoritative English construction law treatise is *Keating on Construction Contracts* (11th ed., 2020), which is edited and co-authored by Sir Vivian Ramsey, the distinguished former barrister and Queen's Counsel, and former Chief Judge of England's Technology and Construction Court, together with his former colleagues at Keating Chambers in London.[129] A third recent English treatise is *Construction Law* (3d ed. 2020) by Julian Bailey, a recognized English barrister in the construction law field.[130] Other nations also are producing treatises. India is the recent beneficiary of Kachwaha and Rautray, *The International Comparative Legal Guide to: Construction & Engineering Law* (2019), which addresses construction and engineering laws and regulations in thirty-two jurisdictions, as well as commentary about commonly-used contract forms and the

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Hudson on Building Contracts, L.J. (London), May 9, 1891, at 311, 317 (book review). Perhaps evidencing Academia's early disinterest in construction law was the brief 1891 review given *Hudson's* in London's Law Quarterly Review, a publication edited by Sir Frederick Pollock, Oxford's Professor of Jurisprudence and the distinguished author of the treatise *Principles of Contract* (1876):

> The subject of this portly volume is too technical to admit of more than summary notice here. It appears to contain everything that persons who have to do with building contracts can reasonably want to know, and such a work well executed (as this appears to be) may save much trouble even to a lawyer trained in the use of the ordinary indexes and digests.

The Law of Building and Engineering Contracts and of the Duties and Liabilities of Engineers, Architects, Surveyors, and Valuers, July 1891, L. Q. REV., at 199, 288 (book review).

128. ATKIN CHAMBERS, HUDSON'S BUILDING AND ENGINEERING CONTRACTS (14th ed. 2019).

129. KEATING ON CONSTRUCTION CONTRACTS (Stephen Furst, QC & Sir Vivian Ramsey, QC eds., 11th ed. 2020).

130. JULIAN BAILEY, CONSTRUCTION LAW (3d ed., 2020).

Indian Law of Contracts as codified in the Indian Contract Act of 1872.[131]

Notwithstanding some United States recognition of construction law in the late nineteenth century and early twentieth century as a fertile field for American writing and scholarship, construction law scholarship languished in the United States for the first three quarters of the twentieth century.[132] After the formation of the Forum on Construction Law in 1976, practitioners began to author and publish articles on aspects of construction law. In 1983, a group of construction lawyers wrote individual chapters edited by Steven G. M. Stein of Chicago, which was published in loose-leaf binders under the title of *Construction Law*. In 1992, Professor Justin Sweet, The John H. Boalt Professor Emeritus of Law at the University of California, Berkeley, and one of a handful of eminent American legal academicians to devote a career to the study and teaching of construction law in the last half of the twentieth century, looked forward to the twenty-first century and called for:

> [A] treatise which systematically collected the leading cases, stated their holdings accurately, summarized the case law correctly, evaluated basic legal principles with wisdom, and

131. Sumeet Kachwaha & Dharmendra Rautray, *India*, *in* THE INTERNATIONAL COMPARATIVE LEGAL GUIDE TO: CONSTRUCTION & ENGINEERING LAW 2019 106, 106 (6th ed. 2019), [https://perma.cc/5TMG-TZ3F].

132. *See* Sweet, *A View From the Tower*, *supra* note 81, at 41 ("[In 1967] there were, to my knowledge, no law courses called construction law. I don't recall a law faculty meeting where a professor asked 'Where can we get a construction law teacher?' as we often did for established academic fields. In the library stacks (for you younger readers, those were shelves in the library where we kept 'hard cover') at Berkeley there were perhaps ten dusty books that covered the space of a century."); *see also* Philip L. Bruner, *Construction Law: The Historical Perspective*, *in* CONSTRUCTION LAW (William Allensworth et. al., eds. 2009) (quoting Justin Sweet, *Construction Law: The Need for Empirical Research*, 23 CONSTR. LITIG. REP. 3, 5 (2002)) ("The best and often only empirical work comes out of the law schools. Law teachers can involve statisticians and sociologists in their studies. . . . Yet you can count on one hand the number of full-time teachers of Construction Law, maybe not even that many. Law teachers come out of certain schools, clerk for important judges, and are interested mainly in Public Law. This pool does not produce many teachers who want to spend their time in Construction Law."); Justin Sweet, *Standard Construction Contracts: Academic Orphan*, CONSTR. LAW., Winter 2011, at 38, 41 ("Much of this lack of scholarly interest is traceable to the methods law schools use to gather a staff. Young teachers . . . are not likely to have any experience in construction law planning or disputes. You will have to look far and wide to find a full-time law professor who devotes his research to construction law.").

> described the functions of legal rules and contracting practices that relate to construction law . . . could become such an authoritative treatise. It would be invaluable to the legal profession and the construction industry, similar to *Prosser on Torts* or *Corbin on Contracts*.[133]

For the remainder of the twentieth century, practitioners and scholars wrote of the need for more academic scholarship in the field[134] and contributed scholarly articles on construction law and dispute resolution.

In 2002 the American treatise, *Bruner and O'Connor on Construction Law* (2002, updated annually)[135] was first published as seven volumes and now is twelve volumes and 11,000 pages. It endeavors to address comprehensively the major issues of modern American construction law, to illuminate those issues in relevant factual and historical context, and to offer a brief "road map" to international construction law, a subject worthy of its own multi-volume treatment. Illumination of issues in relevant factual and historical context is helpful because construction law has derived much of its uniqueness from factual blends of industry experience, customs, practices, and perceptions of foreseeable risk that have shaped evolving principles of the common law and statutory law. Since its publication in 2002, the treatise has been cited by more than 500 published opinions of the

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133. Justin Sweet, *Blueprint for an Authoritative Treatise on American Construction Law*, CONSTR. LAW., Apr. 1992, at 11, 11.

134. *See* Stipanowich, *supra* note 39, at 496–97 ("This scholarly and pedagogical obliviousness [of academia], while not confined to construction contracts, cannot be explained on the basis that such transactions are unimportant—the construction industry has for some time been the largest single production activity in the United States—or less academically rich than other commercial fields. Unless the explanation is a perverse form of intellectual snobbery, it must be a pervading ignorance of the practical significance of and academic challenge presented by the field of construction law—or a reflection of the inherent complexity (real and perceived) of principle and practice in this arena. Although today's attorneys and industry actors have much greater access to treatments of pertinent legal subjects than their predecessors, much more can be done to enhance the level of scholarly treatment and interdisciplinary discussion of legal rules.").

135. Reviews of the treatise upon its publication in 2002 include James F. Nagle, *Bruner and O'Connor on Construction Law*, CONSTR. LAW., Fall 2002, at 46 (book review); Donald G. Gavin*, Have Bruner and O'Connor Done for Construction Law What Prosser Did for Torts?*, 32 PUB. CONT. L. J. 925 (2003) (book review); James P. Groton, *An Encyclopedia of Construction, Dispute Prevention and Dispute Resolution Wisdom*, DISPUTE RESOL. J., Aug.–Oct. 2003, at 87 (book review); *Construction Law Builds a Treatise*, L. QUADRANGLE NOTES, Fall/Winter 2003, at 54 (book review).

United States Circuit Courts of Appeal, Federal District Courts, Federal and State Courts of Claims, State Supreme, Appellate and Trial Courts, and U.S. Commonwealth and Territorial Courts.

IX. THE PASSAGE OF "CONSTRUCTION LAW" LEARNING TO FUTURE GENERATIONS

"Construction Law" clearly has become a "separate breed of animal" that is recognized as addressing complex legal issues arising in one of the global economy's major fields of endeavor.[136] The subject surely will continue to develop rapidly under the impetus of our expanding world economy and its rapid technological advances.

Construction law does deserve much greater attention across Academia. From the perspective of Academia, law schools do need to stay up to date about newly developing major fields of law. As Justice Elena Kagan reminded the legal academy in 2003 upon her becoming the new Dean of Harvard Law School: "[T]he world of law is expanding and we need to cover everything important that is happening in it."[137] Construction law should be included in law school curricula as a third-year "capstone" course to acquaint students with analyses of complex legal issues that they are likely to confront in the practice of law.

From the perspective of the legal profession, construction lawyers for generations have "given-back" their knowledge to the profession, to academia and to the construction industry: (1) by accepting adjunct professor positions to teach construction law courses at law schools; (2) by participating in and lecturing on construction law at legal education conferences and other professional and business meetings; (3) by writing scholarly articles for publication in widely-read, juried journals; (4) by

136. Paul Hardeman, Inc. v. Ark. Power & Light Co., 380 F. Supp. 298, 317 (E.D. Ark. 1974).

137. *Kagan Delivers 'State of the School' Address*, *supra* note 94, at 4. Justice Kagan left Harvard in 2009 to become U.S. Solicitor General under President Obama, and became an Associate Justice of the Supreme Court in 2010. *About the Court: Current Members*, U.S. SUP. CT., [https://perma.cc/G4GQ-RRQG] (last visited Mar. 20, 2022). Harvard has yet to offer a course on Construction Law. *Harvard Law School Course Catalog: 2021-2022 Academic Year*, *supra* note 94.

promoting legislation where needed to assure fairness in the construction process; and (5) by serving as arbitrators or becoming judges available to hear and decide complex construction cases and to write decisions to provide legal precedent for those later seeking to apply the law and understand the construction process and contracts' contextual and implied provisions.

May the contributions of Academia, the judiciary, and the legal profession, through their writings and teaching, continue to provide the foundational building blocks upon which to continue building construction law. In passing down wisdom to present and future generations through their writings and teaching, legal scholars, judges and lawyers give meaning to the observation expressed by Roman Engineer Vitruvius, the "chief engineer" of the civilized world, to Emperor Augustus over 2000 years ago:

> It was a wise and useful provision of the ancients to transmit their thoughts to posterity by recording them . . . so that they should not be lost, but, being developed in succeeding generations through publication in books, should gradually attain in later times, to the highest refinement of learning. And so the ancients deserve no ordinary, but unending thanks, because they did not pass on in envious silence, but took care that their ideas of every kind should be transmitted to the future in their writings.[138]

138. VITRUVIUS, *supra* note 13, at 195. Known to history as "Vitruvius," he was chief engineer to Julius Caesar and Emperor Augustus Caesar. Lienhard, *supra* note 13, at 00:28. Thus, in his time, he rightfully could be called at the height of Rome the "chief engineer of the civilized world." *Id.* Vitruvius was a historian as well as an architect and engineer. *Id.* Vitruvius wrote his ten volume treatise for Augustus on Roman construction practices. *Id.* at 00:45. His treatise survived the ravages of time to influence the architecture of the European Renaissance 1400 years later. His writings offer an illuminating window through which to observe practical design and construction of the Roman civilization in the first century Anno Domini.

CONSTRUCTION LAW: THE ENGLISH ROUTE TO MODERN CONSTRUCTION LAW

Sir Vivian Ramsey*

I. INTRODUCTION: CONSTRUCTION LAW

"Construction Law" is not, in itself, a body of law which applies only to the construction industry. Instead, it derives from other areas of general law, particularly the law of contract and of torts and has been at the forefront of many of the developments in general law. It also takes in many other aspects of law, including insurance law, land law, landlord and tenant law, employment law, intellectual property law and public procurement law as well as regulatory law in the fields such as building regulations, environmental and health and safety law. Whilst it started as a field of law where the main endeavour related to buildings, it is now applied to every form of construction process and finds close parallels in the IT industry where the principles are now applied.

In this Article, I will look at the way that construction law has developed in the English common law[1] world from its roots in the law of England and Wales.[2] Whilst common law traditions

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1. Named because it was "common" to all the king's courts across England—originated in the practices of the courts of the English kings in the centuries following the Norman Conquest in 1066. *See The Common Law and Civil Law Traditions*, ROBBINS COLLECTION (2010), [https://perma.cc/25E3-UDGQ].

2. English law is correctly the law of England and Wales. The law of Northern Ireland is similar, but Scottish law is different being in part common law and in part civil law. The

are now applied to many jurisdictions,[3] the number of jurisdictions in which English precedents are binding is now small. But, in many common law jurisdictions decisions of the English courts are still treated as "persuasive."[4] English decisions in the field of construction law have an extensive reach in terms of their persuasiveness. First, having a long-established court system, including a specialist court for 150 years, has meant that the decisions of the English court have often been the only decisions on points of principle relating to construction. Secondly, forms of contract derived from English standard forms of contract have been and continue to be used worldwide, most commonly in the FIDIC forms of contract.[5] Today, therefore, contracts derived from these English standard forms are used in civil law countries, particularly in the Middle East, and questions of interpretation are very often based on decisions of the English courts, applied of course in the context of the local law.[6]

I will next look at some of the particular construction law concepts which have derived from the English common law. These include risk allocation in construction, the role of the

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common feature of all these jurisdictions is that in the end the final appeal is to the United Kingdom Supreme Court. *See* William Tetley, *Mixed Jurisdictions: Common Law v. Civil Law (Codified and Uncodified)*, 60 LA. L. REV. 677, 690-91 (2000); UK Parliament, *House of Lords, Practice Directions Applicable to Civil Appeals*, U.K. PARLIAMENT, [https://perma.cc/4Q27-UC2N] (last visited Apr. 19, 2022).

3. Common law jurisdictions or mixed common law systems include:

> Antigua and Barbuda, Australia, Bahamas, Bangladesh, Barbados, Belize, Botswana, Burma, Cameroon, Canada (both the federal system and all its provinces except Quebec), Cyprus, Dominica, Fiji, Ghana, Grenada, Guyana, Hong Kong, India, Ireland, Israel, Jamaica, Kenya, Liberia, Malaysia, Malta, Marshall Islands, Mauritius, Micronesia, Namibia, Nauru, New Zealand, Nigeria, Pakistan, Palau, Papua New Guinea, Philippines, Sierra Leone, Singapore, South Africa, Sri Lanka, Trinidad and Tobago, the United Kingdom (including its overseas territories such as Gibraltar), the United States (both the federal system and 49 of its 50 states), and Zimbabwe.

Common Law Countries 2022, WORLD POPULATION REV., [https://perma.cc/FP6X-KHMY] (last visited Apr. 19, 2022).

4. *See* D. Hoadley, et al., *A Global Community of Courts? Modelling the Use of Persuasive Authority as a Complex Network*, FRONTIERS IN PHYSICS 1, 2 (2021), [https://perma.cc/TGP8-RZPG].

5. Fédération Internationale Des Ingénieurs-Conseils or International Federation of Consulting Engineers, based in Geneva. *See* International Federation of Consulting Engineers, *History*, FIDIC, [https://perma.cc/9WRY-BJS2] (last visited Apr. 19, 2022).

6. *See Why English Law Governs Most International Commercial Contracts*, QLTS SCH. (Sept. 12, 2016), [https://perma.cc/BK8Z-ECNG].

Engineer and the applicability of liquidated damages, extensions of time and prevention by the employer. I have tried to choose topics where the cases have some historical interest.

By way of conclusion, I will then consider the way in which dispute resolution has developed over the years to ensure that disputes are avoided or dealt with efficiently. The most important development has been the introduction of "adjudication" which has now spread throughout the common law world and has changed traditional perceptions on the needs of the construction industry.

II. ENGLISH COURTS

Whilst many great construction projects have been carried out in the British Isles from at least 3100 BC,[7] little remains of the history of their construction or any disputes. The Romans, after their invasions in 55 and 54 BC, and until the end of Roman Britain in AD 409, were responsible for the construction of much infrastructure, remains of which can be seen today.[8] The best known are Hadrian's Wall[9] and the Roman baths at Bath.[10]

The earliest surviving arbitration award in Britain dates from AD 114,[11] and the resolution of disputes by arbitration has a long

7. The stone circle at Stonehenge, Wiltshire, has stones dated from 8000BC but the current structure of an outer ring of standing stones, topped with lintels and with an inner circle of bluestones, all orientated to the sunrise on the summer solstice is dated to 3100BC. *See History of Stonehenge*, ENGLISH HERITAGE, [https://perma.cc/ET6L-M3KL] (last visited Apr. 19, 2022).

8. *See* SIR RUPERT JACKSON, THE ROMAN OCCUPATION OF BRITAIN AND ITS LEGACY 3-6 (2020). Sir Rupert was a distinguished English judge and was judge in charge of the Technology and Construction Court until 2007. He is now an international arbitrator and sits in the International Commercial Court in Kazakhstan.

9. The Emperor Hadrian, in about AD 122 ordered the construction of a wall along the northern frontier of Britain from the North Sea at the East to the Solway Firth at the West. *History of Hadrian's Wall*, ENGLISH HERITAGE, [https://perma.cc/2QEU-P98P] (last visited Apr. 19, 2022).

10. Peta Stamper, *Roman Baths—Bath*, HISTORYHIT (May 17, 2021), [https://perma.cc/QH58-7TM3]. Bath or Aqua Sulis was a shrine to a Celtic god, Sulis, and the site of a hot spring discharging 250,000 gallons per day. In about AD 60 the Romans built baths which still function today including a great bath lined with lead sheets and smaller baths. *Id.*; *Roman Baths at Bath—Virtual Tour*, JOY OF MUSEUMS, [https://perma.cc/EHZ2-VMPF] (last visited Apr. 19, 2022); Steven Morris, *Bath Abbey to be Heated Using Water from City's Hot Springs*, GUARDIAN (Jan. 8, 2019), [https://perma.cc/G258-8MBY].

11. *See* DEREK ROEBUCK, EARLY ENGLISH ARBITRATION at pxviii, 50-51 (2008).

history. Many of the trade disputes were resolved by the guilds and livery companies in the City of London.[12] Those organisations, which still exist, regulated various trades including many in the construction industry.[13] The earliest such company dates from 1155.[14] Worshipful Companies associated with the Construction Industry include, in order of precedence: Carpenters, Painter-Stainers, Masons, Plumbers, Tylers & Bricklayers, Joiners & Ceilers, Plaisterers, and Glaziers, with Carpenters dating from 1271.[15]

The modern English justice system was started by King Henry II, who established a jury of twelve local knights to settle disputes over the ownership of land. In 1178 he set up a court of two clergy and three lay people, supervised by him, "to hear all the complaints of the realm and to do right."[16] This was the origin of the Court of Common Pleas. "Eventually, a new permanent court, the Court of the King's Bench, evolved[.]"[17] In 1166, Henry II set in train the system by which new national laws were made by the judges in Westminster. "These national laws applied to everyone and so were common to all."[18] This led to the phrase the "common law." "A third common law court of justice, the Court of Exchequer, eventually emerged . . . ."[19] On the restoration of the monarchy in 1660, there were just twelve judges, "four in each of the common law courts."[20]

Whilst the common law system improved on what had gone before, it was "slow" and "highly technical," and "those who felt they had been failed by the common law system could . . . petition

12. *Livery Companies*, CITY OF LONDON (Aug. 2, 2022), [https://perma.cc/2YV4-HXSK].

13. The Editors of Encyclopaedia Britannica, *Livery Company*, BRITANNICA, [https://perma.cc/85MB-D9AX] (last visited Apr. 19, 2022).

14. *Livery Companies*, *supra* note 12.

15. *Database of Companies and Guilds*, LIVERY COMM., [https://perma.cc/S4AB-MWNS] (last visited Apr. 19, 2022); *History*, CARPENTERS' COMPANY, [https://perma.cc/X9U8-8T9T] (last visited Apr. 19, 2022).

16. *History of the Judiciary: An Ancient System*, CTS. & TRIBUNALS JUDICIARY, [https://perma.cc/YMT2-EFHU] (last visited Apr. 19, 2022).

17. *Id.*

18. *Id.*

19. *Id.*

20. *Id.*

the King with their grievances."[21] Gradually, these cases were delegated to the Lord Chancellor who began to preside over his own court, the Court of Chancery. "This dealt only with civil disputes, for example property and contract cases, and applied the law of equity—even-handedness or fairness."[22] By the time of Henry VIII, the Court of Chancery rivaled the common law courts.[23] But, over the years, that court suffered from the same problems of "expense and delay."[24]

Parliament passed the Judicature Act in 1873, "which merged common law and equity" so that all courts could administer "both equity and common law."[25] "The same Act established the High Court and the Court of Appeal and provided a right of appeal in civil cases to the Court of Appeal."[26]

In the course of that history, there have been specialist courts. The best known were the Fire Courts which were founded under the Fire of London Disputes Act 1666.[27] After the plague of 1665 there followed the Great Fire of London which destroyed many properties in London.[28] Parliament decided to establish a special court to settle all differences arising between landlords and tenants of burnt buildings.[29] The disputes involved liability for restoring buildings, payment of rent and other charges, and establishing new leases on different terms.[30] The courts were overseen by judges of the King's Bench, Court of Common Pleas and Court of Exchequer.[31] The courts sought solutions to

21. *History of the Judiciary: An Ancient System*, *supra* note 16.

22. *Id.*

23. *Id.*

24. *Id.*

25. *Id.*

26. *History of the Judiciary: An Ancient System*, *supra* note 16.

27. *See Fire of London Disputes Act 1666*, MORR & CO., [https://perma.cc/T2RR-F599] (last visited Apr. 17, 2022). It had the long title: "An Act for erecting a Judicature for Determination of Differences touching Houses burned or demolished by reason of the late Fire which happened in London."

28. Becky Little, *When London Faced a Pandemic—And a Devastating Fire*, HIST., (Mar. 25, 2020) [https://perma.cc/ZSP7-CW4N].

29. Jay Tidmarsh, *The English Fire Courts and the American Right to Civil Jury Trial*, 83 U. CHI. L. REV. 1893, 1921 (2016).

30. *See id.* at 1903.

31. John Noorthouck, *Book 1, Chapter 15: From the Great Fire in 1666, to the Death of King Charles II*, *in* A NEW HISTORY OF LONDON INCLUDING WESTMINSTER AND SOUTHWARK (1773), BRIT. HIST. ONLINE, [https://perma.cc/7L5M-M6D2] (last visited Apr. 25, 2022).

the intractable disputes caused in the aftermath of the Great Fire.[32] The Fire Courts are generally recognized as having helped to resolve disputes quickly and acceptably, allowing the City of London and the courts to get back to business within a surprisingly short time.[33]

The other specialist court which has its roots in the changes introduced at the time of the Judicature Act is the Technology and Construction Court ("TCC").[34] The work of the TCC was formerly known as Official Referees' Business, with the office of Official Referee being created in 1873.[35] It was formed "to hear cases involving technical and detailed issues that could not be tried satisfactorily by a judge and jury and, by the 1920s, the bulk of [its] work" was concerned with construction and engineering disputes.[36] "The Official Referees, the majority of whom had been in practice as King's or Queen's Counsel,"[37] sat in the High Court, but more as junior circuit judges rather than High Court judges.[38]

By the 1990's there were eight judges carrying out Official Referees' business in London with other judges designated to deal with Official Referees' Business in major regional court centres.[39] In 2004, it was resolved that substantial cases in the TCC in London would be heard by High Court judges, with a number of High Court judges being designated to sit in the TCC in London and, when needed, at regional centres in England and Wales.[40] "These judges also have an important jurisdiction in relation to arbitration, which is not just limited to the hearing of applications

32. *See id.*

33. *See* THE SELDEN SOC'Y & INST. OF CT., *The Fire Courts: Successfully Delivering Justice in a Time of Plague and Fire*, YOUTUBE, at 17:13 (Oct. 21, 2020). Video available at https://www.youtube.com/watch?v=7FdKzoQ9dyo [https://perma.cc/YC6N-YG3P] (lecture by Professor Jay Tidmarsh of Notre Dame Law School considering the genesis and impact of the Fire of London Disputes Act 1666).

34. The modern name of the TCC was introduced in October 1998. *History*, CTS. & TRIBUNALS JUDICIARY, [https://perma.cc/X56W-EZN3] (last visited Apr. 19, 2022).

35. *Id.*

36. *Id.*

37. *Id.*

38. *Id*.

39. *History*, *supra* note 34.

40. *Id.*

under the Arbitration Act 1996."[41] "As in the Commercial Court, there is a statutory jurisdiction enabling TCC judges to be appointed as arbitrators."[42] This cross-over jurisdiction is an important link to commercial parties involved in construction, engineering and technology disputes.

The TCC has established a global reputation for dealing with cases ranging from the usual types of construction disputes to professional negligence, public procurement, pollution and fire cases and IT disputes.[43] Parties to construction and engineering contracts from all over the world specify the TCC as the court to resolve their disputes. Under the English Arbitration Act 1996 there is also a special statutory jurisdiction provision, enabling TCC judges to be appointed as arbitrators.[44]

In terms of procedure the TCC have been in the forefront in pioneering ways in which cases can be dealt with efficiently. They introduced witness statements in place of evidence-in-chief,[45] lists of issues in complex cases,[46] the need for case management of cases by the judge who will ultimately try the case,[47] the use of "Scott Schedules" to enable all parties to set out their cases on multiple claims or issues to be set out in a single document,[48] the process for expert witnesses to meet on a "without prejudice" basis to discuss their views and seek to agree matters,[49] summarising the extent of their agreement and disagreement in a joint statement and calling expert witnesses concurrently and by discipline.[50]

In addition to trying cases without a jury, TCC judges are also able to assist parties by carrying out early neutral evaluations or by acting as mediators under a "Court Settlement Process."[51]

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41. *Id.*

42. *Id.*

43. *Work*, CTS. & TRIBUNALS JUDICIARY, [https://perma.cc/6P9S-DNSS] (last visited Apr. 16, 2022).

44. *History*, *supra* note 34.

45. H.M. CTS. & TRIBUNALS SERVICE, THE TECHNOLOGY AND CONSTRUCTION COURT Guide §§ 12.1, 12.1.3, 12.2.5 (2nd ed. 2015).

46. *Id.* § 13.8.1.

47. *Id.* § 5.1.

48. *Id.* § 5.6.

49. *Id.* § 13.5.1.

50. H.M. CTS. & TRIBUNALS SERVICE, *supra* note 45 §§ 13.6, 13.8.2.

51. *Id.* § 7.6.

Since the introduction of adjudication in 1998,[52] discussed more fully below, the TCC judges have had a crucial role in enforcing decisions of adjudicators by a shortened summary judgment process, achieving enforcement typically in three to four weeks of the proceedings' start.[53]

III. DEVELOPMENT OF CONSTRUCTION LAW

The development of modern construction law has derived from the developments of society. This can be seen by the type of case which came before the courts in the years before the Industrial Revolution. For example, in 1611, in the *Case of Proclamations*, the court had to consider the division between the role of the monarchy in the context of construction.[54] James I had, by proclamation, prohibited among other things the construction of new buildings in and around London.[55] Coke CJ resisted this incursion stating that "the King by his proclamation or other ways cannot change any part of the common law, or statute law, or the customs of the realm."[56] Those three categories were exhaustive of English law: "the law of England is divided into three parts, common law, statute law, and custom; but the King's proclamation is none of them."[57] It followed that "the King cannot create any offence by his prohibition or proclamation, which was not an offence before, for that was to change the law."[58]

A. The Imposition of Obligations on the Contractor

The expansion of the railway industry in the middle of the 19th century gave rise to a number of decisions in the English courts relating to risk and payment which can be traced as the beginning of principles still applied today.

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52. Housing Grants, Construction and Regeneration Act 1996, c.53 § 108.

53. H.M. CTS. & TRIBUNALS SERVICE, *supra* note 45 § 9.2.

54. Case of Proclamations (1611) 12 Co. Rep. 75. Recently cited by Lord Reed in R v. Secretary of State for Exiting the European Union [2017] UKSC 5 at [165].

55. *Case of Proclamations*, 12 Co. Rep. 75, 75.

56. *Id.*

57. *Id.*

58. *Id.*

In *Sharpe v. San Paulo Ry.*, the Engineer was involved in a scheme to build a railway in Brazil.[59] The Emperor of Brazil authorized the Engineer to form company for the construction of the railway, and the government of Brazil guaranteed the interest up to a limit of expenditure, with the company taking the risk on expenditure over that sum.[60] The contract with the contractors provided that the Engineer's certificate should be binding and conclusive.[61] A lump sum price (less than the limit of expenditure) was agreed to under the contract.[62] The extent to the obligation was, as follows:

> The contractors will execute and provide not only all the works and materials mentioned in the specification comprised in the first schedule to these presents, but also such other works and materials as in the judgment of the company's engineer-in-chief are necessarily or reasonably implied in and by or inferred from that specification, and the plans and sections of the railway and works, it being the true intent and meaning of this contract that the works and materials to be executed and provided respectively by the contractors under this contract shall comprise all works, buildings, materials, operations, and things whatsoever proper and sufficient in the judgment of the company's engineer-in-chief for the perfect execution and completion of the railway, and all the works and conveniences thereof and connected therewith, and the maintenances of every section of the railway for twelve calendar months after the completion and delivery to the company of each such section.[63]

In preparing the tender documents, the Engineer produced a detailed statement of the nature and quantities of the various works to be executed and the materials to be provided.[64] The contractors provided fixed prices for the items required.[65] The contract contained a recital stating that the Engineer had made a "comparative tabular statement of the cost of the several proposed

59. (1872-73) L.R. 8 Ch. App. 597.
60. *Id.*
61. *Id.* at 599.
62. *Id.* at 607.
63. *Id.* at 599.
64. *Sharpe*, L.R. 8 Ch. App. at 598.
65. *Id.*

sections of the railway, of which an abstract copy was given in the second schedule to the contract."[66]

The contractor had to carry out more work than was set out in the statement of quantities and contended that it had been assured that the Engineer had prepared those documents "with great care, and might be relied upon as entirely accurate" and that the contractor had "made a tender to the promoters, offering to form and complete the line of railway, and fixing prices to the different items of the statement."[67] There had been supplementary agreements and the contractor alleged that:

> [D]uring the progress of the works it became apparent that the actual quantities of earthwork being done by the contractors were greatly in excess of the quantities specified in the schedule. That the contractors objected and protested, and that [the Engineer], as engineer and agent of the company, agreed that if it should prove that the total quantity of earthwork was in excess the contractors should be compensated by savings in sidings, stations, and other things which [the Engineer] promised to make.[68]

The facts show that the allegations in construction claims have not altered much in the period of 150 years since this case. The court made some clear findings in rejecting the contractor's claim:

> (a) that the contractor undertook to make the railway, not to do certain works; but they undertook to complete the whole line, with everything that was requisite for the purpose of completion, from the beginning to the end; and they undertook to do it for a lump sum;
>
> (b) that the contractor could not, on mere verbal promises by the engineer, maintain against the company a claim to be paid sums beyond the sums specified in the contract under seal;
>
> (c) that, although the amount of the works to be executed might have been understated in the engineer's specification, the contractors could not, under the circumstances, maintain any claim against the company on that ground;

66. *Id.* at 598-99.
67. *Id.* at 598, 602.
68. *Id.* at 602-03.

> (d) that, in the absence of fraud on the part of the Engineer, and where the Engineer's certificate has been made a condition precedent to payment, that certificate must be conclusive between the parties. "The very object of leaving these things to be settled by an engineer is that you are to have the practical knowledge of the engineer applied to it, and that he, as an independent man, a surveyor, a valuer, an engineer, is to say what is the proper sum to be paid under all the circumstances."[69]

Ranger v. Great W. Ry. Co., concerned the construction of the railway from London to Bristol.[70] Again, there was a lump sum and a schedule of rates for any variations.[71] The contractor ran into financial difficulties, and the railway company took over and completed the works.[72] The Contractor alleged that there had been a fraudulent representation as to the nature of the soil he should have to cut into or through being sandstone whereas, in fact, it was much harder, and more difficult to work than sandstone.[73] The Contractor also alleged that the certificates for his work had not been duly allowed and that he had been delayed, by the acts of the railway company.[74] The claims were dismissed.[75]

The Engineer was impressively called Isambard Kingdom Brunel and was one of the great civil engineers of the era.[76] One particular allegation concerned his certification of sums due to the contractor.[77] It was said that Mr. Brunel, who was the principal engineer of the company, was incapacitated from acting in the discharge of the duties imposed on him, because he was himself a shareholder in the railway company.[78] In dismissing that ground the court stated that:

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69. *Sharpe*, 8 Ch. App. at 608-09.
70. [1854] 5 Eng. Rep. (HLC) 824, 825.
71. *Id.* at 825-26.
72. *Id.* at 827.
73. *Id.*
74. *Id.*
75. *Ranger*, 5 Eng. Rep. (HLC) at 828.
76. *Id.* at 831; *Isambard Kingdom Brunel (1806-1859)*, BBC (2014) [https://perma.cc/7H2F-AYZD].
77. *Ranger*, 5 Eng. Rep. (HLC) at 827.
78. *Id.* at 828.

> It is not necessary to state the duties of the engineer in detail: he was, in truth, made the absolute judge, during the progress of the works, of the mode in which the Appellant was discharging his duties; he was to decide how much of the contract price . . . from time to time had become payable; and how much was due for extra works; and from his decision, so far, there was no appeal. After all the works should have been completed, the Appellant might call in a referee of his own as to any question as to the amount (if any) then due beyond what had been certified.[79]

It was contended by the contractor that:

> [T]he duties thus confided to the principal engineer were of a judicial nature; that Mr. Brunel was the principal engineer by whom those duties were to be performed, and that he was himself a shareholder in the Company; that he was thus made a judge, or arbitrator, in what was, in effect, his own cause.[80]

Dismissing that contention, the court stated that, when matters had to be decided by the engineer appointed by the railway company, that was in fact a decision by the company and:

> [T]here never was any intention of leaving to third persons the decision of questions arising during the progress of the works. The Company reserved the decision to itself, acting however, as from the nature of things it must act, by an agent, and that agent was, for this purpose, the engineer.[81]

In those circumstances there could be no complaint that Mr. Brunel held shares in the railway company.[82]

The extent of the risks undertaken by the contractor were considered in the case of *Thorn v. The Mayor and Commonalty of London*.[83] In 1864 tenders were sought for taking down and removing the Blackfriars Bridge in London, and erecting a new bridge, with plans of the new bridge and specification of the works being provided as part of the tender.[84] The specification included provisions that the contractors were "to take out their own quantities, no surveyor being authorized to act on the part of

79. *Id.* at 831.
80. *Id.*
81. *Id.*
82. *Ranger*, 5 Eng. Rep. (HLC) at 832.
83. (1876) 1 App. Cas. 120, 124.
84. *Id.* at 120-21.

the corporation;" that drawings of the existing bridge gave all the information possessed respecting the foundations; and "[t]hese plans are believed to be correct, but their accuracy is not guaranteed, and the contractor will not be entitled to charge any extra should the work to be removed prove more than indicated on these drawings."[85] For "coffer-dams," it was stated that "[t]he contractor must satisfy himself as to the nature of the ground through which the foundations have to be carried; all the information given on this subject is believed to be correct, but is not guaranteed."[86] For "[i]ron caissons," the specification stated that the "foundations of the piers will be put in by means of wrought iron caissons, as shewn on drawing No. 7."[87] And that:

> The casing of the lower part of which caissons will be left permanently in the work. The upper part, which is formed of buckle plates, is to be removed. The whole of the interior girder framing must be removed as the building proceeds, the work being made good close up to the underside of each girder before removal thereof.[88]

Finally, it stated that "all risk and responsibility involved in the sinking of these caissons will rest with the contractor, and he will be bound to employ divers or other efficient means for removing and overcoming any obstacles or difficulties that may arise in the execution of the works."[89] The engineer had the power to:

> [A]t any time or times, during the progress of the works to vary the dimensions or position of the various parts of the works to be executed under these presents, without the said contractors being entitled to any extra charge for such alteration, provided the total quantity of work be not increased or diminished thereby.[90]

After the caissons had been used as directed in the specifications, it was found that they were no fit for that purpose and the plan of the work was altered.[91] Time was thus lost and

85. *Id.* at 121.
86. *Id.*
87. *Id.*
88. *Thorn*, 1 App. Cas. at 121.
89. *Id.*
90. *Id.* at 122.
91. *Id.*

the labour executing the original design was wasted. The contractor claimed compensation for loss of time and labour caused by the attempt to execute the work to the original plans, alleging that the employer had guaranteed and warranted that Blackfriars Bridge could be built in accordance with the employer's plans and specification, without tide-work, and in a manner comparatively inexpensive, and that caissons shown on the said plans would resist the pressure of water during the construction of the bridge.[92]

The claim was dismissed on the basis that:

> [I]f it were to be held that there is, with regard to the specification itself, an implied warranty on the part of the person who invites tenders for the contract, that the work can be done in the way and under the conditions mentioned in the specification, so that he is to be liable in damages if it is found that it cannot be so done, the consequences . . . would be most alarming.[93]

Therefore, where plans and a specification are prepared for the use of tenderers, the person asking for the tenders does not enter into any implied warranty that the work can be successfully executed according to those plans and specification and the risk is therefore on the contractor.[94]

There was however some respite for contractors. In *Roberts v. Bury Improvement Comm'rs*, there was a contract to construct buildings in accordance with certain plans and drawings, with a provision for variations.[95] There were provisions for extensions of time and for termination if the contractor did not, "in the opinion and according to the determination of the architect, exercise due diligence and make such due progress as would enable the works to be effectually and efficiently completed at the time stipulated."[96] "[A]ll differences were to be referred to the architect, whose decision was to be final, without giving any reasons."[97]

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92. *Id.* at 122-23.
93. *Thorn*, 1 App. Cas. at 128.
94. *Id.* at 120.
95. (1869-70) L.R. 5 C.P. 310, 310.
96. *Id.*
97. *Id.*

The employer terminated the contract on the basis that the contractor failed in the due performance of certain parts of the work, and did not in the opinion of the architect exercise due diligence and make such due progress as would have enabled the works to be efficiently and effectually completed at the time agreed.[98] The contractor contended that the alleged failure and lack of due diligence were caused by the default of the employer and the architect in supplying plans and drawings, and in setting out the land, and defining the roads, and giving information to enable the contractor to commence the works, and that the contractor was therefore entitled to an extension of time which the architect had not granted.[99]

In the course of giving the majority judgment, the court considered the implied obligations of the employer and the contractor, stating:

> The contractor also, from the nature of the works, could not begin his work until the commissioners and their architect had supplied plans and set out the land and given the necessary particulars; and therefore, in the absence of any express stipulation on the subject, there would be implied a contract on the part of the commissioners to do their part within a reasonable time; and, if they broke that implied contract, the contractor would have a cause of action against them for any damages he might sustain, and the commissioners would be precluded from taking advantage of any delay occasioned by their own breach of contract: for, it is a principle very well established at common law, that no person can take advantage of the non-fulfilment of a condition the performance of which has been hindered by himself; and also that he cannot sue for a breach of contract occasioned by his own breach of contract, so that any damages he would otherwise have been entitled to for the breach of the contract to him would immediately be recoverable back as damages arising from his own breach of contract.[100]

The Court then noted that the contractor contended that its alleged default had been caused by the wrongful act or default of

98. *Id.* at 314.
99. *Id.*
100. *Roberts*, L.R. 5 C.P. at 325-26 (citations omitted).

the employer and the employer contended that the default had not, according to the determination of the architect, been caused by the employer's wrongful act or default.[101] They concluded that, the architect having no power under the contract to bind the contractor by any such determination, the employer could not take advantage of its own wrong and had consequently no power to terminate the contract.[102]

B. The Position of the Engineer or Architect as Certifier

The position of the Engineer or Architect as the certifier under a construction contract raises questions of the nature of that person's engagement. They are an agent of the employer in giving instructions and ordering changes. However, as was said in *Sutcliffe v. Thackrah*:

> The building owner and the contractor make their contract on the understanding that in all such matters the architect will act in a fair and unbiased manner and it must therefore be implicit in the owner's contract with the architect that he shall not only exercise due care and skill but also reach such decisions fairly, holding the balance between his client and the contractor.[103]

Whilst the need for a certificate could be dispensed with in cases where the architect had been "disqualified," as in *Hickman & Co. v. Roberts*,[104] there was a question whether the court could intervene to "open up, review and revise" certificates, which was a phrase commonly included in arbitration clauses.[105] After a period when the Court of Appeal held that the court did not have that power[106] the House of Lords in *Beaufort Developments (NI) Ltd. v. Gilbert-Ash (NI) Ltd.*, decided that the court did have that

101. *Id.* at 329-30.

102. *Id.* at 333.

103. [1974] A.C. 727, 737.

104. [1913] A.C. 229, 232-33 (holding that an architect allowed his judgment to be influenced by the building owners and improperly delayed issuing his certificates in accordance with their instructions).

105. N. Reg'l Health Auth. v. Derek Crouch Constr. Co. Ltd. [1984] Q.B. 644 [¶ 30], [¶ 32].

106. *Id.* [¶ 51].

power.[107] Lord Hoffmann made these observations on the role of the architect in giving certificates:

> If the certificates are not conclusive, what purpose do they serve? If one considers the practicalities of the construction of a building or other works, it seems to me that parties could reasonably have intended that they should have what might be called a provisional validity. Construction contracts may involve substantial work and expenditure over a lengthy period. It is important to have machinery by which the rights and duties of the parties at any given moment can be at least provisionally determined with some precision. This machinery is provided by architect's certificates. If they are not challenged as inconsistent with the contractual terms which the parties have agreed, they will determine such matters as when interim payments are due or completion must take place. This is something which the parties need to know. No doubt in most cases there will be no challenge.
>
> On the other hand, to make the certificate conclusive could easily cause injustice. It may have been given when the knowledge of the architect about the state of the work or the effect of external causes was incomplete. Furthermore, the architect is the agent of the employer. He is a professional man but can hardly be called independent. One would not readily assume that the contractor would submit himself to be bound by his decisions, subject only to a challenge on the grounds of bad faith or excess of power. It must be said that there are instances in the 19th century and the early part of this one in which contracts were construed as doing precisely this. There are also contracts which provided that in case of dispute, the architect was to be arbitrator. But the notion of what amounted to a conflict of interest was not then as well understood as it is now. And of course the inclusion of such clauses is a matter for negotiation between the parties or, in a standard form, the two sides of the industry, so that what is acceptable will to some extent depend upon the bargaining strength of one side or the other. At all events, I think that today one should

107. [1999] 1 A.C. 266.

> require very clear words before construing a contract as giving an architect such powers.[108]

However, the Engineer or Architect is not under a duty to hear both parties before coming to a decision and any conflict may not disqualify the engineer from acting.[109] In *AMEC Civ. Eng'g Ltd v. Sec. of State for Transp.*, an engineer was required by the employer to issue a decision on a dispute relating to liability for failed bridge bearings and to do so in circumstances where the engineer was also facing a similar claim for liability from the employer for the failure of the bridge bearings.[110] The Court of Appeals held that the engineer was not obliged to comply with the rules of natural justice applicable to those who acted judicially, but was required to act independently, honestly, and fairly, in so far as what was regarded as fair was flexible and tempered to the particular facts and occasion.[111] It was also held that the fact that the employer had made an equivalent claim against the engineer did not disqualify the engineer from giving a valid decision under clause 66(1), since such a conflict of interest was an unavoidable potential incidence of the contractual relationship.[112]

C. Prevention by the Employer[113] and its Consequences for Delay and Liquidated Damages

The use of Condition L6 in Comyns' Digest was also the basis for another legal development. An issue which also arose in many cases was the issue of delay caused by an employer and the ability to deduct liquidated damages.[114] In *Holme v. Guppy*, a contract for carpentry work at a brewery stipulated a time for completion of four and a half months with liquidated damages of £40 per week.[115] The contractor was delayed by four weeks in

108. *Id.*

109. AMEC Civ. Eng'g Ltd v. Sec. of State for Transp. [2005] EWCA Civ. 291 [¶40], [¶48].

110. *Id.* [¶1], [¶5].

111. *Id.* [¶47].

112. *Id.* [¶44].

113. Under English and International standard forms the "Owner" is known as the "Employer." AISHA NADAR, THE CONTRACT: THE FOUNDATION OF CONSTRUCTION PROJECTS (3d ed. 2019).

114. Holme v. Guppy, 150 E.R. 1195; (1838) 3 M. & W. 387.

115. *Id.* at 1196; 3 M. & W. at 388.

starting the work by not having possession and was then five weeks late finishing, having been delayed one week by the default of their own workmen.[116] It was held that the employer could not deduct any liquidated damages in respect of the delay, not even for one week.

The explanation by Parke B, was as follows:

> It is clear, from the terms of the agreement, that the plaintiffs undertake that they will complete the work in a given four months and a half; and the particular time is extremely material, because they probably would not have entered into the contract unless they had had those four months and a half, within which they could work a greater number of hours a day. Then it appears that they were disabled by the act of the defendants from the performance of that contract; and there are clear authorities, that if the party be prevented, by the refusal of the other contracting party, from completing the contract within the time limited, he is not liable in law for the default. It is clear, therefore, that the plaintiffs were excused from performing the agreement contained in the original contract; and there is nothing to shew that they entered into a new contract by which to perform the work in four months and a half, ending at a later period. The plaintiffs were therefore left at large; and consequently they are not to forfeit anything for the delay.[117]

The phrase "left at large" has caused a degree of debate in English construction law. Does it mean that time is "at large" so that the contractor is left without a time for completion or merely that the contractor's liability for damages is "at large" so that the contractor is not liable for the agreed liquidated damages. The statement was made that "the plaintiffs were excused from performing the agreement contained in the original contract" and that there was "nothing to shew that they entered into a new contract by which to perform the work in four months and a half, ending at a later period."[118]

In *Russell v. Viscount Sa Da Bandeira*, there was a contract to build a ship for the Portuguese navy.[119] One of the provisions

116. *Id.* at 1195; 3 M. & W. at 387.
117. *Id.* at 1196; 3 M. & W. at 388 (internal citations omitted).
118. Russell v. Viscount Sa Da Bandeira, 143 E.R. 59 (1862) at 76.
119. *Id.* at 59.

of the contract was that liquidated damages (called a "penalty") at a daily rate should be paid:

> [F]or each day the vessel should not be delivered finished, fitted, and completed after the day named: provided that, if the vessel should not be launched and delivered at the time appointed, by reason of any cause not under the control of the plaintiff, the same to be proved to the satisfaction of Admiral S., and to be certified by him in writing, then the said penalty should not be enforced for such number of days or for such a time as the said Admiral S. should in such certificate name.[120]

An arbitrator found that extra time was required for the execution of additional work and caused a delay of about six weeks in the progress of the shipbuilding.[121] Erle, C.J.[122] held that no liquidated damages were recoverable and said as follows:

> It turns out that those who were the agents representing the Portuguese government caused a delay of six weeks in the finishing of the vessel. Now, the case of Holme v. Guppy, decides that, where a contractor undertakes, under pain of a certain penalty or forfeiture, to perform a work within a given time, and the performance within the time is prevented by the act of the party with whom he contracts, the contractor is exonerated from the penalties.[123]

Byles, J. stated:

> The only remaining question is as to the penalties which the defendant seeks to set off. Holme v. Guppy, is substantially in point, though here the contract is under seal, and there not. It is founded upon an old and well-understood rule of law. The authorities will be found collected in Comyns's Digest, Condition (L. 6). Where the condition has become impossible of performance by the act of the grantee himself, the grantor is excused. So that Holme v. Guppy is not only in point, but it is consistent with the antient authorities, and is founded on the most invincible reason and good sense. The result is that the plaintiff is . . . that the defendant is not entitled to any set-off in respect of the penalties, the non-

120. *Id.*
121. *Id.* at 68.
122. *Id.* at 82.
123. *Russell*, 143 E.R. 59 at 82.

> delivery of the vessel by the day stipulated having been in part caused by delay for which he himself was responsible.[124]

In *Roberts v. Bury Improvement Comm'rs*, already discussed above, the court was divided four to two.[125] The majority held that the failure of the plaintiff to use due diligence and to make progress was caused by the failure of the defendant-employer and the architect to supply plans.[126] In those circumstances, the termination provisions in clause 27 did not confer a power upon the architect to determine and to bind the plaintiff-contractor by his determination that the defendants had not prevented the plaintiff from proceeding with the works, although they had in fact done so. As a result, the rule of law applied, which exonerates a party "from the performance of a contract, where the performance of it is prevented or rendered impossible by the wrongful act of the other contracting party."[127] The dissenting judges held that the architect was the final judge of the matter and "his certificate justified the defendants in putting an end to the contract, under clause 27."[128] In coming to its conclusion, the majority said:

> [T]he commissioners would be precluded from taking advantage of any delay occasioned by their own breach of contract: for, it is a principle very well established at common law, that no person can take advantage of the non-fulfilment of a condition the performance of which has been hindered by himself; and also that he cannot sue for a breach of contract occasioned by his own breach of contract, so that any damages he would otherwise have been entitled to for the breach of the contract to him would immediately be recoverable back as damages arising from his own breach of contract. These principles have been applied to contracts very analogous to the present, in the cases of *Holme v. Guppy* (1), *Russell v. Da Bandeira* (2) . . . .[129]

In *Dodd v. Churton*, the plaintiff, a builder, claimed for the balance due for extra work under a building contract and the

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124. *Id.* at 82-83 (internal citations omitted).
125. (1869-70) L.R. 5 C.P. 310, 329.
126. *Id.* at 311.
127. *Id.*
128. *Id.*
129. *Id.* at 326.

defendant counterclaimed for liquidated damages for non-completion.[130] The court held that:

> Additional works to the amount of 22*l*. 8*s*. 8*d*. were ordered under condition 4, which necessarily involved a delay in the completion of the works until after the specified date. . . . The contract provided for the performance by a certain date of works described in a specification in consideration of the payment of a fixed sum as the price of the works specified. It is admitted that extra work was ordered, and that the necessary result of the builder's having to do that work was that it took him more time to complete the works than if he had only had to do the work originally specified. It was, no doubt, part of the original contract that the building owner should have a right to call upon the builder to do that extra work, and, if he did give an order for it, the builder could not refuse to do it. The principle is laid down in Comyns' Digest, Condition L (6.), that, where one party to a contract is prevented from performing it by the act of the other, he is not liable in law for that default; and, accordingly, a well recognised rule has been established in cases of this kind, beginning with *Holme v. Guppy* (1), to the effect that, if the building owner has ordered extra work beyond that specified by the original contract which has necessarily increased the time requisite for finishing the work, he is thereby disentitled to claim the penalties for non-completion provided for by the contract. The reason for that rule is that otherwise a most unreasonable burden would be imposed on the contractor.[131]

There was a line of argument in that case that, by agreeing to carry out the original work and any additional work, the contractor had agreed to carry out all of the work by the original date for completion and, in one case, *Jones v. St. John's Coll.*, that argument had succeeded.[132] It was rejected in this case as being limited to the terms of the contract in the *Jones* case.[133]

In *Wells v. Army & Navy Coop. Soc'y*, the contract included a completion date, a provision enabling the employer to extend the deadline for completion in specified circumstances, as well as

130. [1897] 1 Q.B. 562, 562-63.
131. *Id.* at 564, 566.
132. *Id.* at 564 (citing Jones v. St. John's Coll., L.R. 6 Q.B. 115).
133. *Id.* at 565.

a liquidated damages clause.[134] The contractor was fifteen months late in completing the contract and the employer purported to extend the completion date by three months, and then claimed liquidated damages for the remainder.[135] It was held that the extension clause did not apply, and that since the employer had contributed to the delay, thereby preventing the contractor from completing by the contractual completion date, he could not rely on the liquidated damages clause.[136]

In *Peak Constr. (Liverpool) Ltd. v. McKinney Founds. Ltd.*, contractors agreed to build a block of flats for a local authority within twenty-four months.[137] Under clause 22, the contractors had to pay liquidated damages in default.[138] Under clause 23, the time for completion might be extended by the architect, if unduly delayed in consequence of unavoidable circumstances.[139] The employer was responsible for delay by a contractor carrying out foundation piles, which caused a delay of fifty-eight weeks.[140] The Court of Appeal held that "if an employer wishes to recover liquidated damages for failure by contractors to complete on time despite the fact that some of the delay was due to the employer's own fault, the extension of time clause should provide," either "expressly or by necessary inference, for an extension on account of such a fault or breach on the part of the employer."[141] However, clause 22 only contemplated failure to complete on time due to the sole fault of the contractor, not where the failure was due to the fault of the employer as well; thus, the employer was not entitled to recover liquidated damages and was only entitled to such damages as he could prove flowed from the contractor's breach.[142] The Court of Appeal also held that there was no provision in clause 23 for an extension of time for delay due to the employer's own fault, and there was no date under the

134. McAlpine Humberoak Ltd. v. McDermott Int'l Inc. (1992) 58 B.L.R. 1 (citing Wells v. Army & Navy Coop. Soc'y (1902) 86 L.T. 764).
135. *Id.*
136. *Id.*
137. (1971) 1 B.L.R. 111.
138. *Id.*
139. *Id.*
140. *Id.*
141. *Id.*
142. *Peak*, 1 B.L.R.

contract from which liability to pay liquidated damages could run and liquidated damages could not be recovered.[143] The court stated: "If the employer is in any way responsible for the failure to achieve the completion date, he can recover no liquidated damages at all and is left to prove such general damages as he may have suffered"[144] and the employer "is left to his ordinary remedy, that is to say to recover such damages as he can prove flow from the contractor's breach."[145]

In *Trollope & Colls Ltd v. Nw. Metro. Reg'l Hosp. Bd.*, a hospital was to be completed in three phases.[146] Phase III was to commence six months after completion of Phase I, but had a fixed completion date.[147] The House of Lords held that there was no express or implied ability to extend the completion date for Phase III if the employer delayed Phase I.[148] The Court of Appeal, by a majority, held that there was an implied term.[149] Their reasoning was that *Dodd v. Churton*, established that (using (1) and (2) inserted by the House of Lords):

> (1) It is well settled that in building contracts—and in other contracts too—when there is a stipulation for work to be done in a limited time, if one party by his conduct—it may be quite legitimate conduct, such as ordering extra work—renders it impossible or impracticable for the other party to do his work within the stipulated time, then the one whose conduct caused the trouble can no longer insist upon strict adherence to the time stated. He cannot claim any penalties or liquidated damages for non-completion in that time.
>
> (2) The time becomes at large. The work must be done within a reasonable time—that is, as a rule, the stipulated

143. *Id.*

144. *See* BRIAN EGGLESTON, LIQUIDATED DAMAGES AND EXTENSIONS OF TIME IN CONSTRUCTION CONTRACTS 49, 134 (3d ed. 2009).

145. *See* JB Kim, *Concurrent Delay: Unliquidated Damages by Employer and Disruption Claim by Contractor*, INT'L BAR ASS'N (Dec. 2020), [https://perma.cc/6VSP-7Q3A]; City Inn Ltd. v. Shepherd Constr. Ltd. [2007] C.S.O.H. 190 [¶11] (quoting Peak Constr. (Liverpool) Ltd. v. McKinney Founds. Ltd. (1971) 1 B.L.R. 111).

146. [1973] 1 W.L.R. 601, 601.

147. *Id.* at 601-02.

148. *Id.* at 602.

149. *Id.* at 607.

> time plus a reasonable extension for the delay caused by his conduct.[150]

The House of Lords said that:

> Now Dodd v. Churton does establish the first part of that passage, which I have marked "(1)," but does not establish, or afford any support to, the second part of the passage which I have marked "(2)."[151]

This authoritative statement by the highest court, now known as the Supreme Court, makes the position clear: where a party delays completion, that party can no longer insist upon strict adherence to the time stated and cannot claim any penalties or liquidated damages for non-completion in that time.[152] This, however, does not mean that time is "at large" so that the work must be done within a reasonable time.[153]

In *Rapid Bldg. Grp. Ltd. v. Ealing Fam. Hous. Ass'n Ltd.*, a contractor could not be given possession of a significant part of a site because people were occupying it as squatters.[154] The Court had to decide whether in such a case the employer could recover damages for delay. They applied *Peak v. McKinney*, and held that no liquidated damages were recoverable but the defendants were not precluded from pursuing unliquidated damages. Lloyd LJ said:

> Like Lord Justice Phillimore in Peak Construction (Liverpool) v. McKinney Foundations Ltd, at p.127 of the report, I was somewhat startled to be told in the course of the argument that if any part of the delay was caused by the employer, no matter how slight, then the liquidated damages clause in the contract, clause 22, becomes inoperative.
>
> I can well understand how that must necessarily be so in a case in which the delay is indivisible and there is a dispute as to the extent of the employer's responsibility for that delay. But where there are, as it were, two separate and distinct periods of delay with two separate causes, and where the dispute relates only to one of those two causes, then it would seem to me just and convenient that the employer

150. *Id.* (referencing Dodd v. Churton [1897] 1 Q.B. 562).
151. *Trollope*, 1 W.L.R. at 607.
152. *Id.*
153. *Id.*
154. (1985) 29 B.L.R. 5.

> should be able to claim liquidated damages in relation to the other period.
>
> In the present case the relevant dispute relates to the delay, if any, caused by the presence of squatters. At the most, that could not account for more than the period from 23rd June 1980 to 17th July 1980, a period of some 24 days. It ought to be possible for the employers to concede that there is a dispute as to that period, and then deduct the 24 days from the total delay from 22nd September 1982 (when, according to the architect's certificate, the work ought to have been completed) and 23rd July 1983, (that being the date of practical completion) and claim liquidated damages for the balance. But it was common ground before us that that is not a possible view of clause 22 of the contract in the light of the decision of the Court of Appeal in Peak's case, and therefore I say no more about it.[155]

That case and *Peak* treated delay by the employer as disallowing recovery of liquidated damages but preserving a right to unliquidated damages.[156] This would appear to preserve the original time for completion and allow unliquidated damages for the part of the delay in achieving completion by the time for completion. The case also raised, but did not answer, the question whether, in such circumstances, the employer could recover more as liquidated damages than as unliquidated damages.[157]

In *McAlpine Humberoak Ltd v. McDermott Int'l Inc*, in 1992 it was argued that where delay was caused to sub-contractor plaintiffs by main contractor defendants so that the plaintiffs were prevented from completing the work within the time stated in the contract, as time was of the essence of the contract and since the defendants had no power to fix a new completion date, time became "at large."[158] It was also contended that the matters which caused delay (drawing revisions, VOs, late replies to TQs) gave rise to a claim for damages for the sum they would have quoted

155. *Id.*

156. *Id.*; *see also* Peak Constr. (Liverpool) Ltd. v. McKinney Founds. Ltd. (1971) 1 B.L.R. 111.

157. *Ealing Fam. Hous. Ass'n Ltd.*, 29 B.L.R. 5.

158. (1992) 58 B.L.R. 1.

had they known of the delay.[159] As it was said in the Court of Appeal, this was equivalent to contending that:

> If, in a contract which provides for a lump sum price and a firm delivery date, the employer causes the contractor to miss the delivery date by one day, as he might, for example, by ordering extra work, both the lump sum and the delivery date are displaced.[160]

In support of this proposition, the only authority cited was *Wells v. Army & Navy Coop. Soc'y*.[161] As the Court of Appeal said, the principle in *that case* was not new but came from *Holme v. Guppy*, where Parke B used the phrase of the contractor being "left at large" and had been applied in such cases as *Peak v. McKinney*.[162] It was said that in all these cases the employer was claiming liquidated damages and that claim failed "since the employer could not rely on the original date of completion, nor on a power to extend the date of completion. In the absence of such a power, there could be no fixed date from which the liquidated damages could run."[163] The Court of Appeal pointed out that "[e]ven if time is 'at large' (whatever that may mean) there is nothing in the quoted line of authorities to suggest that the price is at large."[164]

More recently in 2007, in *Multiplex Consts. (UK) Ltd. v. Honeywell Control Sys. Ltd.*, the Court had to consider a case where a sub-contractor had been delayed due to variations,[165] but the extension of time clause did not include "variations" or "directions" as a cause of delay for which an extension of time could be granted.[166] It did, however, include "*delay caused by any act of prevention or default by the Contractor in performing its obligations under the Sub-Contract*."[167] The sub-contractor contended that the main contractor by its conduct had put "time

159. *Id.*
160. *Id.*
161. *Id.*
162. *Id.*
163. *McAlpine*, 58 B.L.R. 1.
164. *Id.*
165. [2007] EWHC 447 (TCC).
166. "Variations" are equivalent to "change orders." *See Variation to Work Pertaining to Construction Contracts*, 8 CT. UNCOURT 46, 46 (2021).
167. *Id.* (emphasis added).

at large" under the sub-contract, and an adjudicator[168] agreed because revised programmes had been issued by the main contractor's direction and the sub-contract conditions "did not contain any mechanism for extending time in respect of delay caused by a direction."[169] The main contractor therefore commenced proceedings in the Technology and Construction Court claiming that time had not been put at large.[170]

In summarizing the law, Mr. Justice Jackson (as he then was) said:

> The essence of the prevention principle is that the promisee cannot insist upon the performance of an obligation which he has prevented the promisor from performing.
>
> In the field of construction law, one consequence of the prevention principle is that the employer cannot hold the contractor to a specified completion date, if the employer has by act or omission prevented the contractor from completing by that date. Instead, time becomes at large and the obligation to complete by the specified date is replaced by an implied obligation to complete within a reasonable time. The same principle applies as between main contractor and sub-contractor.
>
> It is in order to avoid the operation of the prevention principle that many construction contracts and sub-contracts include provisions for extension of time. Thus, it can be seen that extension of time clauses exist for the protection of both parties to a construction contract or sub-contract.[171]

Concluding that time was not at large because the direction was an act of prevention, the judge said, "[t]he fact that such a direction is permitted by the contract does not prevent it being an act of prevention."[172]

In coming to his conclusion, the judge referred to *Trollope & Colls Limited v. Nw. Metro. Reg'l Hosp. Bd.*, and said, "[i]n the House of Lords, Lord Pearson agreed with that section of Lord

168. See below for the statutory right to adjudication in English law. *See infra* text of notes 197-98.

169. *Multiplex Constrs. (UK) Ltd.*, EWHC 447 (TCC).

170. *Id.*

171. *Id.*

172. *Id.* (internal citations omitted).

Denning's judgment."[173] That however was a reference to "(1)" identified by Lord Pearson and not to "(2)" where he disagreed with Lord Denning's statement "[t]he time becomes at large. The work must be done within a reasonable time."[174]

Finally, in *Adyard Abu Dhabi v. SD Marine Services*, Hamblen J. (as he then was) had to consider a claim by a shipyard in Abu Dhabi against a UK Government supplier over the termination of two shipbuilding contracts.[175] Adyard contended that the prevention principle applied as the contract did not provide for an extension of time in respect of delay caused by SDMS.[176] The judge said that a convenient summary of the prevention principle was to be found in the judgment of Mr. Justice Jackson in *Multiplex Constrs. Ltd. v. Honeywell Control Sys. Ltd.*, and cited the part included,[177] in which Mr. Justice Jackson said:

> In the field of construction law, one consequence of the prevention principle is that the employer cannot hold the contractor to a specified completion date, if the employer has by act or omission prevented the contractor from completing by that date. Instead, time becomes at large and the obligation to complete by the specified date is replaced by an implied obligation to complete within a reasonable time.[178]

However, when dealing with the principle Hamblen J. said:

> The authorities on the prevention principle show that: . . .
>
> (2) In the event that the Buyer interferes with the work so as to delay its completion in accordance with the agreed timetable, this amounts to an act of prevention and the Builder is no longer bound by the strict requirements of the contract as to time.[179]

The position has therefore been reached where, it is respectfully submitted, the principle derived from Comyns'

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173. *Id.* (internal citations omitted).
174. Trollope & Colls Ltd. v. Nw. Metro. Reg'l Hosp. Bd. [1973] 1 W.L.R. 601, 607.
175. [2011] EWHC 848 (Comm).
176. *Id.* [¶ 5].
177. [2007] EWHC 477 (TCC) [¶48].
178. *Adyard Abu Dhabi*, EWHC 848 (Comm) at [¶240.48].
179. *Id.* [¶242].

Digest under "condition" at rule L(6) has been misapplied in a number of cases. The starting principle is that, if an employer delays a contractor and there is no ability to extend the completion date to allow for that delay, then the employer cannot recover liquidated damages for that period of delay. That is a sensible principle of law as set out in Comyns' Digest: one party cannot both prevent a party from performing and also hold that party to its performance.[180] That principle would equally apply to prevent an employer from recovering unliquidated damages. The difference between liquidated damages and unliquidated damages is that liquidated damages apply under a contractual mechanism when a contractor fails to complete by the agreed date.[181] When that happens, liquidated damages are automatically due for the period of delay at the rate specified. To recover unliquidated damages, the employer would have to prove damages for the period of delay. In doing so and applying the universal rule that a party is entitled to damages to put it into the position it would have been in but for the contractor's breach of contract in causing delay,[182] the employer would have to show that it suffered loss for the period of delay. But if the employer caused the delay, then it would not be able to prove such loss as it would have suffered that loss because of its prevention.

On that basis the issue is limited to the ability of the employer to recover liquidated or unliquidated damages for delay. The reference in *Holme v. Guppy*, to the contractor being "left at large" not having to "forfeit anything for the delay" was interpreted in *Dodd v. Churton*.[183] In that case the court held that the principle established in cases beginning with *Holme v. Guppy* was, if the building owner ordered extra work which increased the time required to finish the work, the building owner was "thereby disentitled to claim the penalties for non-completion provided for by the contract."[184] As Lord Pearson said in *Trollope & Colls*,

180. 3 SIR JOHN COMYNS, A DIGEST OF THE LAWS OF ENGLAND, 116-17 (4th ed. 1793).

181. *See Damages*, BLACK'S LAW DICTIONARY (11th ed. 2019).

182. *See, e.g.*, Livingstone v. Rawyards Coal Co. (1880) 5 App. Cas. 25 CA at 39.

183. Holme v. Guppy, 150 E.R. 1195; (1838) 3 M. & W. 387; Dodd v. Churton [1897] 1 Q.B. 562, 566.

184. *Id.* (referencing Holme v. Guppy, 150 E.R. 1195; (1838) 3 M. & W. 387).

Dodd v. Churton "does not establish, or afford any support" that "time becomes at large" so that "the work must be done within a reasonable time."[185]

Therefore, the principle that "time becomes at large" when there is an act of prevention which prevents the contractor completing the work and there is no provision for an extension of time, finds no apparent support from the line of authorities starting from *Holme v. Guppy*. Despite that, more recent cases have supported the "time at large" principle,[186] and clarity will only come when the challenge to that principle is dealt with in a fully argued case in the Supreme Court.

IV. DEVELOPMENTS IN RESOLUTION OF CONSTRUCTION DISPUTES

The complexity of construction disputes has led to such cases becoming the most difficult to resolve. Added to this complexity is the involvement of those whose endeavour on the project causes attitudes to become polarised and personalised. In 1993 the UK government set up a review of procurement and contractual arrangements in the construction industry.[187] The government appointed Sir Michael Latham as sole "Reviewer," assisted by six assessors.[188] His final report was published in July 1994 and included a number of solutions to try to avoid the types of dispute that have become endemic in the construction industry.[189] It made thirteen recommendations as to provisions that should be inserted in construction contracts, including separation of the role of contract administrator, project or lead manager and adjudicator, periods within which interim payments must be made, taking all steps to avoid conflict and providing for

185. Trollope & Colls Ltd. v. Nw. Metro. Reg'l Hosp. Bd. [1973] 1 W.L.R. 601, 607-08.

186. *Id.*

187. SIR MICHAEL LATHAM, CONSTRUCTING THE TEAM: JOINT REVIEW OF PROCUREMENT AND CONTRACTUAL ARRANGEMENTS IN THE UNITED KINGDOM CONSTRUCTION INDUSTRY 1 (1994).

188. *Id.* at v, 1, 2.

189. *Id.* at v.

speedy resolution of disputes by adjudication.[190] That report led to adjudication being introduced by statute.[191]

There has been an increasing awareness that early involvement of an independent person or panel may assist the parties in seeking a solution to those issues. This has led to setting up an "Independent Dispute Avoidance Panel" or a "Conflict Avoidance Panel" on large infrastructure projects to help the parties resolve the disagreements at a stage before they have matured into disputes requiring a more formal dispute resolution process.[192] Standard forms of contract now include provisions by which the dispute boards are expressly given a dispute avoidance role, separate from the adjudication role.[193] These processes are now widely applied and have been shown to be very effective in projects, including the London Olympics.[194]

Dispute avoidance can vary from a process where discussions take place between the person in the dispute avoidance role and the parties to find a solution to a procedure, similar to mediation, and even the preparation of a preliminary view on how the parties resolve matters. Where there is a panel, then a particular issue may require a solution which requires engineering, project management, financial, legal or other specialist input and the panel often includes that expertise, or a procedure to obtain that expertise.[195] The resolution may involve a solution where the parties share the risks, for instance a change in the design and in construction methods to save time, with shared costs.[196] Ultimately, the resolution of the issue depends on the co-operation of the parties, the expertise of the neutral person, and the flexibility of the process.

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190. *Id.* at 37.

191. Housing Grants, Construction and Regeneration Act 1996, c.53 § 108. The Act applies to "construction contracts" entered into after 1 May 1998.

192. *Independent Dispute Avoidance Panel set up to Smooth London 2012 Construction,* NEW CIV. ENG'R, [https://perma.cc/XFA7-QDQ5] (last visited Apr. 20, 2022).

193. These boards are known as Dispute Avoidance and Adjudication Boards or "DAABs." CONFLICT AVOIDANCE AND DISPUTE RESOLUTION IN CONSTR. 6-7 (1st ed. 2012).

194. *See* Peter H.J. Chapman, *The Use of Dispute Boards on Major Infrastructure Projects*, 1 TURKISH COM. L. REV. 219, 228 (2015).

195. *See id.* at 225.

196. *See id.* at 227.

The ability to resolve disputes at an early stage avoids the situation where the longer a disagreement remains unresolved, the harder it is to resolve it and the more serious the consequences in terms of time and cost to the project. Otherwise, the advantages of the process vary from assisted discussion to something closer to mediation or conciliation.

Some disputes do require a decision at an early stage. This led to the concept of adjudication being promoted by the Latham Report.[197] The statutory provision by which adjudication was introduced was a single section, section 108 of the Housing Grants, Construction and Regeneration Act 1996 (the "Act"). That provides:

> (1) A party to a construction contract has the right to refer a dispute arising under the contract for adjudication under a procedure complying with this section. For this purpose "dispute" includes any difference.[198]
>
> The following provisions in section 108 state:
>
> (2) The contract shall include provision in writing so as to—
>
> (a) enable a party to give notice at any time of his intention to refer a dispute to adjudication;
>
> (b) provide a timetable with the object of securing the appointment of the adjudicator and referral of the dispute to him within 7 days of such notice;
>
> (c) require the adjudicator to reach a decision within 28 days of referral or such longer period as is agreed by the parties after the dispute has been referred;
>
> (d) allow the adjudicator to extend the period of 28 days by up to 14 days, with the consent of the party by whom the dispute was referred;
>
> (e) impose a duty on the adjudicator to act impartially; and
>
> (f) enable the adjudicator to take the initiative in ascertaining the facts and the law.
>
> (3) The contract shall provide in writing that the decision of the adjudicator is binding until the dispute is finally determined by legal proceedings, by arbitration (if the

197. SIR MICHAEL LATHAM, *supra* note 186, at 91.

198. Housing Grants, Construction and Regeneration Act 1996, c.53 § 108(1).

> contract provides for arbitration or the parties otherwise agree to arbitration) or by agreement. The parties may agree to accept the decision of the adjudicator as finally determining the dispute. . . .
>
> (4) The contract shall also provide in writing that the adjudicator is not liable for anything done or omitted in the discharge or purported discharge of his functions as adjudicator unless the act or omission is in bad faith, and that any employee or agent of the adjudicator is similarly protected from liability.
>
> (5) If the contract does not comply with the requirements of subsections (1) to (4), the adjudication provisions of the Scheme for Construction Contracts apply.[199]

How, then, does this apply to a particular contract? First, there has to be a "Construction contract." Section 104(1) provides that a "construction contract" means:

> [A]n agreement with a person for any of the following—
>
> (a) the carrying out of construction operations;
>
> (b) arranging for the carrying out of construction operations by others, whether under sub-contract to him or otherwise;
>
> (c) providing his own labour, or the labour of others, for the carrying out of construction operations.[200]

There are provisions as to what agreements are included and are not included in the definition. There is then a complex set of provisions in section 105 which defines what "construction operations" are. They include, for instance, at section 105(1)(b):

> [C]onstruction, alteration, repair, maintenance, extension, demolition or dismantling of any works forming, or to form, part of the land, including (without prejudice to the foregoing) walls, roadworks, power-lines, electronic communications apparatus, aircraft runways, docks and harbours, railways, inland waterways, pipe-lines, reservoirs, water-mains, wells, sewers, industrial plant and installations

199. Housing Grants, Construction and Regeneration Act 1996, c.53 § 108(2)-(5) (footnotes omitted).

200. Housing Grants, Construction and Regeneration Act 1996, c.53 § 104(1).

> for purposes of land drainage, coast protection or defence. . . .[201]

They exclude, for instance, at section 105(2)(c):

> [A]ssembly, installation or demolition of plant or machinery, or erection or demolition of steelwork for the purposes of supporting or providing access to plant or machinery, on a site where the primary activity is—(i) nuclear processing, power generation, or water or effluent treatment. . . .[202]

Once there is a construction contract, then either the express terms of that contract comply with the statute and include adjudication, or the "Scheme for Construction Contracts" applies as an implied term of the contract.[203]

Having established the contract is a construction contract that includes, expressly or impliedly, adjudication, the process starts with a notice of dispute and, if an adjudicator is not agreed, then an application to an adjudication nominating body, the appointment of an adjudicator and the "referral" of the dispute to him.[204] There is then a process leading up to the adjudicator's decision, which is typically delivered within twenty-eight days. Most decisions lead to payment, but as always, if payment is not made, a party may apply to the courts, even if there is an arbitration clause.

When the first case came before the courts to enforce an adjudication decision, Dyson J. said in *Macob Civil Eng'g Ltd v. Morrison Constr. Ltd*:

> The intention of Parliament in enacting the Act was plain. It was to introduce a speedy mechanism for settling disputes and construction contracts on a provisional interim basis, and requiring the decisions of adjudicators to be enforced pending the final determination of disputes by arbitration, litigation or agreement. . . . The timetable for [adjudication]

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201. Housing Grants, Construction and Regeneration Act 1996, c.53 § 105(1)(b) (footnote omitted).

202. Housing Grants, Construction and Regeneration Act 1996, c.53 § 105(2)(c).

203. Under section 114(4), "Where any provisions of the Scheme for Construction Contracts apply by virtue of this Part in default of contractual provision agreed by the parties, they have effect as implied terms of the contract concerned." Housing Grants, Construction and Regeneration Act 1996, c.53 § 114(4).

204. Housing Grants, Construction and Regulation Act 1996, c.53, pt. II § 108(1), (2)(a)-(b).

> is very tight. Many would say unreasonably tight, and likely to result in injustice. Parliament must be taken to have been aware of this. . . . It is clear that Parliament intended that the adjudication should be conducted in a manner which those familiar with the grinding detail of the traditional approach to the resolution of construction disputes apparently find difficult to accept. But Parliament has not abolished arbitration and litigation of construction disputes. It has merely introduced an intervening provisional stage in the dispute resolution process. Crucially, it has made it clear that decisions of adjudicators are binding and are to be complied with until the dispute is finally resolved.[205]

It was necessary to decide whether the adjudicator's decision was enforceable and how it was enforceable.[206] The TCC used the summary judgment procedure ("no real prospect of successfully defending the claim"[207]) to decide whether to enforce the claim and give judgment for the sum awarded in the adjudicator's decision.[208] In doing so, it treated the adjudicator's decision as binding on matters of fact and law. The alternative would have been to treat it as a temporarily binding certificate which could be challenged on matters of fact and law. This would have deprived adjudication of any practical benefit. A party can defend the enforcement of an adjudication decision on a number of grounds—including arguments that there is no contract or no "construction contract";[209] there was no "dispute" capable of

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205. Macob Civ. Eng'g Ltd. v. Morrison Constr. Ltd. [1999] EWHC 254 (TCC) [¶14].

206. *Id.* [¶2]-[¶3], [¶12].

207. CPR 24.2(a)(ii).

208. *Macob Civ. Eng'g Ltd.*, EWHC 254 (TCC) [¶15].

209. Housing Grants, Construction and Regulation Act 1996, c.53, pt. II § 108(1). A detailed definition of "construction contract" is provided in § 104:

> (1) In this Part a "construction contract" means an agreement with a person for any of the following—
>
> (a) the carrying out of construction operations;
>
> (b) arranging for the carrying out of construction operations by others, whether under sub-contract to him or otherwise;
>
> (c) providing his own labour, or the labour of others, for the carrying out of construction operations.
>
> (2) References in this Part to a construction contract include an agreement—
>
> (a) to do architectural, design, or surveying work, or

being referred to adjudication;[210] the adjudicator did not have jurisdiction over an issue or question or has gone outside of their terms of reference;[211] the adjudicator has conducted the adjudication so as to breach the principles of natural justice so seriously that the purported decision ought not to be enforced;[212] or the adjudicator had not been properly appointed under the terms of the contract.[213] The narrow grounds on which enforcement can be resisted has meant that the courts have generally enforced adjudicators' decisions.

The TCC has been called upon to decide several practical issues, such as timing of referrals and decisions,[214] correcting mistakes in a decision,[215] the effect of the statute of limitation,[216] cost recovery,[217] and enforcement of decisions.[218] In order to do so, it has also implemented a procedure where a party can start proceedings and immediately apply for summary judgment with the normal time limits being abridged.[219] This generally leads to a hearing taking place three to four weeks after court proceedings have commenced.

(b) to provide advice on building, engineering, interior or exterior decoration or on the laying-out of landscape, in relation to construction operations.

(3) References in this Part to a construction contract do not include a contract of employment (within the meaning of the M1Employment Rights Act 1996).

Housing Grants, Construction and Regulation Act 1996, c.53, pt. II § 104(1)-(3).

210. Housing Grants, Construction and Regulation Act 1996, c.53, pt. II § 108(1).

211. H.M. CTS. & TRIBUNALS SERVICE, *supra* note 45 §§ 9.4, 9.4.1.

212. LexisPSL, *Breach of Natural Justice in Adjudication: Practice Notes*, LEXISNEXIS, [https://perma.cc/VH5M-GFRB] (last visited Apr. 21, 2022).

213. Housing Grants, Construction and Regulation Act 1996, c.53, pt. II § 108(2)-(5).

214. *See, e.g.*, Hart Invs. Ltd. v. Fidler [2006] EWHC 2857 (TCC) [¶39]; Aveat Heating Ltd. v. Jerram Falkus Constr. Ltd. (2007) 113 Con. L.R. 13.

215. *Hart Inv. Ltd.*, EWHC 2857 (TCC) [¶76]-[¶77]; Bloor Constr. (UK) Ltd. v. Bowmer & Kirkland (London) Ltd. [2000] B.L.R. 314; YCMS Ltd. v. Grabiner [2009] EWHC 127 (TCC).

216. Martlet Homes Ltd. v. Mullaley & Co. Ltd. [2021] EWHC 296 (TCC) [¶ 25]-[¶27], [¶51], [¶53]; Aspect Contracts (Asbestos) Ltd. v Higgins Constr. Plc [2015] UKSC 38 [¶22], [¶30].

217. Betchel Ltd. v. High Speed Two (HS2) Ltd. [2021] EWHC 640 (TCC) [¶17]-[¶18], [¶25], [¶46]; N. Dev. (Cumbria) Ltd. v. J & J Nichol [2000] B.L.R. 158.

218. AC Yule & Son Ltd. v. Speedwell Roofing & Cladding Ltd. [2007] EWHC 1360 (TCC) [¶1], [¶3], [¶31].

219. Macob Civ. Eng'g Ltd. v. Morrison Constr. Ltd. [1999] EWHC 254 (TCC) [¶37]; H.M. CTS. & TRIBUNALS SERVICE, *supra* note 45 § 9.2.

The TCC, therefore, has developed a single section of the statute into a robust system by which it can make and enforce decisions. Most cases (around 90%) lead to an adjudication decision being the final decision of the dispute, and the TCC has erred in favour of a "pay now, argue later" policy.[220] There is no costs recovery. The process has shown that the construction industry needs and will live with quick decisions. Although adjudication originated in the UK, the statutory process has been mirrored in many other jurisdictions, including Australia, New Zealand, Singapore, Malaysia, Ireland, and more recently in Ontario.[221] It has also been included in standard forms of contract, including those used in South Africa and Hong Kong where legislation has been considered but not yet implemented.[222] There is now a proposal before UNCITRAL for adjudication to be given further and wider consideration.[223]

V. CONCLUSION

The nature of construction is global, and it contributes to a significant percentage of the GDP in every country.[224] As a human endeavour, construction involves the coordination of many complex processes and historically has led to the most complicated and intractable of disputes. The development of modern English construction law shows that the construction industry, including those involved as construction lawyers, have adopted processes to reduce the extent of friction when disputes arise. The example of the TCC as a dedicated court within a

220. Emily Leonard & Hannah Gardiner, *Statutory Adjudication of Construction Contracts in the UK*, WOMBLE BOND DICKINSON (Feb. 22, 2017), [https://perma.cc/78SZ-CTNQ]; *see also Macob Civ. Eng'g Ltd.*, [1999] EWHC 254 (TCC); Bresco Elec. Services Ltd. v. Michael J Lonsdale [2020] UKSC 25.

221. *See* Steve Baldini & Hamish Lal, *The Rise and Rise of Statutory Adjudication: Is the U.S. Ready?*, 264 N.Y. L.J. 1, 1 (2020); *see also* Sir Vivian Ramsey, *A View from the Bench*, 13 CONSTR. L. INT'L 71, 71 (2018).

222. *See* Lawrence Davies & Tom Heading, *Construction Disputes: Global Markets Embrace Adjudication*, PINSENT MASONS (Jan. 28, 2022), [https://perma.cc/82YQ-GHGY].

223. *See* Peter E. O'Malley, *A New 'UNCITRAL Model Law on International Commercial Adjudication': How Beneficial Could It Really Be?*, 88 THE INT'L J. OF ARB., MEDIATION, AND DISP. MGMT. 34, 34 (2022).

224. *See* Niyazi Berk & Sabriye Biçen, *Causality Between the Construction Sector and GDP Growth in Emerging Countries: The Case of Turkey*, 4 ATHENS J. OF MEDITERRANEAN STUDS. 19, 19-20 (2018).

national court system has been followed in other countries such as Australia and Malaysia and is now being reproduced by the international reach of International Commercial Courts, including the Singapore ICC with its TIC List.[225] Given the need for a specialist court to deal with construction disputes and the cross-border nature of international construction projects, there exists an unresolved question about whether we should attempt to institute an International Construction Court which provides international coverage and is served by experienced construction law judges sitting in multiple jurisdictions. I suggest that this is the real challenge for the future of construction law.

225. *See* Jon Gilbert & Gabriel Wang, *Singapore's Technology, Infrastructure and Construction List—A New Global Forum for the Resolution of Major Project Disputes?*, FRESHFIELDS BRUCKHAUS DERINGER (Dec. 17, 2021), [https://perma.cc/6YCK-72E8].

STRUCTURAL PRECARITY AND POTENTIAL IN CONDOMINIUM GOVERNANCE DESIGN

Andrea J. Boyack*

INTRODUCTION

In the early hours of June 24, 2021, half of Champlain Towers South Condominium, a thirteen-story multifamily building located in the Miami suburb of Surfside, collapsed without warning.[1] The *Miami Herald* called the collapse "unprecedented" in that one wing "simply caved in—for no obvious reason."[2] The collapse killed ninety-eight people and was the deadliest multifamily building engineering failure in US history.[3] After an arduous search and rescue and safely dismantling the rest of the structure, inquiries sought to determine why this deadly collapse happened.[4] Who was to blame, and what could have been done differently?

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1. *See, e.g.*, Matthew Shaer, *The Towers and the Ticking Clock*, N.Y. TIMES (Jan. 28, 2022), [https://perma.cc/X2PP-354L].

2. Sarah Blaskey et al., *House of Cards: How Decades of Problems Converged the Night Champlain Towers Fell*, MIAMI HERALD (Dec. 30, 2021), [https://perma.cc/QB5E-65TF] [hereinafter Miami Herald Special Report] ("The tower wasn't particularly old or under major construction. There was no earthquake, gas explosion or terrorist attack to blame. After standing for nearly four decades, one wing of the building simply caved in.").

3. *What to Know About the Building Collapse in Surfside Fla.*, N.Y. TIMES (June 24, 2021), [https://perma.cc/BMS3-BB9H]. *See also* Anjali Singhvi et al., *The Surfside Condo Was Flawed and Failing. Here's a Look Inside,* N.Y. TIMES (Sept. 1, 2021), [https://perma.cc/A8GX-FJ3U]; Arian Campo-Flores & Scott Calvert, *Surfside, Fla., Condo Collapse: From Glimmering Beaches to Ruin*, WALL ST. J. (Dec. 29, 2021), [https://perma.cc/FX95-E946].

4. Both the Miami-Dade Country's State Attorney's Office and the Occupational Safety and Health Administration of Surfside investigated the collapse. KATHERINE FERNANDEZ RUNDLE ET AL., FINAL REPORT OF THE MIAMI-DADE COUNTY GRAND JURY, 11TH JUD. CIR. OF FLA., at 1 (Spring Term A.D. 2021) [hereinafter GRAND JURY FINAL REPORT] (examining the "policies, procedures, protocols, systems and practices" to ensure the safety of buildings and offering specific recommendations). The Miami-Dade police

Within six months of this tragedy, engineering analyses pieced together a picture of a building with hidden, fatal vulnerabilities.[5] Engineering experts concluded that the condominium's building design was flawed from the start.[6] The project was built by inexperienced developers using an architect who had his license suspended for "gross incompetence."[7] Dangers created by design vulnerabilities were compounded by shoddy construction in terms of materials and methods.[8] Drainage and waterproofing were completely inadequate.[9] A

started a homicide investigation related to the collapse, and the Town of Surfside hired a forensic investigator to do a thorough analysis of the disaster. Phil Prazan, *Surfside Hired Him to Investigate Condo Collapse. Here's How He'll Do It*, NBC MIAMI (July 2, 2021), [https://perma.cc/3FG2-XLB4]. Champlain Towers South unit owners have filed multiple class-action lawsuits against the condo association. The National Institute of Standards and Technology (NIST) within the United States Department of Commerce also investigated the cause of the collapse. *NIST Establishes Expert Team to Investigate the Champlain Towers South Collapse*, NAT'L INST. STANDARDS & TECH. (Aug. 25, 2021), [https://perma.cc/NSM6-2Q5U].

5. *See, e.g.*, Gina Harkins, *What You Need to Know About the Florida Condo Collapse as the Search for Survivors Continues and Probe Begins*, WASH. POST (July 10, 2021), [https://perma.cc/G6DU-R9LL]; *Miami building collapse: What could have caused it?*, BBC NEWS (July 1, 2021), [https://perma.cc/9PYU-RH3Y]; James Glanz et al., *Condo Wreckage Hints at First Signs of Possible Construction Flaw*, N.Y. TIMES (July 3, 2021), [https://perma.cc/KQ3T-XKKX].

6. Professor Dawn Lehman analyzed building plans and used computer models to identify structural problems in the building, isolating the causes of the collapse and whether the collapse was caused by inherent design and structural flaws or due to insufficient maintenance. Miami Herald Special Report, *supra* note 2.

7. Engineers reviewing the plans for Champlain Towers South warned of "design flaws" and "strength differences" between various structural components, as well as building code violations. *Id.* "The wing of the tower that survived the collapse was held up by robust 24-by-24-inch columns. Building plans show the rest of the columns in the structure were less than half that size. Columns in the pool deck were the smallest. And even the slightly bigger columns under the part of the tower that collapsed were too small to safely accommodate all of the necessary steel reinforcement, violating building code requirements at the time." *Id.*

8. Sara Blaskey et al., *Contractor for Fallen Surfside Condo Later Lost License Amid Fraud, Negligence Claims*, MIAMI HERALD (Jan. 25, 2022), [https://perma.cc/V54R-MB6R]; Shaer, *supra* note 1. Their project had many personnel problems: two of the project's general contractors resigned mid-build, and the structural engineer overseeing construction had previously built a parking garage that had immediately collapsed. Miami Herald Special Report, *supra* note 2. It also seems that the plans were not adequately carried out in the Champlain Towers South project. For example, some of the support beams that were planned for the garage were omitted or spaced farther apart during construction in order to maximize parking space, and the columns were too narrow. *Id.*

9. The report by Morabito Consulting in 2018 warned that water had damaged the concrete slab and the damage urgently needed to be repaired. *See infra* note 14.

neighboring development may have weakened the condominium's perimeter wall.[10] The engineering post mortem analysis concluded: "This building was so overstressed for so long it's amazing it stood as long as it did."[11]

The final straw that broke the back of Champlain Towers South was the failure to make necessary structural repairs. For decades, the condominium board had opted for superficial measures that masked the underlying vulnerabilities or even exacerbated them.[12] Members of Champlain Towers South Condominium learned the extent of their building's underlying and worsening structural problems in 2018 when the board commissioned an engineering study to comply with Miami's multifamily recertification requirements.[13] The engineering study identified several critically necessary repairs and warned that "[f]ailure to replace the waterproofing in the near future will cause the extent of the concrete deterioration to expand exponentially."[14]

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10. Shaer, *supra* note 1.

11. Miami Herald Special Report, *supra* note 2.

12. *See id.* For example, board-authorized repairs of the cracking pool deck, focused on appearance rather than structural soundness, paving over damage rather than excavating the vulnerable slab, and each new layer added to the stress on the structure, pressing down on inadequate supports and putting lateral strain on the structural perimeter wall. *Id.* The condominium's waterproofing and drainage problems had been exacerbated by leaking planters and invasive plants. The condominium Board ultimately removed eight palm trees from the pool area after realizing that their roots had been penetrating and weakening both concrete and drains for two decades. *Id.*; *see also* Konrad Putzier et al., *Behind the Florida Condo Collapse: Rampant Corner-Cutting*, WALL ST. J. (Aug. 24, 2021, 1:36 PM), [https://perma.cc/86R7-RQRT].

13. Although Florida state law does not require any reinspection of multifamily buildings, Miami-Dade's County Code requires that multifamily buildings be reinspected every forty years and recertified as structurally sound. MIAMI-DADE COUNTY CODE § 8-11(f)(ii)(1) (2001), [https://perma.cc/X2SS-YN3C] (last visited April 17, 2022); *see also Building Safety Program*, BROWARD.ORG, [https://perma.cc/KRT4-JU72] (last visited Apr. 17, 2022) (Broward County building safety program modeled after Miami-Dade County's). Champlain Towers South was turning forty in December 2021, and the governing board of the condominium commissioned an engineering inspection in 2018 and was "in the process of securing compliance" with the recertification requirement. GRAND JURY FINAL REPORT, *supra* note 4, at 2; *see also* MIAMI-DADE CNTY. DEP'T OF REGUL. & ECON. RES., NOTICE OF REQUIRED RECERTIFICATION OF 40 YEAR OLD BUILDING(S), [https://perma.cc/FW6V-G2Z5] (listing the recertification form required by the Miami-Dade County Code).

14. MORABITO CONSULTANTS, CHAMPLAIN TOWERS SOUTH CONDOMINIUM STRUCTURAL FIELD SURVEY REPORT 1, 7 (Oct. 8, 2018), [https://perma.cc/QL4F-SEJG] (hereinafter MORABITO REPORT). Engineers compiling the report examined 68 of the condominium's 136 units and the building's roof, exterior facade, parking garage, pool deck,

After the 2018 report, the board planned for remediation of the issues raised, but many members of the condominium balked when they learned that these repairs would cost over $9 million, an estimate that later ballooned to $15 million.[15] Minutes of board meetings over the three years prior to the building's collapse show that repeated attempts to approve a special assessment to pay for repairs were stymied by disagreements about getting the work done and, particularly, paying for it.[16] A vocal contingent of owners resisted the repair effort, and members of the Board resigned in protest.[17] The necessary work was delayed for months and years until, one night, damaged rebar inside the concrete structure fractured, thereby destabilizing the tower and causing it to collapse in on itself "like a folding card table."[18]

Champlain Towers South suffered from design faults that created structural vulnerabilities as well as insufficient maintenance that exacerbated them, but the building's ownership and governance design may have also contributed to the deadly effects of its structural failings. Champlain Towers South was a condominium, a legal ownership construction that theoretically encourages and enables adequate building construction and maintenance.[19] In addition to asking engineering questions about the building's physical structure, an analysis of the tragedy also requires asking legal questions regarding the condominium's governance design. Structuring the building's ownership as a

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and common areas to determine what "structural issues . . . require[d] repair and/or remediation in the immediate and near future." It found that "waterproofing is beyond it [sic] useful life and therefore must . . . be completely removed and replaced." *Id.*

15. Shaer, *supra* note 1; Campo-Flores & Calvert, *supra* note 3.

16. Russell Lewis, *Months Before Florida Condo Collapsed, Residents and the Board Sparred Over Repairs*, NPR (July 2, 2021, 5:00 AM), [https://perma.cc/56ST-BXSF]. An association PowerPoint presentation to residents from November 2020 "alluded to the contentious debates among owners" related to paying for necessary repairs: "Complaining Or Shouting At Each Other Doesn't Work! . . ." said one side. *Id.*; Casey Tolan et al., *A 2020 Report Found Surfside Condo Lacked Funds for Necessary Repairs. One Expert Called it a 'Wake-up Call'*, CNN, [https://perma.cc/Y6VW-FAJP] (last updated July 8, 2021, 8:52 PM).

17. Campo-Flores & Calvert, *supra* note 3; Beth Reinhard et al., *Majority of Florida Condo Board Quit in 2019 as Squabbling Residents Dragged out Plans for Repairs*, WASH. POST (June 30, 2021, 4:57 PM), [https://perma.cc/CSM6-8K5U].

18. Miami Herald Special Report, *supra* note 2.

19. *See infra* Part I.A-C.

condominium ultimately failed to ensure quality construction and upkeep, and condominium governance may also have inhibited remediation of the building's structural vulnerabilities.

This Article examines a condominium's legal structure in the context of ensuring construction and upkeep quality in a multifamily building and explores possible systemic improvements. Part I considers three latent vulnerabilities inherent in the condominium governance structure: (1) over-protection of developers; (2) unwillingness of members to ensure optimal upkeep; and (3) association financial precarity. Part II critiques some suggested legal responses to the Surfside disaster and discusses the swift and dramatic impacts on condominium governance caused by changed underwriting requirements of Fannie Mae and Freddie Mac. Finally, this Article concludes by calling for more effective stabilization of condominium governance to remediate its inherent structural weaknesses.

I. PRECARITY OF CONDOMINIUM GOVERNANCE DESIGN

A condominium is a creature of statute, a legal ownership structure that enables individuals to hold title to a box of space in fee simple absolute.[20] In a condominium, each owner holds individual title to their unit, and all owners share ownership of the common elements as tenants in common.[21] Common elements include everything that cannot be divided up, including the roof, walls, lobby, halls, elevators, parking, building structures and systems, fixtures, and all community amenities.[22] All unit owners

20. Every state has adopted a condominium-enabling statute. Several such statutes are modeled on the Uniform Common Interest Ownership Act ("UCIOA") which was created by combining the Uniform Condominium Act ("UCA") proposed in 1982 and 1977, respectively, by the National Conference of Commissioners on Uniform State Laws. Some states have their own comprehensive statutory regime governing condominiums and other common interest communities. *See, e.g.*, Davis-Stirling Common Interest Development Act, CAL. CIVIL CODE § 4000 *et seq.* (West 2022).

21. WAYNE S. HYATT, CONDOMINIUM AND HOMEOWNER ASSOCIATION PRACTICE: COMMUNITY ASSOCIATION LAW 105, 121 (3d ed. 2000) (discussing how Boards make and collect assessments).

22. *See* Robert C. Ellickson, *Cities and Homeowner Associations*, 130 U. PA. L. REV. 1519, 1522-23 (1982) (discussing how community assessments allocate common costs among all owners).

are members of the condominium association, which exists to provide the governance that is essential for joint ownership, but the association does not own any property.[23]

The condominium ownership form makes homeownership more accessible and more affordable, particularly in urban areas.[24] Condominium ownership and governance enables people to enjoy group amenities that they could not individually afford.[25] Generally, resources used and enjoyed in common are subject to overuse and under-maintenance because of the tendency of individuals to maximize their internalized gains and externalize their costs (the so-called "Tragedy of the Commons").[26] Condominium governance is designed to solve the problems of free-riding and overuse by empowering the association to make and enforce rules regarding use and maintenance of common areas. The association funds necessary upkeep by assessing all owners whose pro rata payment obligations are backed by liens on their units.[27] Collective action problems disincentivize

23. THOMAS W. MERRILL & HENRY E. SMITH, PROPERTY: PRINCIPLES AND POLICIES 1, 772 (2007) (discussing the need for some governance regime in the context of common resource management).

24. Every state adopted a condominium-enabling statute between 1961 and 1967, leading to a "tremendous condominium boom" in the decades that followed. HYATT, *supra* note 21, at 11-12. According to the National Association of Realtors, condominiums are "one of the most attainable and affordable options for first-time homeowners, minorities, and older residents." NAT'L ASS'S OF REALTORS, *A Bipartisan Effort to Make Homeownership More Affordable*, (June 2018), [https://perma.cc/MLV4-6HUB]. *See also* Michael N. Neal & Laurie Goodman, *The Housing Market Needs More Condos. Why Are So Few Being Built?*, URBAN INST. (Jan. 31, 2022), [https://perma.cc/BHJ8-ZY8G] (presenting data proving that "[c]ondos are more affordable than single-family homes" in every major city except New York City and Philadelphia).

25. CLIFFORD TREESE ET AL., RESEARCH INST. FOR HOUS. AM., CHANGING PERSPECTIVES ON COMMUNITY ASSOCIATION MORTGAGE UNDERWRITING AND CREDIT ANALYSIS 1, 6-7 (Nov. 2001) (discussing how common upkeep allows a community to take advantage of the cost savings from economies of scale).

26. Garrett Hardin, *The Tragedy of the Commons*, 162 SCI. 1243, 1244-45 (1968).

27. HYATT, *supra* note 21, at 105, 108, 121 (identifying the authority to assess and collect payments as a defining feature of common interest communities and discussing tools available to Boards to collect assessments). *See also* Andrea J. Boyack, *Community Collateral Damage: A Question of Priorities*, 43 LOY. U. CHI. L. J. 53, 73 (2011) ("The association provides sufficient governance to solve the tragedy of the commons by controlling overuse and creating a mechanism for maintenance and shared costs, which in turn permits communities to avoid the economic downside of public goods, meaning that a neighborhood can enjoy better amenities at lower prices."). Condominium associations typically are authorized to make regular as well as special assessments, and unit owners'

individuals from acting to remediate problems that cause widespread harms, including by bringing a lawsuit against a builder for faulty construction or by repairing building flaws, but having an association simply facilitates joint action.[28] Condominiums have been called "little democratic [sub-societies]" that give members an economic stake and a measure of control with respect to the multifamily building in which they live.[29]

Condominium governance design makes it possible for residents of a multifamily building to also be its owners.[30] When occupants have an economic stake in the real property they occupy, there is theoretically an incentive alignment that optimizes building quality.[31] In contrast, landlords owning multifamily rental buildings may be tempted to skimp on upkeep to increase their profits because they can externalize the quality-of-life costs of disrepair.[32] Condominium governance should, in theory, produce well-designed, well-constructed, and well-maintained buildings. In reality, that is not always the case.

There are three aspects of condominium ownership design that should help avoid tragic engineering failures like the one in Surfside, but each of these aspects is undermined by hidden

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obligation to pay assessments are both personal obligations and *in rem* covenants that run with the land. HYATT, *supra* note 21, at 105-09; Boyack, *supra* note 27, at 74.

28. Condominium ownership and governance functions as a built-in class action vehicle for consolidating and litigating common claims. *See* Alexandra Lahav, *Fundamental Principles for Class Action Governance*, 37 IND. L. REV. 65, 70-74 (2003) (discussing how joint action overcomes collective action problems inhibiting litigation of joint claims).

29. Hidden Harbour Ests., Inc. v. Norman, 309 So. 2d 180, 182 (Fla. Dist. Ct. App. 1975).

30. Under the common law, real property is owned in a column of space defined with respect to a two-dimensional real property mapping description that indicates a closed figure on the face of the earth. Today, every state has passed statutes that enable a three-dimensionally defined ownership of space through creation of a condominium. Boyack, *supra* note 27, at 74.

31. *See* Larry L. Dildine & Fred A. Massey, *Dynamic Model of Private Incentives to Housing Maintenance,* 40 S. ECON. J. 631, 638 (1974); Marjorie Flavin & Takashi Yamashita, *Owner-Occupied Housing and the Composition of the Household Portfolio*, 92 AM. ECON. REV. 345, 345 (2002); Geoff Rose & Richard Harris, *The Three Tenures: A Case of Property Maintenance*, URBAN STUD., (July 2021), [https://perma.cc/4FTG-TVEN].

32. Adam Travis, *The Organization of Neglect: Limited Liability Companies and Housing Disinvestment*, 84 AM. SOCIO. REV. 142, 145 (2019) (noting studies showing that under certain market conditions, "the under-maintenance of rental properties represents a rational, profit-maximizing approach for landlords").

weaknesses. First, a condominium creates a vehicle for joint legal action, facilitating lawsuits for faulty construction, and this should ensure builder accountability. Second, association governance solves the Tragedy of the Commons, and this should encourage the care and upkeep of a multifamily building. Finally, the ability to collect assessments from all owners expedites cost-spreading, and this should reduce barriers to funding common costs.

A. Developer Accountability and Developer Control

Negligent construction of a multifamily building imposes harm on all owners. A condominium association with authority to bring legal claims based on construction defects solves the associated collective action problem and makes it easier and less expensive for owners to seek legal redress.[33] Associations frequently bring construction lawsuits against developers, architects, and contractors more frequently than other owners.[34] A large number of construction claims could indicate that condominiums are more motivated and empowered to seek redress for defects, or it could indicate that condominiums are

33. A typical provision is the Texas Condominium Act which provides that the association has the power to "institute, defend, intervene in, settle, or compromise litigation or administrative proceedings in its own name on behalf of itself or two or more unit owners on matters affecting the condominium." John W. Raley & Katie McClelland, *Dealing with Multiple Owners—Condominium Construction Defect Litigation*, COOPER & SCULLY P.C. 1, 3 (Jan. 26, 2007), [https://perma.cc/N969-MHYZ]. Although in the early years of condominium development, the question of standing was sometimes contested in court, decisions have established that the association has broad authority to stand in the place of unit owners and bring a claim on their behalf. *Id.* at 3-4. Many state statutory regimes specifically preclude individual action against a developer for negligent construction in a condominium. *See, e.g.*, MASS. GEN. LAWS ch. 183(a) §10(b) (2017). In such states, courts have held that it would frustrate the statutory regime to permit individual lawsuits against the developer for faulty construction. *See, e.g.*, Cigal v. Leader Dev. Corp., 557 N.E.2d 1119, 1122-23 (Mass. 1990).

34. According to the American Insurance Association, owners in condominium developments are four times as likely to engage in construction litigation than owners of single-family homes. Raley & McClelland, *supra* note 33, at 1. For a discussion of the legal issues involved in association claims against developers, see E. Richard Kennedy & Ellen Hirsch de Haan, *Litigation Involving the Developer, Homeowners' Associations, and Lenders*, 39 REAL PROP., PROB. & TR. J. 1, 2-21 (2004).

more likely to engage in opportunistic scapegoating when something goes wrong in their building.[35]

Condominium construction litigation typically involves claims that the developer violated both express and implied warranties of construction quality as well as claims that the developer's board violated fiduciary duties during the period of developer control.[36] Settlements range from developer remediation to a payout of a couple million dollars.[37] Some construction claims result in much larger payouts. For example, the developer of a luxury oceanfront condominium in Florida recently paid $17.5 million to settle a construction lawsuit brought by the association for flaws relating to pool joints, steam rooms, and sliding glass doors.[38] Construction claims pertaining to the Millennium Tower in San Francisco resulted in a $100

35. Under most state statutes, construction claims can be brought by a condominium association any time within ten years of construction, and the risk of a construction claim being brought during that time by a condominium association is substantial and impacts developer costs. A recent study in California considered whether laws facilitating condominium construction claims reduce affordable housing in the state by raising the costs of condominium development. *See* Cynthia Kroll et al., *The Impact of Construction-Defect Litigation on Condominium Development*, 14 CAL. POL'Y. RSCH. CTR. (Oct. 2002), [https://perma.cc/CZ2J-7YQC] (considering the merits of complaints by developers and insurers that "frivolous" construction lawsuits led to higher development costs, slower pace of condominium development, and higher housing costs in California relative to other states).

36. Many construction claims raise statutory violations as well. *See generally, e.g.*, R. Douglas Rees, *Residential Construction Claims After the Advent of the Texas Residential Construction Commission*, COOPER & SCULLY, P.C. (Jan. 2006), [https://perma.cc/MG7F-NB5P] (discussing how construction claims were impacted by three Texas statutes). Construction claims seem to be particularly common types of litigation brought by condominiums against developers. *See, e.g.*, *Condominiums*, LONG & ROBINSON, L.L.C., [https://perma.cc/BAK2-SJ33] (last visited Apr. 16, 2022) (explaining that "[i]n condominiums, defective construction of common elements—including problems such as water intrusion, deficient roofing and defective windows—can lay a tremendous financial burden at the feet of the homeowners' association" and listing their representation in connection with settlement of several multi-million dollar claims brought by condominium associations against development companies).

37. A recently settled case provides a typical example. Complaint ¶¶ 16, 18, Westview Highlands Condo. Ass'n v. Westview of Berlin, L.L.C., HHD-CV18-6110534-S (Conn. Super. Ct. Sept. 7, 2018). Three years after initiating the lawsuit, the condominium and developer settled their dispute for two million dollars, but only after 20 contractors were impleaded in the case as third parties. Marianna Wharry, *Condo Association Reaches $2M Settlement Over Construction Defects*, LAW.COM (Oct. 28, 2021), [https://perma.cc/CY55-QQ7H].

38. *Construction Defects Lawsuit Leads to $17.5 Million Settlement for Condo Association*, BURNS & WILCOX (May 26, 2021), [https://perma.cc/D3F3-TNMC].

million developer remediation funded, in part, by the Transbay Joint Powers Authority.[39]

Statutes, procedural requirements, and governing documents may limit a board's ability to seek redress from developers for faulty construction. For example, in New York, condominiums are typically developed by a single-purpose entity that divests itself of all assets by selling the condominium units. Until November 2020, New York caselaw barred recovery by condominium associations against the development entity's beneficial owners unless the unit owners can prove that a fiduciary relationship existed between themselves and those investors.[40] This requirement effectively denied condominium owners legal redress for faulty construction once all units were sold.[41] Statutes commonly require owners (including condominium associations) to provide developers with the substance of a complaint and a chance to remedy the problem before a lawsuit can be filed.[42] And, of course, statutes of limitation and developer bankruptcy can prevent recovery for negligent construction.

Several condominium statutes permit the developer to modify default dispute resolution parameters by provisions in condominium governing documents and/or purchase agreements in order to limit who can bring what claims in what forum.[43] For

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39. Jay Barmann, *Millennium Tower May Be Sinking Faster Due to Digging That's Part of Effort to Stop It Sinking*, SFIST (Sept. 1, 2021), [https://perma.cc/K7RC-AULC].

40. Sutton Apartments Corp. v Bradhurst 100 Dev. L.L.C., 968 N.Y.S.2d 483, 485-86 (N.Y. App. Div. 2013) (holding that construction claims against investors holding the beneficial ownership of a developer would be dismissed as a matter of law unless there was a fiduciary relationship between the plaintiffs and the investors).

41. A New York court remedied this problem in Bd. of Managers of Be@William Condo. v. 90 William St. Dev. Grp. LLC, 135 N.Y.S.3d 360, 362 (App. Div. 2020). The 2020 ruling also made it possible for associations with previously dismissed lawsuits to recommence their actions against the beneficial owners of defunct developer entities. *See* Bill Morris, *Condo Owners Win Lawsuit Over Construction Defects*, HABITAT: BRICKS & BUCKS (Nov. 11, 2020), [https://perma.cc/A68D-3MTS].

42. *See* Alice M. Noble-Allgire, *Notice and Opportunity to Repair Construction Defects: An Imperfect Response to the Perfect Storm*, 43 REAL PROP., TR & EST. L.J. 729, 748, 779-80 (2009) (discussing the proliferation and impact of NOR statutes and arguing that a more complex, complete, and uniform approach to construction claims would be a preferable approach).

43. See Ron Holmes, *Stop the Lawsuits: Condominium Construction Defect Litigation*, THE HOLMES FIRM PC (Nov. 26, 2019), [https://perma.cc/9SNL-G7PL], for a discussion of early neutral evaluation.

example, purchase agreements can include a buyer's waiver of jury trial, or condominium documents can mandate mediation or arbitration in lieu of construction litigation.[44] One strategy that developers sometimes employ is to require an "early neutral evaluation" by an impartial expert who will analyze the alleged defect and determine a proper remedy.[45]

In addition to limitations on the association's legal ability to seek redress for construction defects, initial developer control of the association creates practical barriers to accountability. In a condominium, the developer initially holds title to all units and accordingly controls the association.[46] Developer control typically persists throughout the period of development, until a supermajority of units is sold.[47] During the Developer Control Period, the developer dominates voting and controls the association's board, including its actions on behalf of owners as well as management decisions regarding budget, maintenance, and repair. The developer is constrained by fiduciary duties because the board of the association acts in a fiduciary capacity for all owners and must operate and manage the condominium in good faith.[48]

In retrospect, the condominium ownership structure of Champlain Tower South does not appear to have adequately restrained the developer's temptation to cut corners. This may be in part because bringing a claim requires awareness of construction defects, and many of the problems in Champlain Tower South were latent for decades. When a condominium association does not resolve building structural problems by obtaining remediation from the developer, then the responsibility of mitigating such problems falls to the owners themselves.

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44. *See* Eva Lauer, *Arbitration and Mediation in Condominium Law*, LAUER LAW, P.A., [https://perma.cc/ALS2-W48G] (last visited Apr. 14, 2022).

45. *See, e.g.*, Holmes, *supra* note 43; *see also* Mosaic Residential N. Condo. Ass' n v. 5925 Almeda N. Tower, L.P., No. 01-16-00414-CV, 2018 WL 5070728, at *8 (Tex. App. Oct. 18, 2018) (adopting this interpretation).

46. *See* WAYNE S. HYATT & SUSAN F. FRENCH, COMMUNITY ASSOCIATION LAW: CASES AND MATERIALS ON COMMON INTEREST COMMUNITIES 607, 622 (2d ed. 2008) (discussing the developer's initial control of a common interest community and when and how control is transferred to unit owners).

47. *Id.*

48. *See* HYATT, *supra* note 21, at 128 (explaining the Business Judgment Rule in judicial oversight of Board actions).

B. Practical Barriers to Condominium Upkeep

Some landlords defer required maintenance in multifamily rental buildings to boost their profits while letting tenants bear the costs of living in unsafe homes.[49] For example, landlord maintenance cost-cutting has led to fatal fires, as recently as 2021 and 2022 in Chicago, Philadelphia, and New York.[50] Historically and today, tenants frequently complain of uninhabitable conditions in multifamily rental buildings, particularly those that charge lower rents.[51] Unless a landlord can make money by increasing rents to offset maintenance costs, landlords have the economic incentive to delay building repairs and updates.

One of the benefits of owning rather than renting a unit in a multifamily building is that the unit owner can theoretically ensure the quality of their home. Owners occupying the unit directly enjoy the benefits of maintenance and upkeep.[52] Maintenance economically benefits all owners (resident or not) by preserving their equity investment.[53] Theoretically, owner

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49. MATTHEW DESMOND, EVICTED: POVERTY AND PROFIT IN THE AMERICAN CITY, 64-79 (2016).

50. *See, e.g.*, Madison Hopkins & Cecilia Reyes, *42 Fires, 61 Deaths: A Story of Failed City Oversight*, BETTER GOV'T ASS'N (Apr. 23, 2021, 6:00 AM), [https://perma.cc/6EPZ-VTJG]; Sophie Kasakove et al., *18 People, a Deadly Fire: For Some, Crowded Housing Is Not a Choice*, N.Y. TIMES (Jan. 8, 2022), [https://perma.cc/P4Q9-U92W]; Ashley Southall et al., *19 Killed in New York City's Deadliest Fire in Decades*, N.Y. TIMES (Jan. 11, 2022), [https://perma.cc/9DHG-MCU5].

51. The famous case of *Javins v. First Nat'l Realty Corp.* involved uninhabitable conditions in a large multifamily project in Washington, DC. 428 F.2d 1071, 1072 (1970). The dangers created by poor landlord maintenance of rental housing contributed to the creation of judicial and statutory implied warranties of habitability in every state. Paula A. Franzese et al., *The Implied Warranty of Habitability Lives: Making Real the Promise of Landlord-Tenant Reform*, 69 RUTGERS U. L. REV. 1, 3, 10, 11 (2016); *see also* David A. Super, *The Rise and Fall of the Implied Warranty of Habitability*, 99 CALIF. L. REV. 389, 389 (2011).

52. *Compare* Rose & Harris, *supra* note 31, at 2 ("It stands to reason that owner-occupiers would maintain their properties better than absentee landlords . . . ."), *with* Laurie S. Goodman & Christopher Mayer, *Homeownership and the American Dream*, 32 J. OF ECON. PERSPS. 31, 50 (2018) ("[R]enters are unlikely to maintain a property as well as its owner would.").

53. When buildings are more highly leveraged, so that less of an owner's capital is invested in the real estate, maintenance levels appear to decline. Lee Seltzer, *The Effects of Leverage on Investments in Maintenance: Evidence from Apartments*, *in* FEDERAL RESERVE BANK OF NEW YORK STAFF REPORTS, NO. 1000 1, 1 (Dec. 2021). Owners, particularly those in high-rise buildings, must fund consistent maintenance in order to preserve the value of their investment. *See* Rachelle Alterman, *The Maintenance of Residential Towers in*

occupants should be more willing to expend money to maintain and repair the building in which they live in and represents perhaps their largest capital asset. On the other hand, lack of knowledge and buy-in from owners and board members can obstruct efforts to undertake expensive repairs. Condominium owners—including those elected to serve on the association's board—are rarely sophisticated real estate businesspeople and may not appreciate the need for and impact of maintenance. Unit owners accustomed to renting may incorrectly presume that significant building repair costs are not theirs to pay.[54] Even though associations typically employ expert managers and repair professionals to perform maintenance, it is up to the board and, in some cases, the association membership at large, to approve such expenditures.[55] Condominium owner inexperience and lack of understanding can inhibit necessary repairs.[56]

Condominium boards are legally required to maintain common property, with costs allocated among the members.[57] In a condominium, decision-making is by committee. Although democratic decision-making gives stakeholders a voice, it is inefficient, complicated, and time-consuming.[58] Board members

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Condominium Tenure: A Comparative Analysis of Two Extremes - Israel and Florida, *in* MULTI-OWNED HOUSING LAW, POWER AND PRACTICE 127, 128, 142 (Sarah Blandy et al. eds., 2010). Landlords have a similar incentive to maintain to preserve their investment. *See* Dean H. Gatzloff et al., *Cross-Tenure Differences in Home Maintenance and Appreciation*, 74 LAND ECONS. 328, 328, 341 (1998) (finding only weak evidence supporting the hypothesis that owner-occupied homes appreciate at a faster rate than rented homes).

54. Ross Levin, *Levin: People Underestimate the Cost of Owning a Home vs. Renting One*, STAR TRIBUNE (Sep. 11, 2021, 8:00 AM), [https://perma.cc/68MX-Q284]; Arian Campo-Flores, *Florida is Set to Pass Stricter Condo Rules After Surfside Collapse*, WALL ST. J. (Mar. 5, 2022, 9:00 AM), [https://perma.cc/B4ML-5TSG].

55. HYATT, *supra* note 21, at 116 ("Often, special assessments require homeowner approval and greater homeowner involvement than annual assessments."); s*ee also, e.g.*, Azar v. Old Willow Falls Condo. Ass'n, 593 N.E.2d 583 (Ill. App. Ct. 1992) (Illinois' Condominium Act requires two-thirds of the unit owners to approve any special assessment).

56. *See, e.g.*, CMTY. ASS'N RESEARCH FOUND., BREAKING POINT: EXAMINING AGING INFRASTRUCTURE IN COMMUNITY ASSOCIATIONS 5 (2020), [https://perma.cc/97TT-Y6DK] ("Survey respondents found that homeowners and residents were more receptive and supportive of major infrastructure repairs when they were given the opportunity to learn—in advance—about the scope and costs of the project from experts, like the engineers and contractors who had specific knowledge of the damage and how to fix it.").

57. HYATT, *supra* note 21, at 43.

58. Jeffrey L. Kerr & Vincent F. Caimano, *The Limits of Organizational Democracy*, ACAD. MGMT. EXEC. 81, 85, 93 (2004); Li Hao & Wing Suen, *Viewpoint: Decision-Making in Committees*, 42 CAN. J. ECON. 359, 384 (2009).

may be unwilling to upset friends and neighbors by mandating disruptive or expensive repairs. In democratic governance, it is difficult to accomplish a necessary, but unpopular, measure. There is a great temptation for board members to kick the proverbial can down the road rather than promptly attending to the unpleasant business of significant remediation work on a building.[59] Even when board members do plan for necessary repairs, they may face resistance from the membership.[60] If governing documents provide for association approval of any large special assessments or capital improvements (as they often do), a vocal contingent of unit owners can prevent the assessment from happening.[61] In Champlain Towers South, such membership resistance proved fatal.[62]

C. Financial Entanglement and Precarity

Condominiums are authorized by statute and the governing declaration to collect assessments from unit owners for required common expenses.[63] Assessments generally are based on budgets proposed by the board and ratified by the members, which means that significant increases in assessments require that a majority of the unit owners agree.[64] Some governing documents and state statutes allow minor assessment increases without a majority

59. Procrastinating costly and unpopular repairs is a common condominium governance program and was a key factor in the Surfside disaster. Mike Baker & Kimiko de Freytas-Tamura, *Infighting and Poor Planning Leave Condo Sites in Disrepair*, N.Y. TIMES (July 3, 2021), [https://perma.cc/L5K3-XAC5].

60. *Id.* (giving several examples).

61. *Id.* HYATT, *supra* note 21, at 115-16.

62. Baker & Freytas-Tamura, *supra* note 59. Some owners refused to pay for structural repairs, delaying the project. *Id.* Their resistance led several members of the Board to resign in protest, further delaying remediation. *Id.*; *see also supra* notes 16-17 and accompanying text (where a similar situation occurred at another Florida condominium when a disagreement in paying for repairs resulted in Board members resigning).

63. *See* UNIF. COMMON INT. OWNERSHIP ACT § 2-107(a) (2008). The precise method of allocating common costs in a given condominium is set forth in its declaration. UNIF. COMMON INT. OWNERSHIP ACT § 2-107(b) (2008). Unit owners may split common expenses evenly among all units or units may have a pro rata contribution share based on square footage, number of bedrooms, or some other classification. UNIF. COMMON INT. OWNERSHIP ACT § 2-107 cmt. 2 (2008).

64. *See* UNIF. COMMON INT. OWNERSHIP ACT § 3-123(a)-(b) (2008). Common upkeep also allows a community to take advantage of cost savings from economies of scale. TREESE ET AL., *supra* note 25, at 6.

ratification, but large increases almost always require the issue be put to a vote.[65]

An owner's assessment obligation is a personal debt that is secured by statutory lien on the owner's unit.[66] Because assessments are secured by a lien, the association can seek repayment of delinquent amounts both from the unit owner through a collection lawsuit or from the unit's value by foreclosing on the lien.[67] It is critically important that an association be able to collect assessments from each unit owner, even those who disagree with approved expenses.[68] If some owners do not pay their pro rata share, the association will lack sufficient funds to maintain common elements and make necessary repairs.[69] In and after 2008, when a significant number of owners in condominiums located in South Florida and other foreclosure hotspots were unable to pay their assessments, compliant owners either had to pay on behalf of their defaulting neighbors or suffer the ill-effects of poor maintenance.[70] In one

65. *See, e.g.*, CAL. CIV. CODE § 5605(b) (West 2014); KAN. STAT. ANN. § 58-4620(b) (West 2010).

66. HYATT, *supra* note 21, at 107, 117, 119. Amounts owed and secured by the lien may also include reasonable attorney's fees, late fees, fines for violations of community rules, and interest, although these additional amounts are sometimes capped by statute. *See, e.g.*, UNIF. COMMON INT. OWNERSHIP ACT § 3-116 (amended 2014) (NAT'L CONF. OF COMM'RS ON UNIF. STATE L. 2008) (18% cap); CAL. CIV. CODE § 5650 (2014) (12% cap); and GA. CODE ANN. § 44-3-109 (2008) (10% cap).

67. Associations frequently adopt a written collection policy stating protocols to follow for collecting delinquent assessments. A few jurisdictions require a written policy. *See, e.g.*, COLO. REV. STAT. § 38-33.3-209.5 (2014). Some associations operate without a formal collection policy, in which case collection occurs as and how the board determines in its discretion. Foreclosure is an option, but a foreclosed lien is often not the first priority lien, meaning that the sale may not generate large proceeds, particularly if the property is underwater with respect to a first mortgage. *See* Boyack, *supra* note 27, at 53, 90, 95. Most states require judicial foreclosure of association liens, but some states that permit non-judicial foreclosure of mortgage liens also permit non-judicial foreclosure of condominium assessment liens. UNIF. COMMON INT. OWNERSHIP ACT § 3-116 cmt. 5 (amended 2014) (NAT'L CONF. OF COMM'RS ON UNIF. STATE L. 2008). An association that enforces its requirements unevenly is vulnerable to litigation claiming violation of fiduciary duties and good faith. *See, e.g.*, Saunders v. Thorn Woode P'ship, L.P., 462 S.E.2d 135, 137 (Ga. 1995); White Egret Condo., Inc. v. Franklin, 379 So. 2d 346, 352 (Fla. 1979); Cowling v. Colligan, 312 S.W.2d 943, 945 (Tex. 1958).

68. Liens are critical to the functioning of condominiums and are the community's "lifeblood." *See* HYATT, *supra* note 21, at 105, 118, 121.

69. *See id.* at 121.

70. The financial entanglement of owners in a condominium created issues in the aftermath of the 2008 Foreclosure Crisis because owners defaulted both on assessments and

case, a Florida condominium with affordable amenities was left to sink into disrepair when several unit owners did not pay their assessments. Soon, "the rats started chewing through the toilet seats in vacant units and sewage started seeping from the ceiling."[71] The decline in maintenance drove falling property values still lower, and the desperate association began foreclosing on people on a fixed income who could not pay the increased assessment amounts.[72]

Unit owners bear the financial responsibility to maintain their condominium, and this means that "the fiscal fortunes of the members of a community are intertwined."[73] Although sharing responsibility spreads the cost of maintenance, the condominium ownership structure also means that an owner's ability to maintain their home is tied to other people who might refuse to pay their fair share.[74] When owners cannot or will not pay their assessments, the association either must assess willing owners even more to make up the shortfall or go without the repairs.[75]

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their mortgages, and mortgage liens in most states enjoy complete (or at least partial) priority over association assessment liens. *See generally* Boyack, *supra* note 27, at 77-79. *See also* Monica Hatcher, *Mediators Foresee Gloom, Doom in Condo Industry*, MIAMI HERALD, Jan. 4, 2009, at 1H; *Concerned Homeowners Association Members Coalition Forms*, PR.COM (Feb. 18, 2011), [https://perma.cc/FF7H-2C2P].

71. *Neighbor vs. Neighbor as Homeowner Fights Get Ugly*, GAINESVILLE SUN (July 10, 2011), [https://perma.cc/KNT5-KFVC] (discussing the problems of the Inlet House condo complex in Fort Pierce, Florida).

72. *Id.* It is predictable that failure of a condominium to maintain will drive down unit values. *See, e.g.*, Bd. of Dirs. v. Wachovia Bank, N.A., 581 S.E.2d 201, 206 (Va. 2003) (Lacy, J., dissenting) ("[P]art of the value of a condominium unit comes from the ability of the condominium to maintain the common areas of the development . . . . The ability to maintain these elements is directly related to the association's ability to secure payment of assessments from the individual unit owners.").

73. Boyack, *supra* note 27, at 76-77; *see also* Trevor G. Pinkerton, *Escaping the Death Spiral of Dues and Debt: Bankruptcy and Condominium Association Debtors*, 26 EMORY BANKR. DEV. J. 125, 129-30 (2009).

74. HYATT, *supra* note 21, at 121; Christine Haughney, *Collateral Foreclosure Damage*, N.Y. TIMES (May 15, 2008), [https://perma.cc/U5RH-NVGW] (quoting Sam Chandan, chief economist at the real estate research firm Reis).

75. The financial strain caused by assessment default during the Foreclosure Crisis was particularly problematic because some of the deferred maintenance occurred in buildings that had been constructed or converted during the housing preceding the Foreclosure Crisis. The high demand for condominium units, particularly in South Florida, incentivized rushed and sloppy condominium construction and conversion, particularly in projects where developers could insulate themselves from liability through the condominium documents. Instead of governance design ensuring high quality construction, governance design may have created a moral hazard encouraging cutting corners. *See* Boyack, *supra* note 27, at 56-

The Surfside collapse shows that unit owners refusing to pay necessary assessments can have dire consequences. The condominium's 2018 engineering report warned of escalating degradation of the structure if remediation was not undertaken, and, in hindsight, this warning is rather damning.[76] But the owners' resistance to a huge special assessment is also understandable.[77] A $15 million repair bill when divided among 136 unit-owners is still a significant sum: Champlain Towers South unit owners were assessed between $80,000 and $336,000 for units priced only two or three times that amount.[78] This astronomical assessment was necessary because the association's reserve accounts had only 6.9% of the amount that was necessary for the project.[79] Simply mandating that unit owners pay such an enormous sum does not make the money appear. When unit owners cannot pay assessments, they will not pay them. This was true in 2008 and is the stark reality that led to dire consequences in Surfside, Florida in 2021.[80]

In response to the functional insolvency of some condominium associations after 2008, approximately twenty states passed laws requiring that condominiums maintain a certain level of reserves or conduct reserve studies to ensure that the association is not left empty handed should a significant capital need arise.[81] In the wake of the Champlain Towers collapse,

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57, 59; Carolyn Gallaher, *Are American's Condos having a Midlife Crisis?*, GREATER GREATER WASH. (Aug. 10, 2021), [https://perma.cc/4PW3-DLW8].

76. *See* MORABITO REPORT, *supra* note 14, at 1, 7.

77. An analogy can be drawn to citizens resisting any tax increase in spite of critical needs to repair and replace national infrastructure.

78. Putzier et al., *supra* note 12; Association Reserves, *Older Condos Part 1 | Lessons from Champlain Towers*, YOUTUBE (Aug. 3, 2021), [https://perma.cc/ZE34-T2VU] (describing Champlain Towers property values); Campo-Flores & Calvert, *supra* note 3.

79. Tolan et al., *supra* note 16.

80. *See, e.g.*, Rachel Lee Coleman, *Desperate Condo, Homeowner Associations Thrown a Lifeline*, MIAMI HERALD, Mar. 7, 2010, at 1A; Haughney, *supra* note 74. The owners in Champlain Towers South similarly lacked the ability to come up with their pro rata contribution to repair costs. Tolan et al., *supra* note 16.

81. Nine states (California, Colorado, Delaware, Hawaii, Nevada, Oregon, Utah, Virginia, and Washington) currently require that associations do reserve studies. *Reserve Requirements and Funding*, CMTY. ASS'NS INST., [https://perma.cc/27D3-WZG3] (last visited Apr. 10, 2022) [hereinafter *Reserve Requirements and Funding*]. Fannie Mae and Freddie Mac also changed their underwriting requirements in the aftermath of the Foreclosure Crisis to require that common interest communities allocate 10% of their annual budgets to fund reserves; although until 2022, a reserve study showing low risk of a high

Florida is considering imposing a hefty reserve requirement to ensure that maintenance can still be funded even if owners cannot pay a large lump sum assessment.[82] The presence of adequate reserves would mitigate the impact of a huge repair bill in a condominium the same way a "rainy day fund" offsets the need for an owner of a single-family home to pay to repair a broken hot water heater or leaky roof. A mandate to fund reserves to a certain level, however, suffers from the same problem as a mandate to fund a special assessment: it presumes that people can and will pay a higher cost for their housing. And unit owners may be unwilling or unable to do so.

II. CONDOMINIUM STRUCTURE'S POTENTIAL

In the aftermath of the Surfside collapse, multiple lawsuits, grand juries, and advisory task forces called for changes to laws governing multifamily buildings and condominiums.[83] Experts examined how building code requirements, inspections, and occupancy certifications can better ensure the safety and stability of high-rise structures.[84] A grand jury in Miami recommended that government officials be granted greater oversight and

assessment could be offered in lieu of the mandatory 10% funding. *See infra* notes 111, 120 and accompanying text.

82. *See infra* notes 87, 109 and accompanying text.

83. *See, e.g.*, GRAND JURY FINAL REPORT, *supra* note 4, at 2, 8, 11, 16; REPORT OF THE FLORIDA BAR REAL PROPERTY, PROBATE & TRUST LAW CONDOMINIUM LAW AND POLICY LIFE SAFETY ADVISORY TASK FORCE, 2 (Oct. 12, 2021), [https://perma.cc/H7XY-JLUS] [hereinafter FLORIDA BAR TASK FORCE REPORT]; SURFSIDE WORKING GROUP, FLORIDA BUILDING PROFESSIONALS RECOMMENDATIONS 2 (Sept. 2021), [https://perma.cc/X5ZJ-MYZ5].

84. There is great urgency in addressing concerns regarding structural integrity of older multifamily condominiums in Florida where approximately 3.5 million people live in 1.5 million condominium units, 60% of which are more than thirty years old. GRAND JURY FINAL REPORT, *supra* note 4, at 2-3 (calling the Champlain Towers South collapse "a wake-up call for state and local governmental officials"). The Grand Jury Final Report suggested ten or fifteen years, the bill introduced in the Florida legislature proposed a statewide thirty-year recertification requirement that is reduced to twenty-five years for coastal structures. *Id.* at 6; H.R. Pandemics & Pub. Emergencies Comm., Proposed Comm. B. 22-03 (Fla. 2022), [https://perma.cc/2HYY-D6L2]. Prior to the collapse, only Miami-Dade and Broward Counties had recertification requirements. GRAND JURY FINAL REPORT, *supra* note 4, at 2; *see also* MIAMI-DADE CNTY. CODE § 8-11(f), *supra* note 13; Broward County Board of Rules & Appeals, *40 Year Building Safety Inspection Program*, at 5.86 (2015), [https://perma.cc/W9PH-WH7Q].

enforcement authority regarding buildings' structural issues.[85] The grand jury also called for more frequent recertification of buildings in Miami so that structures would be examined more often than every forty years.[86] A proposal that mirrored recommendations of various task forces convened in the wake of the Champlain Towers South collapse.[87] Changes to condominium governing law can complement such building code improvements.[88]

A. Florida Condominium Law Proposals

Post-Surfside proposals regarding condominium law fall generally within four categories. First, condominium maintenance standards should be established and linked to mandated reinspection and reserve studies.[89] Second, the quality of improvements in a condominium and the sufficiency of association reserves should be more transparent, specifically disclosed to owners, buyers, and regulators. Third, various other

85. GRAND JURY FINAL REPORT, *supra* note 4, at 1. *See also* Vanessa Romo, *A Surfside Condo Collapse Grand Jury Calls for Immediate Reforms*, NPR (Dec. 15, 2021), [https://perma.cc/26LB-9LAS].

86. GRAND JURY FINAL REPORT, *supra* note 4, at 3,6; *see also* H.R. PCB PPE 22-03, Pandemics and Public Emergencies Comm. (Fla. 2022), [https://perma.cc/6NAX-4BCB] [hereinafter Florida House Bill].

87. Task forces advocated for additional and more frequent recertification requirements for high-rise condominium buildings after transfer of control to unit owners. FLORIDA BAR TASK FORCE REPORT, *supra* note 83, at 15 (calling for reinspection every five years for buildings over 3 stories tall); SURFSIDE WORKING GROUP, *supra* note 83, at 2, 4.

88. Although the Florida Bar Task Force Report, Surfside Working Group, and Grand Jury Final Report focused on necessary changes to state and local laws in Florida, the Surfside disaster has already spurred changes and proposed changes to building and condominium laws in other states. For example, the Los Angeles County Board of Supervisors passed a measure mandating engineering reinspection for 30-year or older buildings in Los Angeles County. L.A. CNTY. BD. OF SUPERVISORS, MOTION FOR ASSESSING THE SAFETY OF HIGH-RISE BLDGS. IN L.A. CNTY. (2021), [https://perma.cc/73LT-L68T]. Similar measures have been proposed in the District of Columbia, Maryland, Missouri, New York, Ohio, and South Carolina.

89. Proposed legislation in Florida would require condominiums and cooperatives to conduct reserve studies every 10 years for buildings that are three stories or more and requires developers to complete reserve studies for every building that is three stories or more, prior to turning over an association to the unit owners. Florida House Bill, *supra* note 86. The bill defines "reserve study" as study of the reserve funds required for future major repairs and replacement of the common elements. *Id.* at 12. If passed, Florida's law "would be one of the strictest in the U.S. regarding condo inspection and reserve-funding requirements." Campo-Flores, *supra* note 54.

proposals focus on educating board members, bolstering their authority to make repairs in spite of unit owner objections, and/or increasing board accountability to owners and government regulators for repairs not made. Finally, several proposals focus on establishing a non-waivable required amount for reserves that a condominium must set aside for structural repairs.

Establishing maintenance and repair standards for high-rise condominiums would provide needed clarity and cover for boards with respect to building maintenance.[90] Frequent, detailed inspections would raise awareness of defects and needed remediation, and it would be particularly helpful if these requirements led to more robust accountability for developers who negligently built inherently flawed buildings.[91] Associations require sufficient time and methods to discover and bring suit for faulty construction, and laws should ensure that condominiums can obtain funding to remediate harms wrongfully caused by builders. For example, terms in condominium governing documents and standard form purchase agreements that purport to narrow the manner or timing of construction dispute resolution and terms that insulate developers from liability should be deemed ineffective.[92]

Transparency requirements would ensure that new and existing unit owners are not caught off guard with respect to forthcoming maintenance needs.[93] If condominium buyers know

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90. The Florida Condominium Act currently has "no express maintenance, repair or replacement standards for boards of directors to follow in the Act or in most governing documents." FLORIDA BAR TASK FORCE REPORT, *supra* note 83, at 9.

91. The Florida Bar Task Force Report suggests the adoption of new inspection protocols using developer turnover inspection report required by R.S. Ch. 718.301(4)(p) as a model. FLORIDA BAR TASK FORCE REPORT, *supra* note 83, at 14-15. That law lists thirteen items that must be inspected, including roof, structure, fireproofing, elevator, plumbing, and electrical systems. *Id.* at 13-14. The Florida Bar Task Force Report proposes that waterproofing be added to the list. *Id.* at 10. The Grand Jury Final Report also recommends more specific requirements for recertification and condominium maintenance standards, particularly mentioning waterproofing. GRAND JURY FINAL REPORT, *supra* note 4, recommendations 4-8, 10, 12, and 25. Lack of waterproofing was a significant source of the structural problems at Champlain Towers South. Putzier et al., *supra* note 12.

92. *See generally* Andrea J. Boyack, *Common Interest Community Covenants and the Freedom of Contract Myth*, 22 J. LAW & POL'Y 767 (2014) (explaining why common interest community governing documents are not contracts that are freely chosen by unit owners).

93. The Florida Bar Task Force proposes that state condominium laws mandate that developers provide a report with protocols for "required maintenance, useful life, and replacement costs" of each item, and propose that large condominiums be required to include

of upcoming maintenance needs, the condominium unit will be more accurately valued in a sale. Disclosure mandates with respect to current owners can help educate residents about the need for structural remediation, and disclosure to governing bodies can help ensure that dangerous structural issues are addressed.[94] However, disclosing existing problems to current owners cannot avoid the effects of those owners' prior mispricing of units. Many current owners did not expect that their housing costs would dramatically increase to fund significant structural remediation in their building.[95] Perhaps government programs can find ways to help protect not only new buyers but also existing owners who did not have the benefit of such disclosures when they purchased their units.[96]

Condominium board members are non-expert volunteer members of the community.[97] As the Florida Bar Task Force explained, "education of directors, officers and unit owners, as to their specific obligations, statutory requirements and issues involved in association and condominium management, operation and maintenance is imperative."[98] In addition to education efforts, some proposals call for enhanced board accountability for maintenance failures,[99] but increased accountability may chill willingness to serve on the condominium board and may lead to wasteful litigation among condominium members.[100] It is perhaps more effective to focus on enhancing the authority of

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and frequently update such information on their website. FLORIDA BAR TASK FORCE REPORT, *supra* note 83, at 13-14.

94. *See, e.g.*, GRAND JURY FINAL REPORT, *supra* note 4, recommendations 21 and 23.

95. Benny L. Kass, *Wondering Why Your Condo Assessment Keeps Going Up? Here's How to Find Out*, CHI. TRIB. (Dec. 26, 2017), [https://perma.cc/6LEW-RBHS].

96. The Grand Jury Final Report recommends that condominium boards be required to report to government entities. GRAND JURY FINAL REPORT, *supra* note 4, recommendation 21. Such reporting requirements could be tied to oversight and enforcement or could be tied to government assistance and guidance.

97. HYATT, *supra* note 21, at 81; Marilyn Lincoln, *Condo Culture: Volunteer Board Members Work Toward Everyone's Good*, NAT'L POST (Dec. 19, 2012), [https://perma.cc/P4XA-DPXW].

98. FLORIDA BAR TASK FORCE REPORT, *supra* note 83.

99. FLORIDA BAR TASK FORCE REPORT, *supra* note 83, at 33; GRAND JURY FINAL REPORT, *supra* note 4, at 6-10.

100. Association and board legal fees are common expenses, and all members of a condominium are therefore financially responsible for legal costs incurred by boards defending against litigation from members. *See, e.g.*, Ocean Trail Unit Owners Ass'n v. Mead, 650 So. 2d 4, 6-7 (Fla. 1994).

board members to make necessary repairs even without unit owner approval.[101] A mandate to make repairs coupled with the authority to do so may also provide cover for board members who face unit owner resistance to assessment increases. Changing the power of condominium boards, however, requires changing the terms of condominium governing documents because condominium bylaws are private contracts enforceable as such. If a condominium's governing documents mandate that unit owners must vote to approve assessment increases, then changing a statute to deny the owners that approval right creates a troubling conflict with the terms of existing private contracts.[102]

Enhanced board accountability for structural problems may increase board members' focus on and willingness to address adequate building maintenance. But lack of awareness and motivation are not the only problems.[103] Ensuring developer responsibility for design and construction errors is also critical because it is unfair to have unit owners pay for a developer's mistakes.[104] In addition, simply mandating that condominiums undertake significant building repairs will be ineffective if the condominium's financial resources are insufficient to do so.

The biggest reason that Champlain Towers South failed to make critical repairs in its building was that it did not have the money to do so.[105] When a condominium has adequate reserves, it need not resort to a huge special assessment to fund the entire cost of necessary repairs. State laws vary with respect to association reserve requirements, and in only a handful of states is a particular level of reserve funding required by law.[106] Furthermore, in some states, including Florida, a majority of unit owners can waive the statutory reserve funding requirement, a loophole that is particularly problematic when employed by a developer-controlled association to defer maintenance funding.[107]

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101. *See* FLORIDA BAR TASK FORCE REPORT, *supra* note 83.

102. HYATT, *supra* note 21, at 109-111.

103. *Supra* Sections I.A-C.

104. *See supra* notes 93-96 and accompanying text.

105. *See* Baker & Freytas-Tamura, *supra* note 59.

106. *Reserve Requirements and Funding*, *supra* note 81 (describing the requirements of various state laws).

107. Florida's current law does not require a reserve study but requires a reserve schedule for repair and replacement of major components, but this statutory requirement is

New proposals in Florida would raise the condominium reserve requirement to 50% of replacing each component in the inspection report "based on the estimated remaining useful life" and make the requirement un-waivable by unit owners.[108]

If reserves are better funded, condominiums will be better financially situated to make major structural improvements, but reserve mandates risk being a type of magical thinking. Simply requiring owners to pay higher assessments in order to fund reserves will not guarantee that owners have the ability do so.[109] Housing costs today are higher than ever before, and inflationary increases outpace income growth, particularly for retirees on fixed income (such as many residents of South Florida condominiums).[110] Growing reserves require assessments to increase faster than inflation, which may make housing costs unaffordable to existing and would-be condominium owners. Alternate sources of capital might be required in some condominiums in order to effectively fund necessary repairs.

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waivable by a majority vote of the association. FLA. STAT. ANN. §§ 720.303(6), 718.112(2)(f), 719.106(1)(j) (West 2022); *see also* Florida House Bill, *supra* note 86, at 13-14 (describing how developers exploit this loophole).

108. FLORIDA BAR TASK FORCE REPORT, *supra* note 83, at 21; Florida House Bill, *supra* note 86, at 14. The proposed Florida House Bill prohibits members of an association from waiving the reserve requirement, prohibits developers from waiving collection of reserve funds, and mandates that reserve funds earmarked for repair be used for those purposes. Florida House Bill, *supra* note 86, at 14. Similarly, the Grand Jury Final Report recommended that "the waiver provision regarding the obligation to fund reserves for condominium repairs be stricken from the statute," but states that if the waiver provision remains, any such waiver should require the vote of at least 70% of the unit owners. GRAND JURY FINAL REPORT, *supra* note 4, § 28-29, at 35. The Grand Jury also recommends that the Florida Condominium Act be amended to prohibit repurposing reserve funds. *Id*. § 30, at 35. The Bar Task Force proposed a less drastic change, requiring a supermajority (75%) vote to waive required reserves. FLORIDA BAR TASK FORCE REPORT, *supra* note 83, at 22.

109. One of the reasons that Champlain Towers South did not perform structural repairs earlier is that the condominium could not obtain financing to commence the project. Tolan et al., *supra* note 16. Condominiums do have the power to collect delinquent assessments from defaulting unit owners, but collection efforts take time and money. Foreclosing an association lien may be ineffective to obtain delinquent assessment funds when a first mortgage lien encumbers the property. Boyack, *supra* note 27, at 75.

110. Nichole Friedman, *U.S. Housing Affordability Worsens,* WALL ST. J. (Feb. 10, 2022), [https://perma.cc/6RUD-G5RT]; Lisa Iannucci, *Making Special Assessments Work,* COOPERATOR NEWS (Mar. 2017), [https://perma.cc/2AUG-KBW6]; Nathan Crook et al., *Florida Building Collapse Hints at Future When Only Rich Can Afford Beach*, BLOOMBERG (July 7, 2021), [https://perma.cc/4WQT-27RN].

B. Impact of GSE Underwriting Requirements

As legislatures around the country debate changes to building codes and condominium laws, in a practical sense, condominium requirements regarding structural stability have already dramatically changed. Fannie Mae and Freddie Mac, the two government sponsored enterprises ("GSEs") that dominate the secondary mortgage market, announced new underwriting requirements starting in 2022 that require condominiums prove structural soundness and maintenance adequacy as a prerequisite to the GSEs acquiring loans secured by units in the building.[111] Because the GSEs are the secondary home mortgage market's biggest players,[112] their underwriting requirements define access to mortgage capital.[113] It is more expensive and more difficult to obtain a loan secured by units in condominiums that do not comply with GSE underwriting requirements.

The GSEs will only acquire mortgage loans secured by condominium units in condominiums that conform to their underwriting mandates.[114] Numerous examples show the

111. Fannie Mae Lender Letter (LL-2021-14) [hereinafter Fannie Lender Letter]; Freddie Mac Bulletin 2021-38 [hereinafter Freddie Bulletin]. The guidelines are framed as "temporary," but contain no expiration date. Fannie Mae released two other documents detailing these changes to its underwriting guidelines: *Appraising and Underwriting Condo and Co-op Projects*, FANNIE MAE, [https://perma.cc/58G6-FLBY] (last visited Apr. 25, 2022); Jodi Horne, *Protecting Condos as a Sustainable Housing Option*, FANNIE MAE: PERSPECTIVES BLOG (Oct. 13, 2021), [https://perma.cc/MQV7-DRNN].

112. The majority of mortgage loans made today are earmarked for resale to the GSEs. Andrew Ackerman, *Fannie Mae, Freddie Mac to Back Home Loans of Nearly $1 Million as Prices Soar*, WALL ST. J. (Nov. 16, 2021), [https://perma.cc/7TFM-525B]; *see also* Ben Eisen & Nicole Friedman, *Surfside Tower Collapse Makes Buying Condos More Complicated*, WALL ST. J. (Feb. 20, 2022), [https://perma.cc/7NNB-QAMK] (noting that the GSEs "wield enormous power in the housing market" through their dominant role in purchasing and securitizing home mortgage loans); John S. Prisco, *In the Wake of the Surfside Tragedy Fannie Mae and Freddie Mac Issue "Temporary" Requirements for Condominiums and Cooperatives*, NAT'L L. REV. (Jan. 21, 2022), [https://perma.cc/3TVT-QUZJ] (opining that the "new additional requirements could make it harder for unit owners to refinance or for new buyers to obtain mortgages").

113. James L. Winokur, *The Mixed Blessings of Promissory Servitudes: Toward Optimizing Economic Utility, Individual Liberty, and Personal Identity*, 1989 WIS. L. REV. 1, 58-59 (1989).

114. The Department of Housing and Urban Development maintains a list of approved condominium projects, and the GSEs only purchase mortgages on units in condominiums on that list unless there is "spot approval" of a unit in a building that otherwise meets all underwriting mandates. *See id.*

material impact that GSE underwriting requirements have had on the content of condominium governing documents and governance decision-making. For example, owner occupancy requirements led communities to adopt leasing restrictions.[115] Prohibition of third-party covenants led developers to stop including private transfer fee provisions in condominium documents.[116] Further, underwriting valuation constructs based on the racial composition of a neighborhood led to a proliferation of community race-based restrictive covenants in the first half of the 20th century.[117]

Per their new guidelines, neither GSE will acquire any loan secured by a condominium that has "significant deferred maintenance" or is subject to a government agency directive "to make repairs due to unsafe conditions."[118] Units in any such condominium are ineligible under the GSE guidelines "until required repairs have been made."[119] The new guidelines also suspended any flexibility pertaining to the GSE requirement that associations make an annual contribution to reserves in the amount of 10% of the condominium's budget.[120]

The impact of the new GSE underwriting requirements is twofold. First, condominiums now have further incentives to ensure their building's structural soundness and upkeep.[121] The

115. Andrea J. Boyack, *American Dream in Flux: The Endangered Right to Lease a Home*, 49 REAL PROP. TR. & EST. J. 204, 255-59 (2014).

116. *Id.* at 258 n.302.

117. RICHARD R.W. BROOKS & CAROL M. ROSE, SAVING THE NEIGHBORHOOD: RACIALLY RESTRICTIVE COVENANTS, LAW, AND SOCIAL NORMS 3-4, 91 (2013); RICHARD ROTHSTEIN, THE COLOR OF LAW: A FORGOTTEN HISTORY OF HOW OUR GOVERNMENT SEGREGATED AMERICA 81-83 (1st ed. 2017).

118. Fannie Lender Letter, *supra* note 111; Freddie Bulletin, *supra* note 111.

119. Horne, *supra* note 111.

120. Fannie Lender Letter, *supra* note 111. Previously, under Fannie Mae's *Selling Guide*, lenders could submit a reserve showing indicating reserve adequacy in lieu of a 10% annual budgetary contribution. *Id.* The inflexibility of the new guidelines may pose problems for condominiums whose governing documents do not permit 10% of each annual budget to be siphoned into reserves whether or not there is a need to plan for future capital requirements.

121. The vast majority of surveyed condominium boards throughout the country worry that these new underwriting guidelines will expose them to liability and impose onerous requirements to attest to facts that they do not and cannot certainly know. Lew Sichelman & Andrews McMeel, *Surfside Tower Collapse Fallout Could Make Condo Financing a Challenge. Here's Why*, MIAMI HERALD (Mar. 22, 2022, 9:16 AM), [https://perma.cc/3ER7-5Y2M] (citing a study done by the Community Associations Institute (CAI)).

new requirements will also make it exponentially more difficult to sell units in condominiums with maintenance deficiencies because of the lack of access to GSE-subsidized mortgage capital. Lower capital availability also makes it harder to refinance a condominium unit to raise capital for a special assessment. Cutting off mortgage capital access to units in structurally perilous buildings maroons the owners in the buildings, which is ironic and dangerous in the context of structurally unsound condominiums. Unit owners in such buildings who do not have the cash to pay a large special assessment may be unable to obtain financing to do so or even sell their units to someone who can pay the costs. While it is prudential for lenders to ensure the structural soundness of their collateral assets, from a public policy perspective, punishing condominium unit owners for not being able to fund needed repairs by taking away the ability of the unit owners to get loans to fund those repairs creates troubling outcomes.[122]

Spokespeople for the GSEs have framed the new underwriting guidelines as a way for Fannie Mae and Freddie Mac to "protect residents from unsafe buildings."[123] But because the guidelines cut off capital flow to unsafe buildings rather than facilitate construction funding for repairs, the true impact of the guidelines is to protect investors, not owners. Of course, the GSEs should have prudent underwriting guidelines, but the GSEs exist not just for investors but also to achieve public purposes.[124] Protecting GSE investors is a good idea, but there is also a huge public need to enable the remediation of structurally unsound buildings.

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122. A similar conundrum was created by GSE limits on condominium assessment delinquency in the aftermath of the 2008 Foreclosure Crisis, because unit owners in buildings with 30% or more unit owners in assessment default could not access GSE-earmarked mortgage loans. This left the unit owners without a source of capital to refinance (in order to continue operating the condominium) and made it virtually impossible for the unit owners to sell their units other than to a cash buyer. *See* Boyack, *supra* note 27, at 104-05. GSE owner occupancy requirements and condominium leasing restrictions likewise constrained unit owner flexibility and access to capital. Boyack, *supra* note 115, at 255.

123. Eisen & Friedman, *supra* note 112.

124. *See* Boyack, *supra* note 115, at 255-58 (describing the public policy mandates of GSEs); *see also History of Fannie Mae & Freddie Mac Conservatorship*, FED. HOUSING FIN. AGENCY, [https://perma.cc/T5HK-93KJ] (last visited Apr. 13, 2022) (detailing the conservatorship the GSEs were put under after the Foreclosure Crisis).

It would be preferable if GSEs made funds available for condominium remediation and repair instead of simply cutting off non-complying condominium owners from an important source of capital. Perhaps the GSEs can innovate a way to protect investors while also helping to shore up crumbling condominium infrastructure. Maybe they could offer special funding to condominium associations or individual unit owners to help them pay for critical repairs, with loan amounts disbursed directly to those performing remediation. The GSEs should examine the impacts of their underwriting changes on unit owners as well as investors and find a way to financially facilitate the structural remediation that these condominiums desperately need—and likely want—but cannot realistically afford.[125]

CONCLUSION

Condominium ownership structure needs to be shored up in a way to help stabilize buildings' structural flaws, but it is as important to facilitate necessary repairs as to mandate them. For condominiums like Champlain Towers South that are facing hugely expensive but critically important remediation projects, the owners' spirit may be willing, but their finances are weak.[126] Strengthening building quality mandates without providing pathways to fund repairs will result in more noncompliant and functionally insolvent condominiums, not more stable buildings.

In cases where buildings were poorly constructed, laws should protect owners' recourse to the developer. If those responsible for inherent construction flaws cannot provide remediation, public funding of remediation may be warranted.[127] For condominiums with massive maintenance needs and

125. The Florida Bar Task Force agrees: Housing finance and affordable housing administrative agencies should create programs to assist low-income owners pay for special assessments needed for structural remediation of their buildings. FLORIDA BAR TASK FORCE REPORT, *supra* note 83, at 10, 28-29.

126. Tolan et al., *supra* note 16.

127. For example, a public fund could cover developer liabilities that are not recoverable due to expiration of a statute of limitations or developer bankruptcy. Some states have established funds to cover construction defects from time to time, although many of these are limited in scope to buildings under governmental control. *See, e.g.*, KAN. STAT. ANN. § 75-3785 (West 2022) (creating a construction defects recovery fund).

inadequate reserves, government or quasi-government entities (for example, the GSEs) could provide the requisite capital. Improvements to laws and policies should help facilitate structural soundness, not just punish disrepair.

Condominium ownership design holds great promise. Condominium ownership facilitates homeownership and self-governance and can help people build wealth while residing in safe homes. But condominium ownership design is precarious as well. Just as democracy is both a good and potentially frustrating form of government, condominium governance can both benefit from including stakeholders but also suffer from the inefficiencies and insufficiencies inherent in decision-making by a committee of non-experts.[128] Unit owners object to assessment increases, and their elected representatives are tempted to give them what they want. As in all democracies, voters and leaders both prefer to procrastinate painful and latent community problems. In condominiums, the owners' financial interconnectedness makes individuals' financial distress contagious, and unaddressed structural vulnerabilities imperil everyone, not just those who do not contribute to repair costs. Design improvements to condominium law should be calibrated to address issues of owner ability to fund repairs, not just their desire to do so. Ensuring building life safety requires fixing the problem, not just assigning blame. Thoughtful changes to condominium laws and public policies can reduce not only the risk of building collapse but also the problems inherent in condominium ownership as a legal construct.

128. In his November 11, 1947, address to the House of Commons, Winston Churchill called democracy "the worst form of Government, except for all those other forms that have been tried from time to time . . . ." CHURCHILL BY HIMSELF: THE DEFINITIVE COLLECTION OF QUOTATIONS 574 (Richard Langworthy, ed., 2008).

CONSTRUCTION LAW APOLOGETICS

Carl J. Circo*

The construction industry constitutes one of the most significant segments of the global economy and presents a constant stream of legal issues and policy questions.[1] A highly specialized construction bar creatively solves complex transactional challenges and implements innovative dispute resolution practices. The legal academy, however, barely allots construction law a place in the law school curriculum, and legal scholars all but ignore it as a topic for scholarly attention.[2] Many law professors see construction law, if they acknowledge it at all, as a narrow practice specialty requiring lawyers and courts to do little more than apply general legal principles to a commercial activity.

This Article challenges the legal academy's perceptions and offers an alternative assessment of the relationship between the construction industry and law. Part I reviews practical reasons for teaching construction law to law students. In brief, Part I first demonstrates how a construction law course pairs advanced instruction in several topics introduced in the core curriculum,

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1. *See generally* Philip L. Bruner, *Construction Law: Its Historical Origins and Its 20th Century Emergence as a Major Field of Modern American and International Legal Practice*, 75 ARK. L. REV. 207 (2022).

2. *See id*. at 234-36 (estimating only twenty-six accredited law schools offer construction law courses); Paula Gerber, *The Teaching of Construction Law and the Practice of Construction Law: Never the Twain Shall Meet?*, 20 LEGAL ED. REV. 59, 61 (2010) (also finding twenty-six law schools offer construction law courses in America, which amounts to only eleven percent of schools); Lawrence C. Melton, *What We Teach When We Teach Construction Law*, CONSTR. LAW., Summer 2009, at 8 (noting at least twenty-six Forum members are teaching construction law in law schools). My own informal surveys comport with these estimates. Part II of this Article discusses the state of scholarly engagement with construction law.

such as contracts, torts, civil procedure, evidence, remedies, and dispute resolution, with lessons on adapting legal knowledge to the specialized construction industry practice. Next, it explains how studying construction law can prepare students to represent clients in a wide range of complex commercial matters that require expertise in transactional practice, advocacy, and dispute resolution. Then, Part II makes the case for greater scholarly engagement with the legal aspects of the built environment, exploring some especially promising contract and tort topics in detail before briefly suggesting other potential research projects. Part III concludes by proposing an ongoing dialogue between construction lawyers and the legal academy.

I. REASONS TO TEACH CONSTRUCTION LAW IN LAW SCHOOLS

The relatively few law schools that regularly offer construction law courses do so for the same reasons schools teach many other practice specialty courses in the upper-level curriculum. These offerings differ from courses primarily focused on advanced legal doctrine (say First Amendment as a subset of Constitutional Law), legal theory (such as Jurisprudence and Law and Economics), or targeted practice skills (such as Trial Advocacy and Negotiations) because practice specialty courses immerse students in the legal aspects of an industry or a segment of the economy. As such, these courses cross doctrinal, theoretical, and skills boundaries. Courses such as Real Estate Transactions and Mergers and Acquisitions, among many others, sometimes approach their subjects primarily as advanced doctrinal studies and at other times as practice specialty courses. The same can be said of other upper-level courses, such as Health Law, Entertainment Law, and Cybersecurity, to name but a few, that have become popular more recently.

Legal educators and critics of legal education disagree about whether, or the extent to which, the curriculum should expand beyond traditional subjects.[3] One opinion has it that law schools

3. *See generally* J. Lyn Entrikin, *The Death of Common Law*, 42 HARV. J.L. & PUB. POL'Y 351, 464-87 (2019) (discussing the need to include legislative and administrative law in legal education and the barriers to innovating the law school curriculum); Michael

should teach courses that "illuminate the entire law" rather than ones "suited to dilettantes."[4] From that perspective, a construction law course might seem to be concerned merely with law about construction industry activities and disputes rather than with a legitimately distinct field of law. Advocates for teaching practice specialty courses, not surprisingly including construction law teachers, contest such a characterization to one degree or another.[5] For the purposes of this Article, I happily abstain from the general debate. I simply argue that to the extent practice specialty courses belong in law schools, and admittedly I believe they do, construction law stands equal to those that have already achieved much wider acceptance.

My purpose in this Part is not to review a typical or model construction law course or to explore the full range of issues and skills a model course might cover. At least two popular textbooks offer that kind of guidance for those unfamiliar with construction law as an academic topic.[6] For more comprehensive coverage, two treatises discuss the relevant principles, cases, legislation, and regulations in great depth.[7] This Part simply advances reasons for teaching construction law. My advocacy goes well beyond the claim that law schools should introduce students to construction law as a major practice specialty. More compelling than that is how the course can help students begin to understand what it means to represent clients engaged in a major segment of the economy, in which multiple participants interact over an extended duration in complicated and interdependent

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Millemann, *The Symposium on the Profession and the Academy: Concluding Thoughts*, 70 MD. L. REV. 513, 519-24 (2011) (discussing Symposium participants' proposed changes to the law school curriculum and teaching methods and differing views about whether such changes could be integrated).

4. Frank H. Easterbrook, *Cyberspace and the Law of the Horse*, 1996 U. CHI. LEGAL F. 207, 207 (1996).

5. *See* Melton, *supra* note 2, at 8; Allen L. Overcash, *The Case for Construction Law Education*, CONSTR. LAW., Summer 2009, at 5.

6. *See* CONSTRUCTION LAW (Carol J. Patterson et al. eds., 2d ed. 2019) [hereinafter FORUM TEXTBOOK]; JUSTIN SWEET & MARC M. SCHNEIER, LEGAL ASPECTS OF ARCHITECTURE, ENGINEERING AND THE CONSTRUCTION PROCESS (9th ed. 2013). I have used each of these resources to teach my construction law course at different times.

7. *See* PHILIP L. BRUNER & PATRICK J. O'CONNOR, JR., BRUNER & O'CONNOR ON CONSTRUCTION LAW, Westlaw (database updated Mar. 2022); STEVEN G.M. STEIN, CONSTRUCTION LAW (2022), LexisNexis.

relationships, and for which law is but one of many key factors. Accordingly, an important purpose of this Part is to explore the study of construction law as an especially effective vehicle—I would say the ideal vehicle—for introducing students to a highly complex commercial practice. First, however, an overview of substantive elements common to construction law courses will help define construction law as a distinct subject in the law school curriculum.

A. Basic Training for Future Construction Lawyers

A construction law course inevitably offers advanced lessons in several topics. Contracts immediately come to mind. Few human activities test contract law principles as thoroughly and intensely as the construction industry does, with its high-risk environment and complex web of interdependent exchange relationships. The cases offer classic examples challenging the boundaries of principles as basic as offer and acceptance,[8] privity of contract,[9] and implied warranty.[10] Construction cases have played dominant roles in the development and refinement of several of the most important contract law doctrines, including substantial performance,[11] reliance as a substitute for consideration,[12] the economic waste limitation on breach of

8. *See, e.g.*, Drennan v. Star Paving Co., 333 P.2d 757, 759-61 (Cal. 1958).

9. *See, e.g.*, Blagg v. Fred Hunt Co., 272 Ark. 185, 186-90, 612 S.W.2d 321, 322-24 (1981).

10. *See, e.g.*, Lane v. Trenholm Bldg. Co., 229 S.E.2d 728, 729-31 (S.C. 1976).

11. *See, e.g.*, Clem Martone Constr., LLC v. DePino, 77 A.3d 760, 771-74 (Conn. App. Ct. 2013); W. E. Erickson Constr., Inc. v. Cong.-Kenilworth Corp., 503 N.E.2d 233, 237 (Ill. 1986); Plante v. Jacobs, 103 N.W.2d 296, 297-99 (Wis. 1960); S. D. & D. L. Cota Plastering Co. v. Moore, 77 N.W.2d 475, 477-78 (Iowa 1956); Jacob & Youngs, Inc. v. Kent, 129 N.E. 889, 891-92 (N.Y. 1921); *see also* 5 BRUNER & O'CONNOR, *supra* note 7, at § 18:12 (providing that "'[s]ubstantial performance' of a construction contract is the point at which the work can be used for its intended purpose, notwithstanding minor remaining nonconformances or uncorrected deficiencies, and negates materiality of any uncured breach, and allows the contractors to recover its full contract price less damages for any uncured breach").

12. *See Drennan*, 333 P.2d at 759-60; CARL J. CIRCO, CONTRACT LAW IN THE CONSTRUCTION INDUSTRY CONTEXT 34-37 (2020) [hereinafter CONTRACT IN INDUSTRY CONTEXT].

contract damages,[13] unilateral mistake,[14] and the demise of the pre-existing duty rule.[15] More broadly, construction industry cases figured prominently in the transition from the formalism of classical contract theory to the far more flexible principles of neoclassical contract and relational contract theory.[16] This influence appears especially in contextual approaches courts often employ in the interpretive process.[17] The trend toward a more flexible framework manifested as early as the late nineteenth and early twentieth centuries in the judicial willingness to imply obligations into construction and design contracts based on customs, usages, and other characteristics specific to the industry.[18] In some of the most influential early cases, courts imposed implied representations and duties of disclosure on project owners based on the obligations of good faith and fair dealing under industry circumstances.[19]

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13. *See* Legacy Builders, LLC. v. Andrews, 335 P.3d 1063, 1068, 1070 (Wyo. 2014); *Plante*, 103 N.W.2d at 299; *Jacob & Youngs, Inc.*, 129 N.E. at 891-92.

14. *See* King v. Duluth, M & N Ry. Co., 63 N.W. 1105, 1107 (Minn. 1895); *see also* 1 BRUNER & O'CONNOR, *supra* note 7, at § 2:138 (discussing the impact of a subcontractor's mistake on a prime bid).

15. *See* Corneill A. Stephens, *Abandoning the Pre-Existing Duty Rule: Eliminating the Unnecessary*, 8 HOUS. BUS. & TAX L.J. 355, 359-63 (2008); Hazel Glenn Beh, *Allocating the Risk of the Unforeseen, Subsurface and Latent Conditions in Construction Contracts: Is There Room for the Common Law?*, 46 KAN. L. REV. 115, 120-24 (1997). *See generally* Lingenfelder v. Wainwright Brewery Co., 15 S.W. 844, 846-47 (Mo. 1891) (discussing the policy rationale underlying the pre-existing duty rule and a finding against new consideration).

16. *See* CONTRACT IN INDUSTRY CONTEXT, *supra* note 12, at 135-54.

17. *See, e.g.*, W. States Constr. Co. v. United States, 26 Cl. Ct. 818, 826 (Ct. Cl. 1992) (holding that a contract specification to wrap metallic pipe did not necessarily apply to a certain class of metal pipe considering evidence of industry meaning); Jake C. Byers, Inc. v. J.B.C. Invs., 834 S.W.2d 806, 810-20 (Mo. Ct. App. 1992) (interpreting a contractual requirement "to fill" a sewage lagoon); *see also* Travelers Cas. & Sur. Co. v. United States, 75 Fed. Cl. 696, 705-08 (Fed. Cl. 2007) (contrasting the classical and neoclassical approaches to contract interpretation).

18. *See, e.g.*, Wells Bros. Co. v. United States, 254 U.S. 83, 86-87 (1920); Guerini Stone Co. v. P.J. Carlin Constr. Co., 248 U.S. 334, 344-45 (1919); United States v. A. Bentley & Sons Co., 293 F. 229, 239-41 (S.D. Ohio 1923); Bates & Rogers Constr. Co. v. Bd. of Com'rs, 274 F. 659, 661-62 (N.D. Ohio 1920). *See generally* CONTRACT IN INDUSTRY CONTEXT, *supra* note 12, at 44-49 (discussing the history of implied warranties and obligations generally and in the construction industry).

19. *See, e.g.*, United States v. Atl. Dredging Co., 253 U.S. 1, 11-12 (1920); United States v. Spearin, 248 U.S. 132, 137-38 (1918); MacKnight Flintic Stone Co. v. Mayor of New York, 54 N.E. 661, 664-65 (N.Y. 1899); Bentley v. State, 41 N.W. 338, 344-45 (Wis. 1889).

Construction industry cases have also offered courts some of the best opportunities to refine principles applicable to subcontract relationships.[20] Courts have often resisted subcontractor assertions of third-party beneficiary status under contracts between other participants in a construction project.[21] The cases have also regularly addressed whether a general contractor can sponsor a claim against a project owner on behalf of a subcontractor.[22] Another issue especially significant to construction industry subcontracts involves the interpretation and legal effect of clauses incorporating into a subcontract obligations, rights, or other terms from related contracts.[23]

By studying contract law in action in the construction industry, in addition to learning advanced contract law as applied by the courts to the construction industry, students will also encounter innovative contract terms and structures that show them how construction lawyers react and adapt to evolving contract law developments. Section I.B. further explores this aspect of a construction law course.

Tort principles also present and inform a rich assortment of industry disputes and practices. Construction activity, of course, often results in serious personal injury, death, and property damage, frequently in situations that implicate multiple defendants.[24] Sorting out whether or on what theory tort law

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20. *See* Adrian L. Bastianelli III, *Construction Subcontracting: A Comprehensive Practical and Legal Guide*, CONSTR. LAW., Summer 2014, at 47; CONTRACT IN INDUSTRY CONTEXT, *supra* note 12, at 65.

21. *See, e.g.*, John V. Burch, P.C., *Third-Party Beneficiaries to the Construction Contract Documents*, CONSTR. LAW., Apr. 1988, at 1, 23; *see also* Benton T. Wheatley & Jessica Neufeld, *The Universal Applicability of Pass-Through Claims to All Parties to a Construction Project*, CONSTR. LAW., Winter 2012, at 12, 12 (discussing pass-through claims as a way for subcontractors and other participants to overcome privity issues and recover when not parties to the contract).

22. *See* 6 BRUNER & O'CONNOR, *supra* note 7, at § 19:25 (discussing the *Severin* doctrine as a limit to liquidating [or pass-through] agreements); Allen L. Overcash, *Subcontractors and Suppliers*, *in* FORUM TEXTBOOK, *supra* note 6, at 283, 307-13 (also discussing the *Severin* doctrine and barriers to subcontractor claims); Wheatley & Neufeld, *supra* note 21, at 12 ("The overwhelming majority of cases concerning pass-through claims involve a subcontractor as the damaged party, a general contractor as the intermediary, and an owner as the responsible party.").

23. *See generally* Stanley P. Sklar, *A Subcontractor's View of Construction Contracts*, CONSTR. LAW., Jan. 1988, at 1, 18-19; CONTRACT IN INDUSTRY CONTEXT, *supra* note 12, at 66-67.

24. *See infra* notes 134-40 and accompanying text.

should afford remedies in these situations can offer exceptional opportunities to expand students' understanding of tort law issues and policies. Circumstances at a project site can test the limits of duty and foreseeability under negligence law, as when the contractual obligations of a project participant are asserted as the basis for a tort duty of care owed to those not parties to the contract.[25] Interdependent construction industry relationships also generate novel theories of negligent misrepresentation.[26] Design professional services give rise to some intriguing tort claims based on the foreseeable consequences that the acts and omissions of designers may have for many other project participants or on the overarching authority that design professionals sometimes possess.[27] Claims arising from industry relationships sometimes combine theories of contract liability with related tort theories, such as misrepresentation, fraud, and interference with prospective business advantage.[28] Damage claims for harm arising from allegedly defective equipment, materials, and components incorporated into a construction project sometimes strain the boundaries of strict liability.[29] Circumstances unique to construction activity also lead to interesting opportunities for punitive damage claims.[30] In

25. *See, e.g.*, Thompson v. Gordon, 948 N.E.2d 39, 42-43 (Ill. 2011); Caldwell v. Bechtel, Inc., 631 F.2d 989, 992, 1002-03 (D.C. Cir. 1980); *see also infra* notes 143-60 and accompanying text.

26. *See* Ossining Union Free Sch. Dist. v. Anderson LaRocca Anderson, 539 N.E.2d 91, 91-92 (N.Y. 1989).

27. *See* Shiva S. Hamidinia, *The Misadventures of Shared Design Risk in the New Design-Build World: Managing Design Risk and Responsibility on Federal Design-Build Projects*, CONSTR. LAW., Spring 2018, at 7, 9-10; Carl J. Circo, *When Specialty Designs Cause Building Disasters: Responsibility for Shared Architectural and Engineering Services*, 84 NEB. L. REV. 162, 179-92 (2005); Marc M. Schneier, *Tortious Interference with Contract Claims Against Architects and Engineers*, CONSTR. LAW., May 1990, at 3, 3; *see also infra* notes 148-62 and accompanying text (providing a more in-depth discussion of the theories of liability asserted against design professionals).

28. *See, e.g.*, J & S Servs., Inc. v. Tomter, 139 P.3d 544, 546 (Alaska 2006).

29. *See, e.g.*, Com. Distrib. Ctr., Inc. v. St. Regis Paper Co., 689 S.W.2d 664, 666-67, 669-70 (Mo. Ct. App. 1985). *See generally* JUSTIN SWEET & MARC M. SCHNEIER, CONSTRUCTION LAW FOR DESIGN PROFESSIONALS, CONSTRUCTION MANAGERS, AND CONTRACTORS 86-88 (2015); Thomas F. Icard, Jr. & Wm. Cary Wright, *Sick Building Syndrome and Building-Related Illness Claims: Defining the Practical and Legal Issues*, CONSTR. LAW., Oct. 1994, at 1, 29-30; Brian M. Golden, *Strict Liability Applied to the Homebuilder: A Defect in the Law of Defective Products*, CONSTR. LAW., Oct. 1994, at 11, 11-12.

30. *See* 6 BRUNER & O'CONNOR, *supra* note 7, at § 19:4.

addition, most construction law courses cover the special aspects of the economic loss rule of tort law in construction industry cases.[31]

Construction activity and industry relationships also frequently present challenging questions of indemnity, insurance coverage, joint liability, and contribution among tortfeasors.[32] Especially complex questions arise with claims implicating the acts and omissions of multiple project participants.[33] Personal injury, property damage, and other tort claims often present difficult coverage issues under policies insuring against commercial general liability,[34] property damage,[35] and other risks.[36] These situations afford excellent opportunities to explore these aspects of tort law as part of a more complete picture of construction law practice. Furthermore, with tort as much as with contract, a special attribute of a construction law course is, again, its utility in illustrating for students not only how an area of law applies to specific circumstances in the construction industry, but also how industry participants and their legal counsel react and

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31. *See generally* A. Holt Gwyn & Luke J. Farley, Sr., *The Economic Loss Rule in Construction Law*, *in* FORUM TEXTBOOK, *supra* note 6, at 653.

32. *See generally* James S. Schenck, IV & Kelli E. Goss, *Liability for Construction Defects That Result from Multiple Causes*, 9 AM. COLL. CONSTR. LAWS. J. 45, 47 (2015).

33. *See id.* at 45-46.

34. *See, e.g.*, Joseph A. Cleves Jr. & Richard G. Meyer, *CGL Policies in the Construction Industry: Emerging Consensus and Coping Strategies*, CONSTR. LAW., Fall 2015, at 12, 12-13; Steven G.M. Stein & Jean Gallo Wine, *The Illusions of Additional Insured Coverage*, CONSTR. LAW., Spring 2014, at 14, 14-15.

35. *See generally* Amanda Anderson & Charles E. Comiskey, *Make Sure You're Covered: Insurance for Natural Disasters*, CONSTR. LAW., Fall 2019, at 16, 20 (discussing insurance coverage for natural disasters and "[t]he design/construction defect exclusion"); Daven G. Lowhurst & Daniel D. McMillan, *Unshrouding the Mysteries of Builder's Risk Insurance, Part 1: The Basics and Beyond*, CONSTR. LAW., Summer 2016, at 32, 32-33 (discussing builder's risk insurance); Mark M. Bell et al., *Confronting Conventional Wisdom on Builders Risk: From Named-Insured Status to Concurrent Causation*, CONSTR. LAW., Fall 2011, at 15, 15 (distinguishing between builder's risk insurance and other insurance policies addressing liability).

36. *See, e.g.*, Wendy E. Scaringe, *Cargo Insurance and Construction Delay Risk*, CONSTR. LAW., Fall 2018, at 34, 34; Elizabeth C. Josepfhs, *Insurance and Risk Management in the Construction Industry: The Case for Decennial Liability Insurance*, CONSTR. LAW., Winter 2014, at 15, 15-22; Stephen D. Palley & Arlan D. Lewis, *Subrogation Waivers*, CONSTR. LAW., Fall 2011, at 6, 6; Ava J. Abramowitz, *Professional Liability Insurance in the Design/Build Setting*, CONSTR. LAW., Aug. 1995, at 3, 3-4.

adapt to the law, such as through industry practices concerning insurance and indemnities as risk management devices.[37]

Litigation and alternative dispute resolution practices, of course, represent other key aspects of construction law. In their first-year courses, as well as in some upper-level core courses, students learn basic principles concerning claims, defenses, and appeals in judicial proceedings, and they study many other fundamental aspects of litigation, such as civil procedure and the law of evidence. They may also be introduced to alternative dispute resolution processes. Those courses provide the necessary foundation, but because construction projects give rise to some of the most complex commercial disputes lawyers handle, future construction lawyers need to understand the nature of construction industry disputes at a more granular level. Consequently, construction industry disputes offer particularly good material for teaching about legal advocacy in the broadest sense.

In learning about construction industry litigation, students encounter many advanced problems of civil procedure.[38] They will likely read cases that highlight problems associated with complex, document-intensive discovery.[39] Litigating construction disputes also regularly gives rise to difficult challenges of proof and problems under the law of evidence.[40] Additionally, establishing liability for and defending against claims concerning construction and design defects, delays, unforeseen circumstances, and cost overruns often requires

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37. *See generally* Deborah Griffin, *Insurance and Bonds*, *in* FORUM TEXTBOOK, *supra* note 6, at 557, 557-68; William R. Allensworth & Matthew C. Ryan, *Construction Safety*, *in* FORUM TEXTBOOK, *supra* note 6, at 393, 417-23.

38. An industry dispute over a forum-selection clause made its way to the U.S. Supreme Court relatively recently. *See* Atl. Marine Constr. Co. v. U.S. District Court, 571 U.S. 49, 52-55 (2013).

39. *See generally* Christopher C. Whitney, *"Rediscovering" the Rules of Discovery in Construction Litigation*, 1 AM. COLL. CONSTR. LAWS. J. 1, 1-2 (2007); Eric A. O. Ruzicka & Kate Johnson, *Constructing a Successful E-Discovery Strategy: Foundational Principles and Building Blocks*, 12 AM. COLL. CONSTR. LAWS. J. 23, 24-25 (2018); Karen A. Denys & Michael A. Hornreich, *Spoliation: Turning the Tide to Your Advantage*, CONSTR. LAW., Spring 2015, at 5, 5.

40. *See generally* Stephen A. Hess & Allison T. Mikulecky, *Damages*, *in* FORUM TEXTBOOK, *supra* note 6, at 717, 728-43; Richard J. Tyler, *Defective Construction*, *in* FORUM TEXTBOOK, *supra* note 6, at 611, 611-15.

mastery of technical data and complicated scientific evidence.[41] Furthermore, these cases provide an especially close look at how lawyers use experts; deal with expert reports and dueling experts; and assess, present, and challenge expert testimony.[42]

Special industry characteristics have also led courts to adopt distinct principles governing the measure and proof of damages.[43] Appellate decisions in construction industry cases have contributed to developments in the law of remedies, including restitution and the right to terminate or reform contracts.[44] The maze of construction lien statutes throughout the country presents yet another specialized aspect of construction litigation.[45] Courses also frequently explore, at least to some extent, the administrative claims and processes established under federal and state law governing public projects.[46]

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41. *See, e.g.*, Paul L. Stynchcomb et al., *Preparing and Presenting Loss of Labor Productivity Claims: Analysis of the Methodologies with Two Exemplars*, CONSTR. LAW., Summer 2020, at 18, 18-19 (2020); Wendy Kennedy Venoit & Kenji Hoshino, *Follow the Money: Interpretation and Evaluation in a Forensic Schedule Analysis*, CONSTR. LAW., Winter 2019, at 15, 15.

42. *See, e.g.*, Shelly L. Ewald & Julia M. Fox, *Introduction of Construction Scheduling Expert Testimony: An Overview of the Current Standards in Federal and State Courts and Administrative Boards*, CONSTR. LAW., Fall 2017, at 26; Venoit & Hoshino, *supra* note 41, at 15; Christopher J. Heffernan et al., *Defending and Asserting* Daubert *Challenges in Construction Disputes*, CONSTR. LAW., Spring 2012, at 6; Jeffrey P. Aiken, *Construction Experts and* Res Ipsa Loquitor*: Bridging the Evidentiary Gap*, CONSTR. LAW., Fall 2010, at 22.

43. *See, e.g.*, Julian Bailey & Stephen A. Hess, *Delay Damages and Site Conditions: Contrasts in US and English Law*, CONSTR. LAW., Summer 2015, at 6, 15 (discussing differing site conditions clauses, under which contractors may seek relief when performance of their promise proves to be more difficult or time-consuming than initially anticipated); John H. Dannecker et al., *Recovering and Avoiding Consequential Damages in the Current Economic Climate*, CONSTR. LAW., Fall 2010, at 28, 28-31; Hess & Mikulecky, *supra* note 40, at 717.

44. *See generally* BRUNER & O'CONNOR, *supra* note 7, at §§ 18:32-18:50, 19:35-19:43.

45. *See, e.g.*, Eileen M. Diepenbrock, *Mechanic's Liens*, *in* FORUM TEXTBOOK, *supra* note 6, at 529, 529-34.

46. *See generally, e.g.*, James F. Nagle, *Public Construction Contracting*, *in* FORUM TEXTBOOK, *supra* note 6, at 759, 804-06; James F. Nagle, *A Primer on Prime-Subcontractor Disputes Under Federal Contracts*, CONSTR. LAW., Winter 2009, at 39; Joshua I. Schwartz, *Public Contracts Specialization as a Rationale for the Court of Federal Claims*, 71 GEO. WASH. L. REV. 863, 863-64, 874-75 (2003); Jared Cohane & Peter J. Martin, *The Modern Problem of Limitless Liability in Public Contracting Afforded by the Ancient Doctrine of Nullum Tempus Occurrit Regis*, 7 AM. COLL. CONSTR. LAWS. J. 65, 66, 73-74 (2013).

Construction law courses generally devote at least as much attention to alternative dispute resolution as to litigation because the construction industry relies so extensively on mediation, arbitration, and other alternatives for dealing with claims and other disputes.[47] At a minimum, students will learn why so many construction industry participants and their lawyers prefer alternative dispute resolution options over litigation.[48] They may explore the advantages and disadvantages of a range of procedures, including stepped dispute processes that begin with informal conferences among on-site personnel, then continue as necessary up through higher management levels and on to designated third-party neutrals, before moving to a more formal stage such as nonbinding mediation as a condition precedent to arbitration or litigation.[49] Some courses will cover voluntary settlement negotiations strategies and techniques.[50] Students will likely study some special characteristics and challenges of construction industry mediation and arbitration.[51] Students will also learn about contemporary movements toward more efficient dispute resolution via dispute review boards, as well as more

47. *See* James P. Groton et al., *Dispute Resolution Processes*, *in* FORUM TEXTBOOK, *supra* note 6, at 587, 590-91; Don W. Gregory & Peter A. Berg, *Construction Lawyer: Problem or Problem Solver? The Need for Cost-Effective Dispute Resolution in the Construction Industry*, CONSTR. LAW., Fall 2013, at 16.

48. *See* Gregory & Berg, *supra* note 47, at 16-19; Philip L. Bruner, *Rapid Resolution ADR*, CONSTR. LAW., Spring 2011, at 6, 6; Allen L. Overcash, *Introducing a Novel ADR Technique for Handling Construction Disputes: Arbitration*, CONSTR. LAW., Winter 2015, at 22; Thomas J. Stipanowich, *Managing Construction Conflict: Unfinished Revolution, Continuing Evolution*, CONSTR. LAW., Fall 2014, at 13, 13. *But see* James P. Wiezel, *Cost-Effective Construction Arbitration*, CONSTR. LAW., Spring 2011, at 15, 15-16 (discussing the benefits of arbitration but noting that it has come under scrutiny even within the construction industry).

49. *See, e.g.*, Groton et al., *supra* note 47, at 590-602.

50. *See generally* Adrian L. Bastianelli III et al., *Strategies for Successfully Navigating Cultural Differences in Construction Negotiation and Mediation*, CONSTR. LAW., Spring 2020, at 11.

51. *See, e.g.*, Philip L. Bruner, *Streamlining Construction Arbitration: Reducing the Peril of "Double Jeopardy" in Dual-Track Proceedings*, CONSTR. LAW., Fall 2018, at 7; Tamara J. Lindsay, *Compelling Arbitration By and Against Nonsignatories*, CONSTR. LAW., Summer 2016, at 16; Daniel E. Toomey & Susan M. Euteneuer, *The Arbitrators Have Decided the Construction Dispute: What Do I Do Now?*, CONSTR. LAW., Spring 2012, at 20; Richard J. Tyler, *Discovery in Arbitration*, CONSTR. LAW., Winter 2015, at 5, 11-12, 15-16; Paul T. Milligan, *Who Decides the Arbitrability of Construction Disputes?*, CONSTR. LAW., Spring 2011, at 23.

holistic and collaborative approaches such as integrated project delivery.[52]

Beyond giving extensive attention to contract and tort law issues and dispute resolution practices, a construction law course will generally explore the industry's intersection with several other doctrinal topics. Construction projects, of course, figure prominently in land use regulation, real estate transactions, and secured financing.[53] Many relationships in the industry include significant intellectual property aspects.[54] Construction activity also implicates environmental law, climate change, and sustainability.[55] Construction lawyers must deal with many aspects of governmental regulation, some of which involve potential criminal liability.[56] They must also keep up with rapid advances in industry technology impacting legal relationships and risks.[57] In addition to these topics, the textbook promulgated by

52. *See, e.g.*, Groton et al., *supra* note 47, at 596; Christopher T. Horner II, *Should Dispute Review Board Recommendations Be Considered in Subsequent Proceedings?*, CONSTR. LAW., Summer 2012, at 17, 17-18; Howard W. Ashcraft, Jr., *Negotiating an Integrated Project Delivery Agreement*, CONSTR. LAW., Summer 2011, at 17; Andrew D. Ness, *Neutral Evaluation: Another Tool in the ADR Toolbox*, CONSTR. LAW., Fall 2020, at 5; Patricia D. Galloway, *The Art of Allocating Risk in an EPC Contract to Minimize Disputes*, CONSTR. LAW., Fall 2018, at 26.

53. *See* Lorence H. Slutzky & Dennis J. Powers, *The Owner's Role*, *in* FORUM TEXTBOOK, *supra* note 6, at 35, 38-43, 57-60.

54. *See* Carol J. Patterson & Timothy F. Hegarty, *The Design Team's Role and Contracts*, *in* FORUM TEXTBOOK, *supra* note 6, at 143, 175-80.

55. *See* Carl J. Circo, *Will Green Building Contracts Transform Construction and Design Law?*, 43 URB. LAW. 483, 483-84 (2011); Ujjval K. Vyas & Edward B. Gentilcore, *Growing Demand For Green Construction Requires Legal Evolution*, CONSTR. LAW., Summer 2010, at 10, 10; Carl J. Circo, *Using Mandates and Incentives to Promote Sustainable Construction and Green Building Projects in the Private Sector: A Call for More State Land Use Policy Initiatives*, 112 PENN. ST. L. REV. 731, 732-34 (2008); Howard W. Ashcraft, Jr., *CERCLA Arranger Liability: Emerging Risk for Environmental Consultants,* CONSTR. LAW., Jan. 1994, at 42, 42.

56. *See, e.g.*, Gretchen M. Ostroff, *The Commercially Useful Function Test and Penalties for Noncompliance with Project DBE Goals*, CONSTR. LAW., Winter 2020, at 25, 25, 28-29; Daniel D. McMillan et al., *The Foreign Corrupt Practices Act in a Global Construction Industry: Corruption Risks and Best Practices*, CONSTR. LAW., Winter 2018, at 6, 6; G. Christian Roux & John D. Hanover, *Implied False Certification Liability Under the False Claims Act: How the Materiality Standard Offers Protection After Escobar*, CONSTR. LAW., Winter 2018, at 16, 16; James J. Barriere & Michael L. Koenig, *DBE Fraud: What Contractors Should Be Doing Now to Avoid Criminal and Civil Liability*, CONSTR. LAW., Fall 2015, at 7, 7; Wayne DeFlaminis et al., *An Ounce of Prevention: A Guide for Combating Fraud in Construction*, CONSTR. LAW., Summer 2014, at 17, 17-18.

57. *See, e.g.*, Kimberly A. Hurtado, *Technological Advances in Construction: Building Information Modeling (BIM) and Related Tools*, *in* FORUM TEXTBOOK, *supra* note 6, at 809;

the American Bar Association's Forum on Construction Law includes chapters or substantial sections on safety, labor and employment law, contract administration, insurance, and suretyship.[58]

This overview of subject-matter content confirms that a construction law course in the upper-level curriculum will effectively expose students to a range of legal topics at an advanced level. In that respect, construction law equals or exceeds other practice specialty courses. Even more important than that, by studying construction law, students encounter legal practice in a setting that features not only knowledge of multiple rules, principles, and procedures first introduced in the legal silos of foundational law school courses, but also the ability to apply those rules, principles, and procedures in an environment liberated from artificial legal categories. Specific to this Article's larger purpose, as Section I.B explains, a construction law course serves as an ideal vehicle for introducing students to complex commercial practice. In that way, the course offers valuable training even for students who may never represent clients engaged in relationships and disputes within the construction industry.

B. Preparing Students for Complex Commercial Practice

To use a phrase popular among professors who teach experiential courses, a construction law course teaches transferrable skills. This is especially so with reference to certain skills most needed by lawyers who represent clients in complex, multi-party, extended-duration commercial ventures—what I will call "complex commercial practice." Indeed, construction law arguably stands as one of the best ways to prepare law students for complex commercial practice. By focusing on what lawyers do in a complex commercial practice, and not simply what

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Sasha Christian et al., *Technology in Construction Claims Management*, CONSTR. LAW., Fall 2020, at 18, 18; Jessica E. Courtway, *Wearables, Augmented and Virtual Reality, Integrated Project Delivery, and Artificial Intelligence*, CONSTR. LAW., Fall 2020, at 25, 25; Carl J. Circo, *A Case Study in Collaborative Technology and the Intentionally Relational Contract: Building Information Modeling and Construction Industry Contracts*, 67 ARK. L. REV. 873, 873-74 (2014).

58. *See* FORUM TEXTBOOK, *supra* note 6.

specialty law they know, a construction law course can help students begin to understand how lawyers engaged in complex commercial practice fields can add the kind of value their clients most often seek. When students explore law practice in the circumstances of a relationship-rich business context such as the construction industry, they see what it means to think like their clients and those with whom their clients interact. What is even more important, they begin to appreciate why that way of thinking can be more essential in a complex commercial practice than thinking only like a lawyer. Doctrinal and theoretical courses, as essential and foundational as they are to a legal education, barely hint at the advising, structuring, collaborating, problem solving, and, above all, judgment skills lawyers must develop to effectively serve clients who engage in the most sophisticated commercial endeavors.

Construction lawyers, whether involved with transactional work or dispute resolution, must learn to practice law in the total circumstances in which their clients operate. Indeed, for these lawyers, the defining feature of their practice is, in a word, context. By studying law in a defined context in this sense, students can progress beyond a mastery of abstract legal principles and doctrine. They can begin to form a more coherent understanding of the ways in which the circumstances of a challenging human endeavor—in this case, designing and constructing the built environment—can influence the application and evolution of the general legal principles they have learned in foundational courses. Just as important, students can see how skilled lawyers help their clients adapt exchange relationships in response to the law, and how they manage and resolve legal conflicts and disputes effectively and efficiently in such settings.

No single course can do all this for every area of practice, but a construction law course provides an especially effective introduction to a lawyering process that highlights structuring and managing complex transactions and resolving the disputes such transactions generate. Studying construction law offers unparalleled advantages for pairing legal theory with practical skills, for balancing zealous advocacy with efficient risk management, and for harmonizing client-centered teamwork with independent legal judgment.

In particular, the circumstances in which clients plan and execute construction projects and in which conflicts often arise in the industry, with its high-risk, low-certainty environment, make construction law an ideal introduction to complex commercial practice. The legal aspects of the construction industry, when explored coherently, place students in a context-rich environment that gives them the opportunity to grasp, or at least to glimpse, what it means for a lawyer to bring value to a client team engaged in such settings. Through a construction law course, students can begin to appreciate that law must be applied, and lawyering skills must be practiced in the complete circumstances (the context) in which their clients operate rather than in the more abstract or generalized environments they encounter in their core courses. What construction lawyers know, and what a construction law course is especially adaptable to teach, is that to be effective in a complex commercial practice, lawyers must become more than legal technicians or theorists; they must be trustworthy advisers who function as part of a client team, and they must become adept at employing the law both to help clients achieve their objectives and to manage and resolve conflicts.

A construction law course proves especially useful to introduce students to these skills essential to a complex commercial practice:

- structuring legal relations to accommodate the divergent and often conflicting interests of multiple parties engaged in a collaborative process;
- negotiating contract terms to allocate risks realistically and efficiently;
- coordinating a network of legal relationships in a transactional environment governed by a series of interrelated contracts;
- managing high-stakes risks under circumstances of constant change and low certainty;
- advising clients as they navigate challenges and conflicts inherent in complex commercial endeavors and learning to anticipate and avoid or minimize disputes when possible and to resolve them realistically when they do materialize (preferably before they become legal battles); and

- exercising judgment that balances legal expertise with the client's business objectives.

Basic aspects of a construction law practice converge in ways that facilitate these learning objectives. Pedagogically, three of the industry's defining characteristics stand out in this regard: (1) its project delivery systems and pricing conventions; (2) its highly developed contractual risk management devices; and (3) its innovative dispute resolution practices. To illustrate, the following paragraphs focus on aspects of these characteristics that receive substantial attention in most construction law courses. While other course components also bear on the skills listed above, discussing these selected elements will suffice to demonstrate the point.

1. Exploring Project Delivery Systems and Pricing Conventions

Teaching about project delivery systems, a topic commonly introduced early in most construction law courses, can be an especially effective way to orient law students toward complex commercial practice. The network of relationships, contracts, and processes that characterize even a relatively minor construction project will likely mystify the uninitiated student. When understood by reference to the distinct objectives, incentives, and expertise of the participants and the dynamic circumstances of a typical construction project—that is, when viewed in the industry context—students learn that success for such a daunting undertaking requires carefully devised contractual structures, which the industry knows as "project delivery systems."[59]

Beginning with the background of the distinct perspectives of the key participants in a construction project, students learn to appreciate the challenge of structuring, negotiating, and orchestrating the interdependent relationships involved. They can see that the contracts themselves, along with applicable legal principles, especially those based on contract and tort law, constitute merely raw materials for the lawyers to use to help facilitate client objectives. In dealing with alternative project

59. *See generally* Ross J. Altman, *Project Delivery Systems*, *in* FORUM TEXTBOOK, *supra* note 6, at 63.

delivery systems, construction lawyers must understand not only their own clients' business environment and objectives, but they must also recognize the totality of circumstances that affect the other project participants and even others, such as governmental agencies and the public. Students will gradually grasp this lesson by comparing and contrasting the legal relationships and incentives established in different ways by the most commonly recognized project delivery systems (probably along with several variations): design-bid-build; design-build; multiple prime contractors; construction management (agency and at-risk); program management; turnkey; public-private partnerships; and integrated project delivery.[60]

The process of learning about project delivery systems may start by exploring an owner's core interests in project quality and functionality in addition to achieving completion on time and within budget.[61] This is, however, only a first step because students must then come to understand that contractual arrangements that advance any one of the owner's key objectives can compromise the owner's other interests and can also implicate the interests of other project participants.[62] Design professionals, general contractors, trade contractors, and suppliers, while always mindful of the owner's focus on quality, cost, and schedule, add other critical considerations to the mix. Each of these participants must balance the need for contractual arrangements that clearly define scope of service and scope of work with suitable compensation and risk management schemes. Whether working directly or indirectly for the project owner, they expect to undertake defined risks, but only to the extent they can control those risks and be compensated accordingly. Each of these project participants, however, functions within distinct circumstances.

Architects and engineers typically expect a degree of independence in performing their design and consulting roles, but they also want to minimize the liability risks associated with the

60. *Id.* at 65-96 (featuring comparative assessments of project delivery systems based on selection factors and risk factors relevant to each).

61. *See id.* at 63-64; Slutzky & Powers, *supra* note 53, at 35.

62. *See generally* Ross J. Altman, *Participants in the Design and Construction Process*, *in* FORUM TEXTBOOK, *supra* note 6, at 17, 32-33.

control they exercise.[63] Design professionals, therefore, may seek contractual terms that objectively define deliverables, disclaim involvement with construction means and methods, and preserve the opportunity for additional compensation when unanticipated complications arise.

The owner's principal partner at the project site, which may be a general contractor, design-build firm, or construction manager, agrees to assume varying degrees of responsibility for project quality, budget, and schedule, while shifting some of those risks to trade contractors, suppliers, and others who manage more or less distinct but overlapping scopes of work. All these frontline participants, operating from varying levels of bargaining strength, must worry about sequencing, payment security, supply chain problems, weather, labor, insurance coverages, and more. They often operate in highly competitive markets that may offer modest profit margins.[64] Construction lenders, insurers, and sureties, each constrained by their own underwriting guidelines and regulatory considerations, provide critical resources attended by requirements and influences that impact the other project participants in many different ways.[65]

Students learn how the industry's continuously evolving experimentation with alternative project delivery systems offers a cafeteria of choices bearing on the competing risk profiles and business objectives of the project participants. They also eventually learn how different payment schemes, such as stipulated-sum, cost-plus, and guaranteed maximum pricing, interact with project delivery system choices.[66] By working through the advantages and disadvantages of these variations and by learning how they can be modified for specific projects and participants, students begin to see what it means to structure contractual relationships, to negotiate a coherent network of interrelated contracts, and to coordinate interdependent activities, manage risks, and accommodate conflicting perspectives in

63. *See generally* Patterson & Hegarty, *supra* note 54, at 143, 145-46, 168, 186-87.

64. George Hedley, *9 Numbers You Need to Keep Your Company Profitable*, CONSTR. BUS. OWNER (Nov. 2, 2011), [https://perma.cc/TG66-36HJ].

65. *See generally* Altman, *supra* note 62, at 25-30.

66. *See generally* Stephen A. Hess, *Pricing Construction Contracts*, *in* FORUM TEXTBOOK, *supra* note 6, at 255, 255-67.

service of a common goal. Understanding project delivery systems and payment arrangements, however, is just the beginning of the process that introduces students to lawyering in a complex commercial practice.

2. Contractual Risk Management Devices

In addition to studying these fundamental aspects of project delivery systems and compensation conventions, construction law students will also encounter a range of other critical contractual risk allocation and management devices that help bring to life such concepts as structuring and coordinating complex legal relationships and managing those relationships effectively and efficiently in circumstances in which multiple participants must navigate through changing conditions over an extended duration. Several common contract terms, and the spectrum of available approaches to them, have special pedagogic value.

Representations and warranties, for example, play important roles. Beyond express warranties, which may be the product of extended negotiations, contract law in the construction industry has evolved to imply into contractual relationships certain representations and duties based on industry circumstances, as well as on customs and practices.[67] As a result of this implication process, lawyers for project participants must carefully craft contracts, sometimes to confirm and to reinforce judicially implied terms and sometimes to alter or reverse them to the extent legally permissible.[68] In addition to representations and warranties, standard industry agreements allocate project risks in different ways, and experienced construction lawyers negotiate contract terms extensively and promulgate endless contractual variations.[69] Key provisions include indemnities, provisions that anticipate differing site conditions and other changed circumstances, regulated payment procedures and security,

67. *See* CONTRACT IN INDUSTRY CONTEXT, *supra* note 12, at 44-49.

68. *See, e.g.*, Slutzky & Powers, *supra* note 53, at 47-51 (discussing the ability to contractually limit the *Spearin* Doctrine).

69. *See generally* Bruce Merwin, *Contracting for Construction Projects*, *in* FORUM TEXTBOOK, *supra* note 6, at 107.

insurance requirements, labor and employment matters, safety, environmental considerations, project financing, aspects of contract administration, and intricate provisions concerning disputes, defaults, and remedies.[70] In this way, scores of interconnected contracts ideally form an effective and efficient risk allocation and risk management roadmap for project success.

By exploring construction industry contracting practices in such detail, students learn how variations in negotiated terms can impact that intricate network. By analyzing court opinions addressing some of the recurring issues that these contractual relationships generate, students see how courts have adapted general principles from different areas of the law to apply in the construction industry context. The educational impact should be transformative, as students begin to see a convergence of law they first encountered in the neat categories of contract, tort, property, civil procedure, evidence, legislation and regulation, remedies, dispute resolution, and more. All these characteristics illustrate how a construction law course can introduce students to the transferrable skills necessary to succeed in a complex commercial practice.

3. Dispute Resolution Practices

If studying project delivery systems and compensation schemes functions as the logical place to begin to explore construction law as a complex commercial practice and covering common contractual risk management devices works to supplement with important discrete and interrelated details, then teaching about industry dispute resolution practices can serve as an especially suitable concluding step to the orientation process. Difficult problems and conflicts inevitably arise when multiple participants influenced by distinct perspectives and incentives play interdependent roles in a complex and risky venture of long duration. By delving into construction industry dispute resolution practices, students learn about processes for early detection and

70. The textbook published by the American Bar Association's Forum on Construction, *Construction Law*, which is repeatedly cited throughout this Article, deals with all of these issues in a range of circumstances and from the perspectives of various project participants in multiple sections of several chapters. *See* FORUM TEXTBOOK, *supra* note 6.

efficient management of problems. Drawing on what they have already learned about the distinct perspectives and objectives of project participants, students can readily appreciate the advantages that privately selected neutrals with relevant industry experience and legal expertise can have over generalist judges.

Students will explore a range of effective devices, both informal and formal, for dealing with claims, disputes, and other problems that might otherwise destroy working relationships and derail projects. These include multi-step processes that may begin with informal meetings between on-site representatives and then gradually advance to higher-level decision makers within the affected organizations, and move on to referrals to third-party facilitators, often followed by mediation as a precondition to binding arbitration or litigation.[71] Variations include standing neutrals, dispute resolution boards, minitrials, and other creative procedures.[72] Students may also study contractual arrangements designed to incentivize collaboration in the best interests of the project.[73] With the benefit of experience over many decades, the industry has developed advanced processes for managing and resolving problems, claims, and disputes. Exposure to these practices teaches students how structuring legal relationships and crafting contractual processes for complex commercial undertakings can help anticipate and efficiently manage many of the problems that such transactions generate.

Depending on the instructor's objectives, a construction law course can take a variety of forms. Two leading textbooks offer frameworks for teaching a comprehensive survey course adaptable to different pedagogic formats.[74] Instructors primarily interested in introducing students to the full range of a construction law practice may simply assign most or all chapters for classroom review and discussion.[75] Alternatively, practice-oriented courses can serve the special purposes of upper-level

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71. *See* Groton et al., *supra* note 47, at 590-602; *see supra* note 49 and accompanying text.

72. *Id.* at 592-602.

73. *See id*. at 592-94.

74. *See* FORUM TEXTBOOK, *supra* note 6, at iii-xx, xxix; SWEET & SCHNEIER, *supra* note 6, at iv-xix.

75. *See generally* FORUM TEXTBOOK, *supra* note 6, iii-xx; SWEET & SCHNEIER, *supra* note 6, at v-xvii.

writing courses or can follow a simulation-based model of experiential learning.[76] In simulation courses, students can engage in mock contract and settlement negotiations, undertake drafting exercises at different levels of complexity, develop advice for hypothetical clients deciding on the project delivery system and compensation structure most appropriate to a specific project, weigh options for assessing and settling claims and disputes, and practice advocacy skills in trial and dispute resolution exercises. A problem-based course can concentrate on a range of litigation skills.[77] Instructors who wish to create their own courses can assemble excellent materials by drawing on *Bruner and O'Connor on Construction Law*[78] and the extensive practice articles in the two leading journals for construction lawyers: *The Construction Lawyer*, which is published by the American Bar Association's Forum on Construction Law;[79] and *The American College of Construction Lawyers Journal*.[80] Additionally, experienced construction lawyers make excellent class guests to work with students in many ways.[81]

Overall, a construction law course serves both to explore a range of legal issues at an advanced level and to introduce students to lawyering in complex commercial practices. On these bases alone, more law schools should include construction law courses among their regular elective offerings. As Part II explains, another compelling reason supports investment in construction law in the legal academy.

II. THE CASE FOR SCHOLARLY ENGAGEMENT

Phil Bruner's outstanding contribution to this symposium accurately—perhaps even charitably—characterizes the legal academy's approach to construction law as "benign neglect."[82]

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76. *See, e.g.*, Melton, *supra* note 2, at 9.

77. *See* Melton, *supra* note 2, at 9.

78. BRUNER & O'CONNOR, *supra* note 7.

79. CONSTR. LAW., [https://perma.cc/48A2-FFXW] (last visited Apr. 1, 2022).

80. AM. COLL. CONSTR. LAWS. J., [https://perma.cc/M484-S3NC] (last visited Apr. 1, 2022).

81. I have invited many such guests to my construction law classes over the years, with great success.

82. Bruner, *supra* note 1, at 233.

That observation echoes a call he and a few others have raised for years.[83] In a thought-provoking overview of construction law written in 1998, Professor Thomas Stipanowich argued compellingly that the legal academy should recognize construction law as an important field for scholarly investigation.[84] Two years later, Professor Jay Feinman lamented that "there has been no sustained scholarly attention" given to construction industry contracts.[85] Not long after that, Professor Justin Sweet, the pioneer of construction law in the U.S. legal academy, complained of continuing scholarly neglect.[86] Similar circumstances exist within the legal academies in other countries.[87] During this symposium, however, Sir Vivian Ramsey's insightful account convincingly demonstrated how much has been done to advance construction law in the international academy and, by implication, how far U.S. law faculties have to go.[88] In 2012, a construction law forum in Melbourne, Australia reflected that British and Australian scholars and law faculties have done much to advance scholarly interest in the field in their countries.[89] Indeed, they are at least a generation ahead of the U.S. legal academy.[90] While U.S. legal scholars occasionally give attention to the construction industry, there is a shocking lack of any ongoing and coherent body of

83. *See, e.g.*, 1 BRUNER & O'CONNOR, *supra* note 7, at § 1:4; Philip L. Bruner, *Construction Law and the American College of Construction Lawyers—A History*, 1 AM. COLL. CONSTR. LAWS. J. 1, 4-5 (2007).

84. Thomas J. Stipanowich, *Reconstructing Construction Law: Reality and Reform in a Transactional System*, 1998 WIS. L. REV. 463, 493-97, 575-76 (1998).

85. Jay M. Feinman, *Relational Contract Theory in Context*, 94 NW. U. L. REV. 737, 747 (2000).

86. Justin Sweet, *Standard Construction Contracts: Academic Orphan*, CONSTR. LAW., Winter 2011, at 38, 39.

87. *See* Gerber, *supra* note 2, at 59, 61-63.

88. *See generally* Sir Vivian Ramsey, *Construction Law: The English Route to Modern Construction Law*, 75 ARK. L. REV. 251 (2022) (discussing the history of construction law in England, the impact of English caselaw, the benefits of England's Technology and Construction Court, and the development of more efficient dispute resolution procedures).

89. Matthew Bell & Paula Gerber, *Passing on the Torch of Learning in the "Primordial Soup" of Construction Law: Reflections from the Construction Law Academic Forum, 2012*, CONSTR. L. INT'L, Oct. 2012, at 26, 26-27.

90. *See* John Uff, *Construction Law—the First 25 Years*, CONSTR. L. INT'L, Jan. 2013, at 40, 40-41.

construction law scholarship.[91] As even a casual review of the resources cited in this Article suggests, publications authored and edited by practicing lawyers, rather than traditional legal scholars, dominate construction law literature.

This regrettable situation persists even while the construction industry increasingly offers a rich array of legal topics and policy issues ripe for academic study. My present purpose is not to contribute substantively to construction law scholarship, nor to offer a systematic catalog of construction law topics for academic projects; rather, I merely aim to identify some especially fertile areas for academic inquiry and, in that way, perhaps to stimulate greater scholarly interest in construction law and the construction industry. Not surprisingly, some of the topics and principles of greatest academic interest correspond to those emphasized in Part I as important from a pedagogic perspective.

The construction industry presents relationships and characteristics most obviously relevant to contract and tort law scholars. Even a modest construction project creates the kind of risks to persons, property, and fortunes that naturally implicate legal duties and rights founded in contract and tort law.[92] Likening a construction site to a battlefield, one judge observed that construction often occurs in chaotic circumstances with "limited certainty of present facts and future occurrences."[93] This Part will consider contract and tort topics in some detail before offering a much briefer note on other promising areas for research and scholarly analysis.

The industry's routine contractual characteristics, already noted in Part I, produce some of the lowest hanging fruit for scholarly investigation. Traditionally, most of the scores of participants in a construction project interact with several others while entering into formal contracts with only one other

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91. Although the paucity of construction law scholarship furnishes the premise for Part II, as citations to standard law review articles scattered throughout this Article attest, some legal academics have made scholarly contributions to the field. *See generally, e.g.*, Beh, *supra* note 15; Stipanowich, *supra* note 84; Feinman, *supra* note 85; Thomas C. Galligan, Jr., *Extra Work in Construction Cases: Restitution, Relationship, and Revision*, 63 TUL. L. REV. 799 (1989). What has been written to date, however, barely scratches the surface.

92. *See generally* notes 11-37 and accompanying text.

93. Blake Constr. Co. v. C.J. Coakley Co., 431 A.2d 569, 575 (D.C. 1981).

participant.[94] Even the project owner, while usually party to several contracts, typically has only one counterparty to each contract involved.[95] Within this network of bilateral agreements, however, nearly every contracting party shares risks with several others who provide work or services in connection with the project under a separate contract.[96] Not only does this create a complex web of interdependent contracts, but each participant provides services and performs work over an extended project duration under constantly changing circumstances.[97] The challenge of rationally and efficiently structuring these relationships provides much to pique the interest of contract scholars.

In a fruitful coincidence, as U.S. contract law began to take on its modern shape beginning in the nineteenth century, the construction industry emerged as one of the most significant and contractually complex segments of the economy.[98] This convergence fostered a reciprocal relationship in which emerging principles of contract law influenced exchange relationships in the construction industry, while evolving industry contracting practices in turn stimulated further developments in the judicial application of those principles.[99] This pattern persists today as industry customs and practices responding to developing contract law prompt courts, and often legislatures as well, to continue

94. *See* Altman, *supra* note 59, at 70-71 (discussing the design-bid-build project delivery system, which is the system most commonly used in the United States).

95. *See id.* at 31, 70-71. Under traditional structures, the owner contracts separately with the lead design professional, with a general contractor or possibly with several prime contractors for different scopes of work (or with a construction or project manager), and also with the construction lender. *See id.* at 70-71; Altman, *supra* note 62, at 20-25.

96. *See* Altman, *supra* note 62, at 32; BRW, Inc. v. Dufficy & Sons, Inc., 99 P.3d 66, 72 (Colo. 2004); *see also* CONTRACT IN INDUSTRY CONTEXT, *supra* note 12, at 60-61 (discussing how the "acts and omissions of contracting parties often affect the interests of those who are not parties to the underlying contractual relationship," creating issues for third-party beneficiaries).

97. CONTRACT IN INDUSTRY CONTEXT, *supra* note 12, at 63-64 (noting that "[u]nanticipated events . . . are particularly common and troublesome within the construction industry, where contractors, subcontractors, suppliers, and manufacturers make commitments to perform in a far-distant and uncertain future").

98. *See id.* at 116.

99. *See id.*

adapting contract law principles.[100] Those who engage intimately with construction disputes have frequently highlighted this phenomenon.[101] But, as one economic case study notes with dismay, "scholars have devoted little attention to an industry—construction—that seems to offer valuable lessons about the organization of economic activity."[102]

The interweaving of so many exchange relationships under high-risk circumstances of long duration offers an especially rich opportunity for putting alternative contract theories to the test. A thorough study of construction contract practices and disputes suggests a highly contextual notion of contract, one that, in keeping with Professor Speidel's conception, "focuses upon particular types of contracts within a relevant business or social setting rather than upon contracts in general."[103] In this way, rather than "just contracts, there are contracts for the sale or lease of personal and real property, construction, personal and professional services, . . . and the settlement of disputes."[104] My own recent work explores several theoretical lessons from industry contracting practices.[105] At the broadest level, I have suggested how the case law connects contract practices and disputes to such alternative theories as classical formalism, legal realism, neoclassical principles, economic analysis, relational theory, and neoformalism.[106]

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100. *See generally* Stephen A. Hess, *The Sanctity of Construction Contracts*, 15 AM. COLL. CONSTR. LAWS. J. 1, 3-14 (2021); BRUNER & O'CONNOR, *supra* note 7, at §§ 2:1, 3:3.

101. *See, e.g.*, Paul Hardeman, Inc. v. Ark. Power & Light Co., 380 F. Supp. 298, 317 (E.D. Ark. 1974) (characterizing industry contracts as "a separate breed of animal"); *BRW, Inc.*, 99 P.3d at 72 (noting the "networks of interrelated contracts" commonly involved in construction projects).

102. William A. Klein & Mitu Gulati, *Economic Organization in the Construction Industry: A Case Study of Collaborative Production Under High Uncertainty*, 1 BERKELEY BUS. L. J. 137, 138 (2004).

103. Richard E. Speidel, *An Essay on the Reported Death and Continued Vitality of Contract*, 27 STAN. L. REV. 1161, 1173 (1975).

104. *Id.*

105. *See* CONTRACT LAW IN INDUSTRY CONTEXT, *supra* note 12, at 8-9; Circo, *supra* note 57, at 283-84; Carl J. Circo, *The Evolving Role of Relational Contract in Construction Law*, CONSTR. LAW., Fall 2012, at 16, 16; Carl J. Circo, *Contract Theory and Contract Practice: Allocating Design Responsibility in the Construction Industry*, 58 FLA. L. REV. 561 (2006).

106. *See* CONTRACT IN INDUSTRY CONTEXT, *supra* note 12, at 115-58. Although I have not observed influences of or implications for the critical legal theory school, it would

While each of these theories finds some degree of support among the industry cases and its contracting practices, I find the implications for relational contract theory especially intriguing.[107] In contrast to most other conceptions of contract law, which promote an overarching framework of rules for recognizing, effectuating, and regulating discrete transactions governed by express agreements, relational contract takes into account the complete circumstances in which the contracting parties operate.[108] Under relational contract theory, trade customs and usage, along with a range of behavioral factors, call for the adoption of legal principles far more flexible than the fixed rules that both the classical and neoclassical frameworks seek to apply more or less uniformly to all contractual dealings.[109] With a focus on preserving exchange interactions, some iterations of relational contract notions encourage courts to fill gaps in incomplete contracts and to derive the norms that govern the parties' relationship from all relevant circumstances.[110] Relational theory promotes the kind of contextual approach that would have a court be "responsive to the realities of the particular contract in context."[111] Construction industry contracts often display highly relational characteristics, such "as provisions anticipating changed circumstances during the course of the performance period, procedures for making equitable adjustments to the project budget and schedule, and comprehensive claims and dispute management procedures designed to maintain the relationship in the face of disagreement between the parties."[112] Relational contract scholarship can benefit from further investigation and assessment of both contract disputes and contract practices in the construction industry.

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be interesting to learn how that scholarly perspective would assess contract practices and cases from the construction industry. Legal problems in residential construction and affordable housing may suggest promising places to start because our legal and economic systems can seem blind to consumer protection issues and related legislative policies tend to promote and protect the status quo for business interests and the affluent.

107. Circo, *supra* note 57, at 873-874; Circo, *supra* note 105, at 16.

108. *See* CONTRACT IN INDUSTRY CONTEXT, *supra* note 12, at 119-20.

109. *See id.*; Galligan, *supra* note 91, at 810-16.

110. *See, e.g.*, Richard E. Speidel, *The Characteristics and Challenges of Relational Contracts*, 94 NW. U. L. REV. 823, 827, 827 n.23 (2000).

111. Speidel, *supra* note 103, at 1173.

112. CONTRACT IN INDUSTRY CONTEXT, *supra* note 12, at 120.

Proponents of alternative schools of contract theory can also find much in the construction industry cases, dispute patterns, and contracting practices relevant to their perspectives. Limited offerings in the law and economics literature demonstrate the potential for economic analysis critiquing and explaining judicial approaches to construction contract disputes and many industry contracting practices.[113] For example, Richard Posner's discussion of a nineteenth century case determining liability for damage to a project under construction has been cited as a leading example of the efficiency principle of economic analysis at work in the courts.[114] Competing contract theories, especially those based on economic analysis and neoformalism, can also be advanced to explain, justify, or question a range of holdings in construction contract cases, including those regarding: the enforceability of liquidated damages, no-damage-for-delay, and conditional payment clauses; the recognition of the betterment and economic waste doctrines; and the use of different frameworks in contract interpretation.[115] In any case, much remains to be written both on how industry cases and practices reflect or contradict competing contract theories and how those cases and practices have or could inform contract theory.

In addition to their relevance to contract theory, industry cases and contracting practices raise many discrete issues of current interest to contract law scholars. Law review articles occasionally note significant industry cases and developments on these matters, although rarely in a way that acknowledges construction law as embracing a subspecialty of contract law.[116] The academic literature and casebooks, however, do implicitly reflect the influence of industry cases in the evolution of several

113. *See, e.g.*, Klein & Gulati, *supra* note 102, at 138-143.

114. *See* Jody S. Kraus, *From Langdell to Law and Economics: Two Conceptions of* Stare Decisis *in Contract Law and Theory*, 94 VA. L. REV. 157, 191-93 (2008) (noting, however, that Posner's "efforts to explain how legal rules and principles based on various notions of efficiency could justify the exercise of political coercion were entirely unsuccessful"). The reference is to Posner's analysis of *Bentley v. State*, 41 N.W. 338 (Wis. 1889) in RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 83 (3d ed. 1986).

115. *See generally* CONTRACT IN INDUSTRY CONTEXT, *supra* note 12, at 25-29, 54-58, 135-42.

116. *See generally* Stipanowich, *supra* note 84, at 493-97.

contract principles.[117] Industry cases have been instrumental in expounding the law of substantial performance.[118] Cases stemming from industry bidding practices virtually define the principle of reasonable reliance as a substitute for consideration.[119] Construction contract disputes also sent early signals of the demise of the pre-existing duty rule.[120] Similarly, they set the stage for the acceptance of unilateral mistake as a defense.[121] Many construction cases figure prominently in evolving judicial attitudes toward binding arbitration clauses.[122] Other contract law issues, some already noted above for their relevance to contract theory, that figure prominently in specific topics of current academic interest extend to economic waste, betterment, liquidated damages, conditional payment provisions, termination for convenience rights, and the evolution of the implication process and judicial attitudes toward incomplete contracts.[123]

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117. Many of the contract textbooks feature construction industry cases to demonstrate leading principles. *See, e.g.*, *id.* at 494 (noting that "[i]n the typical first-year contracts course, construction cases are ubiquitous, and provide a rich source of doctrine and theory" and finding that nearly one in five cases in a popular text on contracts involved construction contracts); CONTRACT IN INDUSTRY CONTEXT, *supra* note 12, at 13 (discussing the influence of industry cases on substantial performance, unilateral mistake, third-party dispute resolution, and other contract law principles).

118. CONTRACT IN INDUSTRY CONTEXT, *supra* note 12, at 13; *see, e.g.*, Clem Martone Constr., LLC v. DePino, 77 A.3d 760, 771-72 (Conn. App. Ct. 2013); W.E. Erickson Constr. Inc. v. Cong.-Kenilworth Corp., 503 N.E.2d 233, 237 (Ill. 1986); S. D. & D. L. Cota Plastering Co. v. Moore, 77 N.W.2d 475, 477-78 (Iowa 1956); Jacob & Youngs, Inc. v. Kent, 129 N.E. 889, 890-91 (N.Y. 1921).

119. *See, e.g.*, Drennan v. Star Paving Co., 333 P.2d 757, 759-60 (Cal. 1958). *See generally* CONTRACT IN INDUSTRY CONTEXT, *supra* note 12, at 34-37 (discussing the importance of *Drennan* but noting its scarce application in areas beyond industry bidding).

120. *See* Lingenfelder v. Wainwright Brewery Co., 15 S.W. 844, 848 (Mo. 1891); King v. Duluth, M & N Ry. Co., 63 N.W. 1105, 1107 (Minn. 1895).

121. *See* Wil-Fred's Inc. v. Metro. Sanitary Dist., 372 N.E.2d 946, 950-51 (Ill. App. Ct. 1978); Rushlight Automatic Sprinkler Co. v. City of Portland, 219 P.2d 732, 751 (Or. 1950); Bd. of Regents v. Cole, 273 S.W. 508, 510-11 (Ky. Ct. App. 1925); Edwin W. Patterson, *Equitable Relief for Unilateral Mistake*, 28 COLUM. L. REV. 859, 884-85 (1928).

122. *See, e.g.*, C & L Enters., Inc. v. Citizen Band Potawatomi Indian Tribe of Okla., 532 U.S. 411, 418-20 (2001); Volt Info. Scis., Inc. v. Bd. of Trs., 489 U.S. 468, 474-76 (1989); Moses H. Cone Mem'l Hosp. v. Mercury Constr. Corp., 460 U.S. 1, 19-20 (1983); *see also* Commonwealth Coatings Corp. v. Cont'l Cas. Co, 393 U.S. 145, 147-50 (1968) (discussing the importance of impartiality among arbitrators and the need for arbitrators to disclose matters that could create the impression of bias).

123. *See* CONTRACT IN INDUSTRY CONTEXT, *supra* note 12, at 25-29, 54-59, 138-54; Deborah S. Ballati & Marlo Cohen, *Termination for Convenience Clauses: Are There*

In many instances, the practice-oriented literature eclipses the legal scholarship in addressing significant issues of contract law. For example, practicing lawyers have authored much of what has been written about the special issues concerning subcontracting relationships.[124] They have also delved deeply into applications of the law of evidence to contract disputes, especially with reference to expert witnesses.[125] Similarly, the practice-oriented literature has dealt in great detail with the problems construction industry disputes commonly present relating to the measure and proof of damages, as well as on a range of contractual limitations on recoverable damages.[126] Practicing lawyers, more than legal academics, have documented the interesting story of how cases and contracting practices have addressed the differing site conditions problem that so frequently impacts construction projects.[127] Practice-oriented literature also accounts for some of the most comprehensive analyses of legislative and regulatory matters affecting construction contracts.[128] All of these topics are ripe for more scholarly investigation.

Limitations on Using Them?, 14 AM. COLL. CONSTR. LAWS. J. 1, 1 (2020); Joseph D. West & Michael B. Hissam, *The Reasonableness of Liquidated Damages Provisions—Why Only the Look Back Approach Can Prevent Windfalls*, 4 AM. COLL. CONSTR. LAWS. J. 1, 1 (2010); Julian F. Hoffar & Shelly L. Ewald, *Liquidated Damages and the Freedom to Contract*, 1 AM. COLL. CONSTR. LAWS. J. 1 (2007).

124. *See, e.g.*, Anthony J. LaPlaca*, On the Effective Use of Liquidating Agreements*, CONSTR. LAW., Summer 2019, at 20, 20; Wheatley & Neufeld, *supra* note 21, at 12; William M. Hill & Mary-Beth McCormack, *Pay-If-Paid Clauses: Freedom of Contract or Protecting the Subcontractor from Itself?*, CONSTR. LAW., Winter 2011, at 26, 26.

125. *See, e.g.*, Laura B. Arrigo & Samantha L. Brutout, *Defining the Schedule Expert's Role, Scope, and Approach: Key Considerations for Coordination Between Attorneys and Experts*, CONSTR. LAW., Fall 2017, at 36; Heffernan et al., *supra* note 42, at 6; Fredric L. Plotnick, *Evidence Issues in Forensic Use of CPM Scheduling*, CONSTR. LAW., Fall 2011, at 25; Aiken, *supra* note 42, at 22.

126. *See, e.g.*, Benton T. Wheatley & Randy A. Canché, *Navigating the Labyrinth of Consequential Damages in the Construction Industry: A History of and Legal Approaches to Living with Them*, CONSTR. LAW., Summer 2013, at 6; Dannecker et al., *supra* note 43, at 28.

127. *See, e.g.*, Bailey & Hess, *supra* note 43, at 6; Kimberly A. Smith, *Differing Site Conditions and* Metcalf*: Judicial Shifting of the Risks*, CONSTR. LAW., Summer 2014, at 35.

128. *See, e.g.*, Dean B. Thomson & Colin Bruns, *Indemnity Wars: Anti-Indemnity Legislation Across the Fifty States*, 8 AM. COLL. CONSTR. LAWS. J. 1, 1-2 (2014). *See generally* 5 BRUNER & O'CONNOR, *supra* note 7, at §16:1 (discussing the government's heavy regulation of construction in America at the federal, state, and local level, for safety, financial, and other reasons).

Beyond addressing such discrete contract law issues, legal scholars should analyze how the risk management strategies of construction industry participants and their lawyers impact contract law in action. Contract law, as established and proclaimed by legislatures, courts, and administrative agencies, functions more as the background against which contracting parties manage contractual relationships than as the rules that determine those relationships.[129] The practicing bar uses innovative contract provisions and structures to adjust and manipulate the rules of contract law.[130] In a 2011 article (tellingly published in the construction bar's leading journal rather than a traditional law review), Professor Sweet argued that legal academics should study and assess standard construction contracts.[131] The ongoing evolution of project delivery systems presents an even more fruitful area for scholarly investigation, but contract scholars have given relatively little attention to these systems.[132] At a more granular level, construction lawyers constantly craft innovative contract terms and practices that can teach at least as much about how contract law functions as a social instrument as can any case, statute, or abstract theory.[133] In

129. *See generally supra* notes 8-23 and accompanying text (discussing how construction cases have challenged the boundaries of contract principles and helped develop and refine contract law doctrines).

130. *See supra* notes 8-23 and accompanying text; *see also infra* note 133 and accompanying text.

131. Sweet, *supra* note 86, at 41.

132. However, the practice literature regularly reports on developments in project delivery systems. *See, e.g.*, Galloway, *supra* note 52, at 29; Justin L. Weisberg & Raymond M. Krauze, *Opening Communication Lines: Evolving Project Delivery Methods to Promote Collaboration*, CONSTR. LAW., Spring 2018, at 14; Howard W. Ashcraft Jr., *The Transformation of Project Delivery*, CONSTR. LAW., Fall 2014, at 35; Casey Halsey & William Quatman, *Design-Build Contracts: Revisited, 25 Years Later*, CONSTR. LAW., Spring 2014, at 5; Joseph A. Cleves, Jr. & Richard G. Meyer, *No-Fault Construction's Time Has Arrived*, CONSTR. LAW., Summer 2011, at 6; Barbara R. Gadbois et al., *Turning a Battleship: Design-Build on Federal Construction Projects*, CONSTR. LAW., Winter 2011, at 6; Peter C. Halls, *Issues for Designers, Contractors, and Suppliers to Public Private Partnership Projects*, CONSTR. LAW., Summer 2010, at 22; Joel W. Darrington & William A. Lichtig, *Rethinking the "G" in GMP: Why Estimated Maximum Price Contracts Make Sense on Collaborative Projects*, CONSTR. LAW., Spring 2010, at 29.

133. *See generally, e.g.*, Lauren P. McLaughlin & Shoshana E. Rothman, *When* Spearin *Won't Work: How Contractual Risk Allocation Often Undermines This Landmark Ruling*, CONSTR. LAW., Summer 2015, at 39, 44; Alex Iliff et al., *The Shifting Sands of Contract Drafting, Interpretation, and Application*, CONSTR. LAW., Spring 2012, at 31;

summary, contracting practices in the construction industry offer much that contract scholars should explore to shed light on the relationship between law and practice and about how the law interacts with human behavior in complex exchange relationships.

The construction industry also offers much material for tort scholars. Construction commonly involves risky activities leading to claims for damages when death, personal injuries, property damage, and economic losses result.[134] Some recurring circumstances peculiar to the construction industry merit the special attention of the legal academy.

In addressing common negligence cases stemming from construction activities, a leading construction law textbook notes some special considerations.[135] These include predictable instances in which negligence during construction causes injury or property damage.[136] Most frequently, the victim is a worker or a person on the site who has some connection with the project.[137] There are, however, also many cases involving victims not physically on the project site who are simply passing by when an incident occurs, and others involving trespassers.[138] Negligence cases involving construction activity can present some interesting features for professors to highlight either in a Torts class, for example the trespasser cases,[139] or in a Construction Law or

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Ashcraft, *supra* note 52, at 17; Kurt L. Dettman et al., *Resolving Megaproject Claims: Lessons From Boston's "Big Dig"*, CONSTR. LAW., Spring 2010, at 5, 16.

134. *See, e.g.*, Lee Lewis Constr., Inc. v. Harrison, 70 S.W.3d 778, 781-82 (Tex. 2001) (wrongful death); *see* cases cited *infra* note 136; *see also* Allensworth & Ryan, *supra* note 37, at 393 (providing that "[t]he U.S. Bureau of Labor Statistics has cited its 'fatal four' leading causes of construction deaths as (1) falls, (2) struck by object, (3) electrocutions, and (4) caught-in/between" and estimating that fourteen deaths occur within the construction workforce per day).

135. *See* Allensworth & Ryan, *supra* note 37, at 393.

136. *See id.*; *e.g.*, Jeffords v. BP Prods. N. Am., Inc., 963 F.3d 658, 661 (7th Cir. 2020); Scott v. Matlack, Inc., 39 P.3d 1160, 1162-63 (Colo. 2002); *Lee Lewis Constr., Inc.*, 70 S.W.3d at 782.

137. *See* cases cited *supra* note 136.

138. *See, e.g.*, Price v. Turner Constr. Co., 190 A.D.3d 435, 435-36 (N.Y. App. Div. 2021) (contractor and subcontractor were not liable for injuries when pedestrian tripped over protruding anchoring bolts on sidewalk); Coburn v. Whitaker Constr. Co., 445 P.3d 446, 448, 453 (Utah 2019) (contractor had no duty to warn pedestrian of danger presented by orange netting strung across trail); *see* cases cited *infra* note 139.

139. Kessler v. Mortenson, 16 P.3d 1225, 1226, 1230 (Utah 2000) (applying attractive nuisance doctrine when child fell through hole on residential construction site); Hayes v.

Labor and Employment Law class, as when workers' compensation law impacts the nature or extent of liability of multiple defendants.[140] For the most part, however, the cases do not suggest a variation or adaptation of tort law specific to the construction industry context.[141] For purposes of construction law, routine negligent injury and damage cases may hold academic interest primarily for what they can show about overlaps in related legal matters, including joint liability, vicarious liability, contribution, indemnification, insurance coverages, and safety statutes and regulations.[142]

More promising areas for scholarly attention emerge when tort law intersects with contractual obligations in the construction industry. Some of the most theoretically engaging situations invoke the judicial gymnastics required to derive a tort duty of care from a contractual obligation. The construction industry presents some noteworthy examples of contractual terms creating special relationships that impose a tort duty of care independent from the contractual obligations.[143] A contractual responsibility to perform construction services or work may impose a duty on the contracting party for the benefit of strangers to the contract. For example, the Court of Appeals for the D.C. Circuit held that a consultant retained by a project owner to provide safety engineering services to the owner owed a tort duty of care to an

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D.C.I. Props.-D KY, LLC, 563 S.W.3d 619, 621-22 (Ky. 2018) (holding that sixteen-year-old trespasser who operated equipment on construction site was not entitled to protection of attractive nuisance doctrine); Lange v. Fisher Real Est. Dev. Corp., 832 N.E.2d 274, 276, 281-82 (Ill. App. Ct. 2005) (holding that taxi driver pursuing non-paying passenger onto construction site was entitled only to the limited duty owed to a trespasser).

140. *See generally* Allensworth & Ryan, *supra* note 37, at 393.

141. *See Kessler*, 16 P.3d at 1230; *Hayes*, 563 S.W.3d at 621; *Lange*, 832 N.E.2d at 283.

142. *See, e.g.*, Coleman v. BP Expl. & Prod., Inc., 19 F.4th 720, 727 (5th Cir. 2021) (applying principles of vicarious liability); Gables Constr., Inc. v. Red Coats, Inc., 228 A.3d 736, 739 (Md. 2020) (discussing principles of contribution and joint liability); W. C. Eng., Inc. v. Rummel, Klepper & Kahl, LLP, 934 F.3d 398, 399 (4th Cir. 2019) (distinguishing concepts of contribution, implied indemnity, and express indemnity in contractor's action against subcontractor); Eng'g & Constr. Innovations, Inc. v. L.H. Bolduc Co., 825 N.W.2d 695, 698 (Minn. 2013) (applying Minnesota's statute limiting enforceability of indemnification agreements in construction contracts); *see also* Schenck & Goss, *supra* note 32, at 1 (discussing the challenges of apportioning fault and damages); John G. Cameron, Jr., *Construction Site Safety: Protecting the Worker/Protecting the Owner*, 9 AM. COLL. CONSTR. LAWS. J. 2, 31 (2015).

143. Circo, *supra* note 27, at 187-90.

on-site worker who suffered from silicosis as a result of working on the project.[144] The court held that even though the worker's employer was directly responsible for the safety of its employees, the consultant's "superior skills and position" and its "ability to foresee the harm that might reasonably be expected to befall" the worker imposed a duty on the consultant "to take reasonable steps to prevent harm to appellant from the hazardous conditions" of the work site.[145] Other cases impose on a project participant a duty to warn others of potential dangers or risks the project presents[146] or to disclose to another information based on the participant's superior knowledge arising out of the performance of contractual duties.[147]

Courts have been especially willing to derive a tort duty of care from contractual undertakings of design professionals.[148] Indeed, even when a client sues for damages allegedly caused by errors or omissions in the performance of services expressly covered by the contract between the client and the design professional, the case is at least as likely to proceed on a theory of professional negligence as on a breach of contract claim.[149] When the plaintiff is not the design professional's client, courts often opt to impose a tort duty of care rather than to accept an alternative theory recognizing the plaintiff as a third-party beneficiary of the design services contract.[150] While the third-party beneficiary argument too often requires a strained interpretation of the contract, tort theory allows the court to recognize a special relationship between the plaintiff and the design professional on public policy grounds.[151]

As discussed in much greater detail in Marc Schneier's article, published as part of this symposium, injured workers have often used the special-relationship analysis to assert claims against architects and engineers with whom the workers have no

144. Caldwell v. Bechtel, Inc., 631 F.2d 989, 1002 (D.C. Cir. 1980).
145. *Id.* at 997, 1001, 1001 n.21.
146. *See generally* 3 BRUNER & O'CONNOR, *supra* note 7, at § 9:102.
147. *See generally id.* at § 9:92.
148. *See* Circo, *supra* note 27, at 186-87.
149. *See id.* at 173, 177-79.
150. *See id.* at 185-87, 237-38.
151. *See id*.

contractual privity.[152] As his account also explains—to a considerable extent—design professionals have reduced their exposure to such claims through carefully narrowing the scope of professional services included in their contracts, particularly by excluding any responsibility for project safety or construction means and methods and by disclaiming authority to order work stoppages.[153]

Some close questions about the circumstances in which a contract creates a special relationship under tort law involve obligations concerning budget estimates, scheduling matters, and other aspects of project management and administration.[154] These cases often call on courts to scrutinize the precise scope of the contractual responsibilities especially closely to determine whether public policy requires the contractually obligated party to observe a tort duty of care in favor of strangers to the contract.[155] To protect against expanding theories of liability under design services contracts, lawyers representing design professionals may aggressively negotiate for express contractual limits on the client's damage liability, limits that courts sometimes hold to be unenforceable on policy grounds.[156]

The special-relationship theory may also be invoked in support of tort claims other than professional malpractice and negligence. Once again, some of the leading cases involve the contractual obligations of design professionals.[157] Design professionals who provide faulty information in the course of performing design services for a construction project may incur liability both to clients and non-clients for negligent misrepresentation when the design professional knows the plaintiff will rely on the information in connection with the

152. *See* Marc M. Schneier, *Design Professional Liability for Construction Worksite Accidents—How Arkansas Led the Way to a National Consensus*, 75 ARK. L. REV. 381 (2022).

153. *Id.* at 395-400.

154. *See generally* Circo, *supra* note 27, at 180-90.

155. *See, e.g.*, Thompson v. Gordon, 948 N.E.2d 39, 45-48, 51-52 (Ill. 2011).

156. Buck S. Beltzer & Melissa A. Orien, *Are Courts Limiting Design Professionals' Ability to Limit Liability?*, CONSTR. LAW., Spring 2010, at 17, 17-18.

157. *See generally* Circo, *supra* note 27, at 173-77.

project.[158] In adopting the negligent misrepresentation doctrine, the Restatement of Torts explicitly references construction industry examples.[159] Some courts have even imposed strict liability for defective designs incorporated into a building, especially when the defendant functioned in a design-build capacity.[160]

A design professional's involvement in a dispute between the designer's client and another participant may support a claim for tortious interference with contract or with prospective business advantage.[161] A common arrangement for a project architect's role in contract administration amplifies this risk when the architect's duties under the owner's contracts with the architect and the general contractor require the architect's approval of, or other direct involvement with, the owner's decision to terminate the contractor for default.[162] In addition to design professionals, other industry players are also susceptible to tortious interference claims.[163] The tortious interference cases receive some attention in practice-oriented journals.[164] The special construction industry circumstances involved should appeal to the academic community.[165] Moreover, the different

158. *See id.* at 182; *e.g.*, Ossining Union Free Sch. Dist. v. Anderson LaRocca Anderson, 539 N.E.2d 91, 95 (N.Y. 1989).

159. RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR ECONOMIC HARM § 5, illus. 4, 15 (AM. L. INST. 2020).

160. *See* Circo, *supra* note 27, at 182-83; *e.g.*, Com. Distrib. Ctr., Inc. v. St. Regis Paper Co., 689 S.W.2d 664, 669-70 (Mo. Ct. App. 1985).

161. *See* SWEET & SCHNEIER, *supra* note 29, at 243-44.

162. Carl J. Circo, *Architect's Contract Administration*, *in* FORUM TEXTBOOK, *supra* note 6, at 197, 219-20.

163. *See* Kevin J. Gleeson & Mark L. McAlpine, *Creative Collateral Claims Against Public Entities and Their Agents*, CONSTR. LAW., Winter 2020, at 33, 34-35, 38 (discussing tortious interference claims brought by disappointed low bidders against owners and competitors contributing to the rejection of their bid); Anna Oshiro & Peter W. Hahn, *Private Rights of Action for Procurement Violations*, CONSTR. LAW., Fall 2015, at 17, 19-24; *e.g.*, J & S Servs. v. Tomter, 139 P.3d 544, 545-46, 551 (Alaska 2006) (involving a disappointed contractor's suit against the state and a state procurement officer alleging intentional misconduct in awarding a contract).

164. *See, e.g.*, Mark J. Heley & Mark A. Bloomquist, *The Design Professional's Role in Termination of the Contractor*, CONSTR. LAW., Apr. 1997, at 3, 10; Schneier, *supra* note 27, at 3-4.

165. *See generally* Circo, *supra* note 27, at 165-67.

frameworks courts use for assessing such claims invite greater academic assessment of the theories and defenses advanced.[166]

As some of the theories of liability discussed above imply, the judicial practice of imposing a tort duty of care based on contractual obligations figures into a growing number of suits to recover damages when the acts or omissions of a project participant adversely affect the economic interests of others.[167] Because the economic interests of dozens or scores of project participants are intertwined with the responsibilities and activities of those with whom no contractual privity exists, construction projects present recurring circumstances of special relationships arguably sufficient to impose a tort duty of care to prevent economic harm. Not only do general contractors seek to recover economic losses attributable to the acts and omissions of project architects or engineers, but project owners seek to recover against subcontractors, suppliers, and manufacturers, while any number of subcontractors, suppliers, consultants, and end-users of the project sue each other when delays, disruptions, errors, and other problems adversely impact the project.[168] A great many of these cases implicate the economic loss rule of tort law, an especially popular topic among construction lawyers.[169]

Turning then directly, but briefly, to the economic loss rule as applied in construction industry contexts, we find an issue that has not only received massive attention from practitioners, but also one that has engendered considerable interest among legal scholars.[170] The economic loss rule has been frequently explained

166. *Compare* DiMaria Constr., Inc. v. Interarch, 799 A.2d 555, 560-64 (N.J. Super. Ct. App. Div. 2001), *with* Dehnert v. Arrow Sprinklers, Inc., 705 P.2d 846, 850-52 (Wyo. 1985).

167. *See* Circo, *supra* note 27, at 178.

168. *See generally* Patricia H. Thompson & Christine Dean, *Continued Erosion of the Economic Loss Rule in Construction Litigation by and Against Owners*, CONSTR. LAW., Fall 2005, at 36; Jay M. Feinman, *Economic Negligence in Construction Litigation*, CONSTR. LAW., Aug. 1995, at 34; Alvin M. Cohen & James W. Bain, *Negligence Claims in Construction Litigation*, CONSTR. LAW., Apr. 1988, at 3, 30-31.

169. Twenty-five years ago, Professor Justin Sweet commented that he had vowed to resist the temptation to write on the economic loss rule issue in construction industry cases because of the extensive attention already devoted to the topic by that time in *The Construction Lawyer* journal alone. Justin Sweet, *A View from the Tower*, CONSTR. LAW., Jan. 1997, at 47, 47.

170. *See, e.g.*, Paul M. Hellegers, *Making Sense of the Economic Loss Rule in Construction Cases: Does the Draft Restatement (Third) of Torts Help? Part Two*, CONSTR.

as a device used to establish or defend the boundary between contract and tort and to guard against unlimited tort liability.[171] Given the policy issues involved and the confusing and conflicting judicial approaches appearing in the industry cases, however, this popular topic begs for the kind of comprehensive and coherent analysis best suited to extended scholarly debate. The application of the economic loss rule to construction industry cases frequently brings to light unique considerations sometimes overlooked or inappropriately conflated by the courts.[172] Despite the extensive body of scholarly work on the economic loss rule, the proper application of the rule specifically in the construction industry context merits further academic analysis.

Tort law suggests many additional areas for scholarly inquiry. A leading textbook for introducing construction law to architects, engineers, and construction professionals provides a good overview.[173] Personal injury claims often invoke premises liability theories to support actions brought against project owners and general contractors on the basis of control over a project site.[174] Injuries and damages attributable to defects in equipment, material, or components incorporated into a project sometimes pose interesting questions under product liability law or strict liability statutes.[175] Several construction industry cases consider

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LAW., Winter 2014, at 5; Paul M. Hellegers, *Making Sense of the Economic Loss Rule in Construction Cases: Does the Draft Restatement (Third) of Torts Help? Part One*, CONSTR. LAW., Fall 2013, at 23; Anthony L. Meagher & Michael P. O'Day, *Who Is Going to Pay for My Impact? A Contractor's Ability to Sue Third Parties for Purely Economic Loss*, CONSTR. LAW., Fall 2005, at 27; Feinman, *supra* note 168, at 34.

171. Sidney R. Barrett, Jr., *Recovery of Economic Loss in Tort for Construction Defects: A Critical Analysis*, 40 S.C. L. REV. 891, 894-97 (1989); Robert L. Rabin, *Respecting Boundaries and the Economic Loss Rule in Tort*, 48 ARIZ. L. REV. 857, 858-61 (2006); Circo, *supra*, note 27, at 190-91, 245-46.

172. *See* Lawrence E. Leykam, *The Viability of the Economic Loss Rule as a Defense to Third Party Claims for Negligent Misrepresentation Against Design Professionals*, 13 AM. COLL. CONSTR. LAWS. J. 1, 8 (2019); Carl J. Circo, *Placing the Commercial and Economic Loss Problem in the Construction Industry Context*, 41 J. MARSHALL L. REV. 39, 42-43 (2007).

173. SWEET & SCHNEIER, *supra* note 29, at 72-92.

174. *See* James Duffy O'Connor, *Additional Insured Coverage: The Why, the What, and the Wherefore*, 11 AM. COLL. CONSTR. LAWS. J. 1, 3-4 (2017).

175. *See* Laurence S. Kirsch & Rebecca E. Rapp, *Mold: An Evolving Issue in Design and Construction Defect Litigation*, CONSTR. LAW., Spring 2003, at 5, 7; William R. Joyce & Patrick J. O'Connor, *Curtain Wall Failures*, CONSTR. LAW., Jan. 2000, at 22, 23; Golden, *supra* note 29, at 11-12.

whether or how violations of federal and state laws and regulations pertaining to safety and employment hazards, including the Federal Occupational Safety and Health Act, may be evidence of negligence or may otherwise support liability in tort.[176] I leave it to tort scholars to assess whether any of these topics, or others not mentioned here, may prove worthy of their attention.

In cataloguing substantive construction law issues with significant scholarly appeal, this review has so far dealt only with contract and tort law, where the most obvious gaps exist between the law in action and the legal academy. Many other construction industry topics deserve further scholarly investigation. Green building initiatives and other techniques for more sustainable design and construction practices suggest especially timely topics.[177] More broadly, questions about the relationship of the built environment as a whole to the challenges of climate change and sustainability raise significant public policy considerations.[178] A topic deserving the attention of alternative dispute resolution scholars emerges from the practicing bar's reflections on the impact that the industry's preference for

176. *See generally* 4A BRUNER & O'CONNOR, *supra* note 7, at § 13:15; Joseph Zavoral, *OSHA Liability in Tort and the Threat of the Multi-Employer Doctrine*, 47 FLA. ST. U. L. REV. 867, 879-82 (2020).

177. *See, e.g.*, Stephen A. Hess & William J. McConnell, *Assessing Liability for Green Building Failures, Part II: How Claims of Green Building Failures Fare Under Common Law Doctrines*, 7 AM. COLL. CONSTR. LAWS. J. 1, 1-5 (2013); Edward B. Gentilcore, *Through the Green Looking Glass, Part II: Contractual Solutions to Avoid Falling into the Rabbit Hole*, CONSTR. LAW., Spring 2013, at 6, 14; Edward B. Gentilcore, *Through the Green Looking Glass, Part I: Pursuing Successful Green/Sustainable Construction Without Falling into the Rabbit Hole*, CONSTR. LAW., Winter 2013, at 39; William J. McConnell & Stephen A. Hess, *Assessing Liability for Green Building Failures, Part I: The History, Development, and Status of Green Building Codes*, 6 AM. COLL. CONSTR. LAWS. J. 1, 5 (2012); Circo, *supra* note 55, at 483-84.

178. *See, e.g.*, Robert Denney, *Contractor Liability Under CERCLA*, CONSTR. LAW., Summer 2020, at 31, 35; Elena Mihaly et al., *Legal Liability of Design Professionals for Failure to Adapt to Climate Change*, 12 AM. COLL. CONSTR. LAWS. J. 1 (2018); Brian J. Mink, *Trading CERCLA for* Spearin *in El Dorado County: Shifting the Risk of Unknown Site Pollution to the Government in CERCLA Consent Decrees*, CONSTR. LAW., Fall 2015, at 26, 33; Jocelyn L. Knoll & Shannon L. Bjorklund, *Force Majeure and Climate Change: What is the New Normal?*, 8 AM. COLL. CONSTR. LAWS. J. 1 (2014); Vyas & Gentilcore, *supra* note 55, at 10; Carl J. Circo, *Should Owners and Developers of Low-Performance Buildings Pay Impact or Mitigation Fees to Finance Green Building Incentive Programs and Other Sustainable Development Initiatives?*, 34 WM. & MARY ENV'T L. & POL'Y REV. 55, 58-60 (2009); Circo, *supra* note 55, at 732-33.

arbitration over litigation may have on the common law development of construction law.[179] Discrete aspects of dispute resolution practices in the industry also hold promise for academic consideration.[180] Legal implications of technological developments affecting design and construction pose many interesting questions.[181] Construction lending presents other topics for academic attention,[182] as does the interface between construction financing and the Bankruptcy Code.[183] Legal scholars should delve more into questions of legislative and regulatory policies affecting the industry, along with a range of administrative law matters.[184] Academics should engage more regularly on international and comparative law topics involving

179. *See, e.g.*, William Karl Wilburn & Robert Chistoffel, *Whither Construction Law? The Conversation Continued . . . auf Deutsch*, CONSTR. LAW., Fall 2012, at 25; Andrew D. Ness, *Whither Construction Law? How Can Construction Law Continue to Grow and Evolve in the Era of "The Vanishing Trial"?*, CONSTR. LAW., Summer 2010, at 5.

180. *See, e.g.*, Bruner, *supra* note 51, at 7; Overcash, *supra* note 48, at 22; Thomas J. Stipanowich, *Managing Construction Conflict: Unfinished Revolution, Continuing Evolution*, CONSTR. LAW., Fall 2014, at 13; Paul T. Milligan, *supra* note 51, at 23; Bruner, *supra* note 48, at 6.

181. *See, e.g.*, Nancy Wiegers Greenwald, *BIM, Blockchain, and Smart Contracts*, CONSTR. LAW., Fall 2020, at 9; Hurtado, *supra* note 57, at 809-43; Vince Anewenter et al., *Brave New Extruded World: Legal Issues Arising in the Construction Industry from Using Additive 3D Printing Technology*, 9 AM. COLL. CONSTR. LAWS. J. 1 (2015); Circo, *supra* note 57, 873-74.

182. *See, e.g.*, Carl J. Circo et al., *The Role of Lender's Counsel in the Design and Construction Process: Contract Review, Conditional Assignments of Contracts, and Related Due Diligence*, 24 REAL PROP., PROB. & TR. J. 557 (1990). *See generally* 3 BRUNER & O'CONNOR, *supra* note 7, at §§ 8:125-49.

183. *See, e.g.*, Jason R. Kennedy, *Selected Issues in Commercial Construction Bankruptcies*, CONSTR. LAW., Spring 2013, at 33; David C. Seitter et al., *The Intersection of Construction Law and Bankruptcy*, CONSTR. LAW., Winter 2010, at 11; Deborah S. Griffin et al., *Intersections of Bankruptcy and Construction: Treatment of Executory Construction Contracts and Mechanics' Liens in Bankruptcy*, 4 AM. COLL. CONSTR. LAWS. J. 1 (2010).

184. *See, e.g.*, Suzanne Karbarz Rovner & Dennis J. Powers, *ADA Compliance in the Commercial Context: Whose Job is it Anyway?*, CONSTR. LAW., Summer 2019, at 14; Phillip B. Russell et al., *An Overview of OSHA Investigations and Citations*, CONSTR. LAW., Winter 2017, at 15; Lori Ann Lange, *Navigating the Increasingly Complex Regulatory Environment of Government Contracts*, CONSTR. LAW., Spring 2016, at 28; Roger C. Haerr, *When Underbidding Below Cost to Win a Public or Government-Funded Contract May Violate the False Claims Act*, CONSTR. LAW., Winter 2013, at 17; Elspeth England, *The Government Upgrades the False Claims Act: Implications for Federal Construction Contracting*, CONSTR. LAW., Winter 2012, at 25; Deborah I. Hollander, *New OSHA Safety Rules for Crane and Derrick Operations*, CONSTR. LAW., Winter 2011, at 30.

the built environment.[185] There is also a pressing need for scholars to assess consumer protection in the construction industry and to consider problems primarily associated with small projects, where sophisticated structures and risk management devices may be impractical.[186] Attention from the legal academy to consumer transactions and small projects may prove especially meaningful to legal academics because members of the construction bar have given less attention to these matters than to commercial ones.

The practice-oriented literature identifies still other issues that legal scholars might pursue. Only further investigation can determine which of them may lead to significant academic projects, but I will conclude this Part by briefly noting a few possibilities. Labor and employment law frequently intersect with the construction industry in ways that should interest scholars in that field.[187] Intellectual property aspects of design and construction warrant ongoing attention.[188] Scholarly investigations might also be directed toward interdisciplinary connections, including engineering, economics, and forensic

185. The practicing bar has already contributed a great deal to these topics. *See, e.g.*, Angus N. McFadden & Gregory K. Smith, *Issues and Solutions in International Construction Contracting*, CONSTR. LAW., Fall 2016, at 7; Stephen A. Hess, *Studies in European Construction Law*, CONSTR. LAW., Winter 2016, at 46; Bailey & Hess, *supra* note 43, at 6; John Livengood, *Comparison of English and US Law on Concurrent Delay*, CONSTR. LAW., Summer 2015, at 21; Jesse B. Grove & Richard Appuhn, *Comparative Experience with Dispute Boards in the United States and Abroad*, CONSTR. LAW., Summer 2012, at 6.

186. *See, e.g.*, Roger B. Coven, *California Attempts to Resolve Residential Construction Defect Claims Without Litigation*, CONSTR. LAW., Spring 2003, at 35; Stipanowich, *supra* note 84, at 502-05, 520-22; Golden, *supra* note 29, at 11.

187. *See, e.g.*, Erin Ebeler Rolf & Andrea Woods, *Labor and Employment Risk in the Real World: A Practical Guide to Understanding Recent Trends and Laws Intersecting the Construction Industry*, CONSTR. LAW., Winter 2021, at 6; Ostroff, *supra* note 56, at 25; Y. Lisa Colon Heron & Brian Anthony Williams, *Government Contracting Preference Programs After* Schuette*: What's Next? Achieving Parity Through Race-Neutral Methods*, CONSTR. LAW., Winter 2015, at 29; Gerard P. Brady & Jared Hand, *The Perils of Doing Business with Disadvantaged Business Enterprises*, CONSTR. LAW., Summer 2012, at 37.

188. *See, e.g.*, Mary Jane Augustine & Christopher S. Dunn, *Consequences of Ownership or Licensing of the Project Drawings—If You Pay for It, Do You Own It?*, CONSTR. LAW., Summer 2008, at 35; David A. Roberts, *There Goes My Baby: Buildings As Intellectual Property Under the Architectural Works Copyright Protection Act*, CONSTR. LAW., Spring 2001, at 22.

studies.[189] Undoubtedly, scholars who specialize in other fields could uncover additional research topics.

III. IN CONCLUSION: SEEKING A PARTNERSHIP BETWEEN THE CONSTRUCTION BAR AND THE LEGAL ACADEMY

Construction law exists not only as a specialty practice for lawyers, but also as a significant body of law, legal relationships, and policies relating to one of the most important segments of the national and global economies. By failing to assign construction law a meaningful place in the law school curriculum, law schools forego a valuable pedagogic tool—one that can both integrate learning in multiple legal fields at advanced levels and help to introduce students to complex commercial practice. By failing to promote scholarly interest in legal aspects of designing and constructing the built environment, the legal academy misses an important opportunity to explore, assess, and critique construction law as an instrument of society. It also overlooks promising opportunities for cross-disciplinary work with faculties in engineering, architecture, and business, among others.

What will it take for the legal academy to embrace construction law? Only a small number of fulltime law professors currently devote substantial time and energy to construction law. There apparently are still too few of us to establish a Section on Construction Law within the Association of American Law Schools ("AALS"), an idea that Professor Stipanowich proposed more than two decades ago.[190] The impetus must come from those with intimate knowledge of the legal relationships

189. There has already been some contribution on lost labor productivity and forensic scheduling issues. *See, e.g.*, William Ibbs & Oskar Gentele, *Usage and Acceptance Rates for Loss of Productivity Damage Quantification Methods*, CONSTR. LAW., at Spring 2021, at 26; Stynchcomb et al., *supra* note 41, at 18; Joseph C. Kovars et al., *Pros and Cons of Using Industry Studies to Quantify Loss of Labor Productivity*, CONSTR. LAW., Winter 2016, at 6; Daniel E. Toomey et al., *Calculating Lost Labor Productivity: Is There a Better Way?*, CONSTR. LAW., Spring 2015, at 27; Patrick M. Kelly & William E. Franczek, *Clearing the Smoke: Forensic Schedule Analysis Method Selection for Construction Attorneys*, CONSTR. LAW., Fall 2013, at 30; Plotnick, *supra* note 125, at 25; Kenji Hoshino & John Livengood, *A Defense of the AACE Recommended Practice for Forensic Schedule Analysis*, CONSTR. LAW., Winter 2010, at 32.

190. *See* Stipanowich, *supra* note 84, at 576.

underlying design and construction of the built environment. The leadership of the construction bar stands in the best position to lead the way. Initiatives might come from the American Bar Association's Forum on Construction Law and the American College of Construction Lawyers. Members of these organizations have long taught most courses relating to construction law offered in U.S. law schools.

These practicing lawyers, mediators, and arbitrators who so frequently serve as adjunct professors on a part-time basis, in addition to continuing to teach, might band together to leverage their law school relationships. They could establish collaborations with fulltime members of law faculties in allied areas, such as contracts, commercial law, dispute resolution, consumer protection, torts, property, administrative law, public contracts, real estate transactions, and environmental policy, among others. At some schools, they might collaborate with fulltime faculty on joint teaching or research projects. They also could lobby the law schools where they teach and other schools where they have contacts to expand academic engagement with the legal aspects of design and construction for the built environment. They could encourage law deans and faculties to schedule regular guest lectures and periodic symposia on construction law and to invite construction lawyers to fill posts as visiting professors of practice. Their support might even help move toward creation of an AALS Section on Construction Law. They can also seek affiliations with international professional organizations and international academic programs devoted to design and construction law that could eventually lead to one or more academic centers of construction law in the United States.

After nearly half a century of construction law being recognized as a practice specialty,[191] the time is right for law faculties to embrace construction law as a specialty in the law school curriculum and in research agendas. My heartfelt hope is that the law professors and construction lawyers who have contributed to the Arkansas Law Review Symposium on

191. *See* Philip L. Bruner, *The Historical Emergence of Construction Law*, 34 WM. MITCHELL L. REV. 1, 22 (2007).

Construction Law in the Legal Academy, along with others who may hear this call, will respond.

EQUITABLE, AFFORDABLE AND CLIMATE-COGNIZANT HOUSING CONSTRUCTION

Shelby D. Green*

I. THE OMENS FROM CLIMATE CHANGE

The almost universal sentiment by a growing body of physical and social scientists is that climate change—with its floods, drought, heat, and cold—portend losses of life, communities, property, and the rhythms of living.[1] Some are more vulnerable to these impacts than others: individuals and the poor, who through official government policy and self-interest in the housing markets, have been relegated to live in poorly-constructed and poorly-placed structures—in the wake of ocean surges; in the path of strong winds; near hazardous and noxious facilities; stranded in urban heat islands.[2] Failing to heed climate change omens will lead to a world fundamentally different and unsustainable for basic human values, for basic physical needs, for how we stay warm, how we obtain food and water, how and where we live, travel, and interact.

Our current land use policy and patterns are precariously out of sync with the ecological trends of the natural world and the evolving notions of equity and fairness. Wisely, we are reassessing the effects of historic discriminatory land use policy and embracing a new urban design concept—"one that if not

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1. *World Faces 'Climate Apartheid' Risk, 120 More Million in Poverty: UN Expert*, UN NEWS (June 25, 2019), [https://perma.cc/W78Y-HPJF].

2. Urban heat islands arise from urban micro-climates, when naturally vegetated surfaces are replaced with impervious surfaces that absorb, retain, and reradiate energy, sickening those trapped in their small living spaces. *See* EVYATAR ERELL ET AL., URBAN MICROCLIMATE: DESIGNING THE SPACES BETWEEN BUILDINGS 67-68, 72-74 (2011); *Reduce Urban Heat Island Effect*, EPA, [https://perma.cc/5NAN-JMV8] (last visited Mar. 18, 2022).

climate-determinist, is *climate-cognizant*."[3] We are seeing that safe and inviting communities are the claim of all, and land use policy should not by intention or effect operate to exclude on account of race, ethnicity, or socio-economic status. We are seeing that the impacts from the built environment and the natural environment can be reconciled in a way that shows regard for climate and social equity.

In this Article, I recount some of the history of unwise and improvident land use policy and practices that have led to gross inequities and to the climate-exposed state, not only in terms of where people were assigned spaces to live, but how. I go on to suggest that communities should be designed with intent, with regard for the threats of climate change as well as accessibility to those historically excluded.

II. DISPARITIES IN ACCESS TO AND QUALITY OF HOUSING

A. The State of Housing

Housing is not just a physical thing, but significantly, a social, economic, and political construct. Good and ample housing is essential to individual thriving and enrichment, family cohesion, autonomy, and economic security. Poor and inaccessible housing means demoralization, bad health, wealth barriers, and family dysfunction. The disparities between those with good and ample housing and those who face poor or inaccessible housing is quite stark. Society's poorly housed have been relegated, physically and metaphorically, to the bottom strata of the socio-economic ladder. While the rates of homeownership have been rising in recent years, the disparity in rates between whites and people of color remains substantial, by nearly 30%.[4] The disparities in housing opportunities stem from cost, supply, quality, and location of housing.

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3. Shelby D. Green, *Zoning Neighborhoods for Resilience: Drivers, Tools and Impacts*, 28 FORDHAM ENV'T. L. REV. 41, 43 (2016).

4. JOINT CTR. FOR HOUS. STUD. HARV. UNIV., THE STATE OF THE NATION'S HOUSING 3 (2021).

1. Cost and Supply

Over 36 million households are housing-cost-burdened, that is, paying more than 30% of income on shelter.[5] The median price of a home in the country is nearly $350,000, and mortgage interest rates are rising, now just under 4%.[6] There is a shortage in the number of available housing units ranging from 2.5 to 3.3 million, and this shortage is persistent.[7] This leaves a significant cohort of households vulnerable to the impacts of economic conditions and climate change.

2. Quality and Location

The housing shortage exists not only in terms of the number of units relative to the number of households seeking housing but also in terms of quality.[8] By official government policy and private practices, certain populations were relegated to the most undesirable parts of communities. After Hurricane Sandy, it was determined that many of the homes ravaged by the storm were poorly constructed public housing units built on the cheapest land and in the path of ocean surges.[9] In New Orleans, during Hurricane Katrina, those homes overwhelmed by the flooding from the lake were those in the "bottoms," an area below sea level; they were built there because the land was cheap and the area was segregated.[10]

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5. *2020 State of the Nation's Housing Report*, HABITAT FOR HUMAN., [https://perma.cc/F7LG-BVZL] (last visited Mar. 17, 2022); JOINT CTR. FOR HOUS. STUD. HARV. UNIV., *supra* note 4, at 4.

6. Ann Carrns, *Rising Mortgage Rates Add to the Challenge of Buying a House*, N.Y. TIMES (Feb. 18, 2022), [https://perma.cc/4TKP-X3VT].

7. SAM KHATER ET AL., FREDDIE MAC, THE MAJOR CHALLENGE OF INADEQUATE U.S. HOUSING SUPPLY 6 (2018), [https://perma.cc/2MAE-KTYF].

8. *Id.* at 7-8.

9. Shelby D. Green, *Building Resilient Communities in the Wake of Climate Change While Keeping Affordable Housing Safe from Sea Changes in Nature and Policy*, 54 WASHBURN L.J. 527, 539 (2015); FURMAN CTR. & MOELIS INST., SANDY'S EFFECTS ON HOUSING IN NEW YORK CITY 4-5 (2013), [https://perma.cc/62TT-NBPR]; HURRICANE SANDY REBUILDING TASK FORCE, HURRICANE SANDY REBUILDING STRATEGY 89 (2013), [https://perma.cc/YS3G-ZS4B].

10. *See* Green, *supra* note 9, at 533, 540; Juliette Landphair, *"The Forgotten People of New Orleans": Community, Vulnerability, and the Lower Ninth Ward*, 94 J. AM. HISTORY

Low-income and minority populations are more likely to live in deteriorating and unhealthy tumble-down housing,[11] with lead paint, asbestos, mold, and mildew.[12] Poorer communities are disproportionately located near industrial and waste-disposal sites[13] and disproportionately exposed to indirect contamination risks from noxious air emissions, residual contaminated sediments, and debris disposal, which is often associated with flooding caused by extreme precipitation.[14]

Additionally, poorer communities are less likely to have access to parks and green spaces.[15] They have fewer trees than wealthier communities,[16] and they have more highways running through them.[17] As the poor more often live in housing without

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837, 838-39 (2007); Emily Eisenhauer, Socio-ecological Vulnerability to Climate Change in South Florida (Mar. 26, 2014) (Dissertation, Florida International University) (available at [https://perma.cc/VFL4-VEJV]). Even as laudable philanthropic efforts emerged to right the historic wrongs, residents of the Lower Ninth Ward were yet victims of their poverty when new green housing was poorly constructed. *See* Judith Keller, *How Brad Pitt's Green Housing Dream Became a Nightmare*, GREEN BLDG. ADVISOR (Feb. 15, 2022), [https://perma.cc/YG8Z-SCZU].

11. *See* S. Burlington Cnty. NAACP v. Mt. Laurel Twp., 336 A.2d 713, 727-28 (N.J. 1975) (discussing the lack of affordable housing for low-income families in New Jersey).

12. *See* James Krieger & Donna Higgins, *Housing and Health: Time Again for Public Health Action*, 92:5 AM. J. PUB. HEALTH 758-68 (2002), [https://perma.cc/8VZY-JGL7].

13. ROBERT BULLARD ET AL., UNITED CHURCH OF CHRIST, TOXIC WASTES AND RACE AT TWENTY: 1987-2007 52-53 (2007); JAMES P. LESTER ET AL., ENVIRONMENTAL INJUSTICE IN THE UNITED STATES: MYTHS AND REALITIES 57-60 (2001) (finding that exposure to environmental risk is correlated with race and class); NAT'L ACAD. OF PUB. ADMIN., ADDRESSING COMMUNITY CONCERNS: HOW ENVIRONMENTAL JUSTICE RELATES TO LAND USE PLANNING AND ZONING 31-32 (2003) (concluding that undesirable land uses are disproportionately located in minority neighborhoods); Jim Erickson, *Targeting Minority, Low-income Neighborhoods for Hazardous Waste Sites*, MICH. NEWS: UNIV. OF MICH. (Jan. 19, 2017), [https://perma.cc/4PSF-FSMA].

14. *See* U.S. GLOBAL CHANGE RSCH PROGRAM, IMPACTS, RISKS, AND ADAPTATION IN THE UNITED STATES: FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME II 451 (David Reidmiller et al. eds., 2018).

15. *See* Emma Zehner, *A Sustainable Recovery*: *How Green Strategies Can Help Small Cities Confront Climate Change, COVID-19, and Systemic Racism*, LAND LINES, Oct. 2021, at 34, 35.

16. Ian Leahy & Yaryna Serkez, *Since When Have Trees Existed Only for Rich Americans?*, N.Y. TIMES, [https://perma.cc/LS7Q-TF6M] (last visited Mar. 18, 2022).

17. *See* Kathleen McCormick, *How Urban Highway Removal is Changing Our Cities*, LAND LINES, April 2020, at 22, 24.

modern systems for heating and cooling, they suffer disproportionately from the urban-heat-island effect.[18]

B. Creating and Destroying Communities by Design

Desolate, dangerous, and dilapidated housing did not just happen. This design was created by government policy, racial zoning, and private discriminatory practices.

1. Federal Roads That Severed Communities

In the middle of the last century, the federal government began pouring billions of dollars into highway construction.[19] Multi-lane highways ran through city neighborhoods, uprooted thousands of individuals, and obliterated entire communities, destroying much scenic beauty along the way, sometimes just to save an extra five miles per hour of speed on a curve or smooth the way for truck traffic.[20] Only the Transportation Act of 1966[21] slowed, but could not halt, the steam rollers. There, Congress declared as national policy "that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites,"[22] and no funds for building roads could be appropriated until their impacts had been evaluated. Despite the directive, governments still tried to build highways in the most inconceivable places, like right through the middle of urban parks.[23]

2. Government Help for Homeowners, but not Renters

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18. Michael Waters, *Heat Waves Hurt Communities of Color the Most*, OUTLINE (July 11, 2018, 3:30 PM), [https://perma.cc/F3W7-A3UY].

19. *See* Bruce Seely, *A Republic Bound Together*, WILSON Q., Winter 1993, at 19, 32-35.

20. *See id.* at 37.

21. Department of Transportation Act, Pub. L. No. 89-670, § 4(f), 80 Stat. 931, 934 (1966) (current version at 49 U.S.C. § 303).

22. 49 U.S.C. § 303.

23. *See, e.g.*, Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 406 (1971).

Tax policies—the deduction of mortgage interest from gross income and the exclusion of up to $500,000 in gains on the sale of a home—have made it cheaper to buy a house in the suburbs than to rent in a walk-up in the city.[24] The federal government spends more than $450 billion annually on tax expenditures and loan commitments to subsidize single-family homeownership, an achievement largely denied to people of color.[25]

3. Renewing by Removal

The Urban Renewal program promised to "renew" urban communities by clearing blighted areas and building new housing.[26] But the erstwhile slums became luxury apartment houses, government buildings, and office towers. In the end, the poor lost more housing than they gained.[27] Before the dust settled, more than 700,000 families, primarily low-income and minority, were displaced by urban renewal and highways.[28] The removal only stopped with the Housing and Community Development Act of 1974, which substituted block grants to cities to build communities other than by slum clearance.[29] The areas cleared, although cast as "blighted," were home to many.

4. Discriminatory Lending Policy

Until it was outlawed by the Fair Housing Act of 1968,[30] government-regulated lenders openly engaged in the practice of "redlining"—actually drawing red lines around neighborhoods on a map, beyond which they would not lend on account of the race of the inhabitants, no matter how creditworthy the prospective

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24. *Key Elements of the U.S. Tax System: What are the Tax Benefits of Homeownership?*, TAX POL'Y CTR. (May 2020), [https://perma.cc/5WY4-96PR].

25. *See* SMART GROWTH AM., FEDERAL INVOLVEMENT IN REAL ESTATE: A CALL FOR EXAMINATION, iii (2013), [https://perma.cc/2WCE-LE2Q].

26. *See* JOHN R. LOGAN & HARVEY L. MOLOTCH, URBAN FORTUNES: THE POLITICAL ECONOMY OF PLACE 167 (1987).

27. *See id.* at 167-69.

28. BERNARD J. FRIEDEN & LYNNE B. SAGALYN, DOWNTOWN, INC.: HOW AMERICA REBUILDS CITIES 29 (rev. ed. 1991).

29. *See* 42 U.S.C. § 5301.

30. *See* 42 U.S.C. § 3605.

borrowers.[31] These same banks took deposits from the community outside their lending circle.[32] It was a vicious cycle—banks refusing to lend on the asserted ground that in default, the collateral would be insufficient, the inability of homeowners to obtain loans leading to deferred upkeep and repair, leading to lower property values, and back to insufficient value to collateralize a loan.

Private lenders were not the only ones mapping out the races. In fact, the federal government, under the Home Owners Loan Corporation ("HOLC"), a depression era agency created to rescue defaulting property owners from default, drew its own race maps.[33] HOLC determined eligibility for government loans based on what zone the prospective borrower lived in.[34] Red zones indicated "hazardous" neighborhoods where lending was discouraged because the area had been "infiltrated" by black people.[35] At the other end of the spectrum were the green zones, deemed the "best" places, because they were entirely segregated.[36] Yellow and blue were in between with varying threats of "infiltration."[37] Tying property worth to the racial composition of the neighborhood denied the wealth-generating power of homeownership and would dictate health and economic outcomes for decades. The Federal Housing Administration ("FHA"), created to provide mortgage insurance for borrowers of modest income, based official lending policy on HOLC maps and required race-restrictive covenants in property it insured to keep communities segregated.[38]

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31. Raymond H. Brescia, *Subprime Communities: Reverse Redlining, the Fair Housing Act and Emerging Issues in Litigation Regarding the Subprime Mortgage Crisis*, 2 ALB. GOV'T L. REV. 164, 179 (2009).

32. *See* 12 U.S.C. § 2901.

33. Amy E. Hillier, *Redlining and the Homeowners' Loan Corporation*, 29 J. URB. HIST. 394, 394-95 (2003).

34. *See* Sarah L. Swan, *Discriminatory Dualism*, 54 GA. L. REV. 869, 879 (2020).

35. *Id.* at 880.

36. *See id.* at 879-80.

37. *See id.* at 880.

38. *See* Hillier, *supra* note 33, at 414; FED. HOUS. ADMIN., UNDERWRITING MANUAL para. 980(3)(g) (1938) (stating that restrictive covenants should prohibit "the occupancy of properties except by the race for which they are intended"); Shelby D. Green, *The Search for a National Land Use Policy: For the Cities Sake*, 26 FORDHAM URBAN L.J. 69, 78, 85-86 (1998).

5. Bleak Houses in the Projects

Federal government housing programs were not administered in ways that were supportive of community and thriving. So as not to compete with private developers, public housing could not be elaborate,[39] but just a basic structure—some said they were designed to look like prisons.[40] Originally, the structures were three and four-story brick buildings with grassy courts, then row houses during the war, then the monolithic high-rise towers. High-rises were less expensive, and proponents claimed they left more room on the ground for children to play.[41] Poor construction and poor maintenance led to infamous "projects" like Cabrini-Green Chicago.[42]

Public housing policy has undergone many permutations in the last half century—from direct support for construction, to destruction of high rises, to direct payments to would-be tenants.[43] Now, housing-choice vouchers are given to renters of moderate income to enable them to go into the market to find housing.[44] There are persistent shortfalls in these budgets and the holders are often met with anti-voucher policies.[45]

III. MOATS AND WALLS BY LOCAL ZONING

While now subject to challenge under the Fair Housing Act of 1968,[46] under both intentional discrimination and impact theories,[47] discriminatory government policies and exclusionary

39. Low Rent Housing Program, 42 U.S.C. § 1437(a).

40. Gordon Cavanaugh, *Public Housing: From Archaic to Dynamic to Endangered*, 14 J. AFFORDABLE HOUS. & COMMUNITY DEV. L. 228, 228 (2005); *see also* OSCAR NEWMAN, U.S. DEP'T OF HOUS. & URBAN DEV., CREATING DEFENSIBLE SPACE 20 (1996) (criticizing the "highrise superblock" housing as not conducive to healthy living).

41. *See* OSCAR NEWMAN, DEFENSIBLE SPACE 4 (1973).

42. *See generally* Emily Magnusen, *The Fight to Stay at Cabrini-Green*, 16 PUB. INT. L. REP. 176, 177 (2011).

43. *See* Newman, *supra* note 40, at 9-12.

44. *See* Cavanaugh, *supra* note 40, at 233.

45. *See* Teresa Wiltz, *Getting a Section 8 Voucher Is Hard. Finding a Landlord Willing to Accept It Is Harder*, STATELINE (Aug. 31, 2018), [https://perma.cc/9H9T-EZFT].

46. 42 U.S.C. § 3603.

47. Texas Dep't of Housing & Cmty. Affs. v. Inclusive Comtys., Inc., 576 U.S. 519, 545-46 (2015).

zoning ordinances continue to determine where and how the poor and vulnerable live. Before enactment of the Standard State Zoning Enabling Act in 1922, a few states had enacted some limits on land use, such as on height, but most governments relied upon common law nuisance to address noxious and incompatible uses in proximity of each other.[48] But nuisance law, by definition, was a reactive measure. The adoption of zoning ordinances allowed local governments to proactively avoid land use harms and create communities thought to be desirable.

In *Village of Euclid v. Ambler Realty Co*., the Supreme Court affirmed the general validity of zoning ordinances aimed at segregating various land uses in a town plan.[49] The result was "Euclidean" zoning, under which local governments could permissibly separate single-family and duplex developments from multifamily apartment buildings.[50] In hailing the high social value in single-family homes, the Court also branded other forms of housing—particularly, the apartment building and its residents, as "parasite[s]" to be controlled.[51] Chillingly, the Court accused apartment houses of:

> Sometimes . . . destroying the entire section for private house purposes . . . monopolizing the rays of the sun which otherwise would fall upon the smaller homes . . . . [T]he apartment house is a mere parasite, constructed in order to take advantage of the open spaces and attractive surroundings created by the residential character of the district.[52]

The Court went on to recount the many evils of multi-unit developments—they brought noise and traffic; they destroyed open space; they threatened the safety of children.[53] Under this conception, apartment living took on the character of a nuisance.

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48. *See* Andrew Auchincloss Lundgren, *Beyond Zoning: Dynamic Land Use Planning in the Age of Sprawl*, 11 BUFF. ENV'T. L.J. 101, 125 (2004).

49. Village of Euclid v. Amber Realty Co., 272 U.S. 365, 375 (1926).

50. *See id.* at 394-95.

51. *Id.* at 394.

52. *Id*.

53. *See id.*

A. The Forms of Local Land Use Controls

Even as apartment dwellers desired sun for their children too, Euclidean zoning has kept a strong hold on access to that sun. The control mechanisms are as varied and preclusive as the Great Wall. They relegate those on the other side to blight and darkness.

1. Zoning Harms

a. Supply

Regulations that set minimum lot sizes, sometimes as much as ten-acres, and floor area ratio limits, determine the volume of housing construction that occurs.[54] While few now would complain about setting aside areas for forests or open-space, at the same time, residential density caps, height restrictions, and the relative allocation of developable space for single-family detached homes relative to that for these and for other forms of housing—including apartment buildings, and mobile and manufactured homes—decrease housing supply, even in times of great need.[55] Minimum frontage setbacks, minimum street widths, sidewalk requirements, and curb and gutter requirements mean less land available for construction. With the requirements of new infrastructure (roads, mass transit, minimum parking, water supply and wastewater treatment facilities, schools, and libraries), housing development can become all but impossible.[56]

Growth controls,[57] which variously establish "urban districts," "growth-management" areas, and "urban growth boundaries,"[58] control housing supply by limiting the number of

54. Robert C. Ellickson, *Zoning and the Cost of Housing: Evidence from Silicon Valley, Greater New Haven, and Greater Austin*, 42 CARDOZO L. REV. 1611, 1623-24 (2021).

55. The Mount Laurel saga best illustrates this. *See id.* at 1627 n.61.

56. *Id.* at 1614-17.

57. Green, *supra* note 3, at 80, 82.

58. *See generally* Gabor Zovanyi, *The Role of Initial Smart Growth Legislation in Advancing the Tenets of Smart Growth*, 39 URB. LAW. 371, 372-73, 389 (2007) (discussing the emergence of growth management laws to confront some of the pernicious effects of

building permits that are issued over a particular period, although they may also limit the extension of urban services and facilities (roads, sewers, and water supply) outside of the boundaries.[59] While smart growth is an effective technique for sustainability—directing the rate, direction and location of development, controlling sprawl, and protecting open and green spaces[60]—it might be exposed as a pretext for excluding undesirable populations.[61]

b. Cost

Not all land use control measures are required for health and safety, but all result in higher housing costs.[62] Some of the costs are obvious—large lots and large homes cost more than smaller ones. The imposition of street-width minima requirements for more setbacks cause prices to increase by nearly 8%.[63] Limits on building height will increase the marginal cost of construction, driving some builders out of the market.[64] Some costs are more hidden, but nonetheless impactful—prohibitions on types of housing deemed inferior, however well-crafted or aesthetically designed, such as mobile and manufactured homes and tiny houses, [65] eliminate these forms as affordable choices.

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unconstrained growth, the environmental degradation of sprawl, and loss of community character).

59. *See* Robert L. Liberty, *Rising to the Land Use Challenge: How Planners and Regulators Can Help Sustain Our Civilization*, 38 VT. L. REV. 251, 261 (2013).

60. *Id.* at 269-70. *See also* Associated Home Builders v. Livermore, 557 P.2d 473, 489 (Cal. 1976) (upholding a growth control ordinance that contained specific milestones for relief from the controls, rejecting assertions that growth control exceeded police powers); Golden v. Planning Bd., 285 N.E.2d 291, 304-305 (Cal. 1972) (upholding phased growth as a valid zoning purpose).

61. *See* S. Burlington Cnty. NAACP v. Twp. of Mount Laurel, 456 A.2d 390, 410, 413, 418-19, 490 (N.J. 1983).

62. Ellickson, *supra* note 54, at 1614-15.

63. John M. Quigley & Larry A. Rosenthal, *The Effects of Land Use Regulation on the Price of Housing: What Do We Know? What Can We Learn?*, 8 CITYSCAPE: J. POL'Y DEV. & RSCH. 69, 88 (2005).

64. *Id.* at 89.

65. Lisa T. Alexander, *Community in Property: Lessons from Tiny Home Villages*, 104 MINN. L. REV. 385, 452-454 (2019).

c. Community

Zoning ordinances operate as monopoly power over local development and local governments acting strategically. They operate perniciously by excluding large sectors of the population from the human and political amenities of society. That is to say that town residents, through zoning legislation, exercise total control over growth and reject projects they fear will bring losses in utility, financial, or quality of life. By the seemingly absolute preference for property values over inclusion,[66] housing developers and local government leaders create communities that are segregated by race and income.[67]

IV. PROPOSALS FOR EQUITY AND EFFICIENCY IN HOUSING CONSTRUCTION

The twin imperatives of climate change and social justice are driving new initiatives for community design. Building communities that are inclusive must be premised upon equitable development, of which housing construction is at the center. Efficient and equitable communities, along with the houses that define them, can be imagined and should be constructed. Builders, planners, and residents must align to achieve desirable quantity, quality, and affordability to meet the variety of housing needs and support for all categories of people.

A. "The first thing we do, let's kill all the [exclusionary zoning]."[68]

66. *See* JESSICA TROUNSTINE, SEGREGATION BY DESIGN: LOCAL POLITICS AND INEQUALITY IN AMERICAN CITIES 19, 34-36 (2018) (arguing that "white property owners turned to suburbanization as their primary mechanism for protecting property values").

67. *See, e.g.*, Mhany Mgmt., Inc. v. Cnty. of Nassau, 819 F.3d 581, 588-90 (2d Cir. 2016); Huntington Branch, NAACP v. Town of Huntington, 844 F.2d 926, 935, 937 (2d Cir. 1988) ("[Facially neutral] rules bear no relation to discrimination upon passage, but develop into powerful discriminatory mechanisms when applied . . . . The discriminatory effect of a rule arises in two contexts: adverse impact on a particular minority group and harm to the community generally by the perpetuation of segregation.").

68. WILLIAM SHAKESPEARE, HENRY VI part 2, act 4, sc. 2, l, 77.

A few jurisdictions, namely California, Oregon and the city of Minneapolis, have already made the giant step of outlawing single-family zoning.[69] These moves must be supplemented by improved inclusionary zoning, both with incentives (density bonuses, variances, fee reductions, or waivers) and mandatory requirements. Rather than the typical 10% set asides for new developments,[70] there should be one for affordability. A range of housing styles, including tiny homes, and mobile and manufactured homes, must be allowed for people of all income levels, household sizes, and mobility constraints. Allowable density must be increased through use of accessory dwelling units, so long as there is minimum area, and infill development.

B. Building by Design

Housing construction now encompasses so much more than the physical integrity of structures. Homes must be smart and frugal. They must be oriented toward the sun, away from flooding. They must be designed to resist the strongest of Mother Nature's ravages. They must be resilient. They must not cause harm to the inhabitants or the environment.[71] They are "robust homes." All manner of regulations and initiatives are being adopted to create these "robust homes," from greenhouse gas ("GHG") reduction targets to water conservation measures.[72] Energy targets will hopefully be met through decreased reliance on fossil fuels, greater exploitation of clean energy, and energy

69. Henry Graber, *You Can Kill Single-Family Zoning, but You Can't Kill the Suburbs*, SLATE (Sept. 17, 2021), [https://perma.cc/CJW5-4R5N]. California also now allows up to ten dwelling units per parcel, provided the parcel is located in either a transit rich area or an urban infill site. CAL. GOV'T CODE § 65913.5 (West 2022). The ordinance, however, must set a height limit. *Id.*

70. David L. Callies, *Mandatory Set-Asides as Land Development Conditions*, 43 URB. LAW. 307, 320 (2011).

71. *See* Candace Jackson, *Lessons from Ultimate Safe Houses*, WASH. POST (Nov. 1, 2012), [https://perma.cc/CG9U-ZERQ].

72. *See U.S. State Greenhouse Gas Emissions Targets*, CTR. FOR CLIMATE & ENERGY SOLS. (Mar. 2021), [https://perma.cc/BM9Y-6XH3]. *See generally* KARL S. COPLAN ET AL., CLIMATE CHANGE LAW (2021).

conservation.[73] Solar energy is supported through zoning measures that allow the placement of solar panels in places heretofore off-limits.[74] Geothermal energy, which harnesses heat from the ground to both heat and cool homes, is being urged.[75]

1. The Interplay Between Robustness, Affordability, and Equity

Not all types of structures are suitable for all areas, and not all building inventions are essential for sustainability. Accessible and affordable communities can be built to be green and aesthetically eye-catching, to have low carbon impacts, and to be productive. Constructing this "robust home" will come with costs—costs of the design, its features, materials, mechanics, new infrastructure, and new administrative teams. While I have previously written about the direct and indirect costs of the efficiency and resiliency inventions being employed by cities,[76] building the "robust home" is not entirely antithetical to the "affordable" home. Efficiency and resiliency inventions can be incorporated within housing that is accessible. Existing structures can be retrofitted to be energy passive and strong. The cost of a high-performance home[77] is estimated to be 3 to 20% higher than the cost to build according to code,[78] but the annual and lifetime

73. *See generally* Kelly Trumbull, et al., *Progress Toward 100% Clean Energy: In Cities & States Across the U.S.*, UCLA LUSKIN CTR. FOR INNOVATION (Nov. 2019), [https://perma.cc/U47Q-PGJ8].

74. For example, the city of Hartford, Connecticut allows free-standing solar panels on historic properties. *City of Hartford: Guidelines for Solar on Historic Properties*, WORDPRESS (2017), [https://perma.cc/G74Z-ZMSB].

75. *See Geothermal Energy Factsheet*, CTR. FOR SUSTAINABLE SYSTEMS UNIV. OF MICHIGAN (Sept. 2021), [https://perma.cc/8C8W-9ZRU]. For some resources on alternative energy, see the Center for Sustainable Systems. *U.S. Renewable Energy Factsheet*, CTR. FOR SUSTAINABLE SYSTEMS UNIV. OF MICHIGAN (Sept. 2021), [https://perma.cc/XL3N-SPL6].

76. Green, *supra* note 9, at 554-56; Green, *supra* note 3, at 96-97.

77. The High-Performance Building Council adopted the following definition: "High-performance buildings, which address human, environmental, economic and total societal impact, are the result of the application of the highest level design, construction, operation and maintenance principles—a paradigm change for the built environment." NAT'L INST. OF BLDG. SCIS., ASSESSMENT TO THE U.S. CONGRESS AND U.S. DEPARTMENT OF ENERGY ON HIGH PERFORMANCE BUILDINGS 5 (2008), [https://perma.cc/L9JS-96UY].

78. Mike Beirne, *Jim Nostedt on How High Performance Can Beat Code-Built Homes on Price*, PRO BUILDER (Jan. 7, 2021), [https://perma.cc/2JGM-69JV]. Yet, the Total Cost

energy savings are enormous.[79] The passive home may cost 5 to 10% more to build than the equivalent sized code-built home,[80] but it can produce over 80% reduction in energy costs.[81] Structural additions, such as green or cool roofs, can reduce stormwater runoff by 50 to 90%[82] while also reducing air conditioning needs from 10 to 30%.[83] However, they can add to the cost of new construction, and adding them to existing buildings may require fortifications.[84] Solar rooftop installations may result in an average annual savings of $1,000 in energy costs.[85]

In addition, non-structural techniques can be employed to keep the costs of construction down, including optimizing the use of the building site to maximize solar gains in winter months—with careful design, this could produce up to 50% savings in energy costs, enabling the reduction in the thickness of insulation, and thus reducing construction costs.[86] Compact buildings reduce the ratio of the exterior surface area to the floor area, thus reducing energy consumption.[87]

2. Intentional Communities

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of Building Ownership ("TCBO") is estimated at 30 to 40% lower. *Id.* TCBO is an "analysis builders and architects can use during the design phase of new construction or remodeling projects to help clients compare the up-front cost of a high-performance home, and the operating cash savings they can realize over the long term, with a minimum code-compliant building." *Id.* (emphasis omitted).

79. *The ROI of a High-Performance Home*, CLARUM HOMES (Apr. 1, 2019), [https://perma.cc/H2Q5-C9NU].

80. Mike Beirne, *Tessa Smith on Accessible Career Paths and Passive Home Building*, PRO BUILDER (Feb. 8, 2018), [https://perma.cc/BD4M-22ZW].

81. Beirne, *supra* note 78.

82. Urban Green Council & The Nature Conservancy, *NYC's Sustainable Roof Laws*, URBAN GREEN COUNCIL 1, 3 (Dec. 2019), [https://perma.cc/BW2Y-KEAD] [hereinafter UGC Policy Brief].

83. *Id.*

84. Green, *supra* note 9, at 554-55.

85. UGC Policy Brief, *supra* note 82, at 3. *See generally Multifamily Green Financing*, FANNIE MAE, [https://perma.cc/K24T-WEND] (last visited Mar. 31, 2022) (providing lower interest rate, additional loan proceeds, and a free energy and water audit).

86. Natalie Leonard, *Can Building a Passive House Cost the Same as a Code-Built Home?*, PRO BUILDER (Feb. 24, 2020), [https://perma.cc/624N-YGU3].

87. *Id.*

Historically, builders have played an enormous role in creating communities—from Levittown[88] to the Tejon Ranch.[89] The impetus for these communities is mixed, perhaps to meet a perceived societal need (GI's returning from the war in the case of Levittown), or pursuant to some master plan of social engineering—keeping the classes separate (the racial covenants also in the case of Levittown). Whatever the reason, the result was a state of affairs that had little regard for social and economic equity or the environment.[90]

Green and affordable construction requires an integrated design process, with a consideration of not only the structural components, but also the social impacts. Builders of structures and builders of society must embrace a shared vision about common ends. Homebuilders create *structures* for living and city administrators and planners build *communities* for living. Housing and all kinds of developments must be preceded by community health and well-being assessments. There must be regard for displacement and gentrification. Physical orientation of the community should encourage personal interaction between neighbors, walks, and child play in open spaces.[91]

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88. Witold Rybczynski, *Why Can't We Build an Affordable House?*, WILSON Q., Summer 2008, at 16, [https://perma.cc/T7CZ-H5ZX].

89. Nina Agrawal, *Supervisors OK 19,000-home development at Tejon Ranch*, L.A. TIMES (Dec. 11, 2018), [https://perma.cc/597J-2C2D]; *see also* KENNETH T. JACKSON, CRABGRASS FRONTIER: THE SUBURBANIZATION OF THE UNITED STATES 135 (Oxford U. Press, 1985) ("[R]eal-estate specialists were more active in the city building process than anyone else. The theory that early suburbs just grew, with owners 'turning cowpaths and natural avenues of traffic into streets,' is erroneous. Subdividers lobbied with municipal governments to extend city services, they pressured streetcar companies to send tracks into developing sections, and they set the property lines for the individual homes.").

90. *See* Erin Blakemore, *How the GI Bill's Promise was Denied to a Million Black WWII Veterans*, HISTORY (Apr. 20, 2021), [https://perma.cc/Z49T-RTQ9]; JACKSON, *supra* note 89, at 208. As developers created subdivisions, they made them exclusive by racial covenants. *See* Catherine Silva, *Racial Restrictive Covenants History: Enforcing Neighborhood Segregation in Seattle*, SEATTLE CIVIL RTS. & LAB. HIST. PROJECT (2009), [https://perma.cc/9457-FQHK].

91. "Green Beyond the Building, incorporates good neighborhood development principles using LEED ND, Earth Craft Communities, [and] other community certification programs . . . ." Carl Seville, *"Blueprint for Greening Affordable Housing*", GREEN BLDG. ADVISOR (Aug. 4, 2020) (citing WALKER WELLS & KIMBERLY VERMEER, BLUEPRINT FOR GREENING AFFORDABLE HOUSING, REVISED EDITION (Island Press, 2020), [https://perma.cc/U9BC-334Q]).

a. Tools for the Conceived Community

Compact building design uses less land and resources and is more efficient. It preserves open space and trees for their beauty and carbon-absorbing effects. Infill development raises density by using existing infrastructure and reduces construction costs. Reductions in paved areas for streets, alleys, and parking (by for example, 50%, with 15% of the land being developed as opposed to the standard 22 to 27%)[92] and using pervious materials will save costs and reduce the heat-island effect. Narrower streets and wider sidewalks on only one side of the street will be conducive to walking and community interaction.

The orientation of homes should be calibrated to the environment—views, the presence of mountains, the prevailing direction of snowfall and drifts, the direction of wind in winter and cooling breezes in summer, and the direction of water drainage. During construction, builders should have in place effective waste management programs—to guide the selection of materials and for disposing of waste—both of which can result in savings on the costs of homes.[93]

b. Adaptive Reuse

Adaptive reuse of abandoned industrial buildings is a good prospect for resilient and affordable housing. Industrial buildings have strong infrastructure and repurposing them saves the cost of excavation and installing a new foundation.[94] Retooling old

92. *Community and Site Planning for Green Residential Design*, WHOLE BLDG. DESIGN GUIDE (Oct. 10, 2016) (citing SUSTAINABLE BLDGS. INDUS. COUNCIL, BEYOND GREEN GUIDELINES FOR HIGH-PERFORMANCE HOMES (Ryan Colker ed., 6th ed. 2013), [https://perma.cc/K6CT-D6DE]).

93. *See* Tom Napier, *Construction Waste Management*, WHOLE BLDG. DESIGN GUIDE (Oct. 2016), [https://perma.cc/VA7P-YHYC].

94. Sophie Francesca Cantell, The Adaptive Reuse of Historic Industrial Buildings: Regulation Barriers, Best Practices and Case Studies 18 (May 2005) (Master's thesis, Virginia Polytechnic Institute and State University). Tax benefits include a 20% federal tax credit taken over five years, along with comparable state credits. 26 I.R.C. § 47; *see, e.g.*, ARK. CODE. ANN § 26-51-2204 (2021); LA. STAT. ANN. § 47:6019 (2020); N.D. CENT. CODE ANN. § 40-63-06 (2020). This form of community building also generates economic benefits as the rehabilitation of historic structures has created millions of jobs and generated billions in private investment. *The Greenest Building: Quantifying the Environmental Value*

structures opens the opportunity to bring a building up to current code and to install efficient systems. Otherwise, building codes should be revised so as not to trigger full code compliance with every rehabilitation, so long as life safety is not at risk. Adaptive reuse can incorporate universal design. Parking minimums should be context-sensitive. By preserving facades and the footprint, adaptive reuse preserves heritage and historic character.

V. CONCLUSION

Equitable development will require many components and initiatives. It starts with integrating smart growth, environmental justice, and equity in community design to build healthy, sustainable, and inclusive neighborhoods. It requires regional and local planners to engage low-income residents and communities of color in decision-making to produce enduring development that is better for people and the environment, toward the common end of an inclusive community.

of Building Reuse, NAT'L TR. FOR HISTORIC PRES. (Mar. 10, 2016), [https://perma.cc/XK9H-WMTJ]. "Studies show residential rehabilitation creates 50% more jobs than new construction." *Id.* (emphasis omitted).

DESIGN PROFESSIONAL LIABILITY FOR CONSTRUCTION WORKSITE ACCIDENTS—HOW ARKANSAS LED THE WAY TO A NATIONAL CONSENSUS

Marc M. Schneier*

Three major developments underlie the law of architect or engineer (a/e) liability to construction workers, beginning in the second half of the twentieth century: (1) a change from a no-duty regime to a duty of care under a foreseeability test, (2) reactions to that expanded liability by changes to standard form documents by industry associations (in particular the American Institute of Architects (AIA)), (3) currently culminating in a broad national consensus. The Arkansas Supreme Court was instrumental in framing the issues of this jurisprudence early in its development and later contributed to its continued evolution.

I. EARLY CASELAW AND AIA RESPONSE

Why should an a/e, who has no direct control over the actions of any construction worker, owe a duty of care to injured workers or their estates? This was never an issue until the fall of the privity doctrine in the first third of the twentieth century.[1] Yet even then, a nexus between the a/e's role in a construction project and liability to construction workers was, arguably, not straightforward. Nonetheless, the replacement of a no-duty rule

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1. *See e.g.*, MacPherson v. Buick Motor Co., 111 N.E. 1050, 1052-53 (N.Y. 1916) (adopting the privity doctrine). The privity defense was applied to shield an architect from liability in *Geare v. Sturgis*, 14 F.2d 256, 256-57 (D.C. Cir. 1926) (theater patron killed in theater collapse).

under the auspices of the privity doctrine, with a test for foreseeability to establish the existence of a duty, was more than sufficient to bridge that gap.

Appreciating the effect of the fall of the privity defense requires an understanding of the architect's role in supervising a contractor's performance at the mid-point of the twentieth century. This baseline understanding can be discerned through an examination of the AIA's 1951 standard form documents.[2] Under the "Standard Form of Agreement Between Owner and Architect," the architect provided "general supervision to guard the Owner against defects and deficiencies in the work of contractors."[3] Under the "General Conditions of the Contract for the Construction of Buildings," a section titled "Architect's Status," combined the duty of supervision with the architect's authority to stop the work:

> The Architect shall have *general supervision and direction of the work*. He is the agent of the Owner only to the extent provided in the Contract Documents and when in special instances he is authorized by the Owner so to act, and in such instances he shall, upon request, show the Contractor written authority. He has authority to *stop the work* whenever such stoppage may be necessary to insure the proper execution of the Contract.[4]

In short, in addition to being the project designer, which included review of shop drawings created by subcontractors, the architect's administrative duties involved supervision and direction of the contractor's performance, backed up by the

2. Of course, the AIA now competes with several other industry organizations which have produced their own, competing standard form documents, including: the Associated General Contractors of America (AGC) and associated entities, publishers of ConsensusDocs; the National Society of Professionals Engineers (NSPE) and affiliated organizations, which publish documents prepared by the Engineers Joint Contract Documents Committee (EJCDC); the Design-Build Institute of America (DBIA); and the Construction Management Association of America (CMAA). However, in the mid-twentieth century, the AIA reigned supreme. *See generally* Justin Sweet, *The American Institute of Architects: Dominant Actor in the Construction Documents Market*, 1991 WIS. L. REV. 317 (1991).

3. AM. INST. OF ARCHITECTS, AIA DOC. B102 art. 7 (1951).

4. AM. INST. OF ARCHITECTS, AIA DOC. A2 art. 38 (1951) (emphasis added).

authority to stop the work. How did the fall of privity affect this industry understanding of the architect's role?

Caselaw spanning a little more than a decade, from 1959 to 1970, in which Arkansas loomed large, upended this baseline understanding, at least regarding worksite accidents.[5] The first decision was not in Arkansas but in Louisiana. Renovation of a public hospital in Louisiana in the mid-1950s included installation of a new boiler.[6] The boiler exploded while being tested, killing a subcontractor's employee.[7] The explosion was caused by the boiler's lack of a pressure relief valve (although required by the specifications).[8] The estate sued the project's architects and a consulting engineer (hired by the architects) for negligence.[9] After a lengthy trial, all defendants except the architects and their insurer were exonerated.[10]

On appeal, the architects raised the privity defense.[11] In a 1959 decision, *Day v. Nat'l U.S. Radiator Corp.,* the Louisiana Court of Appeals rejected that defense and ruled that the architect owed a duty of care to foreseeable victims of the boiler

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5. For an in-depth review of this caselaw, see generally Justin Sweet, *Site Architects and Construction Workers: Brothers and Keepers or Strangers?*, 28 EMORY L.J. 291 (1979) [hereinafter *Site Architects*]. For further discussion, see generally 5 PHILIP L. BRUNER & PATRICK J. O'CONNOR, JR., BRUNER & O'CONNOR ON CONSTRUCTION LAW 663-688 §§ 17:52-17:58 (2002, 2021 Supp.); DWIGHT G. CONGER et al., CONSTRUCTION ACCIDENT LITIGATION ch. 2 (2d ed. 2021); MARC M. SCHNEIER, CONSTRUCTION ACCIDENT LAW: A COMPREHENSIVE GUIDE TO LEGAL LIABILITY AND INSURANCE CLAIMS 252 (1999); Karen S. Precella, *Architect Liability: Should an Architect's Status Create a Duty to Protect Construction Workers from Job-Site Hazards?*, 11 CONSTR. LAW. 11 (1991); Wyatt A. Hoch, *Architects' Liability for Construction Site Accidents*, 30 U. KAN. L. REV. 429 (1982); Northwestern University School of Law, *The Supervising Architect, His Liabilities and His Remedies When a Worker Is Injured*, 64 NW. U. L. REV. 535 (1969); Marc M. Schneier, *Architect's or Engineer's Liability for Injury or Death of Construction Worker on Construction Site Project*, 56 A.L.R.7th art. 7 (2020) [hereinafter *Architect's or Engineer's Liability*]. Design professional liability under the Occupational Safety and Health Act, not the topic of this article, is discussed in John E. Bulman et al., *The Horns of a Dilemma: Too Much Involvement in Worksite Safety Can Backfire on Design Professionals*, 21 CONSTR. LAW. 5 (2001).

6. *See* Day v. Nat'l U.S. Radiator Corp., 117 So. 2d 104, 107, 109 (La. Ct. App. 1959), *rev'd*, 128 So. 2d 660 (La. 1961).

7. *See id.* at 107.

8. *Id.* at 122.

9. *Id.* at 107.

10. *Id.* at 130, 135.

11. *See Day*, 117 So. 2d at 118.

subcontractor's negligence in failing to include the pressure relief valve.[12] The court identified, as the source of that duty, a provision in the design agreement which required the architects to supervise the work.[13] Professor Justin Sweet wrote that the decision "shocked the AIA."[14] He continued:

> It seemed to require that the architect be present, if not continuously, at least at every crucial point in the construction process, judged from a worker safety standpoint. This, the AIA felt, went beyond the proper role of the architect and his contract commitment. . . . Finally, the AIA believed that by concluding the architects were negligent in approving shop drawings which did not show the pressure relief valve, the court revealed its misunderstanding of the architects' function in reviewing shop drawings. To the AIA, review is made for design purposes only and is not intended to be an approval of the means by which design compliance will be achieved.[15]

While the *Day* decision was on appeal, attention shifted to the Arkansas Supreme Court. A 1960 decision, *Erhart v. Hummonds*, involved an excavation cave-in which killed or injured several subcontractor employees.[16] Here, unlike in the Louisiana case, the architect knew of the danger and acted on that knowledge—he demanded that the contractor replace the job superintendent and threatened to order the work stopped, as he had the contractual power to do.[17] The trench collapsed before any remediation of the safety violations occurred, and the Arkansas Supreme Court deferred to the jury's finding of negligence by the architect.[18] So, as of 1960, two appellate court

12. *Id.* at 119-20.

13. *See id.* at 124. The appellate court did not quote the *contract* language, but the supreme court did, stating that the architect had agreed to *provide* "'adequate supervision of the execution of the work to reasonably insure strict conformity with the working drawings, specifications and other contract documents', and this supervision was to include 'frequent visits to the work site.'" Day v. Nat'l U.S. Radiator Corp., 128 So. 2d 660, 666 (La. 1961).

14. *Site Architects*, *supra* note 5, at 303.

15. *Id.*

16. 232 Ark. 133, 135, 334 S.W.2d 869, 871 (1960).

17. *See id.* at 135, 334 S.W.2d at 871.

18. *Id.* at 136, 138, 334 S.W.2d at 871-72.

decisions had rejected the privity defense and found an architect owed construction workers a duty of care.[19]

In 1961, the Louisiana Supreme Court reversed the court of appeals and held the architect's contractual duty of supervision did not impose upon the architect a duty of care owed to construction workers.[20] In contrast to the court of appeals,[21] the supreme court interpreted the design agreement's supervision requirement as creating a duty owed only to the project owner, that the work would comply with the design.[22] The supreme court continued:

> [W]e do not think that under the contract in the instant case the architects were charged with the duty or obligation to inspect the methods employed by the contractor or the subcontractor in fulfilling the contract or the subcontract. Consequently we do not agree with the Court of Appeal that the architects had a duty to the deceased Day, an employee of [the plumbing subcontractor], to inspect the hot water system during its installation, or that they were charged with the duty of knowing that the boiler was being installed.[23]

Apparently even the possibility of increased liability stirred the AIA into action. While the Louisiana Court of Appeals' *Day* decision was not released until 1959,[24] in its 1958 design agreement, the AIA deleted "supervision" from the standard agreement and replaced it with language emphasizing observation through periodic visits.[25] The AIA also made clear in the 1958 document that the duty to inspect was not a guarantee or warranty that the work was defect-free.[26] Just three years later, in 1961, the

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19. *See id.* at 136-37, 334 S.W.3d at 871-72; Day v. Nat'l U.S. Radiator Corp., 117 So. 2d 104, 119 (La. Ct. App. 1959), *rev'd*, 128 So. 2d 660 (La. 1961).

20. Day v. Nat'l U.S. Radiator Corp., 128 So. 2d 660, 666 (La. 1961).

21. *Day*, 117 So. 2d at 119-20.

22. *Day*, 128 So. 2d at 666.

23. *Id.*

24. *Day*, 117 So. 2d at 104.

25. AM. INST. OF ARCHITECTS, AIA DOC. B131 § C(I)(4)(b) (1958) (requiring the architect to provide "periodic inspections at the site"). Note that the AIA renumbered the owner/architect contract from Document B102 in 1951 to Document B131 in 1958. *Compare Id.*, *with* AM. INST. OF ARCHITECTS, AIA DOC. B102.

26. AM. INST. OF ARCHITECTS, AIA DOC. B131, *supra* note 25, § C(I)(4)(c) (obligating the architect only to "endeavor to guard the Owner against defects and deficiencies in the work of the contractors").

AIA again revised its owner/architect agreement.[27] It removed the architect's duty of inspection, instead providing that the architect was to make "periodic visits to the site to familiarize himself generally with the progress and quality of the work and to determine in general if the work is proceeding in accordance with the Contract Documents."[28]

While the AIA removed the duty of supervision from the owner/architect agreement in 1958, and from the General Conditions in 1961,[29] the General Conditions' "Architect's Status" article continued to grant the architect "authority to stop the work whenever such stoppage may be necessary in his reasonable opinion to insure the proper execution of the Contract."[30] Yet the AIA soon had cause to reexamine that language.

In a 1967 decision, *Miller v. De Witt*, the Illinois Supreme Court stated that the architect's power to stop the work was relevant in determining whether an architect had acted reasonably under the Illinois Structural Work Act,[31] after failing to prevent the contractor from removing supporting columns, causing the roof to collapse.[32] The AIA's response was the 1970 edition of the General Conditions, which might be called the first "modern" AIA document.[33]

First, this 1970 "General Conditions of the Contract for Construction" eliminated the architect's power to stop the work and gave that authority solely to the owner.[34] Second, it created

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27. *See generally* AM. INST. OF ARCHITECTS, AIA DOC. B131 (1961) (the new standard form of agreement between owner and architect as of 1961).

28. *Id.* § C(I)(4)(c).

29. *Compare* AM. INST. OF ARCHITECTS, AIA DOC. A201 art. 38 (1958) ("The Architect shall have general supervision and direction of the work."), *with* AM. INST. OF ARCHITECTS, AIA DOC. A201 art. 38 (1961) ("The Architect shall be the Owner's representative during the construction period and he shall observe the work in process on behalf of the Owner.").

30. AM. INST. OF ARCHITECTS, AIA DOC. A201 (1961), *supra* note 29, art. 38; AM. INST. OF ARCHITECTS, AIA DOC. A201 (1958), *supra* note 29, art. 38.

31. 740 ILL. COMP. STAT. 150/0.01-9 (repealed 1995).

32. 226 N.E.2d 630 (Ill. 1967), *superseded by statute*, ILL. COMP. STAT. 70/301 (1979), as recognized in Doyle v. Rhodes, 461 N.E.2d 382, 387-88 (Ill. 1984).

33. *See generally* AM. INST. OF ARCHITECTS, AIA DOC. A201 (1970); *see also* American Institute of Architects, *History*, AIA (2022), [https://perma.cc/9C5U-AKH8].

34. AM. INST. OF ARCHITECTS, AIA DOC. A201, *supra* note 33, ¶ 3.3.1.

a new article exclusively devoted to imposing site safety responsibility on the contractor.[35] This language has remained virtually unchanged in later editions of the General Conditions.[36] Third, it disclaimed the architect's responsibility for performance of the construction work and for safety measures:

> The Architect will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and he will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents.[37]

These changes have remained nearly verbatim with each new edition of the AIA documents, and the risk-limiting strategies they adopt for architects have been embraced by other industry organizations' standard form documents.[38]

II. ARKANSAS LAW: LIABILITY FOR SUPERVISION AND DESIGN SERVICES

Two additional Arkansas Supreme Court decisions, issued in 1966 and 1970, cemented evolution of the judicial approach to worksite accident claims based upon the a/e's duty to be present at the construction site during performance by the contractor—an

35. *Id.* ¶ 10.

36. In the current General Conditions, contractor responsibility for site safety is found in AM. INST. OF ARCHITECTS, AIA DOC. A201 ¶ ¶ 3.3.1, 3.7.2, 10.2 (2017).

37. AM. INST. OF ARCHITECTS, AIA DOC. A201, *supra* note 33, § 2.2.4. In the current General Conditions, this disclaimer by the architect, although somewhat differently phrased, appears in AM. INST. OF ARCHITECTS, AIA DOC. A201, *supra* note 36, § 4.2.2.

38. *See, e.g.*, ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE, EJCDC DOC. E-500 ¶ 6 § 6.01(I) (2020) ("Engineer shall not at any time supervise, direct, control, or have authority over any Constructor's work, nor will Engineer have authority over or be responsible for the means, methods, techniques, sequences, or procedures of construction selected or used by any Constructor, or the safety precautions and programs incident thereto . . . ."); ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE, EJCDC DOC. C-700 ¶ 7 § 7.01(A) (2018) ("Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction"); CONSENSUSDOCS, DOC. 240 § 3.2.8.3 (2017) ("Design Professional shall not be responsible for construction means, methods, techniques, sequences, and procedures, unless they are specified by Design Professional . . . ."). However, Doc. 240's "Standard Agreement Between Owner and Design Professional," uniquely among industry standard form documents, imposes upon a design professional, who "has actual knowledge of safety violations," an affirmative duty to notify the owner. *Id.* § 3.2.8.4. No court has interpreted this language.

evolution now reflecting the national consensus.[39] The first case, *Walker v. Wittenberg, Delony & Davidson, Inc.*,[40] is particularly instructive. On a commercial project, the architect was hired by an oral agreement, but the City of Little Rock Building Code Section 204 mandated the owner employ an architect and required that architect to perform specific inspections of the work.[41] The parties also used the AIA General Conditions, AIA A201 (1958), which in Article 38 stated that "[t]he Architect shall have general supervision and direction of the work."[42]

A contractor's employee was injured when the wall he was standing on collapsed under him when braces were removed.[43] Plaintiff sued the architect for negligent supervision, and the trial court entered a directed verdict in favor of the architect.[44] Citing its earlier decision in *Erhart*, the Arkansas Supreme Court reversed, finding that the contractual duty of supervision (under the General Conditions) created a jury question as to whether the architect breached a duty of care owed to the plaintiff.[45] The court rejected the architect's argument—that its duty of supervision was owed only to the owner and was for the limited purpose of ensuring a completed building was in compliance with the design—observing that the same argument had been rejected in *Erhart*.[46]

Yet, after granting a rehearing, the court reversed.[47] The court held that, under the General Conditions, the architect's duty

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39. *See* Walker v. Wittenberg, Delony & Davidson, Inc., 242 Ark. 97, 108, 412 S.W.2d 621, 631 (1967) (*Walker II*); Heslep v. Forrest & Cotton, Inc., 247 Ark. 1066, 1067, 449 S.W.2d 18, 182 (1970).

40. *Walker II*, 242 Ark. 97, 412 S.W.2d 621.

41. *Id.* at 100-01, 412 S.W.2d at 627. The architect was required to inspect the foundation, the framing, and to make a final inspection, per the full language of Section 204. *Id.* at 101-03, 412 S.W.2d at 628.

42. *See* AM. INST. OF ARCHITECTS, AIA DOC 201 (1958), *supra* note 29, art. 38. The court initially said that the parties used the 1952 edition of A201 (*See* Walker v. Wittenberg, Delony & Davidson, Inc., 241 Ark. 525, 527, 412 S.W.2d 621, 623 (*Walker I*)) but corrected itself in the opinion issued after a rehearing (*See Walker II*, 242 Ark. at 103-04, 412 S.W.2d at 629).

43. *Walker I*, 241 Ark. at 526-27, 412 S.W.2d at 622-23.

44. *Id.* at 526-27, 412 S.W.2d at 623.

45. *Id.* at 529-30, 412 S.W.2d at 624.

46. *Id.* at 528-30, 412 S.W.2d at 624.

47. *Walker II*, 242 Ark. at 97-98, 412 S.W.2d at 626.

of supervision did not require it to be "present continuously during construction," nor did the architect have the authority or a "duty to prescribe safety precautions for the contractor or to enforce performance of the safety provisions contained in the contract between the owner and the contractor, to which he was not a party."[48] Invoking the presumption that parties contract only for themselves, the court concluded:

> Before an architect can be said to have agreed with an owner to exercise direct control over a contractor with respect to day-to-day safety supervision of a building contract, such agreement must clearly appear from the terms of the agreement, the conduct of the parties, or the nature of the work being performed.[49]

The court then distinguished *Erhart* on three grounds.[50] First, the hazard in that case constituted a "special danger" within the meaning of the Restatement (Second) of Torts § 427.[51] Second, the architect in *Erhart* was expressly employed to supervise the work.[52] Third, the architect knew of the danger;[53] by contrast, in *Walker II*, "the architect had no reason to contemplate the contractor's negligence when the contract was made, i.e., the negligence here was collateral to the risk of doing the work."[54] Limiting *Erhart* to the underlying circumstances, the

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48. *Id.* at 98, 412 S.W.2d at 626.

49. *Id.* at 106, 412 S.W.2d at 630.

50. *Id.*

51. *See id.* at 106, 412 S.W.2d at 630 (citing RESTATEMENT (SECOND) OF TORTS § 427 (AM. L. INST. 1965)). Section 427, titled "Negligence as to Danger Inherent in the Work," is one of the numerous exceptions to the so-called independent contractor rule. S*ee also* RESTATEMENT (SECOND) OF TORTS § 409 (AM. L. INST. 1965). Section 427 applies to "[o]ne who employs an independent contractor to do work involving a special danger to others which the employer knows or has reason to know to be inherent in or normal to the work . . . is subject to liability for physical harm caused to such others by the contractor's failure to take reasonable precautions against such danger." RESTATEMENT (SECOND) OF TORTS § 427.

52. *Walker II*, 242 Ark. at 106, 412 S.W.2d at 630.

53. *Id.* at 106, 412 S.W.2d at 630.

54. *Id.* at 98, 412 S.W.2d at 626 (citing RESTATEMENT (SECOND) OF TORTS § 426(a) (AM. L. INST. 1965)). The section cited provides that "an employer of an independent contractor . . . is not liable for physical harm caused by any negligence of the contractor if . . . the contractor's negligence consists solely in the improper manner in which he does the work . . . ." Of course, it should be noted that these Restatement provisions apply to

court stated that the "correct rule" was stated in the Louisiana Supreme Court's *Day* decision.[55]

A final "supervision" case by the Arkansas Supreme Court was issued three years later.[56] In *Heslep v. Forrest & Cotton, Inc.*, a contractor's employee used a front-end loader with a mobile crane to move a piece of pipe near a high-voltage power line (in violation of a safety statute), rather than wait for a truck to move the pipe.[57] The crane created an arc with a power line. The injured worker sued the resident engineer, hired to inspect the work for compliance with the architect's design, for permitting use of the crane without requiring the general contractor to insulate the boom or order the overhead line de-energized.[58]

In affirming a judgment notwithstanding the verdict in favor of the engineer, the Arkansas Supreme Court reasoned that the "engineers' rights and powers are not to be confused with their obligations and duties under their contracts."[59] Specifically, "they do not have the right, power, obligation or the duty to supervise [the contractor's employees] in the performance of their duties."[60] The contractor, not the engineer, had the obligation to guarantee site safety under the contract and performance in compliance with the safety statute.[61]

To recap, under *Erhart*, *Walker II*, and *Heslep*, a design professional's contractual duty of supervision, even under the 1950s-era AIA standard form documents, cannot establish a safety duty of care owed to construction workers, at least where the a/e did not know of the hazardous condition beforehand.[62] A designer's rights or powers under its contract with the owner are

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employers of independent contractors, not to a project architect, who did not hire the general contractor or any subcontractor.

55. *Walker II*, 242 Ark. at 107, 412 S.W.2d at 630-31 (citing Day v. Nat'l U.S. Radiator Corp., 128 So. 2d 660 (La. 1961)).

56. Heslep v. Forrest & Cotton, Inc., 247 Ark. 1066, 449 S.W.2d 181 (1970).

57. *Id.* at 1067-68, 1071, 449 S.W.2d at 181-83.

58. *Id.* at 1067, 449 S.W.2d at 182.

59. *Id.* at 1072, 449 S.W.2d at 184.

60. *Id.* at 1072, 449 S.W.2d at 184 (emphasis omitted).

61. *Heslep*, 247 Ark. at 1070-71, 1073, 449 S.W.2d at 183-84.

62. *See* Erhart v. Hummonds, 232 Ark. 133, 135, 334 S.W.2d 869, 870-71 (1960); *Walker II*, 242 Ark. 97, 98, 412 S.W.2d 621, 626 (1967); *Heslep*, 247 Ark. at 1072, 449 S.W.2d at 184.

presumptively only for the benefit of the owner.[63] Absent clear contract indications, these obligations do not accrue to the benefit of construction workers injured by an unsafe manner of performance, as responsibility for safe performance lies squarely on the contractor.[64] These conclusions were exactly the goals sought by the AIA when it created the "modern" AIA standard form documents starting in 1970.

Of course, before an architect's or engineer's on-site activities (whether described as supervision or inspection) may arise, the a/e must first create the project's design, and injured construction workers have alleged negligent design as a stand-alone basis for liability.[65] Again, the Arkansas high court helped establish a national jurisprudence.

In *Hill Constr. Co. v. Bragg*, a steel erection subcontractor's employee was injured by the fall of a column that was being erected in a high wind.[66] No guy wires or other bracing were used to temporarily hold the column, and the plaintiff blamed both the general contractor and the architect's design for the accident.[67] A jury agreed, attributing 90% fault to the general contractor and 10% fault to the architect.[68]

The supreme court reversed and remanded, ruling that the defendants' proffered instruction on intervening cause (by the subcontractor) should have been provided.[69] The court noted that, while the architect and engineer had specified the use of guy wires and other bracings during the steel erection process, the subcontractor had used only wooden wedges to temporarily brace steel columns.[70] Nonetheless, the court also rejected the architect's assertion that a directed verdict should have been entered at the close of plaintiff's evidence, stating:

> While it is true there was sufficient evidence of the subcontractor's negligence to warrant an instruction on

63. *Walker II*, 242 Ark. at 98, 412 S.W.2d at 626.
64. *Heslep*, 247 Ark. at 1072-73, 449 S.W.2d at 184.
65. *See infra* Part III.
66. 291 Ark. 382, 384, 725 S.W.2d 538, 539 (1987).
67. *Id.* at 384, 725 S.W.2d at 540.
68. *Id.* at 384, 725 S.W.2d at 539.
69. *Id.* at 390, 725 S.W.2d at 543.
70. *Id.* at 384, 725 S.W.2d at 540.

> intervening proximate cause, there was also evidence that there were problems with the design of the column's anchor bolts and that they were offset, and that the layout of the portion of the building which had been constructed when the column was erected was an "ironworker's nightmare." There was sufficient evidence to send the question of [the contractor's] and [the architect's] negligence to the jury.[71]

In the Arkansas Supreme Court's only decision in the twenty-first century on the issue of design professional liability for a construction site accident, *Clark v. Transcon. Ins. Co.*, a worker was electrocuted while carrying a metal pole eight feet from an overhead power line.[72] He sued the architect for negligent design arguing that, because the construction site was located near the high-voltage overhead line, the architect had a duty to delineate the proximity of the power line in a way that would be readily determinable by looking at the plans, but had not done so.[73] The architect countered that it had no duty to supervise the construction, advise the utility to de-energize the power line, or specify any safety measures.[74] The trial court granted the architect's motion for summary judgment.[75]

Declaring that "[a]n architect has the duty of exercising reasonable care in the preparation of plans,"[76] and pointing to expert testimony submitted by plaintiff that the defendant had violated that duty, the supreme court reversed.[77] In the face of that expert testimony, the defendant:

> [F]ailed to provide evidence or authority to show that architects are not responsible for accurately depicting the location of power lines on plans. He also failed to provide evidence or authority to show that architects are not

71. *Hill Constr. Co.*, 291 Ark. at 387-88, *725 S.W.2d at 541.* As revealed by a subsequent appeal from the second trial (on an unrelated issue), the jury found the architect was not liable. *See* Bragg v. Mayes, Sudderth & Etheredge, Inc., 297 Ark. 537-38, 764 S.W.2d 44, 45 (1989).

72. 359 Ark. 340, 344, 197 S.W.3d 449, 451 (2004).

73. *Id.* at 345, 197 S.W.3d at 452.

74. *Id.* at 352, 197 S.W.3d at 456.

75. *Id.* at 350, 197 S.W.3d at 455.

76. *Id.* at 352, 197 S.W.3d at 457.

77. *Clark*, 359 Ark. at 352-53, 197 S.W.3d at 457.

> responsible for providing warnings on the plans of the need to avoid the hazard produced by the power line.[78]

The fundamental difference in the Arkansas Supreme Court's treatment of claims arising out of an a/e's supervision or inspection duties versus those involving allegations of negligent design is clear. A design professional's duty of supervision or inspection is presumptively owed to the owner alone.[79] Absent an a/e's knowledge of the hazardous condition, its contractual power during inspections to *possibly* perceive dangerous performance methods is insufficient to trigger a safety duty of care owed to construction workers.[80] By contrast, creation of a design may well include responsibility to take into consideration safety features of the project site and even the method of performance.[81]

III. NATIONAL LAW—LIABILITY ARISING FROM DESIGN

The Arkansas caselaw discussed above is both a historical introduction to, and a mirror of contemporary national law.[82] The clear majority rule is that an architect may be liable for a worksite accident caused at least in part by a defective design.[83] Indeed, even those states which have enacted statutes partially shielding architects and engineers from liability claims by injured workers or their estates consistently except negligent design claims.[84]

In light of that majority rule, an understanding of what constitutes a design defect, for purposes of an injured worker's construction accident claim, is essential. Clearly, as each construction site is unique, no definitive list of defects is possible, and the following recounting is simply a sampling of claims that have been made:

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78. *Id.* at 353, 197 S.W.3d at 457.
79. *Walker II*, 242 Ark. 97, 99-100, 106, 412 S.W.2d 621, 627, 630 (1967).
80. *See supra* note 61 and accompanying text.
81. *See infra* Part III.
82. *See supra* Part II.
83. Geer v. Bennett, 237 So. 2d 311, 316 (Fla. 1970).
84. See *infra* note 116.

- Failure to specify bracing for unsupported wall during partial demolition;[85]
- On a project to renovate a sewage treatment plant where toxic gases escaped from an adjoining room killing construction workers, the design's inclusion of a window between the area of the building containing the wet sludge and the rest of the building violated a design standard from an engineering association, adopted by Iowa, which prohibited "'interconnection between the wet well and dry well ventilating systems'";[86]
- Where the engineer on site indicated to the contractor to cut a pipe along its length, and when the contractor did so the pipe rolled outward, causing its employee who was standing on the pipe to fall and be crushed when the pipe rolled on top of him, the court found the estate stated a claim for negligent design, reasoning, "[w]e perceive no appreciable distinction between providing the specifications for pipe cutting through a professional drawing or by physically marking on the pipe";[87]
- Collapse of steel frame during erection traced to engineer's incorrect calculation of the correct sizes of steel members;[88]
- Specification of a "double connection" method to connect two horizontal steel beams, caused the beams to bend and workers sitting on it to fall;[89]

85. Wagner v. Grannis, 287 F. Supp. 18, 25 (W.D. Pa. 1968).

86. Evans v. Howard R. Green Co., 231 N.W.2d 907, 913 (Iowa 1975) (jury finding of liability upheld).

87. Edwards v. Anderson Eng'g, Inc., 166 P.3d 1047, 1055 (Kan. 2007) (rejecting a statutory defense found in then KAN. STAT. ANN. § 44-501(f), now KAN. STAT. ANN. § 44-501(d) (2006)).

88. *See* Mudgett v. Marshall, 574 A.2d 867, 871-72 (Me. 1990) (The engineer calculated a rafter beam of 36' by 150', instead of 36' by 230'; the longer rafter beam would have had greater lateral stiffness and an increased resistance to buckling, while the shorter beams would have required the addition of 16 permanent knee braces—the design specified only two—for safe erection.).

89. Tiffany v. Christman Co., 287 N.W.2d 199, 202-03, 209 (Mich. Ct. App. 1979) (jury verdict upheld; the engineer knew of a prior accident of the same nature six weeks earlier but did not alter the design).

- Authorizing substitution of anchor bolts with expansion bolts, which were insufficient to stop the steel beam from falling over;[90]
- The engineer directed city employees to undertake a course of conduct without first conducting an engineering analysis;[91]
- Design of trench bracing system, which failed, causing the trench to collapse onto a worker present in the trench;[92] and
- Design omitting safety-related information as to the project site.[93]

Defenses to a defective design claim include that:

- The architect or engineer is not responsible for the inclusion of temporary safety measures during the erection of the structural steel;[94]
- The architect is not responsible for inclusion of bracing methods for a trench excavation;[95]
- Lack of or insufficient expert testimony to establish the defendant's professional negligence;[96]
- No causal connection between the alleged design defect and the accident;[97]

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90. *See* Campbell v. Daimler Grp., Inc., 686 N.E.2d 337, 339-40, 344-45 (Ohio Ct. App. 1996), *appeal denied*, 677 N.E.2d 816 (Ohio 1997).

91. *See* Michaels v. CH2M Hill, Inc., 257 P.3d 532, 536-37 (Wash. 2011).

92. *See* Bauer v. Howard S. Wright Constr., No. 44817-0-1, 2000 WL 987165 at *1 (Wash. Ct. App. July 17, 2000).

93. Mallow v. Tucker, Sadler & Bennett, Architects & Eng'rs, Inc., 54 Cal. Rptr. 174, 176 (Cal. Ct. App. 1966) (design did not indicate underground high-voltage transmission line).

94. Cady v. E.I. DuPont de Nemours & Co., 437 F. Supp. 1030, 1033 (S.D. Tex. 1977); Nicholson v. Turner/Cargile, 669 N.E.2d 529, 533 (Ohio Ct. App. 1995).

95. Jones v. James Reeves Contractors, Inc., 701 So. 2d 774, 784-86 (Miss. 1997); McAninch v. Robinson, 942 S.W.2d 452, 456-58 (Mo. Ct. App. 1997).

96. Paxton v. Alameda Cnty., 259 P.2d 934, 942-43 (Cal. Ct. App. 1953); Hobson v. Waggoner Eng'g, Inc., 878 So. 2d 68, 77, 80 (Miss. Ct. App. 2003); Simon v. Drake Constr. Co., 621 N.E.2d 837, 839 (Ohio Ct. App. 1993); Nauman v. Harold K. Beecher & Assocs., 467 P.2d 610, 616-17 (Utah 1970).

97. Hutcheson v. E. Eng'g Co., 209 S.E.2d 680, 681 (Ga. Ct. App. 1974) (contractor removed guardrails required by the specifications); Walters v. Kellam & Foley, 360 N.E.2d 199, 206-11 (Ind. Ct. App. 1977); Demetro v. Dormitory Auth., 96 N.Y.S.3d 30, 33 (N.Y. App. Div. 2019).

- Performance methods or safety measures are the domain of the contractor and not the architect's responsibility to include in the design;[98] and
- Information not included in the design was not the architect's responsibility to include.[99]

Closely related to design liability is an architect's liability arising out of its review of shop drawings, and failure to detect a defect in the drawings.[100] Courts rejecting liability often do so to enforce the disclaimer in the modern AIA documents, which provide that the architect's approval of shop drawings is "only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents."[101]

IV. NATIONAL LAW—LIABILITY ARISING FROM SITE SERVICES

Unlike claims for negligent design, courts faced with the modern AIA standard form documents have, to a large degree, enforced the disclaimers limiting the architect's authority over the contractor's manner or method of performance, while imposing

98. Nat'l Found. Co. v. Post, Buckley, Schuh & Jernigan, Inc., 465 S.E.2d 726, 730 (Ga. Ct. App. 1995) (lack of temporary handrails on walkway); Burns v. Black & Veatch Architects, Inc., 854 S.W.2d 450, 454-55 (Mo. Ct. App. 1993), (unshored trench); Wells v. Stanley J. Thill & Assocs., Inc., 452 P.2d 1015, 1018 (Mont. 1969) (unshored trench).

99. *See, e.g.*, Jones v. City of Logansport, 436 N.E.2d 1138, 1144-45, 1150-51 (Ind. Ct. App. 1982), *reh'g denied*, 439 N.E.2d 666 (Ind. Ct. App. 1982) (design specification did not include overhead, uninsulated power line); Patin v. Indust. Enters. Inc., 421 So. 2d 362, 366 (La. Ct. App. 1982) (electric wires); Frampton v. Dauphin Distrib. Servs. Co., 648 A.2d 326, 327 (Pa. Super. Ct. 1994) (power lines); Alexander v. State, 347 So. 2d 1249, 1250, 1252 (La. Ct. App. 1977) (underground butane tank). *See also* Transp. Ins. Co., Inc. v. Hunzinger Constr. Co., 507 N.W.2d 136, 140-41 (Wis. Ct. App. 1993) (design not required to show method of performance); Kaltenbrun v. City of Port Washington, 457 N.W.2d 527, 531 (Wis. Ct. App. 1990) (no duty to test soil at the site's ingress and egress routes to ensure they were adequate to bear the weight of a dump truck coming to the site).

100. *See* Jaeger v. Henningson, Durham & Richardson, Inc., 714 F.2d 773, 775 (8th Cir. 1983); Juno Indus., Inc. v. Heery Int'l, 646 So. 2d 818, 823-24 (Fla. Dist. Ct. App. 1994).

101. AM. INST. OF ARCHITECTS, AIA DOC. B101 § 3.6.4.2. (2017). Earlier versions of the AIA documents contain slightly different wording. *See, e.g.*, AM. INST. OF ARCHITECTS, AIA DOC. B101 § 3.6.4.2 (2007). Courts finding an architect not liable based on a theory of negligent review of shop drawings include *Case v. Midwest Mech. Contractors, Inc.*, 876 S.W.2d 51, 51 (Mo. Ct. App. 1994) and *Waggoner v. W & W Steel Co.*, 657 P.2d 147, 148 (Okla. 1982).

on the contractor responsibility for site safety.[102] As noted, these allocations of responsibility for site safety have been largely adopted by other industry organizations which have also published standard form documents.[103]

Of course, many (often commercial) projects use custom design agreements, and the architect's duties must be understood in light of that contract's specific wording. For example, where an architect was hired only to create the design and not to provide site services, there can be no liability arising out of a theory of negligent supervision.[104] At the other extreme, large project owners may impose detailed supervision obligations upon the architect.[105] Contracts authorizing the architect to stop the work may well convince a court that an architect has a duty to exercise that power when necessary to protect construction workers.[106]

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102. *See, e.g.*, Black & Vernooy Architects v. Smith, 346 S.W.3d 877, 886-87 (Tex. App. 2011) (holding that architect did not have power to control performance of construction at site because several contract provisions explicitly restricted architect's authority); Yow v. Hussey, Gay, Bell & Deyoung Int'l, Inc., 412 S.E.2d 565, 567-68 (Ga. Ct. App 1991).

103. *See supra* note 38 and accompanying text.

104. Rian v. Imperial Mun. Servs. Grp., Inc., 768 P.2d 1260, 1263-64 (Colo. App. 1988); Swartz v. Ford, Bacon & Davis Constr. Corp., 469 So. 2d 232, 233 (Fla. Dist. Ct. App. 1985); *Patin*, 421 So. 2d at 366; Jones v. James Reeves Contractors, Inc., 701 So. 2d 774, 784-86 (Miss. 1997); McAninch v. Robinson, 942 S.W.2d 452, 458 (Mo. Ct. App. 1997); *Frampton*, 648 A.2d at 327.

105. *See e.g.*, Associated Eng'rs, Inc. v. Job, 370 F.2d 633, 638, 643-45 (8th Cir. 1966) (applying South Dakota law; the architect contractually agreed to see that construction was "expeditious and economical"; could subject the "manner of construction" to "inspection, tests and approval"; was required to perform "constant supervision" and take "all reasonable safety precautions"; and could stop the work if the contractor failed to use reasonable safety precautions) (internal quotations omitted), *cert. denied*, Troy Cannon Constr. Co. v. Job, 389 U.S. 823 (1967); Geer v. Bennett, 237 So. 2d 311, 317 (Fla. Ct. App. 1970); Phillips v. Mazda Motor Mfg. (USA) Corp., 516 N.W.2d 502, 507-508 (Mich. Ct. App. 1994), *abrogated on other grounds by* Ormsby v. Capital Welding, Inc., 684 N.W.2d 320, 327 (Mich. 2004); *Jones*, 701 So. 2d at 785 ("It would seem natural that the supervision of safety is encompassed in the duty to supervise, and no separate agreement to supervise safety is necessary where the architect is supervising the details of every other aspect of the project."); Simon v. Omaha Pub. Power Dist., 202 N.W.2d 157, 161, 168 (Neb. 1972); Amant v. Pac. Power & Light Co., 520 P.2d 181, 185 (Wash. Ct. App. 1974), *aff'd per curiam*, 529 P.2d 829 (Wash. 1975). *But see Walker II*, 242 Ark. 97, 105-06, 412 S.W.2d 621, 630 (1967). The court in *Jones* disagreed with *Walker II* in dicta. *Jones*, 701 So. 2d at 785.

106. *Associated Eng'rs, Inc.*, 370 F.2d at 644-45; Moore v. PRC Eng'g, Inc., 565 So. 2d 817, 820 (Fla. Ct. App. 1990). *But see* Parks v. Atkinson, 505 P.2d 279, 283 (Ariz. Ct. App. 1973) (holding summary judgment for architect was appropriate even though he had stopped the work twice because the "interruptions were solely to insure that the work was being done in accordance with the plan and specifications"); Wheeler & Lewis v. Slifer, 577

Moreover, regardless of the contract language, an architect, by its conduct, may assume a duty of care regarding project safety.[107]

However, those projects which use the "modern" (post 1970) AIA standard form documents, or documents of other industry organizations reflecting the AIA's allocation of responsibility for site safety, have overwhelmingly concluded that an architect with site services roles owes no duty of care toward construction workers, at least absent the architect's actual knowledge of the hazardous condition.[108] However, where the architect or engineer

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P.2d 1092, 1094-95 (Colo. 1978) (finding the architect had the right to stop the work, but no contractual control over the contractor with respect to day-to-day safety); Graham v. Freese & Nichols, Inc., 927 S.W.2d 294, 296 (Tex. Ct. App. 1996) (finding the engineer stopped the work twice due to quality concerns, not safety concerns).

107. Hanna v. Huer, Johns, Neel, Rivers & Webb, 662 P.2d 243, 252-53 (Kan. 1983), *superseded by statute on other grounds*, KAN. STAT. ANN. § 44-501 (1985), *as recognized in* Edwards v. Anderson Eng'g, Inc., 166 P.3d 1047, 1053 (Kan. 2007) (stating in dicta that a design professional may by his conduct assume a duty of safety and listing several factors by which to determine whether an expanded duty had been assumed); *Simon*, 202 N.W.2d at 168.

108. Baker v. Pidgeon Thomas Co., 422 F.2d 744, 746 (6th Cir. 1970) (applying Arkansas law); Peck v. Horrocks Eng'rs, Inc., 106 F.3d 949, 955 (10th Cir. 1997) (applying Utah law; AIA contract); Padgett v. CH2M Hill Se., Inc., 866 F. Supp. 563, 564-65 (M.D. Ga. 1994); Poehmel v. Aqua Am. Penn., Inc., No. 3:10-cv-2372, 2013 WL 27493, at *7 (M.D. Pa. Jan. 2, 2013); Easter v. Percy, 810 P.2d 1053, 1056 (Ariz. Ct. App. 1991); Reber v. Chandler High Sch. Dist. No. 202, 474 P.2d 852, 854 (Ariz. Ct. App. 1970); Seeney v. Dover Cnty. Club Apartments, Inc., 318 A.2d 619, 624 (Del. Super. Ct. 1974); Vorndran v. Wright, 367 So. 2d 1070, 1071 (Fla. Dist. Ct. App. 1979); Yow v. Hussey, Gay, Bell & DeYoung Int'l, Inc., 412 S.E.2d 565, 567 (Ga. Ct. App. 1991) (AIA General Conditions); Jones v. City of Logansport, 436 N.E.2d 1138, 1150-51 (Ind. Ct. App. 1982), *reh'g denied*, 439 N.E.2d 666, 669 (Ind. Ct. App. 1982); *Hanna*, 662 P.2d at 250, 254 (AIA General Conditions); Young v. Hard Rock Constr., L.L.C., 292 So. 3d 178, 183 (La. Ct. App. 2020) (modified AIA contract); Black v. Gorman-Rupp, 791 So. 2d 793, 795-96 (La. Ct. App. 2001); Krieger v. J. E. Greiner Co., Inc., 382 A.2d 1069, 1074, 1079 (Md. 1978); MacInnis v. Walsh Bros., Inc., No. 044250, 2006 WL 1047134, at *4-*5 (Mass. Super. Ct. March 23, 2006); Eleria v. City of St. Paul, No. A10-1045, 2010 WL 5293742, at *5 (Minn. Ct. App. Dec. 28, 2010); Dillard v. Shaughnessy, Fickel & Scott Architects, 864 S.W.2d 368, 370 (Mo. Ct. App. 1993) (Kansas law); Brown v. Gamble Constr. Co., Inc., 537 S.W.2d 685, 687 (Mo. Ct. App. 1976); Hobson v. Waggoner Eng'g, Inc., 878 So. 2d 68, 77, 80 (Miss. Ct. App. 2003); Kemp v. Bechtel Constr. Co., 720 P.2d 270, 274 (Mont. 1986), *overruled on other grounds by* Beckman v. Butte-Silver Bow Cnty., 1 P.3d 348, 350 (Mont. 2000); Pfenninger v. Hunterdon Cent. Reg'l High Sch., 770 A.2d 1126, 1129, 1141-43 (N.J. 2001) (a somewhat confusing opinion in which the majority adopted the position of Justice Coleman's dissent on the question of the architect's liability); Torres v. CTE Eng'rs, Inc., 786 N.Y.S.2d 101, 101 (N.Y. App. Div. 2004); Welch v. Grant Dev. Co., Inc., 466 N.Y.S.2d 112, 114-15 (N.Y. Sup. Ct. 1983) (thorough analysis of modern AIA contracts); Nicholson v. Turner/Cargile, 669 N.E.2d 529, 534 (Ohio Ct. App. 1995); Marshall v. Port Auth. of Allegheny Cnty., 568 A.2d 931, 935 (Pa. 1990); Johnson v. EMPE, Inc., 837 S.W.2d 62, 65

knew of the hazardous conditions, there is a split of authority.[109] Some courts continue to exonerate the a/e, pointing to the general contractor as the party responsible for safety at the construction site.[110] Other courts, emphasizing the safety-promotion principle underlying tort law, have held or at least expressed the possibility of finding a duty of care, especially if the a/e had the power to stop the work.[111] One standard form document imposes upon an architect or engineer with knowledge of a safety violation a duty to warn the owner; however, that provision has not been interpreted by the courts.[112]

V. NATIONAL LAW—DEFENSES TO A/E LIABILITY

As should be clear from the discussion above, an architect's or engineer's primary defense to a construction worker's personal injury claim, particularly where the claim asserts negligence regarding site services, is that the design contract disclaimed the a/e's duty of care regarding site safety.[113] In addition, as with any professional liability claim, the plaintiff must present expert testimony as to the standard of care and its violation, unless the

(Tenn. Ct. App. 1992); *Graham*, 927 S.W.2d at 295-96; Romero v. Parkhill, Smith & Cooper, Inc., 881 S.W.2d 522, 526-27 (Tex. App. 1994) (AIA contract); Peterson v. Fowler, 493 P.2d 997, 999 (Utah 1972), *overruled on other grounds by* Stamper v. Johnson, 232 P.3d 514, 516-17 (Utah 2010); Porter v. Stevens, Thompson & Runyan, Inc., 602 P.2d 1192, 1193 (Wash. Ct. App. 1979); Baumeister v. Automated Prods., Inc., 690 N.W.2d 1, 2-3 (Wis. 2004); Makinen v. PM P.C., 893 P.2d 1149, 1154-55 (Wyo. 1995), *overruled on other grounds by* Terex Corp. v. Hough, 50 P.3d 317, 321 (Wyo. 2002).

109. *See Yow*, 412 S.E.2d at 566-67.

110. *Id.* (stating in dicta that the architect's knowledge of the hazardous condition would not have given rise to a duty of care); Jones v. James Reeves Contractors, Inc., 701 So. 2d 774, 782-83 (Miss. 1997).

111. Balagna v. Shawnee Cnty., 668 P.2d 157, 163 (Kan. 1983), overruled by statute on other grounds as stated in Edwards v. Anderson Eng'g, Inc., 166 P.3d 1047, 1053, 1056 (Kan. 2007) (summary judgment reversed; a factual question whether the engineer knew of the hazardous condition); Carvalho v. Toll Bros. & Devs., 675 A.2d 209, 214 (N.J. 1996) (engineer knew of hazard and had power to stop the work); Duncan v. Pennington Cnty. Hous. Auth., 283 N.W.2d 546, 548 (S.D. 1979) (architect's duty of supervision included visits to the site by its employee several times a day, and the employee knew the work site had received an OSHA citation which indicated that 20% of the temporary railings were inadequate); Nauman v. Harold K. Beecher & Assocs., 426 P.2d 621, 622 (Utah 1967) (knowledge of hazard coupled with authority to stop the work).

112. CONSENSUSDOCS, *supra* note 38, § 3.2.8.4.

113. *See supra* note 102.

negligence is so clear as to not require such testimony.[114] Furthermore, an a/e may assert any defense any defendant in a personal injury lawsuit could raise, such as lack of causation.[115] Finally, although this Article is devoted to common law developments, it should be noted that a few states have amended their workers' compensation laws to extend immunity from tort liability to design professionals, so long as the accident did not arise out of the defendant's design responsibilities.[116]

VI. CONCLUSION

The changes in construction accident law jurisprudence from the mid-twentieth century to the present, and in particular a/e liability for worksite accidents, may be viewed as a microcosm of American tort law developments during the same period. The most fundamental progression was from a no-duty regime to the use of the foreseeability doctrine to determine the existence and scope of a duty. However, the particular nature of construction projects—they involve numerous unrelated parties who are on the site only by virtue of a contract—has created something of a "special case" in tort law, in which contractual risk allocations and disclaimers become of paramount importance in the liability landscape. In this regard, a focus on construction accident law, and a/e liability in particular, may be a lens through which to achieve insights into tort law more generally.[117]

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114. *See, e.g.*, Michael v. Huffman Oil Co., 661 S.E.2d 1, 11 (N.C. Ct. App. 2008).

115. McKean v. Yates Eng'g Corp., 200 So. 3d 431, 433 (Miss. 2016) (criticizing the quality of the design, however, the court pointed out that the contractor had "ignored essential features of [the engineer's] scaffolding design," thereby implying that any defect in the design was not a causal factor in the scaffold's collapse); Baumeister v. Automated Prods., Inc., 690 N.W.2d 1, 9-10 (Wis. 2004) (holding plaintiffs did not establish causation, as they did not follow the truss manufacturer's instructions).

116. A compilation of these statutes is found at 1 JON L. GELMAN, MODERN WORKERS COMPENSATION § 103:34 (2021). *See also Architect's or Engineer's Liability*, *supra* note 5, §§ 34-39.

117. Similarly, construction industry disputes may be a lens through which to examine the development of American contract law. *See generally* CARL J. CIRCO, CONTRACT LAW IN THE CONSTRUCTION INDUSTRY CONTEXT (2020); Carl J. Circo, *The Construction Industry in the U.S. Supreme Court: Part 1*, *Contract Law*, 41 CONSTR. LAW. 6 (2021); Carl J. Circo, *The Construction Industry in the U.S. Supreme Court: Part 2, Beyond Contract Law*, 41 CONSTR. LAW. 5 (2021).

CONSTRUCTION LIENS AND THE "SECRET LIEN" PROBLEM

Dale Whitman*

Perhaps the most essential element of a modern scheme of land ownership is a system of records that will allow an owner to show to the world, and particularly to intended transferees, that she or he owns the land in question. It is almost equally important that an owner be able to create a lien or charge on land, putting it up as security for an obligation or debt while retaining possession. And as a concomitant principle, it is critical that an intended transferee be able to detect, in a reliable system of records, whether the land has already been charged with a security interest by its present owner.

Note that the intended transferee might be a new owner, in which case the transferee will, in effect, inherit and become subject to the lien or charge of the preexisting security interest.[1] Alternatively, the transferee might be taking another security interest, in which case, if there is a preexisting security interest, the new interest will be subordinate in priority to the old one under the familiar common-law principal that "first in time is first in right."[2] Either way, it is essential to fairness and justice that a system of records exists that will disclose to the subsequent transferee the existence of the prior security interest. If the system cannot reliably inform the subsequent party of the existence of a prior interest or lien, the subsequent party may be unfairly surprised to its great detriment. This might be termed the "secret lien" problem. It is obvious that a modern system of commerce

* The author wishes to thank Professor Carl Circo and J. B. Cross of the Arkansas Bar for their valuable comments during the preparation of this article. Errors and oversights are those of the author alone, of course.

1. *See* Lawrence Berger, *An Analysis of the Doctrine That "First in Time is First in Right"*, 64 NEB. L. REV. 349, 350 (1985).

2. *Id.*

in land, or in credit secured by land, cannot function successfully if it permits secret liens to any major extent.

I. SECRET LIENS AND THE INVENTION OF THE RECORDING SYSTEM

In the United States, of course, the system upon which we rely to perform the task of avoiding secret liens is the recording system. Surprisingly, England had no recording or land title registration system before the twentieth century.[3] The early English mortgage was typically a conveyance of a fee simple subject to a condition subsequent.[4] The condition, upon occurrence of which the mortgagor could exercise and redeem the land, was payment of the debt on "law day," the date the debt fell due.[5] The equity courts introduced flexibility into this procedure by allowing tardy payment up to a later foreclosure date set by the court.[6] But for our purposes, the salient feature of this system was that there were no public records from which a subsequent purchaser or mortgagee could learn of the existence of a prior mortgage on the land.

If the mortgagee took possession of the land, that possession would likely warn future transferees of the existence of the mortgage. But it was usual for the mortgagor to retain possession, either by virtue of language in the mortgage granting that right, by a leaseback, or simply by custom.[7] Because there was no governmental system of land records, an innocent purchaser who had no knowledge of the preexisting mortgage might buy the land or take a subsequent mortgage on it, and do so subject to the first mortgage, only to learn later of his or her mistake. In other words, the law allowed the existence of secret liens. Such a system, which could punish the innocent purchaser or subsequent

3. Francis R. Crane, *The Law of Real Property in England and the United States: Some Comparisons*, 36 IND. L. J. 282, 290 (1961).

4. *See* GRANT S. NELSON, DALE A. WHITMAN, ANN M. BURKHART & R. WILSON FREYERMUTH, REAL ESTATE FINANCE LAW § 1.2 (6th ed. 2015) [hereafter "REAL ESTATE FINANCE LAW"].

5. *Id.*

6. *Id.* § 1.3.

7. *Id.* § 1.2.

mortgagee, was unacceptable to the American colonists, and they were determined to change it.

Our recording system was invented in the Massachusetts Bay Colony.[8] While some towns apparently had local recording prior to this date, the first colony-wide act was adopted in 1640.[9] It applied to both deeds and mortgages.[10] Unlike modern recording acts, which typically operate only in favor of bona fide purchasers, it simply provided that conveyances were not effective against *any* subsequent third party unless they were recorded. For example, as to mortgages, the act said:

> And that no such bargain, sale, or grant already made in way of mortgage where the grantor remains in possession, shall be of force against any other but the grantor or his heirs, except the same shall be entered, as is hereafter expressed, within one month after the end of this Court, if the party be within this jurisdiction, or else within 3 months after he shall return.[11]

In simple terms, the recording system the colonists invented had two functions. One was to allow owners to demonstrate their ownership. This was useful mainly when they desired to sell or mortgage their land. The system gave purchasers and mortgagees some confidence that the party with whom they were dealing actually had title to the land. The other function, closely related, was to assure such purchasers and mortgagees that the title on which they were relying was not burdened by preexisting mortgages, liens, or other encumbrances—again, to oversimplify a bit, that there were no secret liens.

While the original Massachusetts Bay statute quoted above protected all subsequent takers, nearly all of the recording acts that subsequently evolved protected only subsequent parties who took their interests in the land in good faith and paid value—that is, they were "bona fide purchasers."[12] Moreover, the protection

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8. *See* PHILIP J. NEXON, REAL ESTATE TITLE PRACTICE IN MASSACHUSETTS § 1.4 (Mass. Cont. L. Ed. 2020).

9. *Id.* § 1.4.2.

10. *Id.*

11. *Id.* (citing 1 Mass. Colonial Records 306 (1640) (spelling modernized)).

12. *See* DALE A. WHITMAN, ANN M. BURKHART, R. WILSON FREYERMUTH & TROY A. RULE, THE LAW OF PROPERTY § 11.9 (4th ed. 2019) [hereinafter "THE LAW OF

afforded by the recording acts was and is in some respects weak, partial, and inadequate,[13] a fact that has led in the United States to the rise of title insurance as additional protection to purchasers and mortgagees.[14] But defects in the recording systems are not our focus in the present Article. It remains a fact that one principal objective of those systems is to ensure that purchasers and mortgagees not be entrapped by secret liens, and in that task they are generally quite effective.

II. THE COURTS' ANTIPATHY TO SECRET LIENS: THE VENDOR'S LIEN AS AN ILLUSTRATION

The principal focus of this Article will be the operation of construction liens. However, in this section we will examine, for purposes of illustration, an analogous but much simpler concept: the vendor's lien. Assume that an owner of land sells it but does not receive the full purchase price at the time legal title is passed to the purchaser by deed. A wise seller would demand that the purchaser give the seller a promissory note for the unpaid portion of the price, secured by a purchase-money mortgage on the land. But not all sellers are wise or sophisticated, so let us imagine a case in which the seller does not retain any specific security interest on the land when conveying away the title.

In this setting the courts of equity will find an implied lien on the land in favor of the seller for the remaining purchase price.[15] This seems a fair result; if the purchaser were permitted to keep the land's title free and clear, the purchaser would obviously be unjustly enriched. Even if the purchaser resells the property to a new party, the lien will remain in effect if the new party has notice of the fact that the original purchaser has not yet fully paid for the land. But the courts are a bit suspicious of the

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PROPERTY"]. Only three modern statutes (North Carolina, Louisiana, and Delaware) do not require BFP status to protect the subsequent taker. *Id.*

13. *Id.*

14. *Id.* § 11.14.

15. *Id.* § 10.6. If the seller does reserve an express purchase-money mortgage or other documented express security interest, it is usually held that the vendor's lien has been waived. *See, e.g.*, Russo v. Cedrone, 375 A.2d 906, 909 (R.I. 1977).

lien,[16] and if the land is resold to a bona fide purchaser ("BFP") who lacks notice of it, title will pass free of the lien.

One can explain this result in either of two ways. One explanation is the recording act. The vendor's lien is, of course, unwritten, and therefore unrecorded. Hence, the subsequent purchaser, being a BFP, will take free of the lien.[17] The alternative explanation is the long-standing equitable principle that the legal interest acquired by a BFP will prevail over a prior equitable right.[18] Either way, the result is the same; the law's famous solicitude for BFPs will govern over the claim of the land seller, who might have protected himself or herself by more careful means—taking and recording a purchase-money mortgage. As early as 1822 the U.S. Supreme Court adopted this view, holding:

> There is not perhaps a State in the Union, the laws of which do not make all conveyances not recorded, and all secret trusts, void as to creditors as well as subsequent purchasers without notice. To support the secret lien of the vendor against a creditor who is a mortgagee, would be to counteract the spirit of these laws.[19]

The vendor's lien thus provides us with a good example of courts' unwillingness to foist a secret lien on a BFP, frames the issue nicely, and prepares us to begin our analysis of construction liens.

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16. *See, e.g.*, Brooks v. Thorne, 222 N.W. 916, 917-18 (Minn. 1929).

17. *See, e.g.*, Agri Bank FCB v. Maxfield, 316 Ark. 566, 570-71, 873 S.W.2d 514, 516-17 (1994); Stump v. Swanson Dev. Co., 2014 IL App (3d) 110784, ¶ 95; Bolen v. Bolen, 169 S.W.3d 59, 63-64, 63 n.11 (Ky. Ct. App. 2005); Malco Realty Corp. v. Westchester Condos, LLC, 982 N.Y.S.2d 64, 64 (N.Y. Sup. Ct. 2014). In half the states (those with "race-notice" statutes), this assumes that the subsequent purchaser records his or her own deed, but that is nearly always the case. In the three pure "race" states (see THE LAW OF PROPERTY, *supra* note 12, § 11.9) the subsequent purchaser need not even be a BFP to prevail over the vendor's lien. And at least one state has a special statute dealing with vendors' liens: CAL. CIV. CODE § 3048 (West 2022) states that a vendor's lien is not valid against "a purchaser or incumbrancer in good faith and for value."

18. *See generally* 2 JOHN NORTON POMEROY, A TREATISE ON EQUITY JURISPRUDENCE § 413 (Symons ed., 1941); *see* 4 *id.* § 1253; *see also*, Weaver v. Blake, 300 N.W.2d 52, 54 & n.4 (S.D. 1980); Radke v. Myers, 167 N.W. 360, 361 (Minn. 1918) (apparently adopting both explanations).

19. Bayley v. Greenleaf, 20 U.S. (7 Wheat.) 46, 57-58 (1822).

III. THE STRUCTURE OF CONSTRUCTION LIENS

The concept of construction liens (traditionally termed "mechanics' liens") is simple and attractive. If someone provides labor or materials for a project of construction or improvement on real estate and is not paid for the work or materials supplied, she or he is entitled to a lien on the real property that can be foreclosed to recover the money owed.[20] This seems fair enough; the lien claimant has obviously increased the value of the property, and the owner would be unjustly enriched if he were permitted to retain it in its improved state without paying for the improvement.

There are at least three critical dates in the scheme under which construction liens operate. One of them is the recording date.[21] On this date, usually measured at 60 to 180 days after the claimant completes his or her work on the project, the claimant must record a notice of the claim of lien in the public records, usually mail a copy of the claim to the owner, and sometimes publish a copy in a local newspaper.[22] Within some additional period of time after that, usually six months to a year, if the claim has not been paid, the claimant must file a suit to foreclose the lien, much like the judicial foreclosure of a mortgage or the foreclosure of a judgment lien.[23]

The third critical date occurs long before the two mentioned above. It is the lien priority date. The most common priority date, used in nearly half of the states, is the date that work on the overall project commenced.[24] Under this approach, all lien claimants get the same priority, and their liens share *pro rata* in the security afforded by the real estate.[25] This seems fair enough: why should the happenstance of when a particular claimant did work or provided materials during the course of construction have any effect on the priority of his or her lien?

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20. *See* REAL ESTATE FINANCE LAW, *supra* note 4, §12.4. This source provides citations for all of the general descriptions of construction lien statutes in this section.

21. *See Id.*

22. *See Id.*

23. *Id.*

24. *Id.*

25. *See* REAL ESTATE FINANCE LAW, *supra* note 4, § 12.4.

The second most common approach to the lien priority date is to give each claimant priority based on the date he or she commenced work or first supplied materials on the project.[26] This gives an obvious advantage to those whose involvement was earlier in the construction process. A few states use a variety of other methods, including the date of the general contract, the date of the lien claimant's contract, or the date a notice of the contract was recorded.[27]

All of these priority dates have one thing in common, however: they are early in the construction period, while the lien claim's recording date is likely to be late in the construction period or, in many cases, well after construction is completed.[28] When the lien claim is recorded, it is nearly always said to "relate back" to the priority date.[29] Suppose that at some time between the priority date and the recording date, someone buys the property or lends money and accepts a mortgage or other consensual lien on it. How can such a buyer or lender learn about the impending filing of the lien claim? Obviously, the traditional method of discovering the existence of prior liens—a title search in the public records—will potentially be unavailing, since the lien claimant may not yet have filed his or her claim in the records.

How will a purchaser or lender learn of liens that are yet to be filed? If they are aware that a construction project has recently been completed, or is about to be completed, and if the owner and general contractor are honest and well-organized, the answer is simple. The owner will present the purchaser or lender with a list of all subcontractors and suppliers, along with a set of final lien waivers signed by those who have finished their work. The lien waivers show that they have been fully paid and cannot file liens. Prior to closing of the sale or loan, lien waivers for the remainder of the subcontractors and suppliers will also be provided as they receive final payment.

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26. *Id.*
27. *Id.*
28. *Id.*
29. *Id.*

What can go wrong? As it turns out, a great deal. The process of obtaining lien waivers is complicated, time-consuming, and potentially error prone. Even a modest-sized construction project may involve several dozen suppliers and subcontractors. One or more of them may be unpaid but omitted from the lien waiver process inadvertently by the owner or general contractor, and it is easy enough for the buyer or lender (or its title insurer) to fail to notice a missing contractor, subcontractor, or supplier from the list provided by the owner. Second, if cash is running short, the owner may well be tempted to intentionally fail to pay a supplier or subcontractor, and to omit that party from the list of lien waivers given to the buyer or lender. Again, the omission may not be noticeable to the buyer or lender.

Third, will the fact of recent construction be apparent to the buyer or lender? If it is a new building or major work, probably so. But a more minor remodeling job, such as the replacement of a roof, repaving of a parking lot, or replacement of an HVAC unit, may not be obvious at all, and may fail to trigger any further inquiry. At most, the owner may simply sign a (false) affidavit stating that no construction work has occurred on the property during the past X months. No question of lien waivers will ever arise. Yet if a contractor or supplier on such a minor job is in fact not paid, a lien may well be filed.

All in all, there is simply no assurance that a buyer or lender will get notice of an impending, but as yet unrecorded, lien filing on the property. If such a party acquires the property or a mortgage on it after the lien priority date, but before a lien is recorded, that party is at risk of being victimized by a secret lien. Of course, if the courts followed the philosophy we outlined earlier with regard to vendors' liens and other secret liens, they would step in and protect the BFP. But with construction liens, things are not so simple, because construction liens are creatures of statute. The statutes may not make any provision for protection of BFPs, and courts may not feel at all comfortable creating judicial exceptions to statutory language.[30] Hence an innocent

30. Of course, a judicial recognition of such protection is possible. *See* Anderson v. Streck, 378 S.E.2d 526, 528 (Ga. App. 1989); *see also* COLO. REV. STAT. ANN. § 38-22-125

buyer or lender may be subjected to a construction lien. Therein lies the problem this Article intends to address.

At this point we propose to leave the general and examine the specific. We will consider the construction lien statutes of Arkansas and the eight states contiguous to Arkansas to see if the scenario described above can realistically occur in each of them, and whether in each there are any statutory or judicially created protections for the innocent buyer or lender. The choice of these nine states is admittedly arbitrary but will provide a snapshot of the problem in this region of the nation. We will begin with Arkansas.

IV. ARKANSAS CONSTRUCTION LIENS AS ILLUSTRATIVE OF THE SECRET LIEN PROBLEM

Arkansas follows the general pattern for construction liens outlined above. A contractor, subcontractor, or supplier is entitled to file in the public records a lien for labor, goods, or services incorporated into an improvement on real property.[31] The filing, known as a "Statement of Account," may be filed up to 120 days after the last work or material delivery by the lien claimant.[32] At least ten days prior to filing, the lien claimant must send a notice to the owner of the property of the claimant's intent to file the lien.[33] If the claimant is not paid, she or he has fifteen months after filing the lien to file a judicial complaint to foreclose the lien.[34]

The key issue in this process is the priority of the lien. All liens filed by all claimants receive the same priority date, which is the date of commencement of work on the overall project.[35] Commencement is defined by statute as "visible manifestation of activity on real estate that would lead a reasonable person to believe that construction or repair of an improvement to the real

(2021) (protecting BFPs against certain mechanics liens if filed more than two months after completion of a one-family or two-family dwelling).

31. ARK. CODE ANN. § 18-44-101(a) (2021).
32. ARK. CODE ANN. § 18-44-117(a)(1) (2019).
33. ARK. CODE ANN. § 18-44-114(a) (2009).
34. ARK. CODE ANN. § 18-44-119 (2005).
35. ARK. CODE ANN. § 18-44-110(a)(1) (1995).

estate has begun or will soon begin."[36] As illustrations, the statute mentions delivery of materials, grading or excavating, laying out lines or grade stakes, and demolition of existing structures.[37]

Thus, the stage is set for the secret lien problem. One who buys or takes a mortgage on the property after commencement of the project, but before 120 days have expired after its completion, will take his or her interest subordinate in priority to any construction liens that may be filed. Yet there is no assurance whatsoever that such buyers or mortgagees will have notice that liens are pending. As noted above, they may not even be aware of the construction work or completed repairs. For liens filed by subcontractors and suppliers who participated late in the construction process, there is a period of nearly four months after construction is completed, but before any lien filing need take place, when a buyer or mortgagee might acquire an interest in the property despite no obvious evidence that any recent construction has taken place.[38]

Even if buyers or mortgagees are aware of the recent construction or repair project, and even if they are sophisticated enough to understand the need for lien waivers, they may request waivers but be negligently or intentionally misinformed by the owner as to the identity of the relevant subcontractors and suppliers. They have no practical means of protecting themselves from this eventuality. If they can convince a title insurer to cover them for this risk, which is unlikely, that merely passes any potential loss to the title underwriter—which is no fairer than leaving it with the buyer or mortgagee, although at least it spreads the loss among a broader group.

Arkansas statutes require two specific notices in connection with the eligibility of potential lien claimants to file their liens. The first is required only in the case of construction of residential property of four dwelling units or less.[39] The notice must be sent by the prime contractor to the owner before work on the project commences. Only a single notice is required, and it is effective

36. ARK. CODE ANN. § 18-44-110(a)(2).
37. ARK. CODE ANN. § 18-44-110(a)(2).
38. ARK. CODE ANN. § 18-44-117(a)(1) (2019).
39. ARK. CODE ANN. § 18-44-115(b)(4) (2021).

for all subcontractors and suppliers. If the prime contractor does not give the notice, then any subcontractor, laborer, or supplier may do so (even after the project commences),[40] and such a notice is effective for subcontractors and suppliers for work done thereafter but is not effective for the prime contractor.

If no notice is given, no lien to assist in recovery on any contract may be filed.[41] However, there are two exceptions:[42] (1) if a payment bond is in place (a rare occurrence on small residential projects), and (2) if claim of lien is for materials that have been directly sold to the owner by a supplier.[43] The notice is not required to contain any listing of the subcontractors or suppliers.[44]

The second "extra" notice applies only to properties that the first notice, discussed above, does not apply to—that is, nonresidential property and residential property with five dwelling units or more.[45] The notice is usually termed a "seventy-five day notice" because it requires that each subcontractor or supplier, in order to be eligible to file a lien, must notify the owner that it is unpaid within seventy-five days from the time that it commenced supplying materials or labor to the project.[46] The notice must identify the project or job and the subcontractor or supplier, briefly describe the work or materials, and state the amount unpaid.[47] In effect, this notice is a warning to the owner that if she or he does not take appropriate measures to insure that the claimant is paid, a lien may be filed. If a subcontractor or supplier has not sent a seventy-five-day notice, no lien can be filed.[48]

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40. ARK. CODE ANN. § 18-44-115(a)(5)(b)(i).
41. ARK. CODE ANN. § 18-44-115(a)(4), (a)(5)(C).
42. ARK. CODE ANN. § 18-44-115(a)(8).
43. ARK. CODE ANN. § 18-44-115(8)(A).
44. ARK. CODE ANN. § 18-44-115(b)(6).
45. ARK. CODE ANN. § 18-44-115(b)(4).
46. ARK. CODE ANN. § 18-44-115 (b)(5)(A). The class of persons who must file the seventy-five-day notice is broadened to include "service providers," defined as an architect, an engineer, a surveyor, an appraiser, a landscaper, an abstractor, or a title insurance agent. ARK. CODE ANN. § 18-44-115(b)(2)(B).
47. ARK. CODE ANN. § 18-44-115(b)(6).
48. ARK. CODE ANN. § 18-44-115(b)(4).

Both notices may be useful to owners who are having construction work done on their real estate. Unfortunately, they have no value to prospective BFPs or creditors making loans on that real estate. The primary reason is that they are not recorded in the public records, so that there is no certain way for a BFP to locate them. In the case of a seventy-five day notice, a purchaser or lender can *ask* the owner for a copy of the notices received, but there can be no way to ensure that the owner will provide them, or all of them.[49] Moreover, the owner may receive additional seventy-five day notices after the request is received, and indeed, even after the closing of the sale or loan.[50] The residential pre-commencement notice does not even provide this much assistance, since it does not list the names of potential lienors.[51]

All in all, it is apparent that the Arkansas General Assembly has not considered the problem of the BFP and has provided no practical means for such a party to be protected from secret mechanics' liens. There appears to be no Arkansas judicial authority considering the issue.

V. A COMPARISON WITH THE CONSTRUCTION LIEN STATUTES OF SURROUNDING STATES

In this section we propose to examine the construction lien statutes of the states surrounding Arkansas to see to what extent they too present the problem of secret liens in roughly the same manner as Arkansas. Of course, construction lien statutes are famously individualized, and no two states have identical statutes, so we are looking for overall patterns rather than perfect matches. Bear in mind, as well, that there are many subtle differences among these statutes that have nothing to do with the problem of secret liens and that are outside the scope of our treatment here.

A. Kansas

49. *See supra* notes 26-38 and accompanying text.
50. *See* ARK. CODE ANN. § 18-44-115(b)(5)(A).
51. *See* ARK. CODE ANN. § 18-44-115(a)(3), (a)(5)(B)(i).

At first glance, the Kansas construction lien statute's definitions seem quite different than Arkansas's. The priority date that the first lien attaches to the property is the date that the first individual lien claimant commences work or supplies materials,[52] rather than the date work commences on the project as a whole as in Arkansas.[53] If there are multiple lien claimants, all of them share *pro rata* in that same priority.[54] However, if that earliest lien claimant is paid off, the priority date for all remaining claimants then shifts to the date of commencement of work or supplying of materials of the next earliest claimant.[55]

The result of this somewhat bizarre system is that, until well after construction is completed, it is impossible to tell what the priority date for the construction liens will be. All that one can say for certain is that it will be at some point during the construction period.

When will a prospective mortgagee or buyer be able to tell from an examination of the public records that a lien exists? Unlike Arkansas, the time frame is determined on the basis of the behavior of each individual claimant, rather than by virtue of completion of the overall project. Each contractor or supplier must file a claim of lien, with an itemized statement of the amount owed, within four months after that particular claimant last supplied materials or performed labor on the project.[56]

But despite the differences in definitions, the result in Kansas is much the same as in Arkansas. There is a gap of several months' duration after construction is completed, during which a purchaser or mortgagee may acquire an interest in the property, and despite having performed a thorough title examination, be unaware that title will be subject to one or more construction liens. In Kansas, this is the gap between the date of lien priority, when the earliest unpaid lien claimant commences work or begins supplying materials, and the date when the lien is filed in the

52. KAN. STAT. ANN. § 60-1101 (2005).
53. ARK. CODE ANN. § 18-44-110(a)(1) (2021).
54. KAN. STAT. ANN. § 60-1101 (2005).
55. KAN. STAT. ANN. § 60-1101.
56. KAN. STAT. ANN. § 60-1102 (2005). For subcontractors and materials delivered to subcontractors, the period is reduced to three months. KAN. STAT. ANN. § 60-1103 (2005).

public records, which may be as long as three or four months after the last lien claimant completes work or finishes supplying materials. A BFP or mortgagee who buys or lends during this period is left with no protection by the statute. There appears to be no Kansas judicial decision addressing the rights of BFPs.

B. Kentucky

The rules for establishing and filing a construction lien in Kentucky are similar to those in Kansas. Each claimant's lien relates back, for priority purposes, to the date that the particular claimant began furnishing labor or materials to the job.[57] The claimant must file the claim of lien for record within six months after she or he completes work on the job.[58] Hence it appears that, like Arkansas and Kansas, there is a "gap" during which any buyer or mortgagee, even a good faith taker for value, may be subject to a secret lien.[59] However, the Kentucky statute contains an extremely useful provision for prospective purchasers and mortgagees. It states that:

> The lien shall not take precedence over a mortgage or other contract lien or bona fide conveyance for value without notice, duly recorded . . . unless the person claiming the prior lien shall, before the recording of the mortgage or other contract lien or conveyance, file . . . a statement showing that he has furnished or expects to furnish labor or materials, and the amount in full thereof.[60]

A subsequent buyer or lender[61] might at this point wonder: am I protected by this statute as a bona fide taker for value without notice? The meaning of the value part of this phrase seems simple; I have paid or lent a substantial amount of consideration.

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57. KY. REV. STAT. ANN. § 376.010(1) (West 2002).

58. KY. REV. STAT. ANN. § 376.080 (West 1990).

59. *Compare* KY. REV. STAT. ANN. § 376.010(1) (West 2002), *with* KY. REV. STAT. ANN. § 376.080 (West 1990) (demonstrating the apparent gap between the date of priority and the date when the lien is filed in the public records).

60. KY. REV. STAT. ANN. § 376.010(2).

61. Despite the somewhat ambiguous wording of the statute, it is clear in the cases that the "without notice" phrase applies to takers of mortgages as well as grantees of deeds. *See, e.g.*, Grider v. Mut. Fed. Sav. & Loan Ass'n, 565 S.W.2d 647, 649 (Ky. Ct. App. 1978).

But do I have notice? What does notice mean? Is notice that there was work done or materials supplied to the site sufficient? What about notice that a contractor or supplier did work or supplied materials, but has not yet been paid? Or suppose I have notice that the contractor or materials supplier intends to file a notice of lien? Which of these forms of notice, if any of them—all of which are something short of the actual filing of a notice of lien, which I can discover by means of a title examination—will deprive me of my BFP status?

Fortunately, a Kentucky case provides a clear answer: the grantee or mortgagee will be held to have enough notice to lose BFP status only if she or he knows that there is a prospective lienor who in fact intends to file a claim of lien, or if she or he knows that there are delinquent amounts owed to a prospective lienor and that the owner is unable to pay them.[62] Where does this leave a prospective buyer or mortgagee? Obviously, such a party will perform a title examination in the ordinary course of events. If no recorded statements from potential lienors are found in this search, and if the buyer or mortgagee is not aware of any contractor or supplier performing work or supplying materials to the property within some reasonable prior period—say, eighteen months[63]—the buyer or mortgagee can be reasonably sure of being classified as a BFP and taking free of any liens that might be subsequently filed. Note that only actual knowledge of the subsequent purchaser or mortgagee is relevant; the Kentucky Court of Appeals, at least, has taken the view that constructive notice is not relevant in assessing whether the subsequent party is a BFP.[64]

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62. *Id.* at 649-50.

63. This figure is arrived at by taking the six-month period for filing of liens after completion of the lienor's work or final supplying of material and adding a generous estimate of the time required for construction—say, twelve months. This last figure might be varied depending on the type of property and construction.

64. *Grider*, 565 S.W.2d at 649. This view is not inevitable, however. The court could have said that the subsequent party should be held to have inspected the property, detected that some work had been done on it, and inquired how long ago and by whom the work was done. In the actual case such a discussion would, however, have been dictum, since the subsequent mortgagee was fully aware of the contractor's work on the property, as the loan in question was a construction loan. *Id.* at 648.

If any recorded statements are found, or if the buyer or mortgagee is aware from other information of the existence of any contractors or suppliers, the only safe course of action is to insist on lien waivers from them, showing that they have been paid in full and hence will not file claims of lien. It would make little sense for a subsequent party who knows about a contractor or materials supplier to rely on the definitions of BFP discussed above—that is, that the potential lien claimant is not planning on filing a lien, or that the owner has sufficient funds to pay the claimant's unpaid bill—as a way of achieving priority; it is much simpler and more certain to insist on a lien waiver.

In conclusion, how good is the Kentucky statute's protection of BFPs? Good, but not perfect. There is still some risk. A subsequent buyer or mortgagee might honestly have no knowledge of the existence of a lien claimant, but the lien claimant might assert priority, claiming that the subsequent taker had actual knowledge of the lien claimant's existence and that the claimant intended to file a lien or was unpaid and that the owner lacked the funds to pay the claimant's bill. Conceivably the trier of fact could believe the lien claimant's allegations and the lien could be granted priority over the BFP. After all, lacking subjective knowledge and convincing a court of that lack of knowledge are two different things, potentially with different outcomes. There is no way to prevent this risk, although it might be passed to a title insurer, with a suitable affidavit provided by the purchaser or mortgagee.

Nonetheless, the Kentucky statute provides much better protection against construction liens for BFPs than any of the other statutes we have discussed—provided, of course, that the BFP is willing to go to the trouble of obtaining lien waivers from every contractor and supplier who has filed a recorded notice as provided by the Kentucky statute, as well as every contractor and supplier of whom the BFP is actually aware.

C. Mississippi

The Mississippi legislature radically revised its construction lien statutes in 2014.[65] Under the new statute, liens have no "relation back" priority. An individual lienor's lien arises and takes its priority only from the date that it is recorded.[66] That means that the grantee of any mortgage or deed to the property that is recorded prior to a particular mechanics' lien will take free and clear of that lien.[67] Likewise, the grantee of any mortgage or deed recorded after a particular lien is filed will take subject and subordinate to that lien.[68] Each lien stands on its own and gets its own priority date as of the date it is filed of record, so far as third parties are concerned.[69]

No issue can arise with respect to a grantee or mortgagee having notice (constructive, inquiry, or actual) of a lien that a contractor, subcontractor, or materials supplier intends to file or has the right to file but has not yet filed; the statute provides that the lien simply does not exist until it is actually filed of record. In effect, the statute is a pure "race" recording statute. Notice or BFP status is of no consequence.[70] From the viewpoint of subsequent purchasers or mortgagees, this is the best of all possible worlds; such a party who performs a "clean" title examination can be absolutely certain to take free of construction liens.

D. Missouri

The basic pattern of early priority and late filing of construction liens which we have seen in Arkansas and Kansas is

65. *See* Clyde X. ("Trey") Copeland, III & Robert P. Wise, *Expansion of Mississippi's Construction Lien Laws to Include Mississippi Subcontractors, Materialmen, Consulting Engineers, and Surveyors*, 84 MISS. L.J. 905, 908 (2015).

66. MISS. CODE ANN. § 85-7-405(1)(b) (2014).

67. Copeland, *supra* note 65, at 952-53.

68. *Id.*

69. *Id.*

70. As early as 1906, prior versions of the Mississippi mechanics lien statute protected BFPs by providing that the lien would "take effect as to purchasers or incumbrancers for a valuable consideration, without notice thereof, only from the time of commencing suit to enforce the lien." MISS. CODE ANN. § 3058 (1906). *See* McKenzie v. Fellows, 52 So. 628, 628 (Miss. 1910). The present version of the lien statute drops this language, presumably because it would now be irrelevant, since BFP status is irrelevant in a pure "race" regime.

also applicable in Missouri. The priority date for all liens "relates back" to the date when work on the overall project commences—often termed the "first spade" rule.[71] The claim of lien must be filed within six months after the claim accrues,[72] a phrase that has been construed to mean six months after the last work has been performed or materials delivered.[73] There is thus a wide gap period within which a BFP might buy or take a mortgage (or in Missouri, more likely a deed of trust) on the property, unaware from a title examination or an inspection of the property that there is an impending filing of a lien. How would such a case be handled in Missouri?

There are indeed reported Missouri cases in which a purchaser was held to be subject to a lien that was not yet filed of record at the time of the purchase, but in each of these cases the transferee was fully aware of the construction project, and indeed, construction was still ongoing at the time of the sale.[74] Thus, the purchaser in these cases was emphatically not a BFP. By negative inference, we might suspect that a BFP would take free of an unfiled mechanics' lien in Missouri, but there is no authority to help us determine whether this is so, or if it is, how to define the parameters of BFP status in Missouri.[75] Unfortunately, there is simply no express answer to our question in statutory or case law.

E. Oklahoma

In Oklahoma mechanics' liens follow the "first spade" rule; all liens take their priority from the date the building or project

71. MO. REV. STAT. § 429.060 (1939). Technically, this date establishes priority only for a lien on the land. MO. REV. STAT. § 429.050 (1939) gives the properly perfected lienor a lien on the buildings or improvements even as against preexisting mortgages and other encumbrances. *See* Bob DeGeorge Assocs., Inc. v. Hawthorn Bank, 377 S.W.3d 592, 598-99 (Mo. 2012).

72. MO. REV. STAT. § 429.080 (2007).

73. *See* United Petroleum Serv., Inc. v. Piatchek, 218 S.W.3d 477, 482-83 (Mo. Ct. App. 2007).

74. Lee & Boutell Co. v. C. A. Brockett Cement Co., 106 S.W.2d 451, 459-61 (Mo. 1937); Williams v. Chi., S.F. & C. Ry. Co., 20 S.W. 631, 633, 642 (Mo. 1892); McAdow v. Sturtevant, 41 Mo. App. 220, 224-25, 228, 231 (Mo. Ct. App. 1890).

75. *See supra* notes 63-67 and accompanying text.

commences.[76] It has been said that the recording requirement of the Oklahoma mechanics' lien statute exists to protect BFPs.[77] However, since recording need not occur until four months after the last material or equipment used on said land was furnished or the last labor was performed under the contract,[78] recording is a very ineffectual method of protecting BFPs. Like Arkansas, Kansas, and probably Missouri, there is a wide time gap within which a purchaser or mortgagee might acquire or take a security interest in the property without any protection from the recording system. No judicial decision seems to address protection for BFPs.

F. Tennessee

Tennessee's statutes contain an unusual provision allowing a contractor to record an acknowledged form of the construction contract in the records of the register of deeds in the county where the real estate is located.[79] If such a recording is made, it immediately gives notice to any subsequent purchaser or encumbrancer of a mechanics' lien that may arise in favor of the contractor.[80] If the contract is not thus recorded, the contractor must record a notice of lien within ninety days after the improvement is completed or abandoned.[81] If this time deadline is met, the lien's attachment dates back to the time of visible commencement of operations on the improvement—the "first spade" rule;[82] if it is not met, there is no relation back, and the lien attaches only when it is recorded.[83]

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76. OKLA. STAT. tit. 42, § 141 (2013).

77. Davidson Oil Country Supply Co., Inc. v. Pioneer Oil & Gas Equip. Co., 689 P.2d 1279, 1280 (Okla. 1984).

78. OKLA. STAT. tit. 42, § 142 (1980).

79. TENN. CODE ANN. § 66-11-111 (2007).

80. TENN. CODE ANN. § 66-11-111. The contract may be recorded at any time up to ninety days after the improvement is completed or abandoned. TENN. CODE ANN. § 66-11-112(a) (2007).

81. TENN. CODE ANN. § 66-11-112(a).

82. TENN. CODE ANN. § 66-11-104(a) (2013).

83. TENN. CODE ANN. § 66-11-112(a).

Thus, Tennessee follows the pattern we have already seen in Arkansas, Kansas, likely Missouri, and Oklahoma, with one exception: the possibility that that the lienor will have recorded a copy of the construction contract at an early stage, thus giving notice of his or her potential lien rights to prospective purchasers or lenders. Obviously, anyone considering buying or lending on property and finding, in a title examination, a construction contract recorded recently,[84] will be well advised to obtain a lien waiver from such a contractor.

Hence, if no contract is recorded, the "gap" period, during which a BFP will be subject to a lien that relates back to the commencement of the project, is fairly narrow: ninety days from the time the lien claimant completes or abandons his or her work. Nonetheless, the risk is present, and nothing in the Tennessee statute or judicial decisions appears to protect BFPs against it.

G. Texas

Texas, rather oddly, recognizes two categories of mechanics' liens: constitutional[85] and statutory.[86] A constitutional lien, in principle, is self-executing and takes effect without any filing by the lien claimant unless the property is a homestead.[87] A statutory lien[88] requires compliance with specific procedures, including the filing for record of an affidavit of claim by the fifteenth day of either the third or fourth month after the month the contractor or supplier has completed, terminated, or abandoned work on the improvement, depending on the circumstances.[89]

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84. A prime contractor's lien lasts for one year after completion or abandonment of the improvement. TENN. CODE ANN. § 66-11-106 (2007). Subcontractors' and materials suppliers' liens last for only ninety days after completion of work or the furnishing of materials. TENN. CODE ANN. § 66-11-115(b) (2007).

85. TEX. CONST. art. XVI, § 37.

86. TEX. PROP. CODE ANN. § 53.021 (West 2022).

87. *See* First Nat'l Bank v. Whirlpool Corp., 517 S.W.2d 262, 267 (Tex. 1974).

88. TEX. PROP. CODE ANN. § 53.021.

89. TEX. PROP. CODE ANN. § 53.052 (West 2022). The deadlines indicated in the text take effect in 2022. Relevant circumstances include whether the claimant is a prime contractor or a subcontractor or supplier and whether the real estate is residential. The details are not significant for our purposes.

The constitutional lien might seem preferable from the viewpoint of lien claimants, since it takes effect automatically and requires no filing.[90] However, it is subject to several important limitations. It operates only in favor of prime contractors—those who deal directly with the owner of the property—and not for subcontractors.[91] It is available only for improvements to an "article" or "building," while the statutory mechanics' lien can also cover architects, engineers, surveyors, landscape providers and installers, and demolition workers.[92]

Significantly for our purposes, constitutional mechanics' liens are said not to be binding on BFPs.[93] This rule is detrimental to a lien claimant, and is viewed as a reason for a claimant not to rely on a constitutional lien, or to file for record an affidavit of lien in order to prevent BFPs from arising.[94] From the viewpoint of purchasers and lenders the rule seems beneficial, but it is not quite the panacea that they might hope, in part because BFP is narrowly defined. A purchaser or creditor who has seen the construction in process of completion[95] (or presumably, one who has other actual knowledge of it) is deemed to be aware that mechanics' liens may be filed, and thus is not considered a BFP. That seems fair enough. The cases all involve newly constructed houses, and it is reasonable to expect someone who buys a new

90. However, if the property is a homestead, the contractor and owner must enter into a written contract; both spouses must sign if the owner is married, and the contract must be filed for record with the county clerk's office. Additional requirements apply if the contract is for remodeling. *See* TEX. PROP. CODE ANN. § 53.254 (2022); TEX. CONST. art. XVI, § 50; J. PAULO FLORES, TEXAS RESIDENTIAL CONSTRUCTION LAW MANUAL § 6:7 (2021).

91. The latter are covered by the statutory lien. TEX. PROP. CODE ANN. § 53.021.

92. FLORES, *supra* note 90, § 6:2; TEX. PROP. CODE ANN. § 53.021.

93. *See, e.g.*, Tex. Wood Mill Cabinets, Inc. v. Butter, 117 S.W.3d 98, 105 (Tex. App. 2003).

94. *See* FLORES, *supra* note 90, §§ 6:2, 6:12. The affidavit is the same form that is used to perfect a statutory mechanics lien. *See* TEX. PROP. CODE ANN. § 53.054(a) (1997).

95. *See* FLORES, *supra* note 90, § 6:12. The other cases cited by *Tex. Wood Mill Cabinets, Inc.* for this proposition probably all involve fact patterns in which the purchaser actually saw the ongoing construction. *See, e.g.*, Valdez v. Diamond Shamrock Refin. & Mktg. Co., 842 S.W.2d 273, 276 (Tex. 1992); Inman v. Clark, 485 S.W.2d 372, 374 (Tex. Civ. App. 1972). *Wood v. Barnes* does not expressly state that the purchaser saw the construction, but the timing of the purchase, when compared with the date of recording of the affidavit of claim of lien, strongly suggests that the purchasers either saw the construction or were actually aware that it had just been completed. 420 S.W.2d 425, 427 (Tex. Civ. App. 1967)

house to obtain a list of contractors and suppliers from the seller and insist on lien waivers from them.[96] It is not clear what a Texas court would do with a case in which work has recently been completed but the purchaser or creditor is unaware of it; a new roof, a repaved parking lot, or a new HVAC system might provide an example. Would the court hold that the purchaser or creditor should have discovered the construction work, and hence is not a BFP? The answer is uncertain.

If the lienor files for record an affidavit claiming a constitutional lien, but does so after the property has been sold or mortgaged by the owner, the situation becomes even murkier. This is what occurred in *Wood v. Barnes*.[97] Putting aside the notice that the purchaser received from viewing the construction itself, as discussed above, the court in that case seems to hold that the filing of the affidavit gave the purchaser notice of the lien even though it was filed *after* the purchaser bought the property. "The [buyers] having purchased the property before the expiration of the 120-day period [allowed for filing the affidavit] must take constructive notice[98] of [the lienor's] existing right to file his affidavits."[99] In other words, a purchaser has constructive notice of an affidavit that might be recorded in the future![100] Placing this conclusion on the ground of constructive notice seems to make no sense at all; one might as well say that, if the lienor ever files an affidavit of claim within the allowed statutory period, the protection for BFPs is simply nonexistent.[101]

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96. There remains, of course, the problem of the seller who dishonestly fails to disclose a complete list of contractors and suppliers.

97. 420 S.W.2d at 427.

98. *Id.* at 428. It is unclear whether the discussion in the opinion about constructive notice is mere dictum, in light of the fact that the buyers saw the ongoing construction and hence arguably had actual knowledge of the construction contracts. *See Inman*, 485 S.W.2d at 374.

99. *Wood*, 420 S.W.2d at 428.

100. Flores agrees with this interpretation of the case. *See* FLORES, *supra* note 90, § 6.14: "When a lien affidavit is filed after the property is sold by the owner who contracted for the improvements, the purchaser is deemed to have constructive notice of a contractor's right to assert a lien for the statutory period, even where the filing period commenced prior to the purchase." Apparently *contra*, *see* Atkinson v. Swoboda, No. 01-94-00510-CV, 1997 WL 94358 at *6 (Tex. App. Mar. 6, 1997).

101. Incidentally, why the *statutory* time limit for filing the affidavit should be binding in the case of a *constitutional* mechanics lien is a mystery that has not been satisfactorily

One can only conclude that the apparent protection for BFPs against constitutional mechanics' liens in Texas is, to put it mildly, confusing. For statutory mechanics' liens on the other hand, there is no confusion because there is no protection. For priority purposes, both constitutional and statutory liens relate back to the commencement of construction.[102] Thus for statutory liens, Texas is similar to the other "first spade" states we have discussed, and there is ample opportunity for a BFP to suffer an unwarranted loss of priority to a construction-lien claimant.

One additional factor can affect the rights of potential BFPs in Texas. If the property in question is a homestead, a mechanics' lien claimant must execute a written contract with the owner (and if the owner is married, with his or her spouse) before commencement of work or furnishing of materials.[103] The contract must be recorded in the county clerk's records.[104] While the statute states no time deadline for the filing of the contract, it is likely to be filed shortly after its execution.[105] Once recorded, the contract itself will, of course, give subsequent purchasers and mortgage lenders notice of the contractor's identity and the fact of the construction project, and thus preclude them from becoming BFPs as to that project if a constitutional mechanics' lien is claimed.[106] It will also warn them that they will need to obtain a lien waiver from that contractor.[107]

To summarize, can a prospective BFP or mortgagee take free of a mechanics' lien in Texas? In theory the answer is probably yes, but only if a set of conditions is met—conditions which, in

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explained, but it is. *See* Detering Co. v. Green, 989 S.W.2d 479, 481 (Tex. App. 1999); FLORES, *supra* note 90, § 6.14.

102. TEX. PROP. CODE ANN. § 53.124 (West 2021) (statutory liens); Tex. Wood Mill Cabinets, Inc. v. Butter, 117 S.W.3d 98, 105 (Tex. App. 2003) (discussing constitutional liens).

103. FLORES, *supra* note 90, § 5.12.

104. TEX. CONST. art. XVI, § 50(a)(5); TEX. PROP. CODE ANN. § 53.254(a)-(c), (e) (West 2022). See *Cavazos v. Munoz* for a comprehensive explanation. 305 B.R. 661, 666 (S.D. Tex. 2004). *See also* TEX. PROP. CODE ANN. § 53.254(g) (discussing how, for homesteads, additional language must also be included in the affidavit claiming a lien discussed in the text); Morrell Masonry Supply, Inc. v. Loeb, 349 S.W.3d 664, 670 (Tex. App. 2011) (holding a claimed lien invalid for failure to include the required language).

105. TEX. CONST. art. XVI, § 50(a)(5).

106. TEX. CONST. art. XVI, § 50(a)(5).

107. TEX. CONST. art. XVI, § 50(a)(5).

the aggregate, seem quite improbable. They are as follows: (1) the lien claimant opts to claim a constitutional rather than a statutory lien; (2) the property in question is not a homestead, or if it is, the purchaser or mortgagee acquires its interest before the lien claimant records the construction contract; (3) the purchaser or mortgagee does not see the ongoing construction or otherwise gain any actual knowledge of it before acquiring its interest; and (4) the lien claimant does not record an affidavit of lien claim within the time limit allowed by the statute. If these conditions are met, the purchaser or lender will probably prevail unless a Texas court holds that BFP status should be denied because the purchaser or mortgagee *should* have been aware of the recent construction on the property,[108] even though she or he was not. In sum, there is a high risk in Texas that a BFP will be held subject to unrecorded mechanics' liens.

VI. WHAT SHOULD BE DONE?

The survey of Arkansas and surrounding states in the previous section is sufficient to illustrate that the "gap" problem with mechanics' liens is a real problem, and that situations can and do arise in which purchasers and lenders who would ordinarily be considered BFPs can and sometimes do unfairly lose priority to mechanics' liens. Indeed, it is widely assumed that if visible construction is going on or has recently occurred, a purchaser or mortgagee is bound to know about it and cannot be considered a BFP at all.[109] This assumption is simply unjust; it

108. Perhaps such a duty might exist because the purchaser or mortgagee should have made a more careful or thorough inspection of the property. On this point there seems to be no clear Texas case authority. *See, e.g.*, Apex Fin. Corp. v. Brown, 7 S.W.3d 820, 832 (Tex. App. 1999) (remanding this issue to the trial court for finding of fact).

109. This assumption is built into the lien statute in Minnesota. Like a great many states, the Minnesota statute provides for a common priority date for all liens, but with apparent protection for BFPs:

> All liens, as against the owner of the land, shall attach and take effect from the time the first item of material or labor is furnished upon the premises for the beginning of the improvement, and shall be preferred to any mortgage or other encumbrance not then of record, unless the lienholder had actual notice

fails to consider whether the construction is sufficiently obvious, and whether the subsequent purchaser or creditor can tell that it has occurred recently enough that a legitimate lien can still be filed by a contractor or supplier on account of it. A system that relies on this sort of guesswork is sloppy and unfair to buyers and lenders. To the extent that its risks can be passed on to title insurers, it ends up imposing unnecessary costs on all title insurance customers.

What are the alternatives for reform? There are three possibilities available in existing state law, each of which has both advantages and shortcomings.

A. Abrogate "Relation Back"

Since the fault with the existing system lies in the underlying legal concept of "relation back" of mechanics' liens, the simplest approach is to do away with relation back. In such a regime, a mechanics' lien would take its priority only from the date it was filed of record. In such a system, a purchaser or mortgage lender would determine whether there were any existing liens by performing (or having its title insurer perform) an ordinary title examination. No special risk would be involved. From the viewpoint of buyers and lenders, this sort of system would be ideal.

One might say that moving to such a system would be politically impossible, since the construction industry would oppose it so vigorously. However, it is precisely the system Mississippi adopted in 2014.[110] One of its apparent faults is that each subcontractor and supplier gets its own individual priority date, determined by its recording date. That produces a result that may seem arbitrary, as compared with most states that assign a

> thereof. As against a [BFP], mortgagee, or encumbrancer without actual or record notice, no lien shall attach prior to the actual and visible beginning of the improvement on the ground . . . .

MINN. STAT. § 514.05(1) (2022). The protection for BFPs turns out to be relatively meaningless, since once the beginning of actual and visible construction has occurred, no one can be a BFP! *See* Richards v. Sec. Pac. Nat'l Bank, 849 P.2d 606, 612 (Utah Ct. App. 1993).

110. MISS. CODE ANN. § 85-7-405(1)(b) (2014).

common priority date to all lien claimants—commonly the date of commencement of construction—and allow all claimants *pro rata* claims against the property, an arguably more equitable arrangement. In Mississippi, it was unnecessary to justify moving away from such a *pro rata* system, since prior to the 2014 revamping of the statute, subcontractors had no lien rights at all.[111] In most states, a shift to a Mississippi-type system is difficult to conceive politically.

B. Require Advance Recording of a Notice of Work by Prospective Lienors

Under this concept, a mechanics' lien could relate back to some early, common lien date, such as the date of commencement of construction, but only if the lien creditor had filed for record a notice that she or he was providing labor or materials for the job before a subsequent purchaser or creditor acquired an interest in the property. The notice would not be a claim of lien, but only a sort of placeholder, notifying the world that the party filing it would have the right to claim a lien in the future. Application of this rule would have the effect of allowing any purchaser or lender, by performing a title examination, to compile a list of contractors or suppliers from whom it would be necessary to obtain lien waivers. The Kentucky statute adopts this rule with respect to BFPs.[112]

Such a system would be much preferable, from the subsequent purchaser or lender's viewpoint, to attempting to get a list of contractors and suppliers from the owner of the property or general contractor. It would eliminate the risk that the owner or general contractor might lie or forget to include someone who should have been included on the list, as well as the risk that the job itself might be unnoticeable, so that the subsequent purchaser would not think to ask for a such a list. Instead, the title examination would produce a definitive and reliable list of parties from whom lien waivers needed to be obtained.

111. MISS. CODE ANN. § 85-7-405(1)(b).
112. KY. REV. STAT. ANN. § 376.010(1) (West 2002).

Nonetheless, such a system is not as desirable from the BFP viewpoint as the first solution mentioned above, the abrogation of the "relation back" concept. The reason is that it would still force the subsequent purchaser or lender to go through the administrative burdens of the lien waiver process, which is tedious and fraught with some potential for error. But it would be a great improvement over the present system.

From the viewpoint of prospective lien claimants, the burden of recording a notice of this sort is relatively slight, and one of which they could hardly complain. A contractor or materials supplier could accomplish the filing with a one-page printed form, without the help of a lawyer, and with a minimal fee. This approach would go a long way toward balancing the scales of fairness between construction lien claimants and BFPs.

C. The Uniform Construction Lien Act's Approach

In 1987 the Uniform Law Commission promulgated the Uniform Construction Lien Act ("UCLA"). The act was not the product of independent drafting, but was derived by splitting out Article Five of the Uniform Simplification of Land Transfers Act,[113] which had itself been promulgated in 1977 but which had achieved only one adoption,[114] and publishing it as a separate act. That article in turn had been roughly based on the Florida mechanics' lien statute.

The UCLA takes a novel approach to establishing construction lien priority while at the same time protecting the rights of BFPs and lenders. As will be seen, its approach is complex—indeed, its very complexity may explain its lack of adoptions—but functional. While it seems highly unlikely that the UCLA is going to gain any future adoptions at this point, it provides a rather ingenious point of reference for our discussion

113. NAT'L CONF. OF COMM'RS ON UNIFORM STATE L., AM. BAR ASS'N, UNIFORM CONSTRUCTION LIEN ACT 5 (1987) [hereinafter UCLA]; *see also* Sara E. Dysart, *USLTA: Article 5 "Construction Liens" Analyzed in Light of Current Texas Law on Mechanics' and Materialmen's Liens*, 12 ST. MARY'S L.J. 113, 116-118 (1980).

114. Nebraska adopted the construction lien article of USLTA and adopted it as a free-standing act in 1981; NEB. REV. STAT. §§ 52-125 to -159.

here. It hinges on the concept of a recorded "notice of commencement."

Under the UCLA a notice of commencement may be recorded either by the owner of the property (which would ordinarily be the case) or by a prospective lien claimant. The purpose of the notice is to let parties who acquire interests in the property in the future know that there is construction on the real estate which may give rise to lien claims. The notice itself, however, is general, and does not purport to identify prospective claimants. If the notice remains in effect, it provides a priority date, and all lien claims will relate back to the notice's recording date. If no notice is recorded, the priority date is normally the date of visible commencement of work on the project. Ordinarily it is expected that a notice of commencement will be filed.[115]

If a lien claimant records a lien while a notice of commencement is in effect,[116] the lien's priority relates back to the date the notice of commencement was recorded. However, an owner can terminate a notice of commencement by recording a notice of termination to take effect at least thirty days in the future, and by sending a notice to all prospective lien claimants who have requested notification of termination.[117]

If a purchaser or lender decides to buy or take a mortgage on the property, it will (if well advised) insist that the owner terminate the notice of commencement as described above. When lien claimants receive notice that termination is about to occur, they are warned that they must act promptly to preserve their liens. If they do not record their liens before the thirty-day period expires, they will lose the relation-back benefit. Their priority date instead will become thirty days after the termination date or the date that they actually record, whichever is earlier.[118] Thus,

115. UCLA, *supra* note 113, § 301; *Id.* at 8. If no notice of commencement is filed by the owner, a lien claimant can file one later to have benefits described below. *Id.* at 70.

116. The notice of commencement is good for the time it states, but at least six months and no more than three years (or one year in the case of a buyer of residential real estate); *Id.* § 301(b).

117. *Id.* § 302(a)(1)(iii)-(iv). The owner must also publish notice of the termination and record an affidavit stating that the notice has been sent to all of the claimants who requested it. UCLA, *supra* note 113, § 302(a)(4).

118. *Id.* § 208(c).

they have a strong incentive to record immediately. At the same time, the purchaser or lender who waits until thirty-one days after the termination date of the notice of commencement to close the loan or sale can be certain that its title examination will have identified all construction liens that have any possibility of gaining priority over the new deed or mortgage.

While this system seems complex, it embodies a strong set of benefits:

> (a) All lien claimants who request notice of termination of notice of commencement, and who file their liens promptly, get the benefit of equal relation-back lien priority.
>
> (b) All purchasers and lenders can be assured of priority over all construction liens, provided they insist on termination of notice of commencement and are willing to wait at least thirty-one days after the termination takes effect to close their sale or loan.
>
> (c) The priority of lenders and purchasers does not depend on their going through the administrative burden of obtaining lien waivers from potential lien claimants.

Despite these benefits, however, the UCLA's overall structure is daunting to explain. It represents a radical departure from the existing mechanics' lien systems of most states, and it seems improbable that any groundswell of enthusiasm could be generated for its adoption.

CONCLUSION

As these three alternatives illustrate, the secret lien problem is not insoluble in the context of construction liens. Of the solutions presented, the second is probably the most appealing from a political viewpoint. It requires every subcontractor and supplier who expects to have the benefit of relation-back priority to record a public notice of work. The notice warns future lenders and purchasers that, to be safe from unexpected liens, they must obtain lien waivers from all those who have recorded such notices.

This solution is simple and easy to explain to a legislative committee. Its burdens are not extreme to contractors and suppliers, and it should be highly appealing to the title insurance industry and to real estate investors, banks, and other lenders who must pay title insurance premiums. It seems a much fairer allocation of risks than the present system's secret liens.

A DOG'S BARK TO ACT AS A NARK

Bailey R. Geller*

I. INTRODUCTION

What does one do when life hands them lemons? That's right—make lemonade. Now, that is not to say that making lemonade is always easy. Some may find the lemonade too bitter, others too sweet, and nevertheless some might simply dislike the taste of lemonade regardless of the process. Nevertheless, the mere possibility of critique—the potential for objections—does not mean that lemons should be wasted. Rather, it is an admonition. The transformation of a sour fruit into a delectable refreshment is not easy nor can it be done by just anyone; it requires consistency, experience, and a precise recipe. But when one closely adheres to that recipe, something astonishing commences—a seemingly unappetizing lemon becomes something more. It becomes something great.

The law is full of lemons, of sorts. Namely, dogs. Dogs are often considered an unsavory element of criminal procedure; tools of the criminal justice system purposed toward unjust ends.[1] But what should our legal system do with creatures possessing an inhuman, near-unearthly nose, capable of surpassing a human's

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1. *See* William M. FitzGerald, *The Constitutionality of the Canine Sniff Search: From* Katz *to Dogs*, 68 MARQ. L. REV. 57, 64-82 (1984) (discussing the long line of case law involving the use of dogs in criminal procedure that has caused much controversy).

sense of smell by a factor of 100,000 times?[2] That's right—use their noses (veritable legal lemons) for good.

Put simply, dog scent lineups use a canine to match a scent from a crime scene to the scent of a suspect in a lineup.[3] Dog scent lineups serve as an effective resource aimed at improving identifications at trial, and they can yield immensely probative and essential evidence.[4]

For example, consider a vignette about Maggie, a trained bloodhound, which demonstrates the vast potential of a canine's sense of smell.[5] Investigators following a crime scene sought to link a crumpled manila envelope with a purported suspect.[6] The envelope was initially found on the suspect's bed—preliminarily connecting the evidence and the suspect—but, given the importance of the identification, investigators sought to reinforce that link.[7] That is when Maggie was called in. With no prior encounter between Maggie and the suspect, investigators presented the envelope to Maggie at the entrance of a jail where the suspect was being housed.[8] Immediately thereafter, Maggie tracked the envelope's scent through the entirety of the jail, taking the exact route walked by the suspect to the control room, until she arrived at the very room where the suspect was being held and alerted to him.[9] During the legal proceedings that followed, the Supreme Court of California upheld the admissibility of Maggie's scent identification, directly acknowledging its immense probative value.[10]

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2. *8 Dog Nose Facts You Probably Didn't Know*, PETMD (May 28, 2020), [https://perma.cc/JVL4-ZZ5H].

3. *See infra* Section II.B.

4. *See* Sophie Marchal et al., *Rigorous Training of Dogs Leads to High Accuracy in Human Scent Matching-To-Sample Performance*, PLOS ONE, Feb. 10, 2016, at 1, 10 (demonstrating that dog scent identifications helped the French Division of the Technical and Scientific Police in judicial cases solve more than a quarter of criminal cases alone).

5. People v. Jackson, 376 P.3d 528, 551 (Cal. 2016).

6. *Id.*

7. *Id.*

8. *Id.*

9. *Id.*

10. *Jackson*, 376 P.3d at 572. Experts testified regarding the training of the bloodhound, a reasonable time for scents to linger, and the ability of bloodhounds to distinguish between different human scents, even on paper, thus laying a proper foundation for the admission of the evidence. *Id.* at 561-65.

Despite their potential significance, however, dog scent identifications have been categorized by many courts and commentators as "junk science."[11] They are perceived to be, as foreshadowed, a sour lemon for courts to avoid.

Often, the criticisms of dog scent identifications turn on concerns about expert testimony. Scent identifications are typically relayed to trial factfinders through expert witnesses, and the admissibility of identifications therefore depends on the evidentiary strictures surrounding expert testimony.[12] However, the admissibility standards of expert testimony are somewhat vague.[13] And, increasingly, judges rely on federal and state evidentiary codes to simply exclude scent identifications entirely as an insufficiently reliable form of expert testimony.[14]

But that exclusion is a miscalculation. Rather than excluding scent lineups entirely, courts should permit factfinders to weigh their importance.

Such a permissive approach, though a drastic change from current practice, would be far from anomalous. Consider, for instance, how eyewitness identifications by humans are routinely used in court despite comparable reliability concerns.[15] Eyewitness identifications carry an abundance of prospective shortcomings, albeit flaws in human nature itself, including undue influence from the observer's cognitive biases.[16] In fact, nearly

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11. John J. Ensminger & Tadeusz Jezierski, *Scent Lineups in Criminal Investigations and Prosecutions*, *in* POLICE AND MILITARY DOGS: CRIMINAL DETECTION, FORENSIC EVIDENCE, AND JUDICIAL ADMISSIBILITY 101, 101 (John J. Ensminger ed., 2012) ("Scent lineups are a significant forensic and evidentiary tool, though they are sometimes dismissed as 'junk science.'").

12. *See infra* Section II.D.

13. *See In re* Paoli R.R. Yard PCB Litig., 35 F.3d 717, 750 (3rd Cir. 1994).

14. JoAnna Lou, *Scent Lineups: Properly Harnessing the Power of the Canine Nose*, THE BARK, [https://perma.cc/69YS-7MA7] (June 2021) (Alaska, Florida, New York, and Texas are some of the few states to currently use scent lineups; however, they are still deemed problematic even in these states).

15. Stephen Raburn, *Mistaken Eyewitness Identification Leads to Wrongful Convictions*, INTERROGATING JUST. (May 12, 2021), [https://perma.cc/JZT8-P3HG]; *see also Eyewitness Identification Reform*, INNOCENCE PROJECT, [https://perma.cc/D4DE-4DHD] (last visited Apr. 1, 2022) (a highly influential organization that argues against "junk science," and despite criticizing the method due to the influences, it sets out some approaches to make eyewitness identifications more reliable in order to keep them in court).

16. *Police Lineups and Other Identification Situations*, FINDLAW, [https://perma.cc/5VHS-MAEU] (Feb. 14, 2019).

70% of wrongful convictions later overturned by DNA evidence are due to inaccurate eyewitness identifications.[17] Nonetheless, eyewitness identifications are not deemed categorically inadmissible despite these pervasive reliability concerns. Rather, they remain a cornerstone of modern trials, with reliability concerns affecting the evidence's *weight* rather than its *admissibility.*[18]

Our legal system's treatment of eyewitness testimony paves the path ahead for dog scent lineups. Dog scent lineups are used solely for identification purposes, neither to determine guilt nor innocence.[19] Both forms of identification produce a similar outcome—suspect elimination—and yet, in many regards, scent identifications are *more* reliable than eyewitness testimony. Canines do not suffer the same cognitive biases that humans do. Furthermore, the perceptive ability of a dog's nose often far exceeds that of a human's eyes.

This Comment therefore advocates for systemic reconsideration of dog scent lineups at trial. It will not claim that all dog scent lineups are flawless, particularly given the slipshod manner in which many are performed. But dog scent identifications are increasingly more valuable than our legal system currently acknowledges when they are properly conducted. They should be admissible.

Directly after this Introduction, Part II of this Comment offers background information on the various uses of canines in the criminal justice system as well as an empirical survey of how scent lineups are currently utilized by law enforcement across numerous countries. Thereafter, Part III details best practices of

17. Raburn, *supra* note 15.

18. *Weight of Evidence*, JRANK, [https://perma.cc/ZE7R-EECJ] (last visited Apr. 1, 2022) (demonstrating the ability of the jury to weigh the evidence).

19. Winfrey v. State, 393 S.W.3d 763, 768 (Tex. Crim. App. 2013). Further, analogous to a fingerprint expert not being qualified to conclude if a defendant was guilty but could testify that the fingerprint on the murder weapon was the defendant's, here testimony regarding dog scent evidence is not, and cannot, be used to show legal conclusions such as guilt. *See* Berry v. City of Detroit, 25 F.3d 1342, 1353 (6th Cir. 1994). Rather, scent lineup testimony demonstrates a relationship between the suspect and the crime scene itself, but a legal conclusion made by the expert is not appropriate. *Id.*

scent lineups before advocating in favor of their admissibility at trial. A brief Conclusion provides the Comment's parting note.

II. BACKGROUND

Scent lineups can hardly be categorized as "novel" considering the various uses of canines in all fields. First, the history and evolution of canine use in the legal field must be analyzed. The various uses of scent identification are inevitably tied with the Federal Rules of Evidence and application thereof.

A. Barkground on Canine Uses

Since Roman times, dogs have been utilized for security and hunting.[20] Soon after, the English first began using bloodhounds starting in 1888.[21] The use of dogs in law enforcement became prevalent in America by the 1970s.[22]

Today, dogs take on many roles humans are incapable of competing with, such as tracking criminals, sniffing out contraband, or locating missing children.[23] Dogs are actively employed during national crises and rescue missions.[24] The job is not done by their (albeit cute) looks; rather, the nose controls. A canine's nose is superhuman like, capable of smelling in three-dimensional and the passage of time, and even so, the nose continues to evolve.[25]

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20. *History of Dogs*, DOGS FOR L. ENF'T, [https://perma.cc/C8EG-EKUQ] (last visited Oct. 24, 2021).

21. *History of Police Canines Around the World*, DOGS FOR L. ENF'T, [https://perma.cc/44SS-HSXY] (last visited Apr. 13, 2022).

22. *Id.*

23. Ed Grabianowski, *How Police Dogs Work*, HOW STUFF WORKS, [https://perma.cc/J2K9-Y84X] (last visited Oct. 24, 2021).

24. *See, e.g.*, Mara Bovsun, *The Legacy of 9/11 Dogs*, AM. KENNEL CLUB (Aug. 30, 2021), [https://perma.cc/3BEA-22HV] (describing the use of canines during the Oklahoma City bombing and the terrorist attacks of 9/11).

25. PETMD, *supra* note 2.

Not all dogs are alike.[26] Bloodhounds and German Shepherds are the "gunners" in terms of canine smelling, with bloodhounds usually coming in first.[27] After all, they are "a nose with a dog" and often serve as more vital assistance to law enforcement than the complex technology available today.[28] Consider the ease with which a human can distinguish strong scents—say pickles and popcorn—and then consider how much easier it is for a dog to do the same. A dog can distinguish scents better than a human due to "a large, ultrasensitive set of scent membranes that allows the dog to *distinguish* smells[.]"[29] The first-place winner's nose is comprised of approximately 230 million olfactory cells, forty times the amount in humans.[30]

Scent lineups were at last introduced into evidence in the United States in 1982,[31] but regrettably carried little weight, as demonstrated by the quick disposal of their existence in many states.[32] Contrarily, European countries have regularly employed scent lineups as far back as the beginning of the twentieth century.[33]

Analogous to the many uses of a lemon, dogs—our legal lemons—are often subjected to uses outside law enforcement. Human companions and guide dogs serve unique roles.[34] Canines are able to smell heat signatures with their noses, as well as detect cancer and COVID-19.[35]

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26. *Id.*

27. For example, a pug is not known to have a good sense of smell as its scrunched nose blocks passageways. *Id.*

28. *The Bloodhound's Amazing Sense of Smell*, PBS (June 9, 2008), [https://perma.cc/5M3V-ZJTZ].

29. *Id.* (emphasis added).

30. *Id.*

31. John J. Ensminger, *Development of Police and Military Dog Functions*, *in* POLICE AND MILITARY DOGS: CRIMINAL DETECTION, FORENSIC EVIDENCE, AND JUDICIAL ADMISSIBILITY, *supra* note 11, at 3, 5 [hereinafter Ensminger, *Development of Police and Military Dog Functions*].

32. *See supra* note 14 and accompanying text.

33. Ensminger & Jezierski, *supra* note 11, at 101.

34. Grabianowski, *supra* note 23.

35. *Dogs Can Detect Heat with 'Infrared Sensor' in Their Nose, Research Finds*, REUTERS (Mar. 3, 2020, 7:22 AM), [https://perma.cc/Y9XX-H3K6]; Mia Rozenbaum, *The Science of Sniffs: Disease Smelling Dogs*, UNDERSTANDING ANIMAL RSCH. (June 19, 2020), [https://perma.cc/K4KE-K39Q].

B. Sniff What?

Despite the unwarranted, wide range of techniques involving scent lineups, the general idea behind a scent lineup is to allow a canine to smell the scent from a crime scene and then walk by containers that have scent swabs from a group of individuals, one being the suspect's.[36] If the canine matches the two scents, it should alert with a trained signal.[37] This signal is often a bark, but not always.[38] Alerts, though subject to variation, are largely a "specific and simple behavior pattern by which the dog indicates to the handler that a target odor is present."[39] Thus, if the dog alerts, it implies that the two scents derived from the same person.[40] Despite optimism, alerts are not always clear, and in return they should not be classified as such.[41]

C. Technique to Speak: Worldwide

To properly evaluate scent lineups, they must be compared across the nations that use them. An empirical study was conducted across eleven different countries demonstrating these discrepancies.[42] The key differences are noteworthy.

First up: the collection and handling of the scents.[43] All of the countries have a standard material that may hold the scents of suspects and decoys, except the United States.[44] Worldwide, including the United States, there is nearly no required specific time period on how long after the collection of the scent it could be used or how long the scent of the suspect may be used; instead

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36. Lou, *supra* note 14.
37. *Id.*
38. *Id.*
39. Ensminger, *Development of Police and Military Dog Functions*, *supra* note 31, at 7.
40. *See* Barbara Ferry et al., *Scent Lineups Compared Across Eleven Countries: Looking for the Future of a Controversial Forensic Technique*, 302 FORENSIC SCI. INT'L, July 2019, at 1, 1.
41. Ensminger, *Development of Police and Military Dog Functions*, *supra* note 31, at 8.
42. Ferry et al., *supra* note 40, at 2.
43. *Id.* at 3 tbl.1.
44. *Id.*

they have "norms".[45] Despite this, most countries, not including the United States, at least have a rule on the frequency of cleaning the stations between trials.[46]

The characteristics of the decoy vary as well.[47] Some countries require the scent to be taken from suspects with similar characteristics, usually gender; the United States has no requirement, but race, ethnicity, and gender are sometimes considered.[48] Even with nearly all countries requiring a novel decoy, the United States allows re-used decoys during judicial trials.[49] Not surprisingly, many other countries, the United States not included, require a minimum number of control trials.[50]

Even the setup of the lineups among countries differs.[51] Every country except one established a procedure or requirement for the number of scent stations—the United States being the one exception with variable numbers in case law.[52] Likewise, the United States has no minimum number of trials required before scent lineups are admissible as evidence and has even allowed a single run with an alert to be enough, notwithstanding many countries strictly imposing a minimum number of trials.[53]

Ignorant to researchers' advice urging a high degree of blindness, meaning obliviousness to the actual location of the scent, dog scent lineups often are performed without blindness.[54] Common practice in the United States is to have the handler, but not the technician, blind; however, there is a lack of consistency among the states and across countries.[55]

Surprisingly, the United States is the only country to use bloodhounds; however, there is no training or age requirement for

45. *Id.*
46. *Id.*
47. Ferry et al., *supra* note 40, at 4 tbl.2.
48. *Id.*
49. *Id.*
50. *Id.* at 5 tbl.3.
51. *Id.* at 6 tbl.4.
52. Ferry et al., *supra* note 40, at 6 tbl.4.
53. *Id.*
54. *Id.* at 12.
55. *Id.* at 8 tbl.6, 12.

the dog.[56] Likewise, the United States has no specific requirements for the qualifications of the handler and often allows self-training, despite other countries requiring specific training, certifications, and testing.[57]

Eight of these countries, including the United States, reported that scent lineups are still allowed as evidence for courts, one reported scent lineups are only used early in the investigation, and two do not use them at all anymore.[58]

D. Let the Pros Use the Nose

In the United States, expert testimony must pass through Federal Rule of Evidence 702 before being admissible in court through an expert witness.[59] This rule is triggered by all "scientific, technical, or other specialized knowledge" introduced—like dog scent lineups.[60] To satisfy Rule 702, the testimony must: (1) be provided by a witness qualified as an expert; (2) help the trier of fact; (3) be based on sufficient facts or data; (4) be the product of reliable principles and methods; and (5) constitute a reliable application of those principles and methods. The Rule provides in pertinent part:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.[61]

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56. The ages range from two up to eleven years old in the United States, and training is usually about one year, with some countries also requiring a certain number of successful trials and time requirements as well. *Id.* at 9 tbl.8.

57. Ferry et al., *supra* note 40, at 10 tbl.9.

58. Although in the United States many states have not precluded the use of scent lineups, they are seldomly used. *Id.* at 11 tbl.10.

59. FED. R. EVID. 702.

60. FED. R. EVID. 702(a).

61. LARRY E. COBEN, CRASHWORTHINESS LITIGATION § 24:7 (2d ed. 2021).

In the simplest terminology, Rule 702 restricts the admissibility of expert testimony in three ways: qualification, reliability, and fit.[62]

The heart of this Comment boils down to the last two factors—is this testimony reliable based on the principles and methods used? There is no codified approach on examining reliability,[63] but it began with the *Frye* test, requiring a "general acceptance" by the scientific community,[64] and soon thereafter shifted to the well-known principles established by *Daubert v. Merrell Dow Pharmaceuticals, Inc*.[65] Under *Daubert*, the reliability of the method is often examined by a non-exhaustive list: (1) falsifiability; (2) peer-review; (3) known error rates; (4) objective standards; and (5) general acceptance.[66] All *Daubert* factors need not be met for the testimony to be considered reliable expert testimony.[67] With courts functioning as "gatekeeper[s]," there is wide judicial discretion in the admissibility of expert testimony.[68]

Subsequently, *Kumho Tire Co. v. Carmichael* expanded *Daubert*'s gatekeeping function from scientific evidence to also non-scientific evidence—but there is no clear line separating the two.[69] Consequently, some or all of the *Daubert* factors *may* be applied to non-scientific evidence as relevant, or any other set of "reasonable reliability criteria" may be used instead.[70]

E. A Ruff Balancing Approach

Notwithstanding passing the scrutiny of Federal Rule of Evidence 702, there is yet another hurdle: the balancing test of

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62. *Id.*

63. The rules used will depend on which approach the jurisdiction has adopted. *See generally* Anjelica Cappellino, *Federal Rules of Evidence and Experts: The Ultimate Guide*, EXPERT INST., [https://perma.cc/WT35-8YU4] (Aug. 25, 2021).

64. Frye v. United States, 293 F. 1013, 1014 (D.C. Cir. 1923).

65. *See generally* 509 U.S. 579 (1993); *see also* COBEN, *supra* note 61; Cappellino, *supra* note 63.

66. COBEN, *supra* note 61.

67. Cappellino, *supra* note 63.

68. *Id.*; *see also Daubert*, 509 U.S. at 597.

69. 526 U.S. 137, 148 (1999).

70. *Id.* at 158.

Federal Rule of Evidence 403, which controls admissibility of evidence generally.[71] Relevant evidence will be excluded if the probative value—tendency to make a fact more or less likely true—is substantially outweighed by unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence, with the presumption that one of the (many) exceptions does not apply.[72]

Probativeness is at the fate of the gatekeepers' discretion based on a non-exhaustive list: "(1) [t]he importance of the evidence to the resolution of the case; (2) the remoteness of the evidence; (3) the necessity of the evidence; and, (4) how logically related the evidence is to the legal disputes in the case."[73] Further, the gatekeepers must then balance that with the dangers faced by admitting the evidence.[74] Put simply, Federal Rule of Evidence 403 fails if the benefit of the evidence is substantially outweighed by the interference with the jury's ability to reach an impartial verdict.[75]

III. ANALYSIS

When it comes to scent lineups, admissibility will likely turn on the final two elements of Federal Rule of Evidence 702, collectively reliable principles, methods, and application therein, which fall under *Daubert* and form the basis for this Comment.[76]

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71. For further clarity, the witness must (respectively) pass the prongs of Federal Rule of Evidence 702: the topic must be "beyond the ken of jurors," have an adequate factual basis, be the product of reliable principals and methods, as well as survive a balancing test. GEORGE FISHER, EVIDENCE 748 (Robert C. Clark et al. eds., 3d ed. 2013); *see also* FED. R. EVID. 403.

72. FED. R. EVID. 403; *see also When Can You Exclude Relevant Evidence?*, BIXON LAW (July 12, 2019), [https://perma.cc/U3GV-C4BJ].

73. BIXON LAW, *supra* note 72.

74. *See* FED. R. EVID. 403.

75. BIXON LAW, *supra* note 72.

76. It will not be a challenge to show that there is a qualified expert by training and careful selection; it can easily be shown how this will help the trier of fact when the defendant has not been placed at the crime scene, and data from dog tracking in all regards has historically been relied upon. Thus, the main issue turns on the final two elements. *See* State v. Smith, 335 S.W.3d 706, 715-16 (Tex. Ct. App. 2011).

Given the demands for general acceptance under *Frye*, dog scent lineups are likely to fare better under *Daubert*.[77]

Despite the lack of a bright line rule distinguishing evidence based upon training and experience rather than a scientific method,[78] scent lineups likely fall into the training and experience field.[79] However, the distinction is not ultimately crucial as the end goal is the same—reliability.[80] Thus, tests often apply to both forms of evidence, albeit with some fitting better than others, including the *Nenno* test later discussed.[81]

This Comment advocates the stance the Federal Bureau of Investigation ("FBI") holds regarding the partial weight of the admissibility—scent evidence should be used as corroborating evidence only.[82] Scent evidence is not "so foreign" that it precludes jurors from forming independent analyses on how strong the evidence is; it is easily comprehensible that even the most "well-trained dog" can make mistakes, and in return scent evidence is not, and should not, be weighed as a strict science.[83]

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77. To be admissible under *Frye*, the method must be generally accepted in the scientific community. Frye v. United States, 293 F. 1013, 1014 (D.C. Cir. 1923). This "general acceptance" standard is only one of the relevant factors under *Daubert*. *Id.* Frye has been replaced by the federal courts, as well as many state courts, with the *Daubert* standard, as it gives judges greater authority to determine reliability of expert testimony. *Admissibility of Expert Testimony in All 50 States*, MATTHIESEN, WICKERT, & LEHRER, S.C., [https://perma.cc/5TSD-WUT3] (Jan. 13, 2022); *see also* John Ensminger et al., *Scent Identification in Criminal Investigations and Prosecutions*, SSRN ELEC. J., August 2010, at 1, 68, [https://perma.cc/S4HC-S39P] (agreeing that dog scent identifications likely do not pass the *Frye* test alone but noting that states that apply the *Frye* standard often do not even evaluate dog scent identification under it and often only require foundational requirements for tracking).

78. Kumho Tire Co. v. Carmichael, 526 U.S. 137, 138 (1999).

79. Winston v. State, 78 S.W.3d 522, 526 (Tex. Ct. App. 2002).

80. *Kumho Tire*, 526 U.S. at 148.

81. *See generally* Nenno v. State, 970 S.W.2d 549, 561 (Tex. Crim. App. 1998).

82. Rex A. Stockham et al., *Specialized Use of Human Scent in Criminal Investigations*, FORENSIC SCI. COMMC'NS (July 2004), [https://perma.cc/V3AG-UR6R]; *see also* 1 B.E. WITKIN, WITKIN CALIFORNIA EVIDENCE § 78(2) (5th ed. 2021) (discussing the importance of canine evidence being corroborative); Winfrey v. State, 393 S.W.3d 763, 770 (Tex. Crim. App. 2013) (holding that dog scent evidence raises a suspicion of appellant's guilt but is insufficient to convict alone).

83. People v. Jackson, 376 P.3d 528, 566 (Cal. 2016); *see also* United States v. McNiece, 558 F. Supp. 612, 615 (E.D.N.Y. 1983) (holding there is a "lesser potential prejudicial impact" of dog identification evidence than "seemingly flawless" evidence and courts "need not apply as strict a standard" in regard to dog scent identifications); State v. Roscoe, 700 P.2d 1312, 1320 (Ariz. 1984) ("It was not the theories of Newton, Einstein or

A. Whiff of *Daubert*

As a gatekeeper, a trial judge must have significant leeway to determine whether or not evidence is admissible and thus must only consider the appropriate *Daubert* factors.[84] Despite *Kumho Tire* permitting a trial judge to consider the *Daubert* factors, it recognized that the factors were intended to be very flexible and not a "definitive checklist or test."[85] Despite the flexibility, there is value in briefly considering dog scent lineups under a pure *Daubert* standard.

1. Falsifiability

Falsifiability under *Daubert* falls back on whether the methodology used by the expert can be (or has been) tested.[86] This factor can be difficult to assess under non-scientific evidence.[87] Regardless, dog scent lineups are likely "falsifiable." Consider a quick comparison. An effortless example of a non-falsifiable method would be the following: a higher power designed all anatomical structures to be a certain way.[88] As suggested, unless there is a magical test to demonstrate the abilities of this so called higher power, simply evaluating anatomical structures cannot count as evidence against this theory.[89] Comparatively, dog scent lineups and handler methods

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Freud which gave the evidence weight . . . . It was, rather, [the expert's] knowledge, experience and integrity which would give the evidence weight . . . . His credentials, his experience, his motives and his integrity were effectively probed and tested. Determination of these issues does not depend on science; it is the exclusive province of the jury.").

84. *Kumho Tire*, 526 U.S. at 152.

85. *Id.* at 150.

86. Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 593 (1993).

87. *See id.* ("[T]he criterion of the *scientific status* of a theory is its falsifiability, or refutability, or testability") (emphasis added) (quoting KARL R. POPPER, CONJECTURES AND REFUTATIONS: THE GROWTH OF SCIENTIFIC KNOWLEDGE 37 (5th ed. 1989)); *see also* Kristina L. Needham, *Questioning the Admissibility of Nonscientific Testimony After* Daubert*: The Need for Increased Judicial Gatekeeping to Ensure the Reliability of All Expert Testimony*, 25 FORDHAM URB. L.J. 541, 564 (1998) ("The first *Daubert* factor [falsifiability] is perhaps the most inapplicable to nonscientific testimony.").

88. D.H. Kaye, *On "Falsification" and "Falsifiability": The First* Daubert *Factor and the Philosophy of Science*, 45 JURIMETRICS J. 473, 476 (2005).

89. *Id.*

are regularly tested in mock and control trials where accuracy can be tested with control scents and suspects, and false positives can be evaluated.[90]

2. Peer Review

Peer review or publication by other experts in the field of expertise serves as another important consideration.[91] Often, well-grounded but innovative theories will not yet be published; therefore, lack of publication is not dispositive, and the weight tends to fall on being subjected to the community.[92] Although methodologies among scent lineup experts vary, the theories supporting it are consistent with the understanding that, with the right training and procedures, it is reliable.[93] Several publications exist regarding the theory behind dog scent lineups, as well as how to conduct them.[94]

3. Known Error Rates

The potential or known error rates of a technique or methodology are vital.[95] Error rates ensure consistency in the methodology, but "if a consistent methodology is not applied each

90. *See e.g.*, *infra* notes 99-100 and accompanying text.

91. *Daubert*, 509 U.S. at 593.

92. *Id.* ("Some propositions, moreover, are too particular, too new, or of too limited interest to be published.").

93. Scholars and spectators are mostly all in agreement that dog scent lineups are not perfect and in order to be admissible, work needs to be done. One spectator explaining her view on dog scent lineups stated, "I hate to see a potentially valuable tool be dismissed because it wasn't used properly. I think that with the right protocol and standard procedures, scent lineups could find their place in law enforcement." Lou, *supra* note 14; *see also* Marchal et al., *supra* note 4, at 1 ("Human scent identification is based on a matching-to-sample task in which trained dogs are required to compare a scent sample collected from an object found at a crime scene to that of a suspect. Based on dogs' greater olfactory ability to detect and process odours, this method has been used in forensic investigations to identify the odour of a suspect at a crime scene.").

94. *See, e.g.*, *Law Enforcement Canine Use-of-Force Research*, L.A.A.W. INT'L, [https://perma.cc/P9Z5-LCWT] (last visited Feb. 5, 2022) (containing a list of publications for "Dog Scent Lineups" under "Treatises Research"); *Books by William D. Tolhurst*, HOME OF THE BIG T, [https://perma.cc/USN7-SJBM] (last visited Feb. 5, 2022) (demonstrating a list of publications by author William Tolhurst regarding scent identifications). *See generally* Ensminger & Jezierski, *supra* note 11, at 101.

95. *Daubert*, 509 U.S. at 594.

time the theory is proffered, there can be no evaluation of rate of error."[96] Here, it can be difficult to assess the rate of error, as dog scent lineups are not consistently conducted in the same way.[97]

However, if they were,[98] the error rates could easily be identified.[99] With consistent methods and appropriate training, a study showed 100% specificity and 85% sensitivity from the dogs.[100] Sensitivity refers to how often the dog detected the target scent when it was present.[101] If the dog failed to find the scent when one was present, the sensitivity score decreased.[102] Likewise, specificity refers to how often the dog correctly matched the scent to the target.[103] If the dog had any false alerts, the specificity score decreased.[104] Translated to this study, with these conditions, there were zero false matches, and the dogs only failed to detect 15% of the matches when there was a scent present.[105] Therefore, any "error" committed by the canine would be for the defendant, not against.[106] Each dog shall have specific error rates.

4. Objective Standards

Knowledge within Rule 702 indicates more than just a subjective belief or unsupported speculation.[107] However, it would be unreasonable to require the subject of the testimony be

96. Needham, *supra* note 87, at 565-66 (noting that this is one factor even a court that does carefully evaluate under *Daubert* cannot apply to nonscientific expert testimony).

97. *See supra* Section II.C.

98. *See infra* Section III.B.1.

99. The FBI publicly shared its experience regarding a study involving dog scent lineups, finding the results to be convincing: "[F]ive experienced bloodhound/handler teams had a success rate of 96 percent with no false identifications." Stockham et al., *supra* note 82.

100. Danielle Robertson, *How Accurate are Search Dogs? – Part 2: Scent Discrimination Dogs*, LOST PET RSCH. & RECOVERY, [https://perma.cc/S44V-D64T] (last visited Feb. 5, 2022).

101. *Id.*

102. *Id.*

103. *Id.*

104. *Id.*

105. Robertson, *supra* note 100.

106. *Id.*; *see also* FED. R. EVID. 403.

107. Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 589-90 (1993).

"known" to a certainty, as rarely certainties truly exist.[108] Despite skepticism among scholars about a lack of subjectivity in signals,[109] the methods prove certainty when properly conducted. As foreshadowed,[110] the canines should have a trained signal to use, require a degree of blindness, and have a second officer to interpret the results, which mitigates the potential for the *Clever Hans effect*[111] and eliminates subjectivity.

The equation thus is straightforward with minimal subjectivity: relentlessly teach the canine a signal to do upon detection—if the dog does that signal, it is the sign of detection.[112] In particular, with multiple officers and technicians, there is low subjectivity when hearing or seeing a trained signal.[113] Furthermore, requiring a minimum number of trials coupled with a maximum allowance of false alerts and implementation of other safeguards not only strengthens the reliability but also alleviates the potential for subjectivity and claims of "guessing."[114] However, a lack of support thereof by the handler to the courts can prove to be fatal for the admissibility of lineups.[115]

5. General Acceptance

Finally, the generally accepted standard from *Frye* is still relevant in determining reliability under *Daubert* but is not

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108. *Id.* at 590.

109. Andrew E. Taslitz, *Does the Cold Nose Know? The Unscientific Myth of the Dog Scent Lineup*, 42 HASTINGS L.J. 15, 83-84 (1990).

110. *See infra* Sections III.B.1.c, III.B.1.d.

111. Ensminger & Jezierski, *supra* note 11, at 104 (demonstrating that an issue of subjectivity arises when the handler cues the dog either consciously or in the alternative unconsciously, also known as the *Clever Hans effect*).

112. *See supra* Section II.B.

113. *See* Ferry et al., *supra* note 40, at 16 ("Alerts should be visible to more than just the handler, so the handler should be able to describe a unique alert for a dog to an observer.").

114. Experimental studies demonstrate that the identification accuracy rate far "surpasses results produced merely by chance." *Id.* This is further to the point "that scent lineup identification of perpetrators can at least produce corroborative evidence so that neither courts nor police should totally reject use of the procedure." *Id.*

115. State v. Smith, 335 S.W.3d 706, 712 (Tex. Ct. App. 2011) (excluding dog scent evidence because, although the expert claimed his dogs were reliable, he "failed to produce or cite any evidence supporting his claims").

required.[116] This element turns on acceptance by a relevant scientific community.[117] A known technique with only minimal support within the community may be viewed skeptically.[118] Although scent lineups often have low awareness or utilization rates, the use of canines in the legal community is not novel.[119] In regard to admissibility and a canine's abilities and procedures, there is little distinction between a scent lineup and a situation where a dog is required to track an individual's scent over an area traversed by multiple persons.[120] Relevant communities generally accept canines in court settings.[121] Because of this miniscule distinction, it can be argued that dog scent lineups should equally be considered accepted. However, it is not entirely accurate to say the relevant community would completely agree.

As established, dog scent lineups will pass many of the *Daubert* factors—some better than others.[122] *Daubert* is a flexible test, and every factor need not be perfect.[123] However, as a matter of first impression—where courts are not encumbered by precedent—*Daubert* is not the best test.[124]

B. A Pawfect Alternative

Perhaps dog scent lineups do not fit *perfectly* under *Daubert*, but *Kumho Tire* makes clear that some or none of the *Daubert*

116. Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 594 (1993). *See generally* United States v. Gates, 680 F.2d 1117, 1119 (6th Cir. 1982) (admitting dog scent identification evidence without considering the *Frye* rule).

117. *Daubert*, 509 U.S. at 594.

118. *Id.*

119. *See supra* text accompanying notes 31-33.

120. Winston v. State, 78 S.W.3d 522, 527 (Tex. Ct. App. 2002).

121. *Id.* ("Thirty-seven states and the District of Columbia admit scent-tracking evidence to prove the identity of the accused, provided a proper foundation is laid.").

122. *See supra* Section III.A. See also *State v. Smith*, 335 S.W.3d 706, 709-10 (Tex. Ct. App. 2011), for an example of a typically very qualified expert witness whose testimony was excluded in the specific case when it lacked support of complying with the appropriate reliability factors. It should be emphasized that this Comment is based on assumptions of consistency and the utmost effort during dog scent lineups, but individual admissibility will depend on the specific expert, case, facts, and circumstances, just as every other methodology does.

123. *See supra* text accompanying notes 84-85.

124. *See* Ensminger et al., *supra* note 77, at 67 (explaining that many courts carve out an exception to *Daubert* for dog scent lineups specifically).

factors may be used as well as any other reliable test.[125] Many states have opted to use their own standards or a combination standard—there is no clear-cut consensus.[126] But before evaluation under a standard, lineups must be conducted properly.

1. Employ a Good Boy

For scent lineups to satisfy the *Nenno* test, or any other test for that matter, they should be set up as in other countries that have successfully utilized them historically or currently, as assessed above in Part II.[127] "Scent lineups . . . are a common part of police practice in the Netherlands, Poland, Germany, Russia, and other Eastern European countries."[128] A primary reason other countries are reluctant to implement dog scent lineups is "a lack of international standards for the way in which dogs are trained, certified and used."[129]

a. The Collection

First, the United States must adopt a standard material for holding scents as other countries require.[130] "All human scents [should be] collected by a qualified technician, wearing a special sterile paper suit and powder-free nitrile examination gloves."[131] While lacking "norms" at every step is a procedural failure, the United States should at least consider implementing a normative process for preserving the usability of scents from crime scenes and suspects.[132] Lithuania's bright line rules, on the other hand,

125. Kumho Tire Co. v. Carmichael, 526 U.S. 137, 141-42 (1999).

126. Several states have their own completely different standards of admissibility. *See* Anjelica Cappellino, Daubert *vs.* Frye*: Navigating the Standards of Admissibility for Expert Testimony*, EXPERT INST. (Sept. 7, 2021), [https://perma.cc/H74H-6T7M] ("Overall, the evidentiary standard governing the admissibility of expert testimony is, in many respects, a continuum opposed to a bright-line rule.").

127. *See supra* Section II.C.

128. Ensminger & Jezierski, *supra* note 11, at 101.

129. Marchal et al., *supra* note 4, at 2.

130. *See supra* text accompanying note 44.

131. Marchal et al., *supra* note 4, at 3.

132. *See supra* text accompanying note 45.

are admirable.[133] Per Lithuania's procedures in 2019, trace scents from the crime scene could be used no sooner than twenty-four hours after the collection,[134] and body scents from the crime scene could be stored for a maximum of one year.[135] Further, body scents could be used twenty-four hours after the collection, but not before.[136] Trace scents could be kept in the (proper) storage for five years, and body scents could only be stored for one year.[137] As the name implies, body scents ("BS") are taken directly from the body of the suspect whereas trace scents ("TS") are taken from the object or clothes.[138]

Research indicates that trace scents can be kept for ten years with higher success rates for the same type of scent used from the crime scene and individuals; this tracks with research that recommends using TS/TS.[139] A lack of false alerts in studies demonstrates human body odor uniqueness, and sensitivity scores explain canines' abilities to extract individual body information with the best scores deriving from either BS/BS or TS/TS.[140] However, consistency is the key here.

b. The Procedure

Common sense prevails, but international consistencies speak for themselves. The United States should also follow suit with other countries that have implemented rules prescribing a proper cleaning procedure for the lineup stations between trials or dogs.[141] Lithuania, again, has a very cautious approach of cleaning stations between each trial and replacing the jars containing the scents.[142] Considering the United States does not have *any* procedure in place and often skips cleaning between

133. *See* Ferry et al., *supra* note 40, at 3 tbl.1 (comparing the United States' scent collection standards with Lithuania's standards).

134. *Id.*

135. *Id.*

136. *Id.*

137. *Id.*

138. Marchal et al., *supra* note 4, at 3.

139. *Id.*

140. *Id.* at 10.

141. *See supra* text accompanying note 46.

142. *See* Ferry et al., *supra* note 40, at 3 tbl.1.

trials, it should take the most cautious route to ensure the accuracy of the trials.[143] Likewise, the cautiousness of Lithuania's procedures, which also require decoy scents to be "as similar as possible to the target" with a primary focus on the targets' sex and age, is commendable and should be retained by the United States.[144] The United States must follow international trends and require that decoy scents be novel to the canine in judicial trials before they can justifiably be used.[145]

With no requirement for disqualifying searches or negative checks, the United States should adopt stricter, international judicial requirements: (1) prior to each official test, the canine must complete two control trials correctly; and (2) one negative check should be inserted every three trials.[146]

The United States' clearly lackadaisical consideration of the admissibility of dog scent lineups cannot be tolerated. It is unfathomable why every country requires a fixed number of stations within each scent lineup except the United States, where case law demonstrates a variation between two and seven stations.[147] It is a concept we are taught as children: the more stations, the more work the canine must do, thus the more accurate result. The United States must adopt a standard high enough to be more than chance, with seven stations being the sweet spot.[148] Further, dog scent lineup evidence should not even be *considered* in a United States courtroom after only one trial despite the current lack of a minimum judicial control-trial requirement.[149] Plainly, the United States must set a minimum number of trials before admitting the evidence, as well as require confirmation by *multiple* canines. Consistency, accuracy, and precautions must serve as safeguards.

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143. *See id.*

144. *Id.* at 4 tbl.2 (comparing Lithuania with the United States); *see also* Joe Schwarcz, *Do Men's and Women's Armpits Smell Differently?*, MCGILL (Mar. 20, 2017), [https://perma.cc/GLV3-TATT] (demonstrating that scents from males and females differ).

145. *See supra* text accompanying notes 47-50.

146. Ferry et al., *supra* note 40, at 5 tbl.3.

147. *Id.* at 6 tbl.4.

148. *See id.* at 6 tbl.4, 10.

149. *Id.* at 5 tbl.3.

c. The Training

Praise for the canines is a step in the right direction,[150] but the lack of a training requirement for the dogs quickly forces that step back.[151] Studies have shown that extensive training is essential for accurate results.[152] With a lack of consensus among other countries, the United States should imitate other successful experiments and training procedures.[153]

In a famous study, canine training was divided into "initial training" and "continuous training . . . ."[154] The entirety of the program was approximately twenty months long with several steps within each division.[155] The continuous training lasted the entirety of the dog's life,[156] including a daily training routine that involved a series of lineup trials and praise when the dog was correct.[157] Judicial case admissibility was exclusive to the dogs in this study that completed over two hundred trials with no false alarms—a perfect approach for the United States to adopt.[158] To maximize reliability, there should be a minimum standard within United States courts that when dogs fail test lineups or fail to correctly match the suspect's scent in at least two successive lineups, their scent lineup evidence is disqualified.[159]

Even after correctly training the dogs, the accuracy of a single dog alone should not be solely relied on.[160] In order to be admissible in a judicial case, scent matching should be confirmed by several dogs, ranging from a minimum of two dogs to the goal

150. Cesar Millan, *How and When to Give Healthy Dog Treats*, CESAR'S WAY (June 18, 2015), [https://perma.cc/74VY-LJ4M] (a famous dog handler demonstrating that the appropriate usage for treats as praise is "a critical component in dog training and rewarding [proper] behavior.").

151. *See* Ferry et al., *supra* note 40, at 9 tbl.8.

152. *See* Marchal et al., *supra* note 4, at 2; *see also* Robertson, *supra* note 100.

153. *See* Marchal et al., *supra* note 4, at 2.

154. *Id.* at 2-4.

155. *Id.* at 4.

156. *Id.* at 3-4

157. *Id.* at 4.

158. Marchal et al., *supra* note 4, at 6.

159. *See* Robertson, *supra* note 100.

160. *See id.*

of seven dogs.[161] Each dog should do several lineups providing evidence from at least fourteen lineups for a single case.[162]

The handlers themselves must also have extensive training requirements such as certifications, specific training, and discouragement of self-training; however, this is likely not the component that will be turned on for scent lineups.[163] Similarly, the dog must be of a breed capable of correctly performing a scent lineup, such as a German Shepard or bloodhound.[164] However, it is more important to look to the specific dog rather than just the breed.[165] Favorable characteristics include "a predisposition to working with a handler, be[ing] eager to please, and hav[ing] a strong play drive."[166]

d. The Alerting

To ensure a lack of bias in the experiment, the United States must adopt a similar approach to Poland, which requires alerts "to be clear to anyone[.]"[167] A video-recording should be required, as there is not currently any such requirement.[168] And of course, the handler, or whomever is conducting the experiment, should be blind, meaning the conductor of the experiment should be unaware of the suspect's scent placement.[169] Further, the extra step of "double blindness," requiring the individual who does know the placement of the scents to be secluded from both the handler and the canine or anyone else in the room where the

161. *See id.*

162. *Id.*

163. *See supra* notes 76, 161-62 and accompanying text; *see also infra* note 164.

164. *See supra* text accompanying note 27. Although a great house pet, retrievers have not lived up to the same standard of acute smelling abilities that bloodhounds and German Shepherds have. *See* People v. Mitchell, 2 Cal. Rptr. 3d 49, 63-64 (Cal. Ct. App. 2003).

165. John J. Ensminger, *History and Judicial Acceptance of Tracking and Trailing Evidence*, *in* POLICE AND MILITARY DOGS: CRIMINAL DETECTION, FORENSIC EVIDENCE, AND JUDICIAL ADMISSIBILITY, *supra* note 11, at 32 [hereinafter Ensminger, *History and Judicial Acceptance of Tracking and Trailing Evidence*].

166. *See* PBS, *supra* note 28.

167. Ferry et al., *supra* note 40, at 7 tbl.5.

168. *Id.*

169. *Id.* at 8 tbl.6.

experiment is being conducted, is just another necessary precaution to increase the reliability and accuracy of the trials.[170]

2. Time Fur the Nenno *Test*

Based off those standards that should be set, dog scent evidence should be admissible, as the *Nenno* test sets out that "the appropriate questions for assessing reliability are (1) whether the field of expertise is a legitimate one; (2) whether the subject matter of the expert's testimony is within the scope of the field; and (3) whether the expert's testimony properly relies upon or utilizes the principles involved in the field."[171] The *Nenno* test was established by the Texas Court of Criminal Appeals, a state leader for scent lineups,[172] for "soft sciences[,]" but it is evaluated here as it implements *Daubert* principles brilliantly, tailored for scent lineups.[173]

a. Whether the Field of Expertise is Legitimate

The FBI does not undercut the value of dog scent lineups as demonstrated by advising the use of "scent-discriminating dogs in criminal investigations . . . to establish[] a scent relationship between people and crime scene evidence."[174] Not only does the FBI advise the use of scent lineups, but it also follows that advice with its own use of scent lineups.[175] Evidently, a "dog['s] ability to distinguish scents is valued and respected" in the real world.[176]

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170. *Id.* at 8 tbl.6, 12 (Hungary and Poland conduct the double blindness by having the expert observe through the use of a one-way mirror compared to how Russia allows them to view through a video monitor).

171. Winston v. State, 78 S.W.3d 522, 526 (Tex. Ct. App. 2002) (citing Nenno v. State, 970 S.W.2d 549, 561 (Tex. Crim. App. 1998)).

172. *Id.* at 525-26; *see also supra* text accompanying note 14.

173. José A. Berlanga, *Harmonizing Civil and Criminal Rule 702 Analysis: Do Criminal Litigants Utilize a Less Rigorous Standard?*, 37 T. MARSHALL L. REV. 55, 55-56, 56 n.6, 80 (2011).

174. Stockham et al., *supra* note 82.

175. *See, e.g.*, *Winston*, 78 S.W.3d at 526-27 ("In one notable case involving a serial killer, the FBI noted in a letter to Deputy Pikett's department that his work with the bloodhounds and scent lineups 'saved many investigation man hours that would have been spent searching for the wrong person.'").

176. *Id.* at 527.

"[D]ogs' superior senses have long been used to aid mankind in a variety of contexts outside the courtroom, including 'to track by scent escaped criminals or lost persons and articles.'"[177] States across the country continuously use scent-tracking evidence for identification purposes.[178] With the lack of value in differentiating reliability between scent lineups and other scent tracking techniques, scent lineups should be considered a legitimate field of expertise as well.[179]

b. Subject Matter Within Scope of the Field

Seldom will the scope be at issue—it will be dependent on the specific expert testifying as well as the scope of expertise, which appears to be a low bar.[180] Comparable to the well-known nexus requirement in Federal Rule of Evidence 702 generally, this is a non-strict standard that simply requires a logical relationship between the testimony and the expert's field; it need not be a perfect connection.[181] Consider a traditional law school example: an expert in corrupt business practices was not qualified to testify specifically on Korean business practices due to a lack of a nexus with the broader subject of Korean-specific business.[182] Dog scent experts do not follow this same ill-fated path. With experience in scent lineups and testimony regarding scent lineups, this prong will be easily surpassed. It can further be appropriate for an expert to testify as to scent-matching techniques generally, without experience in scent lineups specifically, as long as the testimony is narrowed to such.

177. *Id.* at 526 (quoting People v. Price, 431 N.E.2d 267, 269 (N.Y. 1981)).

178. *Id.* at 527.

179. *Id.*

180. *See*, *e.g.*, Coastal Tankships, U.S.A., Inc. v. Anderson, 87 S.W.3d 591, 604 (Tex. Ct. App. 2002) (demonstrating how easily the court could "impliedly" find the expert's testimony was within the scope when he was a doctor specializing in diagnosing and treating acute lung injuries and his testimony concerned the victim's lung disease and was thus within the scope of his field of expertise).

181. Jinro Am. Inc. v. Secure Invs., Inc., 266 F.3d 993, 1009 (9th Cir. 2001).

182. *See id.*

c. Properly Relies Upon or Utilizes the Principles Involved in the Field

The outcome of the *Nenno* test is most dependent on the final prong—requiring a determination by the court that "the proffered expert testimony properly relies upon or utilizes the principles involved in the field of expertise."[183] Three factors are evaluated to determine this reliability: "(1) the qualifications of the particular trainer; (2) the qualifications of the particular dog; and (3) the objectivity of the particular lineup."[184]

i. Qualifications of the Trainer

The qualifications of the trainer are not the main concern at issue and will not be discussed in depth as they are expert dependent, but the trainer should be qualified specifically in scent lineup procedures. Ideally, the trainer should have testified previously, but this is not dispositive.[185] Assuming that the particular expert has performed scent lineups in the past, the qualifications should likely be met. The trainer's expertise and experience must match up to the step in the lineup that is being discussed in trial. For example, an expert who has properly performed several lineups in the past may not be qualified to testify about the genetic makeup of a canine's scent membranes but could testify about how the scent lineup was conducted.[186] Experts' qualifications merely have to surpass a low bar, as demonstrated by the first prong of Federal Rule of Evidence 702, requiring no actual degree.[187] The same logic applies to scent

183. *Winston*, 78 S.W.3d at 527.

184. *Id.*

185. *See generally* FED. R. EVID. 702 (no former testimony as an expert is required—rather some combination of "knowledge, skill, experience, training, [and] education" collectively is what matters).

186. For example, if an expert is used to testify regarding the unique odor of every human, then that expert should have some type of scientific background or evidence to back that up, versus an expert testifying about the procedure that took place, then that expert should have experience with the actual performance of the lineups. *See* Ensminger et al., *supra* note 77, at 67.

187. *See generally* FED. R. EVID. 702 (which has no degree requirement and provides that expertise can be shown in other ways such as experience). The term "expert" does not

lineups, but despite the leniency, it is recommended here that a certification accompany the expert.[188]

ii. Qualifications of the Dog

The qualifications of a dog include factors such as whether:

> (1) the dog is of a breed characterized by acuteness of scent and power of discrimination; (2) the dog has been trained to discriminate between human beings by their scent; (3) by experience the [dog] has been found to be reliable; (4) the dog was given a scent known to be that of the alleged participant in the crime; and (5) the dog was given the scent within the period of its efficiency.[189]

By utilizing the preconditions established above, all factors of qualification are exceeded.[190] Bloodhounds and German Shepherds are undoubtedly qualified breeds, and canine training will be extensive. By focusing specifically on scent lineups and discrimination, no canine will be considered for judicial cases without the required experience, thresholds, and rates of performance as a prerequisite; when professionals gather and place the scent, the efficiency period will be followed.[191]

There is no dispute that the current chaos revolving around inconsistent standards of scent lineups is justified—but this is the heart of this Comment. Once a clear, consistent, and reliable method is utilized, scent lineups will pass standards they would

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have the plain meaning that many people think of, but a good example to demonstrate the lack of requirement for formal education is Marisa Tomei in the movie *My Cousin Vinny*. Arthur McGibbons, *Marisa Tomei From My Cousin Vinny Great Example of How an Expert Witness Works*, ILL. CASE L. (Feb. 1, 2014), [https://perma.cc/DB68-86FF].

188. *See* NAT'L POLICE CANINE ASS'N, STANDARDS FOR TRAINING & CERTIFICATIONS MANUAL 3, 21 (2014), [https://perma.cc/Y4UK-6LEJ] (example of a certification); *see also* Ensminger, *History and Judicial Acceptance of Tracking and Trailing Evidence*, *supra* note 165, at 29 (commenting on proposals by the Scientific Working Group on Dog and Orthogonal Detector Guidelines ("SWGDOG"), which recommend that handler training is to involve human scent theory, relevant canine case law, and legal preparation, including court testimony). *See generally* KENNETH FURTON ET AL., THE SCIENTIFIC WORKING GROUP ON DOG AND ORTHOGONAL DETECTOR GUIDELINES 1, 87-89 (2010), [https://perma.cc/3SK9-EB22] (SWGDOG guidelines including handler specifications).

189. Winston v. State, 78 S.W.3d 522, 527-28 (Tex. Ct. App. 2002).

190. *See supra* Section III.B.1.

191. *See supra* Section III.B.1.c.

not have before, as demonstrated. Transparency must be established; the expert must provide support for any claimed qualifications, including certification of the dog as well as (well-tracked and mandatory) error rates for each specific dog.[192]

It should be noted that skepticism of dog scent evidence often arises from a lack of full disclosure from handlers, as well as from prosecutors, despite disclosure being required.[193] Without consistent track records and full disclosure of error and accuracy rates, this Comment too would not support dog scent lineups—these safeguards are necessary and must be mandatory in order to accurately portray the reliability of dog scent lineups.[194]

iii. Objectivity of the Lineup

Support is key.[195] The plain meaning of objectivity is "[d]oing one's best to get rid of biases, and other subjective evaluations, by solely depending on objectifiable data."[196] Therefore, claims of perfection and trustworthiness will fail largely when deprived of support. Reliance on manuals often proves to be sufficient—yet there is still an overarching lack of international standards and timely updates.[197] The use of manuals

192. *Winston*, 78 S.W.3d at 527-28.

193. *See e.g.*, Loaiza v. Pollard, No. LACV 16-5703-JWH (LAL), 2021 U.S. Dist. LEXIS 159510, at *30-31, *40 (C.D. Cal. May 13, 2021) (unpublished opinion demonstrating the potential harm to the defendant was the fact that the dog made many past false identifications which were not disclosed, and the court likely would have excluded the scent evidence due to lack of reliability as well as the potential to impeach the government's witness); *see also* Brady v. Maryland, 373 U.S. 83, 87 (1963) (requiring disclosure by the prosecution of all evidence that might exonerate the defendant). *See generally* Bryan Altman, *Can't We Just Talk About This First?: Making the Case for the Use of Discovery Depositions in Arkansas Criminal Cases*, 75 ARK. L. REV. 7, 8 (2022) (discussing the consistent theme for the defense to be left "in the dark" by prosecution on a local level).

194. *See Loazia*, 2021 U.S. Dist. LEXIS 159510, at *30.

195. *See supra* note 115 and accompanying text.

196. *What is Objectivity*, L. DICTIONARY, [https://perma.cc/HD72-VE86] (last visited Apr. 10, 2022).

197. *See Winston*, 78 S.W.3d at 528-29 (holding that testimony by Deputy Pickett stating his procedure was "consistent with the National Police Bloodhound Association's manual on how to conduct a scent lineup" was sufficient to satisfy the objective standards); *see also* Berlanga, *supra* note 173, at 69 (demonstrating that the main requirement to satisfy the objective standard was being consistent with the manual).

must be coupled with the standard protocols recommended above: double blindness, trained signals, multiple confirmations, and additional safeguards, namely videos and witnesses of the lineup.[198] These safeguards will help negate any indication of scent contamination or biases by proactively eliminating subjectivity.[199] The typical misconception that trained canines merely guess, and their handlers subjectively interpret those guesses to be signals when they are not, is discredited when these safeguards are in place.[200] Moreover, the *Nenno* test will be passed with the established protocol.

C. Compliance is Not Junk Science

Several passed prongs later, admissibility is finally established, but Federal Rule of Evidence 403 still lurks in the shadows. It must be shown that the danger of unfair prejudice does not substantially outweigh the probative value to fully be admissible.[201]

After surviving the scrutiny of the expert testimony analysis itself, scent lineups plainly outstrip any risk of unfair prejudice. A jury will not be partial due to scent lineups. It does not take specialized skills or knowledge to comprehend that dogs are not perfect—juries understand this—and they are capable of giving proper weight to such evidence.[202] Further, dog scent

198. *See* discussion *supra* Section III.B.1.

199. *See Winston*, 78 S.W.3d at 528-29 (illustrating a lineup with proper safeguards); *see also supra* Section III.A.4. For an example of what not to do, consider when a dog scent handler's testimony was not allowed in court although he testified many times before; when, in his current testimony, he "testified that there was a possible cross-contamination of the scents in the lineup in question;" he "did not run a 'blind' scent lineup"; he did "not keep complete records on the scent lineups that his dogs have participated in;" his training records regarding the dog's training were incomplete and the failure to maintain complete records made it hard to determine accuracy; there was no peer-review of any records; he "failed to follow up on the dispositions of" other cases his dogs participated in; he "failed to perform validation testing on his dogs during scent lineups;" he testified no one reviews his work; his dogs were not certified; no literature was offered in support of the procedure used; no other evidence was put on regarding any error rates; and there was no evidence that the scent lineup could have been "duplicated by others following the same methods." *See* State v. Smith, 335 S.W.3d 706, 708-10 (Tex. Ct. App. 2011).

200. *See supra* text accompanying note 113.

201. *See supra* Section II.E.

202. United States v. McNiece, 558 F. Supp. 612, 615 (E.D.N.Y. 1983).

identifications do not plainly decide guilt or innocence; they simply show that a suspect's scent was at a particular place.[203] Statistically, potential "errors" by the canine are more likely to harm the government's case rather than the defendant's because they are more likely to involve missing a scent than wrongfully accusing the defendant.[204] Lastly, despite the advancements scent lineups will prove to show, they are still limited to serve as corroborating evidence.[205]

Also, jury instructions, such as the following, play an important role in mitigating any risk of unfair prejudice when they limit the lineup's permissible purposes:

> Evidence of dog tracking has been received for the purpose of showing, if it does, that the defendant is [the] perpetrator of the crime of _____. This evidence *is not by itself sufficient* to permit an inference that the defendant is guilty of the crime of _____. Before guilt may be inferred, *there must be other evidence* that supports the accuracy of the identification of the defendant as the perpetrator of the crime of _____. The corroborating evidence need not be evidence which independently links the defendant to the crime. It is sufficient if it supports the accuracy of the dog tracking. In determining the weight to give to dog-tracking evidence, *you should consider* the training, proficiency, experience, and proven ability, if any, of the dog, its trainer, and its handler, together with all the circumstances surrounding the tracking in question.[206]

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203. *See* G. A. A. Schoon, *Scent Identification Line-ups Using Trained Dogs in the Netherlands*, 47 PROBS. FORENSIC SCI. 175, 175 (2001), [https://perma.cc/UJX5-K4AH].

204. *See supra* text accompanying notes 105-06.

205. *See supra* note 82 and accompanying text.

206. People v. Jackson, 376 P.3d 528, 578 (Cal. 2016) (emphasis added). The defendant in Jackson appealed the jury instructions and suggested the following from the *Craig* court:

> [D]og-trailing [sic] evidence must be viewed with the utmost of caution and is of slight probative value. Such evidence must be considered, if found reliable, not separately, but in conjunction with all other testimony in this [sic] case, and in the absence of some other direct evidence of guilt, dog trailing evidence would not warrant conviction.

Id. (quoting People v. Craig, 150 Cal. Rptr. 676, 683 (Cal. Ct. App. 1978)). The court did not entertain this instruction, but for the purposes of this Comment it would be sufficient as well. *Id.*

The entirety of this Comment demonstrates the exceedingly high probative value of scent evidence—establishing a suspect's presence at the crime scene.[207] In this way, scent identifications directly tend to prove, or disprove, whether a crime was committed by a particular person.[208] In summation: dog-scent identifications contribute directly to the resolution of the case by helping to establish identity;[209] they serve a unique purpose when the suspect cannot already be easily or confidently placed at the crime scene. While a fairly short analysis, Federal Rule of Evidence 403 is important, and is passed.[210]

IV. CONCLUSION

Once a sour lemon for courts to avoid, dog scent lineups prove to be capable of transforming into a superb resource. When followed, a precise recipe, representative of international tastes,

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207. *See supra* note 4 and accompanying text.

208. It is vital that the expert be able to put on information regarding the uniqueness of each person's body odor beyond experience from just one trainer and one dog. *See* People v. Mitchell, 2 Cal. Rptr. 3d. 49, 64, 66 (Cal. Ct. App. 2003). This goes towards the relevancy of the scent lineups: if it cannot be shown the scents are unique and the canine is able to recognize differences between the scents, then scent lineups would just be a guessing game. *See id.* The court in *Mitchell* found the dog scent evidence to be inadmissible because relevancy could not be established when it was concerned with the absence of evidence showing that every person's scent is unique. *Id.* at 794-95. This type of evidence does exist. *See* Marchal et al., *supra* note 4, at 1-2 ("Gas chromatography-mass spectrometry studies showed that each human scent consists of a combination of volatile components produced from the skin and differing in ratio from person to person, along with some compounds that are unique to certain individuals. This combination, which has been shown to be constant and reproducible over time, contributes to the individuality and uniqueness of human scent. This finding likewise includes identical twins' individual scents.").

209. If it is not a question whether the suspect's scent was at the crime scene, then dog scent lineups will not do much good. *See* 1 DAVID B. SMITH, PROSECUTION AND DEFENSE OF FORFEITURE CASES ¶ 4.03 (2022) (discussing how the drug sniffing dog at best showed the money had been exposed to narcotics and that this information was not very probative because up to 80% of the money in circulation may carry narcotics residue). To further illustrate, in a situation where the suspect is a family member and living in the crime scene home, dog scent lineups would not have much probative value, as it is already known and understood that the suspect's scent would likely already be at the crime scene.

210. *See generally* FED. R. EVID. 403 (allowing the judge to exclude relevant evidence if its probative value is substantially outweighed by a danger of unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence).

can advance the legal field—whether change was asked for or not.[211]

In an already flawed justice system, no harm commences by dog scent lineups unpretentiously placing a scent at a crime scene and allowing the lawyers, judges, and factfinders to determine the rest.[212] This Comment serves both to encourage the transformation of dog scent lineups by demanding standards and safeguards and to appreciate their value. Of course, there are challenges with such a notable transformation. Namely, resources.[213] But once transformed, something shocking will transpire—a seemingly unreliable method of identification will become something more. It becomes something great.

211. *See, e.g.*, PBS, *supra* note 28 ("One of the greatest sleuths in canine history was a Kentucky bloodhound called Nick Carter. His dogged persistence led to the capture and conviction of more than 600 criminals throughout his illustrious career.").

212. *See* State v. Frederiksen, No. 15-0844, 2016 WL 4051655, at *6 (Iowa Ct. App. July 27, 2016) (acknowledging that the defense pointed out weaknesses of the identification and that the jury was free to assign appropriate weight however they saw fit).

213. It is recognized that the FBI and other large agencies may be one of the few agencies with the resources available to currently conduct dog scent lineups properly, as many local agencies lack funding, canines, handlers, and are already overworked. *See* Ensminger & Jezierski, *supra* note 11, at 101.

RECENT DEVELOPMENTS

ARKANSAS INSURANCE DEP'T. FINAL RULE 126: "INSURANCE BUSINESS TRANSFERS" [1]

Pursuant to Act 1018 of 2021, "An Act to Establish the Arkansas Business Transfer Act," the Arkansas Insurance Department has promulgated Final Rule 126 "to provide standards and procedures for the transfer and novation of insurance policies from a transferring insurer to an assuming insurer through a transaction known as an 'insurance business transfer.'" The Rule requires that the applicant submit an Insurance Business Transfer Plan—along with a nonrefundable $10,000 fee—to the Department detailing the transaction. One critical element of this Plan is the Independent Expert Opinion Report. An independent expert will produce a written report to be included in the Plan and will assist the court and the Commissioner of the Insurance Department in their review of the transaction. Under Final Rule 126, "The Commissioner shall authorize the submission of the Plan to the court unless he or she finds that the insurance business transfer would have an adverse material impact on the interests of policyholders or claimants that are part of the subject business." Within thirty days of the Commissioner's approval of the Plan, the Rule requires the applicant to petition the court for approval. Final Rule 126 became effective on January 1, 2022.

BENTONVILLE SCHOOL DISTRICT V. SITTON [2]

The parents of several Bentonville School District students challenged the constitutionality of a mask mandate policy

1. 12 Ark. Reg. 8 (Dec. 2021).
2. Bentonville Sch. Dist. v. Sitton, 2022 Ark. 80, ___ S.W.3d ___.

imposed by the District in August 2021 for the 2021-2022 academic year. The Benton County Circuit Court entered a temporary restraining order ("TRO") on October 12, 2021, enjoining the District's enforcement of its policy, ruling that the mandate violated the Plaintiffs' constitutional rights and was enacted without proper authority. Later the same month, declining COVID-19 infection rates led the District to allow the mask mandate to lapse.

The Arkansas Supreme Court held that the grounds on which the circuit court had granted the TRO had been rendered moot, but that the case fell under the substantial-public-interest mootness exception. Because a substantial public interest existed in the issues being considered, and because the Court would likely prevent future litigation by considering those issues, the Court proceeded to the merits of the case. The Court held that the mask mandate policy was a proper exercise of the District's authority, one which did not violate the Plaintiffs' constitutional rights; therefore, the Plaintiffs had failed to show that irreparable harm would result in the absence of a TRO.

Justice Womack concurred in the judgment but authored a separate opinion, arguing that the District's appeal was moot. Special Justice Brill penned a concurrence, as well, contending that the United States and Arkansas constitutions do not protect a parent's right to micromanage an elected school board; rather, disgruntled parents may voice their grievances at the ballot box. In her dissent, Justice Webb argued that the majority's consideration of the merits in this case overstepped the abuse-of-discretion standard of review that accompanies TRO appeals. Even if consideration of the merits were proper, Justice Webb continued, the majority wrongly held that the mask mandate was within the District's authority and did not violate the plaintiffs' parental rights.

PENNINGTON V. BHP BILLITON PETROLEUM (FAYETTEVILLE), LLC [3]

Oil-and-gas royalty holders sued their lessees for breach of contract related to the lessees' improper deduction of certain costs from the monthly payments made to the royalty holders. Some of these underpayments had occurred within the statutory five-year period and some had occurred outside the period. The United States District Court for the Eastern District of Arkansas certified the following question to the Arkansas Supreme Court:

> In the oil and gas leases at issues in this case, does the five-year statute of limitations set forth in Arkansas Code section 16-56-111(a) bar Plaintiffs from bringing a breach of contract lawsuit for alleged underpayments of monthly royalties that occurred within the statute of limitations period because similar underpayments of monthly royalties took place outside of the limitations period?

The Court held that the damage element of breach of contract would have been established each month that lessees underpaid the royalty holders, and that the existence of some underpayments outside of the limitations period did not bar recovery for underpayments within the limitations period.

SILAS HEFFLEY

3. Pennington v. BHP Billiton Petroleum (Fayetteville), LLC, 2021 Ark. 179, 631 S.W.3d 555.