ESSAY

THE PARADOXICAL EVOLUTION OF LAW

by
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This Essay presents law's evolution as a paradoxical union of the finite and the infinite. At any given point in time, law is a finite body of norms, which can be identified. At the same time, law's evolution is infinite because rule-mutations that alter those norms are indeterminable. In modern legal systems, law's evolution occurs under the constraining influence of master texts, which provide normative durability by enshrining the fundamental norms of a legal system and fortifying them against change. Despite this stabilizing role, however, master texts are themselves open to mutations. Therefore, law's evolution under the constraints of a master text mediates the paradoxical union of law's finite and infinite nature.

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I. INTRODUCTION

This Essay presents law's evolution as a paradoxical union of the finite and the infinite. As a functional social system, law is a systemic series[1] of definitive norms that guide specific social, political, economic, and religious behaviors. Law, rooted in the nation's history and past traditions, continuously renews itself. In its mutational dynamism, preserving durability and change, law's evolution is both accretive and subtractive. It is accretive as it adds new norms to its corpus; it is subtractive because existing norms may be modified or repealed. At a given point in time, law is a finite body of norms and its constitutive norms can be identified. Law's finitism is critical for the performance of a legal system, which must provide methodologies to ascertain whether a particular norm (statute or case holding) belongs to the system. Litigants, lawyers, judges, and lawmakers would be unable to function in their respective roles if they had no way to tell which norms do or do not belong to the system. Despite its finitism at a given point in time, however, law's evolution is infinite because rule-mutations are indeterminable. How law's evolution would mutate legal norms in the future is unpredictable, perhaps unknowable. What makes law's evolution infinite is its potentially interminable capacity to acquire, adapt, and discard legal norms. In Hegel's illuminating words the infinite is always in the "process of becoming."[2]

In modern legal systems, law's evolution occurs under the constraining influence of master texts placed at top of the normative hierarchy. Master texts are finite texts that embody the highest norms of a legal system.[3] Master texts may or may not be secular texts. Divine texts, such as the Torah and the Qur'an, guide the legal system in fusion states that decline to separate human law from God's law.[4] Some divine texts cannot be amended or repealed. Secular master texts, such as the U.S. Constitution, also furnish a quasi-permanent normative framework that cannot be easily amended or repealed. Unlike customary law, which

[1] A systemic series is a distinct legal system or a subsystem. For example, the U.S. federal law constitutes a systemic series, whereas the Kansas legal system is a sub-systemic series within the systemic series. Here, law series, systemic series, and legal system are used interchangeably.

[2] G.W.F. HEGEL, HEGEL'S SCIENCE OF LOGIC 148 (A.V. Miller trans., George Allen & Unwin, Ltd. 1969) (Humanities Press 1976) (1832). The true infinite is not a static unity of the finite and the infinite because the infinite is in a constant process of becoming. This Essay embraces the Hegelian concept of the true infinite that expresses itself through the finite, but the finite cannot exhaust the possibility of the infinite.

[3] Some states, for example, accept regional human rights treaties as the supreme law of the land and bring their constitutions into conformity with the regional and global human rights treaties. *International Norms and Standards Relating to Disability*, UNITED NATIONS, http://www.un.org/esa/socdev/enable/comp101.htm.

[4] *See* L. ALI KHAN, A THEORY OF UNIVERSAL DEMOCRACY: BEYOND THE END OF HISTORY 43–45 (2003).

develops slowly but freely, law subordinated to master texts pursues a more structured evolution. Master texts provide normative durability so that change does not invalidate fundamental norms. Despite their stabilizing role, however, master texts are open to mutations. Skillful exegetes (judges and jurists) may in good faith interpret master texts to construct new rules. An interpretative series, such as constitutional law, derived from a master text, may mutate from time to time, and generation to generation.

In order to explain law's evolution, this Essay provides a brief overview of absolute infinitism, demonstrating that absolute infinitism has multiple meanings, including originlessness, unboundedness, incomprehension, and interminability. Recognizing these meanings, the concept of absolute infinitism is applied to law's evolution to explain the progressive and regressive mutations of legal norms under the constraints of master texts. Furthermore, this Essay explains the concept of law's finitism that shapes almost every aspect of practical law. This discussion demonstrates the limits of the finite and introduces the concepts of manufactured and normal finitism. Finally, this Essay examines the role of master texts in the paradoxical evolution of law. Although master texts furnish systemic stability, they may themselves undergo amendatory and interpretive mutations. Therefore, law's evolution under the constraints of a master text mediates the paradoxical union of stability and mobility, retention and transformation of legal norms. A master text that can no longer evolve faces extinction.[5] A live master text, though itself finite, evolves in an infinite manner to respond to shifting social conditions. In sum, law's evolution is a dialectical interaction between the finite and the infinite.

II. ABSOLUTE INFINITISM

This Part presents the various facets of absolute infinitism and concomitant understandings of the unknown and the unknowable, emphasizing that absolute infinitism is a mysterious belief that carries diverse attributes. The discussion of absolute infinitism lays the foundation for understanding law's paradoxical evolution.[6] For centuries, the mystery of absolute infinitism has been studied in epistemic disciplines devoted to time, space, and mathematics. Conceptually, no one definition can explain all that belongs to absolute infinitism.

[5] Some legal scholars, for example Justice Antonin Scalia, disagree. *See* ANTONIN SCALIA, A MATTER OF INTERPRETATION: FEDERAL COURTS AND THE LAW 41–47 (1997) (discussing the problems with a "living" constitution); Stephen Durden, *Partial Textualism* 41 U. MEM. L. REV. 1, 21 (2010) ("Justice Scalia, among others, wants his Constitution good and dead.").

[6] *See* Laurence H. Tribe, *The Curvature of Constitutional Space: What Lawyers Can Learn from Modern Physics*, 103 HARV. L. REV. 1, 2 (1989) (stating that even though law is not epistemologically inferior to other disciplines, scientific metaphors and intuitions can guide our comprehension of legal issues).

Different meanings of absolute infinitism illuminate different phenomena of the world we know and the world we do not know.[7] An epistemic discipline may construct its own meaning of the infinite. Each meaning of absolute infinitism carries awe and wonder. The metaphor of *pantheon* might be apposite to capture the various meanings of absolute infinitism, as the *pantheon* accommodates a variety of mythological beings, side by side, each infused with a discrete spirit.[8]

Consider the mystery of time and space. Absolute infinitism reveals that time is eternal, that time flows endlessly, and that time has no beginning and no end. Time is often related to motion and is indivisible. For human utility, however, the infinite time has been divided into macro (centuries) and micro units (milliseconds). The infinite space is immovable and indivisible.[9] With respect to space, absolute infinitism offers a conception of unboundedness, presenting space as vastness with no edges or boundaries, holding uncountable stars and planets in perpetual motion. Because absolute infinitism permeates the spatio-temporal universe, a singular definition of absolute infinitism, even if constructible, is more likely to obscure rather than illuminate the complexity of time and space.

Mathematics has its own understanding of absolute infinitism. A simple numbers series furnishes insights into the endless process of counting, a process that cannot be completed with any certainty. An unlimited data of natural, rational, and irrational numbers can be placed in limitless ways to construct series. Consider the following mathematical series: ($-\infty$ . . . -3, -2, -1, 0, 1, 2, 3, . . . ∞). This Janus-faced series, expanding in opposite directions, may never be concluded and the final number on either side may never be determined. Even though the mind cannot complete the series, it develops an intuitive awareness of absolute infinitism as an unceasing progression and regression of numbers. Most important, mathematics discloses the manifoldness of absolute infinitism, mystery within the mystery, since subsets of an infinite mathematical set are themselves infinite.[10]

Divine law adulates the mystery of God that no human system can conclusively comprehend. Omnipresence of God has been confused with the unboundedness of space and eternality of time.[11] In the words of a

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[7] PAUL W. FRANKS, ALL OR NOTHING: SYSTEMATICITY, TRANSCENDENTAL ARGUMENTS, AND SKEPTICISM IN GERMAN IDEALISM 130–31 (2005) (explaining that infinity of space is not the same as infinity of God).

[8] For the diversity of the Greek Pantheon, see JOHN ALEXANDER FRERE, ON THE INCARNATION 46 (London, F. & J. Rivington 1853). For the concept of Hindu Pantheon, see LUCIUS BORAKS, RELIGIONS OF THE EAST 14 (1988).

[9] 2 ANTONIO ROSMINI SERBATI, PSYCHOLOGY 219 (London, Kegan Paul, Trench, & Co. 1886).

[10] *See generally* Luis E. Moreno A. & Guillermina Waldegg, *The Conceptual Evolution of Actual Mathematical Infinity*, 22 EDUC. STUD. MATHEMATICS 211 (1991) (tracing the introduction of infinity into the realm of mathematics).

[11] *See* A COMPENDIUM OF THE THEOLOGICAL WRITINGS OF EMANUEL SWEDENBORG 10–11 (Samuel M. Warren ed. & trans., 1875).

divine text, "there is none comparable unto Him."[12] Reaching the same conclusion, scientists and scholars have also disentangled God from the infinite space and the infinite time, clarifying that "God is *causally prior* to space and time, and is . . . *unconditioned* by them."[13] The infinite God is nothing like any other manifestation of absolute infinitism. The human mind is not equipped to fully understand the variety of the infinite that animates the universe. Certain understandings of the universe, we come to realize, are meta-rational and unknowable.[14]

Nature, a mystifying repository of durability and progression, comes close to capturing the meaning of law's paradoxical evolution. Consider the life forms of animals, birds, plants, and other organisms. Each life form shows durability and progression as it replicates itself for an unlimited period of time. Potentially, every life form is infinite with no sunset provision on its life span. Yet nature discontinues life forms.[15] The extinction of dinosaurs, an animal series that evolved for millions of years, testifies to the discontinuation of an otherwise infinite series.[16] Likewise, human beings constitute an infinite but evolutionary series.[17] However, there is no assurance that human beings will continue to reproduce as they have for millions of years.[18] Even within the human series, families and tribes face and meet extinction. A family series terminates when the family is destroyed or when it is unable to reproduce. While nature is primarily responsible for the evolution and extinction of life series, human beings may also, either unintentionally, unknowingly, or deliberately, destroy specific life series of animals, birds, and plants.[19] Law's evolution mimics nature's evolution as legal norms strive for durability but face evolution and extinction.

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[12] QUR'AN, sura al-Ikhlas 112:4. All Qur'an citations are to MARMADUKE PICKTHALL, THE MEANING OF THE GLORIOUS KORAN: AN EXPLANATORY TRANSLATION (1930). His translation is also available at http://www.islamicity.com/QuranSearch/.

[13] FRANKS, *supra* note 7, at 130.

[14] *See* QUR'AN, sura al-Imran 3:6 ("He it is who fashioneth you in the wombs as pleaseth Him. There is no God save Him, the Almighty, the Wise.").

[15] CHARLES DARWIN, ON THE ORIGIN OF SPECIES 123–24 (David Quammen, ed., Sterling Publishing Co. 2008) (1859) ("Rarity . . . is the precursor to extinction.").

[16] *See generally* DAVID E. FASTOVSKY & DAVID B. WEISHAMPEL, THE EVOLUTION AND EXTINCTION OF THE DINOSAURS (2d ed. 2005) (exploring the relationship between biosphere and life forms through the tale of dinosaurs).

[17] *See generally* C.F. HUDSON, HUMAN DESTINY: A CRITIQUE OF UNIVERSALISM (Boston, James Munroe & Co. 1861).

[18] Divine texts predict the discontinuation of human series. *See, e.g.*, QUR'AN, sura al-Rahman 55:26.

[19] Bradley C. Karkkainen, *Biodiversity and Land*, 83 CORNELL L. REV. 1, 7 (1997) (Biodiversity loss means the "fragmentation, degradation, and destruction of ecosystems and habitats through conversion of land to economically productive uses.").

James Mensch furnishes the remarkable insight that the "infinit[e] reflects itself . . . in the concealment of human finit[ism]."[20] In concealing absolute infinitism, human systems, including law, develop distinct responses. For example, human systems may simply deny or abandon the mystery of absolute infinitism. Aristotle deserted the pursuit of absolute infinitism by concluding that absolute infinitism does not exist.[21] Other philosophers may desert absolute infinitism by finding that the infinite itself is a product of the human mind. Kant believed that space and time have no existence in the external world and are projections of our mind.[22] Nietzsche pronounced that God is dead, thus repudiating the mystery of God.[23] With variant motives and rationales, human systems may forsake absolute infinitism and opt for the finite. The gradual decline of natural law and divine law rooted in the mysteries of nature and God and the rise of legal positivism founded on state-mediated power is the triumph of the finite over absolute infinitism. The forsaking of absolute infinitism is far from complete. Human creativity learns from absolute infinitism by incorporating its understandings into human inventions, a phenomenon that may be called applied infinitism.

Samuel Hamilton observes that "[h]uman progress is the result, not of knowledge alone, but of knowledge applied."[24] Even though human systems may not fully comprehend the multiple dimensions of absolute infinitism, they nonetheless put the concept of absolute infinitism to practical use. Applied infinitism pervades the modern world. Applied infinitism employs understandings of absolute infinitism for constructing machines, tools, and numerous other objects.[25] The ceiling fan, when turned on, propels its blades in endless circular motion, mimicking the infinite rotation of celestial planets in their respective loops. Of course, the ceiling fan can be turned off, bringing its motion to a stop. But the motion of planets cannot be turned on and off. Rotational motion and its control are critical to the manufacturing of a fan. Millions of machines, including motor vehicles and planes, would not function without rotational motion conceptually derived from infinite motion in the

[20] JAMES RICHARD MENSCH, INTERSUBJECTIVITY AND TRANSCENDENTAL IDEALISM 167 (1988) (internal quotation marks omitted) (alteration in original).

[21] ARISTOTLE, *Analytica Posteriora*, bk. 1, 72b 5–15, *in* 1 THE WORKS OF ARISTOTLE (W.D. Ross ed., G.R.G. Mure trans., Oxford Univ. Press 1928). *See also* Andrew D. Cling, *The Trouble with Infinitism*, 138 SYNTHESE 101, 108 (2004).

[22] KANT'S CRITIQUE OF PURE REASON 1–7 (T.D. Weldon ed., 2d ed. 1958). For a discussion of this point, see Efraim Fischbein, *Tacit Models and Infinity*, 48 EDUC. STUD. MATHEMATICS 309, 309 (2001).

[23] FRIEDRICH NIETZSCHE, THE GAY SCIENCE 120 (Bernard Williams ed., Josefine Nauckhoff trans., 2001) (1887).

[24] SAMUEL HAMILTON, THE RECITATION 89 (1907).

[25] Popular versions of infinity abound. Japanese and Russian artisans insert dolls in a sequential order where the bigger doll contains a smaller similar looking doll to imitate the idea of infinity. For other popular uses of infinity in poetry, folk stories, and humor, see LEO ZIPPIN, USES OF INFINITY 6–8 (1962).

celestial loop. However, machines will not be of any practical use if their motion cannot be started or terminated, thus converting infinite motion into finite motion.

Applied infinitism mediates between the finite and the infinite. Absolute infinitism obscures the eternality of time, the unboundedness of space, the magic of mathematics, and the mystery of nature; but applied infinitism employs finite time, finite space, division, multiplication, addition, subtraction, extension, contraction, natural reproduction, and other processes producing practical knowledge. When a pollutant is dumped into the ocean, its ripples may gradually fade away but the ocean does not remain the same. Chaos theory explains that small fluctuations can trigger large scale instabilities and reorganizations.[26] Likewise, when a case is litigated, the entire nation may suffer the trauma.[27] Yet applied infinitism assigns the consequences of litigation to the parties. Absolute infinitism reveals that the human body, as a material container of life, cannot be destroyed since matter is indestructible. Yet dead bodies are buried or burnt to bring closure to a life span. Absolute infinitism suggests that the causation of an event is endless and consequences of an act are interminable. Applied infinitism relies on proximate cause to resolve issues of legal liability even though proximate cause, a useful "legal filter," cannot be coextensive with causation in its entirety.[28]

Applied infinitism overcomes the awe and mystery of absolute infinitism. A practical understanding of space guides engineers in designing spacecrafts and spacesuits. An astronaut may never reach the edge of space or understand spatial infinitism. Yet the astronaut may confidently proceed toward the International Space Station. Absolute infinitism does not tell us the zero moment (t_0) when time began or the end moment (t_e) when time will cease to exist.[29] The practical notion of time, however, uses durations of time to construct and understand beginning and end points in time. The life of the United States Constitution started in 1789, a definite point of time on the Gregorian calendar. The life of the Constitution is potentially infinite because no one knows when and whether the Constitution will cease to exist. Until the Constitution ceases to exist, its functionality emulates eternal time. However, the Constitution, like the ceiling fan, functions in the realm of applied infinitism as the Constitution, though in perpetual motion, may

[26] PETER FRANCIS MACKEY, CHAOS THEORY AND JAMES JOYCE'S EVERYMAN 42 (1999).

[27] Consider the impact of *Brown v. Board of Education* on desegregation in the United States. *See* Janet Ward Schofield & Leslie R.M. Hausmann, *The Conundrum of School Desegregation: Positive Student Outcomes and Waning Support*, 66 U. PITT. L. REV. 83, 83 (2004); Editorial, *Brown v. Board of Education*, N.Y. TIMES, May 16, 2004, § 4 (Week in Review), at 12.

[28] *See* Rodriguez-Cirilo v. Garcia, 115 F.3d 50, 52 (1st Cir. 1997) ("The concept of proximate causation restricts tort liability to those whose conduct, beyond falling within the infinite causal web leading to an injury, was a legally significant cause.").

[29] Liaquat Ali Khan, *Temporality of Law*, 40 MCGEORGE L. REV. 55, 58 (2009).

be deactivated. This observation reveals that applied finitism is related to both the infinite and the finite.

III. LAW'S FINITISM

As a general matter, law opts for the finite.[30] The finite is the cognitive medium of law. Parties, lawyers, courts, complaints, claims, crimes, remedies, and punishments, these and other fundamental logistics of law all belong to the realm of the finite. The legal machine of dispute resolution rests upon the principle of finitism, which relies on rules of evidence and procedure to extract finite facts from an otherwise chaotic and infinite story; it then turns the extracted facts into finite issues, which are resolved under finite laws within a limited time.[31] A pre-established hierarchy of courts oversees final disposition of the case and the concept of res judicata seals the finite disposition of the case.[32] This legal methodology—practiced in almost all systems of the world, secular and divine—operates under the principle of finitism, a principle that converts the infinite into the finite.

Finitism also influences the theory of legislation and judicial decisionmaking. Law's finitism presupposes that "the infinite variety of claims that may arise make it virtually impossible to announce a black-letter rule that will dictate the result in every case."[33] The jurisprudential skepticism of back-letter rules is valid to the extent that no statute, no matter how cannily crafted, could possibly foresee the infinite variety of disputes that would arise under the statute's finite text.[34] In explaining

[30] Consider the courts' discomfort with potentially infinite foreseeability. The courts are reluctant to embrace a doctrine of liability that cannot meaningfully provide a clear rule. For the analysis of this issue, see Victor E. Schwartz & Emily J. Laird, *Non-Economic Damages in Pet Litigation: The Serious Need to Preserve a Rational Rule*, 33 PEPP. L. REV. 227, 253 (2006).

[31] In 1852, the Supreme Court of Texas captured the finiteness of law in the following words: "The law requires diligence in the assertion of a right by legal actions. Life is short, parties and witnesses are mortal; memory is frail; written muniments are spread upon perishable materials, and are subject to many accidents; and time throws a veil of obscurity over transactions of the distant past; under circumstances like these, is it either unreasonable or unjust that he who has a claim should be required to assert it within a limited time?" De Cordova v. Smith's Adm'x, 9 Tex. 129, 147 (1852) (internal quotation marks omitted).

[32] *See* Brown v. Felsen, 442 U.S. 127, 131 (1979) (stating that res judicata preserves finite judicial resources as it "frees the courts to resolve other disputes").

[33] Associated Gen. Contractors of Cal., Inc. v. Cal. State Council of Carpenters, 459 U.S. 519, 536 (1983). This maxim is repeated in numerous cases. *See, e.g.*, Holmes v. Sec. Investor Prot. Corp., 503 U.S. 258, 272 n.20 (1992); Poulos v. Caesars World, Inc., 379 F.3d 654, 666 (9th Cir. 2004).

[34] Hendler v. United States, 952 F.2d 1364, 1371 (Fed. Cir. 1991); *see also* Vivian Grosswald Curran, *Romantic Common Law, Enlightened Civil Law: Legal Uniformity and the Homogenization of the European Union*, 7 COLUM. J. EUR. L. 63, 75 (2001) (stating that the common law is always in the process of "becoming, developing and transforming").

the concept of proximate cause in tort liability, Prosser and Keeton recognized the principle of finitism when they said: "In a philosophical sense, the consequences of an act go forward to eternity, and the causes of an event go back to the dawn of human events, and beyond."[35] They cautioned, however, that "any attempt to impose responsibility upon such a basis would result in infinite liability for all wrongful acts."[36]

In manufacturing finitism, law nonetheless acknowledges the infinite and arbitrary limits of the finite. The infinite lurks behind numerous legal concepts. The common law estate system, for example, makes little sense without understanding the infinite.[37] The system divides estate rights from the finite short-term leasehold to the "infinite fee simple absolute."[38] The finite property rights in the estate are conceived against a background of the infinite.[39] Finite property rights created through the force of law undergird the dynamism of modern economies. Legally manufactured finite property rights such as life-tenures, leases, and liens may be rented, transferred, mortgaged, gifted, or simply abandoned.[40] These and other finite rights are meaningful only because the infinite fee simple absolute provides their infinite context. Graham Oppy aptly notes that "[b]ecause the infinite lurks everywhere both in our ordinary thought about the world and in science [and law], it is very hard to see how we can live without it."[41]

Law's finitism strives for certainty. It attempts to sort out fuzziness, ambiguity, inconsistencies, open-endedness, and loose ends, sometimes unsuccessfully. In contracts, decedent's estate, patents, search and seizure, and other areas of law, practical law requires finite facts and finite laws in order to structure transactions and resolve disputes. Practical law shuns the infinite and searches for finitism. The reasonable person standard, proximate cause, statutes of limitation, custodial interrogation, and other legal concepts formulate legal issues within

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[35] W. PAGE KEETON ET AL., PROSSER AND KEETON ON THE LAW OF TORTS § 41, 264 (W. Page Keeton ed., 5th ed. 1984). This famous quotation has been mentioned in numerous cases. *See, e.g.*, Powell v. Hawkins, 885 N.E.2d 958, 962 (Ohio Ct. App. 2007).

[36] KEETON, *supra* note 35, § 41, at 264.

[37] *See, e.g.*, *Hendler*, 952 F.2d at 1376.

[38] Jeffrey E. Stake, *Darwin, Donations, and the Illusion of Dead Hand Control*, 64 TUL. L. REV. 705, 717 (1990).

[39] Under the discovery doctrine, a colonial policy under which discovering nations obtained the infinite title to the discovered land, the United States acquired fee simple absolute and the concomitant infinite rights in the Indian land. *See generally*, Nell Jessup Newton, *Federal Power over Indians: Its Sources, Scope, and Limitations*, 132 U. PA. L. REV. 195, 208 (1984). *Cf.* Blake A. Watson, *The Doctrine of Discovery and the Elusive Definition of Indian Title*, 15 LEWIS & CLARK L. REV. 995 (2011) (exploring the subtleties—and ambiguities—of the title that the United States acquired from the "discovered" native peoples).

[40] Stake, *supra* note 38, at 717. Law allows property holders to alienate fee simple property rights as well. *Id.*

[41] GRAHAM OPPY, PHILOSOPHICAL PERSPECTIVES ON INFINITY 294 (2006).

finite categories of understanding and assessment. Without repudiating the variety of the infinite, law primarily relies on the principle of finitism to build and operate the machine of law. Law's finitism deconstructs the infinite into finite units of comprehension.[42]

A. *Manufactured Finitism*

The process of measuring and counting matter, time, and space—a process most critical to the enterprise of law—manufactures the finite out of the infinite. This manufacturing of finitism divides what might otherwise be indivisible. Unitization is necessary for measurement.[43] The unitization of matter makes the units distinguishable and separate from each other. In dividing matter, unitization can be arbitrary, irregular, or geometric. For example, territorial states of different sizes divide the earth's seamless unity. Law counts each state as a distinct and separate entity and may confer equality on states of unequal size. Water and other fluids cannot be counted unless unitized. Buckets of water can be counted, even though each bucket may contain a different amount of water. But bottles of water can be made identical in size and shape, each containing an equal volume of water. Gas and air can also be unitized when captured in material containers of equal or unequal sizes. Unitization, though not opposed to equivalence, seeks no equivalence. Geometric containers of identical shape and size, but different weights, can also be counted, but law may treat them differently. In addition to matter, space and time have also been unitized. The unitization of space occurs when buildings are constructed. Each building, though occupying a different or equal amount of space, is counted as one. Property tax may be levied on each building taking into factor the units of space the building occupies. The division of time in years, months, days, hours, minutes, and seconds is necessary for constructing statutes of limitation, periods for pleadings, and declaring winners in competitive sports. Once matter, space, and time have been broken into finite and measurable segments, law uses the manufactured units for recognizing social, political, and economic measurements.

In addition, manufactured finitism is inevitable for shaping legal concepts. In 1928, Leon Green made a superb observation: "[I]t is not surprising that in the face of infinity the law does exactly what other sciences do in like situations. It adopts a formula; a formula in terms which will permit its problems to be reduced to a graspable size."[44] Take an ordinary criminal case that law prosecutes. Law takes a complex story and reduces it to an identifiable criminal act. Prosecuted with negative

[42] *See* Joan Stambaugh, *Time, Finitude, and Finality*, 24 PHIL. E. & W. 129 (1974) (arguing that the "West has related time to finitude" and the East to infinity).

[43] The number of cases decided under the United States Constitution can be counted, because each case is taken as a finite unit, separate from every other case decided under the constitution.

[44] Leon Green, *The Negligence Issue*, 37 YALE L.J. 1029, 1030 (1928).

social sentiments attached to criminality, the law grasps the unitized criminal story in the court of law. Numerous aspects in the progression of a case are reduced to finite parts. Under the rules of evidence, admissible and relevant facts are filtered into the trial, thus vesting the story with factual finitism. The finite facts presented in the court are also filtered through rules of procedure, frequently severed from their broader social, political, economic, and sociological complexity. If the defendant does not testify, the defendant's state of mind—where many facts were created, distorted, diluted, exaggerated, and re-imagined—is rarely brought into evidence.[45] The criminal case is tried in a limited amount of time, thus placing the story in temporal finitism. Even though the real story may have traversed a vast distance of geography and culture, the tale is recreated in the limited space of a courtroom far removed from the location where the real story originated and developed. At the conclusion of the trial, the defendant may be found guilty and confined to the most finite of locations—a prison—for a finite punitive period. The journey of the case demonstrates how law imposes finitism over an event that occurred in the infinite realms of matter, time, and space. Such is the nature of practical law that it deals with finite objects and concepts. Practical law manufactures finitism to make sense of complex, compounded, and even convoluted reality.[46]

B. Normal Finitism

Furthermore, law is more at ease with what might be called normal finitism. The finite above and beyond the normal range of experience can be as incomprehensible as is the infinite. Words such as gigantic, colossal, and mammoth describe things beyond the normal range of experience. Modern technology is expanding the scope of the normal finite. A microscope can see individual bacteria that could not be viewed with the bare eye. But, for centuries, normal finitism derived from the human sensory motor occupied the world of practical law.

The law of evidence cannot ignore the fact that the human sensory motor is ill-equipped to understand finite facts beyond a limited range. The sensory motor, consisting of the five senses, the "living inlets of

[45] Commenting on negligence cases, Leon Green makes the following observation: "And while it is intellectually stimulating to inquire into the intelligence, experience, powers of memory, observation, coordination, the reaction time, self-control, courage, skill, ad infinitum, which the law might require of defendants, such inquiry is rendered utterly without profit for the purposes of determining the negligent conduct of any particular defendant in any particular case. The law does not make any attempt to require any of them in any one or more combinations." *Id.*

[46] American realists have made this point with great clarity. For the seminal debut of legal realism, see JEROME FRANK, LAW AND THE MODERN MIND 46 (1930). For a comment and critique of this work, see K.N. Llewellyn, Law and the Modern Mind: *A Symposium* (pt. 1), 31 COLUM. L. REV. 82 (1931) (book review).

learning," is limited to processing finite data.[47] Eyes cannot see, ears cannot hear, and the nose cannot smell beyond a certain distance. These three senses operate within a finite space. The range of touch is even more limited because hands, feet, and other parts of the body can hold only small objects and can feel only tiny portions of enormous objects, such as the proverbial elephant. The sense of touch is also limited in the thermal sense: the human body cannot touch exceptionally hot or cold objects. The most limited of the five senses is the sense of taste. Out of fear of injury to the body, the sense of taste cannot savor every available object. Since the human body is mobile, the sensory motor is mobile too. Yet the sensory motor can process only limited portions of the material world. The body's encounter with the material world is not only finite but traverses a limited range. Huge and miniscule objects fall outside the limited range of the sensory motor. Even with technology, the human sensory motor has limited data-processing capability. With or without technology, practical law relies on normal finitism to process finite facts.

While the human sensory motor is limited, the human mind is less so.[48] Liberated from the limitations of the sensory motor, the mind can freely travel in time and space. It can remember and reproduce the past and it can invent a non-existent future.[49] In its creative undertakings, the mind can grapple with complex laws of physics and can construct paths for objects it sends to other planets. The mind can calculate the speed of light, a fact beyond the normal range of the sensory motor. It can comprehend cosmology and conceptualize positions of orbits along which planets rotate in the vastness of space. The mind can construct huge and miniscule mathematical series that fall outside the normal range of the sensory motor. The mind may not fully grasp the scope of the infinite.[50] The mind, however, knows that the finite cannot be the sole basis for understanding the forces of creation or the vastness of knowledge.

Even the human mind has its own limits in understanding the finite.[51] Computers have augmented the ability of the mind to process large amounts of data. But even the computer-assisted mind is not free of limits. The mind's capacity to comprehend the transfinite and infinitesimal[52] is restricted. Transfinite and infinitesimal objects and concepts are finite, but some are so beyond the realm of human

[47] GEORGE WILSON, THE FIVE GATEWAYS OF KNOWLEDGE 1–2 (Cambridge, MacMillan & Co. 1856) (the five organs of senses are identified as eye, ear, nose, mouth, and skin). For a detailed understanding of the sensory motor, see JACK H. WILMORE ET AL., PHYSIOLOGY OF SPORT AND EXERCISE 91–94 (4th ed. 2008).

[48] *See generally* IAN GLYN, AN ANATOMY OF THOUGHT: THE ORIGIN AND MACHINERY OF THE MIND (1999) (explaining the inter-functionality of brain, mind, and physical body).

[49] Khan, *supra* note 29, at 78 (discussing scalenic consciousness of mind).

[50] *See* Robert W. McBride, *Life and Mind*, 38 PROC. IND. ACAD. SCI. 61 (1922).

[51] *See* Fischbein, *supra* note 22.

[52] Huge numbers, quantities, and sizes belong to the realm of the transfinite whereas miniscule numbers, quantities, and sizes are infinitesimal.

experience, of both body and mind, that they carry the aura of the infinite. On the miniscule side, a nanometer in the metric system is equal to one billionth (10^{-9}) of one meter.[53] In temporality, seconds and milliseconds are recognizable micro-units of time but an attosecond, one quintillionith (10^{-18}) of a second,[54] an infinitesimal fraction of time, though mathematically conceivable, is no part of the normal experience. On the aggregative side, money transactions involving huge amounts begin to become abstract. Most individuals can relate to five, ten, twenty, or hundred-dollar bills; they, however, have no experience of understanding a trillion dollars, though they may recognize the enormity of the number. Transcomputational problems involving numbers larger than 2.56×20^{92} are "not even theoretically doable."[55] Even large and speedy computers fail to handle massive gigabytes of data and churn endlessly for its unsuccessful transmission. In sum, there exists a vast and complex universe between infinite and normal finite. The binary division of reality between infinite and finite leaves out much that is finite but incomprehensible.

This understanding of the finite transforms our notion of law, legal methods, legal analysis, dispute resolution, and legal remedies. It diminishes our confidence in the finite as a reliable guide, though it is used as the measuring rod of legal architecture. Consider criminals convicted on the basis of eyewitness identifications, forensic evidence, informant testimony, and confessions. One would think that the principle of finitism serves criminal law well. Yet hundreds of these criminals were found innocent through postconviction DNA testing.[56] At the time of the trial, the finitism principle relied on the available finite evidence. The DNA evidence is finite but it was not part of the normal finite. The microscopic evidence has belied the testimony of witnesses. Propelled by the normal finite, some judges have been reluctant to reverse erroneous convictions on the basis of DNA testing.[57]

IV. MASTER TEXTS

The presence of a master text is not vital to law's evolution. Legal norms may come into existence without a master text, they may continue to develop without a master text, and a legal system may or may not adopt a single master text as the supreme law of the land. The common law of England has developed without a master text. By adopting the

[53] A DICTIONARY OF SCIENCE 523, 548 (6th ed. 2010).

[54] *Id.* at 64, 736. There is still controversy over the smallest measurable unit of time. The Planck unit of time, named after Max Planck, has been used to measure the speed of light in a vacuum. A DICTIONARY OF PHYSICS 368 (Alan Isaacs ed., 4th ed. 2000).

[55] DAVID FOSTER WALLACE, EVERYTHING AND MORE 18 (2003).

[56] *See generally* Brandon L. Garrett, *Judging Innocence*, 108 COLUM. L. REV. 55 (2008) (providing empirical evidence that the criminal justice system frequently convicts on the basis of unreliable factual evidence).

[57] *Id.* at 129–30.

Magna Carta (1215),[58] and more recently by adhering to the European Human Rights Convention and foundation treaties that established the European Union,[59] the English legal system has subscribed to a number of supreme texts. Despite these commitments, however, the common law of England has not been subordinated to a single master text. In its formative period, what provided order to the evolution of common law were rudimentary notions of natural law and the doctrine of *stare decisis*.[60] Natural law allowed common law judges to venture into philosophy, theology, and jurisprudence to discover guiding principles for rendering and defending opinions.[61] The doctrine of *stare decisis* provided inter-temporal continuity and a notion of justice rooted in a simple idea that like cases must be judged alike.[62] Thus, for many centuries, natural law and *stare decisis* together composed the unwritten master text of common law.

In common law the presence of a written master text surfaced to prominence with the promulgation of the U.S. Constitution in the late eighteenth century. The preamble of the Constitution secures the blessings of liberty to posterity, presuming that the Constitution will continue to guide for an indefinite future, thus openly relying on the concept of the infinite.[63] The supremacy clause of the U.S. Constitution mandates that all laws submit to constitutional values.[64] The idea of a constitution as the supreme master text has become universal as most modern legal systems, democratic and non-democratic, secular and theocratic, are constitution-based.[65] Some states have moved beyond the supremacy of the national constitution and willingly submit to the supremacy of regional and global treaties. The European Union is the most striking example of such a supra-constitutional phenomenon.[66]

In jurisprudence, the master text may be identified as the grundnorm or the rule of recognition. The constitution as the master text, for example, requires that all rules of the legal system be compatible

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[58] *See generally* R.H. Helmholz, *Magna Carta and the* ius commune, 66 U. CHI. L. REV. 297 (1999) (arguing that Roman and canon law influenced the text of the Magna Carta).

[59] *See* Ian Loveland, *Incorporating the European Convention on Human Rights into UK Law*, 52 PARLIAMENTARY AFF. 113, 113–18 (1999).

[60] *See* 1 WILLIAM BLACKSTONE, COMMENTARIES *39–41, 70.

[61] *Id.* at *40–42.

[62] *See id.* at *70.

[63] *See* U.S. CONST. pmbl. *See also* OLIVER PAUL GOODING, THE PEOPLE'S GOD VS. THE MONARCHIC GOD 164–65 (1892) (arguing that posterity in the preamble means that the Union shall be perpetual).

[64] U.S. CONST. art. VI, cl. 2.

[65] Ran Hirschl, *The Rise of Constitutional Theocracy*, 49 HARV. INT'L L.J. ONLINE 72, 73–74 (2008), http://www.harvardilj.org/wp-content/uploads/2011/02/HILJ-Online_49_Hirschl.pdf.

[66] *See* Matej Avbelj, *The Treaty of Lisbon: An Ongoing Search for Structural Equilibrium*, 16 COLUM. J. EUR. L. 521, 522–23 (2010).

with substantive parameters of the constitution. The constitution provides normative guidance to the legislature in providing new laws and to the judiciary in deciding new cases. The method of judicial review provides an institutional mechanism to weed out laws that cannot be reconciled with the master text. Thus, the master text assures an orderly evolution of norms. It provides constraints within which legal norms may be modified, repealed, and expanded.

Master texts carry both finite and infinite attributes, promising durability and evolution. In this regard, there are notable differences between secular texts and divine texts. Secular texts, such as national constitutions, can be modified, radically changed, and even totally deserted. "The 1977 Soviet constitution, which established supremacy of the communist party, and which guided social, economic, and legislative policies,[67] was abandoned at the dissolution of the Soviet Union."[68] The U.S. Constitution, which permitted slavery in its early phase, was later amended to abolish slavery.[69] This value-reversal is possible with respect to secular texts. By contrast, divine texts cannot be altered or modified.

A. *Textual Finitism*

Written constitutions are finite master texts. A constitution is a finite text at any given point in time in that its words can be precisely identified and counted.[70] The text has a definite beginning and a definite end. The U.S. Constitution was a finite text when it was first drafted in 1787. In 2011, the Constitution continues to be a finite text, precisely identifiable. However, the 2011 Constitution is not exactly the same text as was the 1787 Constitution. Numerous amendments have been made to the original text. In 1791, ten amendments, collectively known as the Bill of Rights, were added to the original text. As of August 2011, twenty-seven amendments have been made to the Constitution. An amendable master text remains a finite text—but not the *same* finite text.

Constitutions are spatially finite. The U.S. Constitution is valid within a finite geography, even though some of its applications may be extended

[67] For the centralization of supreme authority under the Soviet and Iranian constitutions, see Ali Khan, *Constitutional Kinship Between Iran and the Soviet Union*, 9 N.Y.L SCH. J. INT'L & COMP. L. 293, 303–08 (1988).

[68] L. Ali Khan, *Fana and Baqa Infinities of Islam: Approaches to Islamic Law and Behavior*, 7 U. ST. THOMAS L.J. 511, 536–37 (2010).

[69] U.S. CONST. amend. XIII. *See also* Akhil Reed Amar, *Of Sovereignty and Federalism*, 96 YALE L.J. 1425, 1464 (1987) (arguing that the Thirteenth Amendment's abolition of slavery was of far greater significance than the federal guarantee of individual rights); Laurence H. Tribe, *The Puzzling Persistence of Process-Based Constitutional Theories*, 89 YALE L.J. 1063, 1065 (1980) (stating that the amendment guaranteed to obliterate all vestiges of slavery).

[70] There are 4543 words in the original, unamended U.S. Constitution, including the signatures. *Constitution of the United States, Questions and Answers*, NAT'L ARCHIVES, http://www.archives.gov/exhibits/charters/constitution_q_and_a.html.

abroad.[71] However, nations are free to borrow the principles contained in the U.S. Constitution and place them in their own national constitutions. By contrast, divine texts are spatially infinite. They are not territorial. The Qur'an is as valid in Indonesia as in Saudi Arabia. Divine texts establish the law for believers wherever they establish communities. Even if a state, such as the United States, does not recognize divine texts as law, religious communities, exercising the freedom of religion, can privately enforce divine texts to the extent they are compatible with the state's constitution. A state constitution, hostile to divine texts, such as that of the defunct Soviet Union, however, may outlaw any application of divine texts.[72]

B. *Textual Infinitism*

Through finite texts, constitutions embrace many attributes of the infinite. As a general principle, constitutions are projected to exist for an indefinite future. Even ordinary statutes and case holdings influence future relations. Although some laws take effect retroactively, most laws are enforced prospectively. While some select laws expire at a predetermined date in the future, most continue to exist for an indefinite period of time. Furthermore, a law of even limited scope may potentially be relevant for deciding an infinite number of present and future cases. A constitution contains all these elements of the infinite. It shapes the legal future of the nation. Its framework is projected to exist for an indefinite period of time. No constitution contains a sunset provision for its own demise. A constitution is invoked in an infinite number of cases, legal commentaries, and legislative debates.[73] Of course, a constitution may be discarded or made dead, as was, for example, the Constitution of the Soviet Union.

Typically, a constitution is open to an infinite number of amendments. This point is noteworthy: A constitution may be explained

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[71] Kal Raustiala, *The Geography of Justice*, 73 FORDHAM L. REV. 2501, 2503 (2005). Professor Raustiala has invented an appropriate term of "legal spatiality" to capture the territoriality of the constitution. *Id.*

[72] Despite its militant atheism, the Soviet Union continued to allow organized religion. *See* CONSTITUTION (FUNDAMENTAL LAW) OF THE UNION OF SOVIET SOCIALIST REPUBLICS art. 52 (1977). This anomaly benefitted the Soviet Union as Muslims identified both with the communist state and Muslims in other countries, thus building goodwill for the Soviet Union. *See* WILLIAM C. FLETCHER, RELIGION AND SOVIET FOREIGN POLICY 1945–1970, at 71–72 (1973). Active state hostility toward divine texts is increasingly unacceptable under the law of human rights and individual liberties. *See* Universal Declaration of Human Rights art. 18, G.A. Res. 217(III) A, U.N. Doc. A/RES/217(III) (Dec. 10, 1948).

[73] For a discussion of the Supreme Court's efforts to reduce its caseload, see Carolyn Shapiro, *The Limits of the Olympian Court: Common Law Judging Versus Error Correction in the Supreme Court*, 63 WASH. & LEE L. REV. 271 (2006) (suggesting the type of cases more appropriate for the Supreme Court). A choosy Supreme Court, however, does not limit the constitutional docket of lower federal and state courts.

as series of rules subject to infinite deletions and infinite additions. C ($\infty \ldots D_3$, D_2, $D_1 \ldots C_o \ldots A_1$, A_2, $A_3 \ldots \infty$). Here "C_o" means the original constitutional text containing a set number of rules. "D" means deletion and "A" means addition to the original text. Both deletions and additions are obtained through amendments. For example, the 18th amendment (A) to the U.S. Constitution prohibited the manufacture, sale, and transportation of intoxicating liquors.[74] The 21st amendment (D) repealed the 18th amendment.[75] In the actual life of a constitution, only a limited number of additions and deletions are made. Potentially, however, the number of deletions and additions is infinite.

Some constitutions are more easily amendable than others.[76] The U.S. Constitution is not open to easy amendments. A constitutional amendment requires what has been called a "supermajority" of elected officials both at federal and state levels.[77] Despite this procedural difficulty of making amendments, and even though only few amendments have been made over a period of more than two hundred years, the U.S. Constitution is nonetheless potentially open to an infinite number of amendments. Some constitutions prohibit certain specific amendments. The Turkish constitution, for example, cannot be amended to change its secular character.[78] While the Turkish constitution is unique in preserving its secular provisions, arguments have been made to assert that even certain provisions of the U.S. Constitution, such as the Thirteenth Amendment, which prohibited slavery, cannot be repealed.[79] Granted that some provisions of a constitution may not be theoretically or practically amendable, the fact remains that no constitutional amendment procedure limits the number of amendments. In this sense of amendability, master texts are potentially infinite.

Constitutions that cannot be easily amended mimic the permanence of divine texts.[80] Secular legal systems, founded on positive law, recognize

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[74] U.S. CONST. amend. XVIII. For an analysis of the 18th amendment, see Robert Post, *Federalism, Positive Law, and the Emergence of the Administrative State: Prohibition in the Taft Court Era*, 48 WM. & MARY L. REV. 1, 4–23 (2006).

[75] U.S. CONST. amend. XXI. *See also* Asheesh Agarwal & Todd Zywicki, *The Original Meaning of the 21st Amendment*, 8 GREEN BAG 2D 137, 139 (2005) (prohibition unleashed violence, bloodshed, and corruption).

[76] Maria Cahill, *Ireland's Constitutional Amendability and Europe's Constitutional Ambition: The Lisbon Referendum in Context*, 9 GERMAN L.J. 1191, 1217 (2008) (arguing that the European Union should respect national constitutional amendability procedures even if they produce unpleasant results).

[77] U.S. CONST. art. V. *See also* John O. McGinnis & Michael B. Rappaport, *The Rights of Legislators and the Wrongs of Interpretation: A Further Defense of the Constitutionality of Legislative Supermajority Rules*, 47 DUKE L.J. 327, 344–45 (1997).

[78] TURK. CONST. arts. II, IV.

[79] George Rutherglen, *State Action, Private Action, and the Thirteenth Amendment*, 94 VA. L. REV. 1367, 1370–71 (2008).

[80] Morton J. Horwitz, *The Bork Nomination and American Constitutional History*, 39 SYRACUSE L. REV. 1029, 1030 (1988) (arguing that the eighteenth-century

human power to make and unmake laws to protect and promote traditions, values, and community interests. Change allows secular constitutions to respond to changing social and economic realities of the community. Though change is valued, durability remains a desirable goal as well. The U.S. Constitution incorporates both change and durability. Theoretically, since no provision of the Constitution is immune from amendment, it is open to infinite value additions and value reversals. Practically, however, since the amendment procedure is tedious and demands the collective will of a supermajority, the Constitution tilts toward durability.

Two factors distinguish law's durability from law's evolution. First, what is durable remains the same but what is evolutionary is subject to change.[81] As discussed previously, law's evolution denotes a process of progressive and regressive change. Cultures and communities that human beings construct, as well as the natural universe that God has created, are infinite—a phenomenon frequently described in popular maxims such as: everything changes; or, nothing stays the same. In contrast to what is evolutionary, a rigid concept of durability is non-evolutionary, free of change, always and everywhere one and the same. The chief characteristic of durability is its immunity from change. In binary terms, therefore, what is evolutionary cannot be durable and what is durable cannot be evolutionary. No such binary dichotomy, however, is necessary to illuminate the difference between durability and evolution.[82] Natural entities and human products, such as rocks, life forms, planets, buildings, case holdings, and statutes, each and all are subject to transformation and have no permanence. Some natural entities are more durable than others, but no entity is permanent in form, shape, or content. Likewise, some human products are more fragile than others but all are subject to deterioration. Evolution rather than durability is the normal state of the universe, including human life and its artifacts.

Second, what is evolutionary is not immune from dissolution and even extinction. As noted previously, numerous life forms, including birds, animals, and plants, which replicate themselves for centuries and evolve, meet extinction. The life of a human individual is evolutionary and transient, though the constitutive material of a human body is indestructible.[83] By contrast, the human species as a life form is infinite as

conception of the constitution was Newtonian, which presumed that the constitution would last for all time).

[81] Infinity as a process of change is not an attribute of every form of infinity. Spatial infinity, for example, shows little change or mobility. Time, however, is associated with change. Life forms are also infinite and subject to change, including extinction.

[82] Consider the tautology, for example, that evolution is permanent.

[83] Note, however, that the appearance of transience might be deceptive because the constitutive matter of the human body is destructible in form but indestructible in matter. And since the constitutive matter of the human body can take an infinite number of forms, the human body in some sense is not only permanent but also infinite.

it is ceaselessly reproducing itself. The human species may also be evolving in intellectual and spiritual senses. Despite its infinite evolution, the human species possesses certain durable definitional characteristics that distinguish it from other species. According to natural probability, however, the human species cannot last forever. Per divine texts, the human species will cease to exist and will be resurrected on the Day of Judgment.[84] On both counts, the human species is not permanent. It is evolutionary and infinite, so long as it survives. But when the human species will cease to exist, its evolution will also cease to exist. Until it ceases to exist, however, the human species will remain evolutionary and infinite in time.

This principle of evolutionary extinction also applies to constitutions. A constitution continues to exist and evolve until it meets extinction. Revolutions have been the primary means of discarding the existing constitutions and replacing them with new ones.[85] The American Revolution repudiated the royal master texts with a republican constitution. The Iranian Revolution replaced the royal master texts with a theocratic constitution. The dissolution of the Soviet Union discarded the communist constitution. Recent revolutions in Tunisia and Egypt are revolts against the prevailing constitutions that supported and preserved autocracy.[86]

V. TEXTUAL MUTATIONS

This Part explains that master texts are exposed to amendatory and interpretative mutations. A master text may mutate—suffer radical changes in its normative composition and meaning—through textual amendments or textual interpretations. An amendment changes the meaning of the text by changing the existing composition of the text. An interpretation changes the meaning of the text without changing the composition of the text. Mutations occur when the text itself is amended, including repeal; and mutations occur when the text is interpreted in a precedent-breaking manner. Note, however, that not every change in the text through amendment or interpretation is a mutation. Mutations are radical normative changes.

Textual mutations may be mono-dimensional or bi-dimensional. Mono-dimensional mutations occur when the master text is open to

[84] *See* QUR'AN, sura ar-Rahman 55:26–27, sura al-Waqi'ah 56:47–50. The extinction of dinosaurs and numerous other species demonstrates that life forms can be suddenly destroyed. It is unclear whether the post-resurrection human species will be evolutionary and infinite.

[85] *See generally* Ali Khan, *A Legal Theory of Revolutions*, 5 B.U. INT'L L.J. 1 (1987).

[86] *See, e.g.*, Thomas Fuller, *Tunisians Turn to Everyday Matters*, N.Y. TIMES, Feb. 13, 2011, http://www.nytimes.com/2011/02/14/world/africa/14tunisia.html; David D. Kirkpatrick & Kareem Fahim, *In Egypt, a Panel of Jurists is Given the Task of Revising the Country's Constitution*, N.Y. TIMES, Feb. 15, 2011, http://www.nytimes.com /2011/02/16/world/middleeast/16egypt.html.

interpretive mutations but the text itself cannot be amended. For example, a divine text that can be interpreted but cannot be amended is open only to mono-dimensional, that is, interpretive mutations. Bi-dimensional mutations occur when the master text is open to both amendments and interpretive mutations. Constitutions, statutes, treaties, and other legal texts can be amended and interpreted. They are thus subject to bi-dimensional mutations. When a text can be renovated through both amendments and interpretations, the text is susceptible to bi-dimensional mutations. Most legal texts are potentially bi-dimensional. Bi-dimensional mutations allow a legal system to dramatically change its normative framework. The dramatic change can come through the combined effect of interpretative mutations and amendments.

The U.S. Constitution furnishes a prototypical text to understand bi-dimensional mutations. First, the Constitution itself is open to amendments. Over a period of more than two centuries, some textual norms of the U.S. Constitution have remained constant while others have been modified and some repealed. New textual norms added to the Constitution have been momentous in changing the normative course of the interpretive series. In fact, amendments have transformed the Constitution in significant ways, particularly by providing for the equal protection of laws.[87] Even though the constitutional amendment process is tedious, the tedium does not remove the possibility of radical constitutional amendments. For example, the Thirteenth Amendment to the Constitution outlawed slavery and involuntary servitude except as a punishment for crime.[88] This amendment was a mutational reformation of the Constitution, ending the institution of slavery. As noted above, not all amendments are necessarily mutations, for an amendment may simply affirm an existing norm. An amendatory mutation effects a fundamental change in the character of the legal system. Scholars and judges who advocate an original understanding of the Constitution and resist its interpretive mutations do not deny that constitutional norms can be modified through the amendment process that the Constitution itself furnishes.[89]

Second, the Constitution has been interpreted over a period of more than two hundred years. Each generation of legal professionals interprets the master text to meet social needs and resolve issues that previous generations either did not confront, ignored, or resolved in ways no longer acceptable. These interpretations in the form of court holdings have generated an impressive and complex body of constitutional law. This body of law extracted from the Constitution constitutes an interpretive series. There are methodological constraints on entries that can be made to the interpretive series. The entries are vetted through a court hierarchy, and the U.S. Supreme Court is the ultimate author of

[87] U.S. CONST. amend. XIV, § 1.

[88] U.S. CONST. amend. XIII.

[89] *See* Antonin Scalia, *Originalism: The Lesser Evil*, 57 CIN. L. REV. 849, 862 (1989).

interpretive mutations. Some entries have been added and others have been modified or subtracted. Some interpretations have been more radical than others. The interpretive series of the Constitution is an infinite enterprise and is likely to last so long as the Constitution survives.[90] Because both constitutional amendments and constitutional interpretations can be potentially radical, the Constitution is exposed to bi-dimensional mutations.

In interpreting master texts, the doctrine of precedent serves as a stabilizing force in textual evolution.[91] The doctrine provides continuity and prevents normative shocks to law's evolution. Note again that not every interpretation of the U.S. Constitution results in a mutation. Some interpretations are more momentous than others. The judicial repudiation of the United States apartheid laws was a momentous interpretive mutation that revolutionized racial relations.[92] Likewise, any future interpretation of the Constitution to outlaw the death penalty as a punishment will be a significant interpretive mutation of the Eighth Amendment.[93]

The doctrine of precedent is vulnerable with respect to texts exposed to bi-dimensional mutations. The precedential inertia is a protective force to preserve the interpretive series. Courts follow holdings of prior cases and resist shocking the system by arbitrarily alternating between opposing interpretations. However, the doctrine of precedent is defenseless when the master text is open to amendments. Cases emanating from a textual provision provide stability only if the textual provision remains intact. But if the textual provision itself is modified or repealed, the precedents derived from the provision lose their normative force. Even though precedents derived from the modified or repealed textual source remain in the system and are rarely physically deleted, they cannot be relied on to decide future cases. Courts must discard precedents and adjust the interpretive series in line with the modified master text.

Considering the radical history of interpretive mutations with respect to the U.S. Constitution, a thesis may be advanced that master texts are so porous that resourceful judges and jurists can extract diametrically opposite rules from the same master text.[94] The thesis is not completely baseless. The U.S. Supreme Court has interpreted the Constitution to

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[90] This Essay, however, does not discuss interpretive theories or exegetical rules of textual construction.

[91] For common law, see Roscoe Pound, *The Theory of Judicial Decision*, 36 HARV. L. REV. 641, 648–49 (1923).

[92] *See* Brown v. Bd. of Educ., 347 U.S. 483 (1954); *see also* Schofield & Hausmann, *supra* note 27, at 83; Editorial, *Brown v. Board of Education*, *supra* note 27, at 12.

[93] *See, e.g.*, Kennedy v. Louisiana, 128 S. Ct. 2641, 2650–51 (2008) (holding that capital punishment does not offend the Eighth Amendment).

[94] The broader debate over the certainty of law vacillates from extreme skepticism to intellectualized faith in right answers. For a discussion of these views, see Richard A. Posner, *The Jurisprudence of Skepticism*, 86 MICH. L. REV. 827 (1988).

reach opposite holdings in cases of juvenile executions. The Court first ruled that the Constitution poses no barrier to executing persons who committed a capital offense during the age of minority.[95] The same Court, though with a different set of judges, reached the opposite holding and declared that juvenile executions constitute cruel and unusual punishments under the Eighth Amendment.[96] While such diametrically opposite holdings extracted from the same provision of a master text are probable, they are not so common as to support the view that interpretative mutations are completely arbitrary. Sparse conflicting holdings maintained under the same master text do not confirm a broad thesis that the master text exercises no guiding influence on interpretation. Any such thesis will force us to conclude that the text itself is simply irrelevant to interpretation.[97]

Interpretive mutations advance the paradoxical evolution of law. On the one hand, interpretive mutations respect the integrity of the existing master text, reaffirming the social paradigm of durability. On the other hand, interpretive mutations bring about radical changes in the meaning of the text, recomposing the social order. The U.S. Constitution, through the Fourteenth Amendment, introduced equality between races.[98] This amendatory mutation of the Constitution faced interpretive challenges. First, the U.S. Supreme Court interpreted the equality provision to advance the idea of separate but equal, thus allowing apartheid laws.[99] Later, the Court discarded the separate but equal interpretation, mandating desegregation.[100] Both interpretations qualify as interpretive mutations, for each engendered fundamental change in the social structure.

Interpretive mutations add new norms to law's repertoire as they also discard some prior norms. This process of adding and discarding norms is not arbitrary or chaotic. Each legal tradition provides legal methods by which new norms can be added and prior norms can be discarded. Legal methods and procedural constraints guide interpretive mutations into an ordered progression of norms. In the common law tradition, judges interpret master texts in concrete and not hypothetical cases.[101] Interpretive mutations are also ordered because mutually inconsistent norms cannot belong to the same legal system, though there might be

[95] Stanford v. Kentucky, 492 U.S. 361, 380 (1989) (holding that juvenile execution does not violate the eighth amendment prohibition against cruel and unusual punishment).

[96] Roper v. Simmons, 543 U.S. 551, 574–75 (2005) (overruling *Stanford*).

[97] *But see* Frederick Schauer, *Deliberating About Deliberation*, 90 MICH. L. REV. 1187, 1231 (1992) (reviewing BRUCE ACKERMAN, WE THE PEOPLE: 1: FOUNDATIONS (1991)) (arguing that the Roe v. Wade opinion, which allows abortion, is an example of interpretive arbitrariness).

[98] U.S. CONST. amend. XIV, § 1.

[99] Plessy v. Ferguson, 163 U.S. 537, 548 (1896).

[100] Brown v. Bd. of Educ., 347 U.S. 483, 495 (1954).

[101] *See* U.S. CONST. art. III, § 2.

periods during which competing norms may remain unsettled.[102] An internally coherent legal system, for example, cannot support and oppose capital punishment at the same time. Systemically, therefore, interpretive mutations seek consistency in law's normative evolution.[103]

No generation of jurists is permitted to close the interpretive series by declaring its holdings to be immutable. Each generation of jurists, however, is free to interpret master texts according to its understanding, level of knowledge, and social needs. Some interpretations most relevant to one period of development may no longer be needed in another period. New interpretations may resolve issues that prior generations did not have or could not settle. Older interpretations may have to be modified to meet new challenges.

If a master text survives for centuries, it may experience several successive eras of interpretative mutations. An era of interpretation is rooted in distinct spatio-temporal specificities and social realities. An era of interpretation, therefore, reflects its unique cultural, social, and political viewpoints. No era of interpretation is sacred, not even the era of the so-called "founding fathers," the authors of the master text. And no era of interpretation is entitled to uncritical respect regardless of how skilful or knowledgeable its exegetes were. The holdings of an interpretive era may last for decades by sheer force of their continued relevance and utility, but no era of interpretation is inherently superior to any other. Classical interpretive methods, which a prior generation of jurists deployed to interpret the master text, need not be discarded if they continue to inform present interpretations of the master text. No interpretive methodology, however, is sacrosanct. Each generation of jurists is free to adopt new methodologies to interpret master texts. As a

[102] For example, the circuit courts may interpret the master text in conflicting ways. In such cases, the Supreme Court may resolve the conflict by pronouncing a more authoritative interpretation binding on all courts. For a current example, consider the Supreme Court's grants of certiorari in the Patient Protection and Affordable Care Act litigation. *See* Florida. v. U.S. Dep't of Health and Human Servs., 648 F.3d 1235 (11th Cir. 2011), *cert. granted*, No. 11-393, 2011 WL 5515162 (Nov 14, 2011), *cert. granted*, No. 11-398, 2011 WL 5515164 (Nov. 14 2011), *and cert. granted in part*, No. 11-400, 2011 WL 5515165 (Nov 14, 2011). While the courts of appeals took up different issues below, they did not agree on the issues that were common between the cases, such as Congress' authority to enact the legislation under the Commerce Clause. *See, e.g.*, *Florida*, 648 F.3d at 1241 (finding Congress exceeded its authority under the Commerce Clause); Thomas More Law Ctr. v. Obama, 651 F.3d 529, 534 (6th Cir. 2011) (finding the Act a valid exercise of legislative power under the Commerce Clause).

[103] In each legal system, however, there are periods of uncertainty when opposing norms vie for legitimacy and inclusion. In the United States, circuit courts may disagree about the application of federal law. Such disagreements may simmer for years before the Supreme Court provides a resolution. For example, federal circuit courts disagree whether the installation of a monitoring device constitutes search. For a discussion of this disagreement, see People v. Zichwic, 114 Cal. Rptr. 2d 733, 742 (Cal. Ct. App. 2001). The Supreme Court recently "resolved" the issue. *See* United States v. Jones, No. 10-1259, 2012 WL 17117 (2012).

general principle, no era of interpretation and no generation of jurists are vested with any preemptive authority to foreclose interpretive series and subseries of a master text from further development.

Each distinct provision of the master text may contain one or more subseries. The First Amendment jurisprudence is a rich and fertile provision of the U.S. Constitution. Within the First Amendment, there are numerous subseries dealing with freedom of speech, free exercise of religion, and separation of church and state.[104] Each subseries cultivates its own interpretive coherence that determines the future expansion of its particular norms. The text, history, structure, and prior understandings of the subseries in the broader context of the master text guide the dynamics of interpretative mutations. A mutation that does not fit with the pattern of the series or the subseries frequently generates judicial and academic controversy.

Though not exactly analogous, interpretive mutations follow the logic of a mathematical series in which the entry of successive numbers cannot be willful or arbitrary.[105] Consider a mathematical series of prime numbers: (1, 2, 3, 5, 7, 11, 13 . . .). An entry of 15 or 16 violates the logic and pattern of the series because 15 and 16 are not prime numbers. These numbers do not belong to the series. Likewise, each successive entry that may be lawfully added to the interpretive series of a master text must satisfy the logic, the pattern, and the historical ethos of the series. The interpretive series is not open to any and all entries. Each interpretive entry must first respect the normative presumption that the series is internally coherent. Furthermore, no entry contrary to clear ordainments of the master text can be allowed. Any interpretive mutation that subverts the series, defies its logic, or deviates from its pattern cannot be a sustainable part of the interpretive series. Of course, an entire interpretive series or subseries can be discontinued by changing or repealing the associated provision of the master text. While each generation of jurists is free to interpret master texts, no generation is

[104] *See* U.S. CONST. amend. I.

[105] A mathematical series discloses that there exists order and logical consistency within its infinite progression—a point most relevant to the study of the interpretive series. Consider a master series and three subseries. Suppose the master series consists of every natural number, that is, it consists of (1, 2, 3, 4, 5, 6 . . .). Now consider three subseries: the odd numbers series (1, 3, 5, 7, 9, 11 . . .); the even number series (2, 4, 6, 8, 10, 12 . . .); and the prime number series (1, 2, 3, 5, 7, 11 . . .). Each subseries, though itself infinite, is part of the master series. Every odd, even, and prime number in the subseries also exists in the master series. However, the first and the second subseries are mutually exclusive in that a natural number found in the odd-numbers subseries does not exist in the even-numbers subseries. Likewise, the odd-numbers and prime-numbers subseries are not the same, simply because every odd number is not a prime number. Despite this mutual exclusivity, all three subseries are parts of the master series. Furthermore, subseries may share some common members. The prime-numbers subseries shares common members with both odd- and even-numbers subseries. Furthermore, each subseries could have its own subseries.

allowed to subvert the interpretive series by lifting all methodological constraints and completely discarding prior entries. The evolution of law permits interpretive mutations but not willful subversions.

VI. CONCLUSION

The paradoxical evolution of law authenticates durability and change. It mediates between the finite and the infinite. At a given point in time, law is a definitive corpus of rules and its constitutive norms can be identified and applied through specific legal methods. Despite its finitism, however, law accommodates a complex world imbued with absolute infinitism. Time, space, divinity, nature, causation, and consequences, all are infinite. As a general matter, human systems, including law, faced with infinitism manufactures finitism. In contracts, decedent's estate, patents, search and seizure, and other areas of law, law needs finite facts and finite rules to structure transactions and resolve disputes. Master texts, containing fundamental norms, protect the paradoxical evolution of law. They provide stability and durability. But they are also exposed to bi-dimensional mutations. First, the master text may undergo amendatory mutations. Second, the master text, even if non-amendable, is open to interpretative mutations. Living master texts, such as the U.S. Constitution, evolve and embrace bi-dimensional mutations. Law's structured finitism, however, places methodological constraints on interpretative mutations and does not allow arbitrary and willful subversions.