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Chronolawgy: A Study Of Law And Temporal Perception

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INTRODUCTION

In 2012, time is of the essence and speed is of the utmost importance.[1] With respect to the nature of time, relatively recent developments and trends have begun to reshape how societies and individuals utilize, manage, and experience time. Through a number of factors, industrialized nations are experiencing a transition from structures organized according to the strict repetition of the clock to the free-flowing and precipitous nature of the network. Temporal impediments that once hindered progress have been drastically diminished by the ability to instantaneously communicate with an unprecedented number of people regardless of physical distance.

Temporal dynamics affect every aspect of existence, from how we structure political and economic institutions, to how people live day-to-

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1. Because this article will deal with differing concepts of the measurement of time, I will note that all years mentioned are calculated according to the Gregorian calendar. 2012 is thus 2012 *Anno Domini*. As of this era in history, there is no international uniformity in calendar time.

day, week-to-week, or year-to-year. Changes in the velocity at which information is capable of being transmitted have had a remarkable impact on the ways in which the passage of time is experienced. Along with this transition comes an intensification of the pace of life, a pace in sharp contrast to the pace at which the legal system operates. The legal system is built around concepts of stability, longevity, and infrequent change—concepts that have decreasing value in a society that prizes flexibility, rapidity, and continuous transformation. The law, in order to be considered legitimate, must tie together the immutable past and the unknowable future while attending to the concerns of the modern generation. The evolution of the law does not occur at the same pace as the evolution of man.

This article will explore the conflict that arises between a society accustomed to instant gratification and constant flux when confronted with a legal system that must operate deliberately and change infrequently by design. Section I will discuss the complicated nature of time from a number of different vantage points in order to develop an understanding of how humans experience the passage of time. Section II will elaborate on the phenomenon of social acceleration, including the broad effects on both systems and individuals. Section III will discuss the time frames that the legal system must operate in to maintain stability and legitimacy, exploring the fixed and relational temporal intervals that guide elusive concepts such as due process. Section IV will examine the effects of the friction between the pace of twenty-first century society and the pace of the twenty-first century legal system. Finally, Section V will focus on methods for combatting the rushed nature of the modern era in the hope of preserving the ideals that the legal system represents.

I. THE NATURE OF TIME

A. *The Perception of Time*

Time, as a concept, has been quite difficult to define. While "the experience of time's passage is intimately familiar, the idea of time is strangely elusive."[2] Philosophers and poets have often taken a broad view of time, attempting to capture and understand whether time flows endlessly, or whether the passage of time is merely an illusion. Henry David Thoreau described time as "but the stream I go a-fishing in."[3] Kahlil Gibran likened the immeasurable nature of time to the immeasurable nature of love:

2. J.T. Fraser, *Time Felt, Time Understood*, 3 KRONOSCOPE, 15 (2003).

3. HENRY DAVID THOREAU, WALDEN OR, LIFE IN THE WOODS AND ON THE DUTY OF CIVIL DISOBEDIENCE 71 (The New American Library of World Literature, Inc. 1960) (1854).

> Who among you does not feel that his
> power to love is boundless?
>
> And yet who does not feel that very love,
> though boundless, encompassed within the
> centre of his being, and moving not from
> love thought to love thought, nor from
> love deeds to other love deeds?
>
> And is not time even as love is, undivided
> And spaceless?[4]

Philosophers have attempted to grasp the complicated relationship between man and time since the dawn of philosophy itself. One of the earliest thinkers to address the nature of time was Zeno, whose paradoxes sought to demonstrate that the passage of time was merely a delusion of the senses.[5] Plato separated the nature of reality into two separate domains: the world of phenomena, which is experienced through the senses, and the world of forms, which is the unchanging essence of objects. Time could only factor into the former, because time could not be understood as anything more than a measure of change.[6] Aristotle similarly recognized that without change the idea of time was meaningless and defined time as the measure of motion.[7] Toward the end of the fourth century, St. Augustine developed an understanding of the flow of time in the universe that is opposite to the experience of time in the Self. While the universe appears to unfold from the past to the future, the Self experiences time as the future turning into the present before being relegated to the past.[8] Immanuel Kant, who defined time as an *a priori* form of perception, asserted that time is "nothing but the form of inner sense, that is, of the intuition of ourselves and of our inner state."[9] Ludwig Wittgenstein went so far as to claim that immortality was possible merely through conceptualization: "If we take eternity to mean not infinite temporal duration but timelessness, then eternal life belongs to those who live in the present."[10]

All forms of life experience time through rhythms and cycles. All

4. KAHLIL GIBRAN, THE PROPHET, 62–63 (1923).

5. BARBARA ADAM, TIME 24 (2004). Perhaps the most well-known of Zeno's paradoxes was the arrow paradox. Zeno posited that at any given instant (with an instant defined as an indivisible unit of time), an arrow in flight can have no motion. Because nothing can move in an instant, but time is composed of successive instants, nothing can ever move. Nick Huggett, *Zeno's Paradoxes*, THE STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Oct. 15, 2010), http://plato.stanford.edu/entries/paradox-zeno/.

6. ADAM, *supra* note 5, at 26–7.

7. *Id.* at 27–28.

8. *Id.* at 54.

9. IMMANUEL KANT, CRITIQUE OF PURE REASON B49 (Marcus Weigelt, ed., Penguin Classics 1996) (1787).

10. LUDWIG WITTGENSTEIN, TRACTATUS LOGICO-PHILOSOPHICUS 6.4311 (C,K. Ogden,

types of animals, plants, and bacteria are guided by internal clocks: circadian rhythms that are synchronized with light and dark cycles governed by the rotation of the Earth.[11] Every human has a master internal clock located in the suprachiasmatic nucleus (SCN), a cluster of nearly 10,000 brain cells in the hypothalamus.[12] The SCN regulates more than fifty different daily rhythms, including those of blood pressure, mood, fertility cycles, and sleep/wake cycles.[13] Circadian rhythms also affect the ability to perceive shorter time intervals.[14]

These rhythms affect how humans experience time on a day-to-day basis. J.T. Fraser refers to these experiences as biotemporality – time associated with living organisms.[15] Yet this is only one segment of a six-level hierarchy that helps to define one's temporal reality. The other five are: 1) atemporality – the chaos of electromagnetic radiation at the moment of the Big Bang; 2) prototemporality – the realm of particle waves; 3) eotemporality – the time of massive objects (such as planets and stars) gathered into galaxies; 4) nootemporality – the time of the human mind (dealing with longer, more open-ended time horizons than biotemporality); and 5) sociotemporality – the time of a society produced by social consensus.[16] For the purposes of understanding how modern developments have influenced the perception of time, this last category is the most critical. While some aspects of time are eternal and unchanging (e.g., the time required for the Earth to complete an entire rotation on its axis), other aspects of temporal understanding are constantly being redefined.

The concepts of time and change are inseparably intertwined. There can be no change without time for it to occur and there can be no time (or, there would be no need for the concept) without some processes occurring to measure it against.

> People accept that time exists as a physical entity because we have invented those objects called clocks, which are simply more consistent than buds flowering or apples rotting. In reality, what's really happening is motion, pure and simple—and this motion is ultimately confined to the here and now. . . . [G]rowing children, aging, and feeling most poignantly that time exists when our loved ones die con-

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translator, Project Gutenberg Ebook 2010) (1921). Available at http://www.gutenberg.org/files/5740/5740-pdf.pdf.

11. SARAH NORGATE, BEYOND 9 TO 5: YOUR LIFE IN TIME 41 (2006).

12. PHILIP ZIMBARDO, PH.D. & JOHN BOYD, PH.D. THE TIME PARADOX: THE NEW PSYCHOLOGY OF TIME THAT WILL CHANGE YOUR LIFE 191 (2008).

13. *Id.*

14. NORGATE, *supra* note 11, at 80.

15. ALLEN C. BLUEDORN, THE HUMAN ORGANIZATION OF TIME: TEMPORAL REALITIES AND EXPERIENCE 24 (2002).

16. *Id.*

> stitute the human perceptions of the passage and existence of time. Our babies turn into adults. We age. They age. We all grow old together. *That to us* is time. It belongs with us. . . . Time does not have a real existence outside of animal-sense perception. It is the process by which we perceive changes in the universe.[17]

Einstein's theory of general relativity rests on the principle that time has no tempo of its own outside of the observer. Thus, the contextual nature of time is not limited to the social world, it is an intrinsic feature of the universe.[18] Time, rather, is defined according to how societies engage with nature's rhythms and cycles.[19]

B. *From Calendar Time to Clock Time to Network Time*

Early man kept track of time through cycles of light and dark or hot and cold. The earliest form of calculating time was accomplished by tracking the phases of the moon; only later would the sun become central to timekeeping.[20] As civilizations developed, the need to coordinate religious practices and governmental affairs led to inventions that more carefully measured what constituted a day or a year.[21] Mechanical clocks were first invented in the thirteenth century, but the need to carefully delineate the passage of time did not place the clock in a position of great importance until the Industrial Revolution.[22] For agrarian societies, the importance of time measurement was in determining the rise and fall of the sun as well as the change in seasons.[23] The shift to clock time, however, altered more than merely the measure of the day.

> The clock, we can state quite categorically, changed the meaning of time. The machine time supplanted (but never eradicated) the experiential understanding of time as change—as growth and ageing [sic], seasonal variation, the difference between the past and future—and shifted the experience and meaning of time towards invariability, quantity and precision motion expressed by number. With the mechanical clock, time became disassociated from planetary rhythms and seasons, from change and ageing [sic], from experience and

17. ROBERT LANZA, M.D., BIOCENTRISM: HOW LIFE AND CONSCIOUSNESS ARE THE KEYS TO UNDERSTANDING THE TRUE NATURE OF THE UNIVERSE 108–110 (2009).

18. ADAM, *supra* note 5, at 61–62. This observation was one of the many reasons Einstein was named *Time*'s "Person of the Century." Frederic Golden, *Albert Einstein*, TIME, Dec. 31, 1999, http://www.time.com/time/magazine/article/0,9171,993017,00.html.

19. TODD D. RAKOFF, A TIME FOR EVERY PURPOSE: LAW AND THE BALANCE OF LIFE 32 (2002).

20. Adam, *supra* note 5, at 106.

21. DAVID PRERAU, SEIZE THE DAYLIGHT: THE CURIOUS AND CONTENTIOUS STORY OF DAYLIGHT SAVINGS TIME 26 (2005).

22. *Id.* at 28.

23. Sam Ladner, *Agency Time: A Case Study of the Postindustrial Timescape and Its Impact on the Domestic Sphere*, TIME & SOCIETY 284, 289 (2009).

> memory. It became independent from time and space, self-sufficient, empty of meaning and thus apparently neutral. This allowed for entirely new associations, linkages, and contents to be developed and imposed.[24]

Indeed, E.P. Thompson identified a "general diffusion of clocks and watches" that occurred at the "exact moment" the shift to industrialization required a greater degree of synchronization of labor.[25]

As the clock took over as the primary medium through which mankind experienced time, "lived time" experienced in and through nature disappeared.[26] Advances in communication and transportation pushed for a universalized standard in how societies measured time. Of particular concern were telegraphs and railroads, because both traversed great distances and connected regions that each measured time according to local custom.[27] Differences in how regions calculated time led to legal controversies that primarily revolved around procedural deadlines, time in determining the coverage period for insurance policies, and designated closing times for taverns.[28] It was not until 1918 that Congress established a uniform national time and created the five time zones that we use to coordinate national activity.[29]

The need for precision in timing marched forward in the twentieth century. Physical scientists, requiring precision for their studies, sought to define the passage of time in smaller and smaller increments. While most people would be more than happy to consider a single second to be roughly 1/60 of a minute, 1/3600 of an hour, or 1/86,400 of a day, by 1955 such imprecise measurements were outdated. To ensure precise timing, a method was devised to produce the "the most accurate realization of a unit that mankind has yet achieved."[30] The cesium clock, accurate to one second in 1,400,000 years,[31] measures time by calculating the number of transitions of two hyperfine energy levels of the ground state of a cesium-133 isotope—9,192,631,770 such transitions, to be precise.[32] Such hyperfine measurements are necessary for modern technologies such as global positioning systems.

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24. Adam, *supra* note 5, at 113–14.

25. E.P. Thompson, *Time, Work-Discipline and Industrial Capitalism*, 38 PAST & PRESENT 56, 69 (1967).

26. John Urry, *Speeding Up and Slowing Down*, in HIGH-SPEED SOCIETY: SOCIAL ACCELERATION, POWER, AND MODERNITY 179, 185 (Hartmut Rosa & William E. Scheuerman, eds., 2009).

27. Prerau, *supra* note 21, at 34.

28. Rakoff, *supra* note 19, at 16.

29. Standard Time Act, Ch. 24, 40 Stat. 450 (1918).

30. *Cesium Atoms at Work*, TIME SERVICE DEPT., UNITED STATES NAVAL OBSERVATORY, http://tycho.usno.navy.mil/cesium.html.

31. *Id.*

32. *Id.*

Further innovation in the twentieth century has once again challenged how mankind interacts with time. Exponential growth in communication technologies and the availability of information have diminished the importance of clock time in favor of "network time." Under the regime of network time, "our long-standing relationship with the time of the clock is not only being 'deconstructed' but is undergoing profound transformation."[33]

II. SOCIAL ACCELERATION

A. *The Futuristic Nature of the Present*

The effects of the changing perception of time in the digital era are profound. In recent decades, the feelings of heavy time pressure and a scarcity of time have increased.[34] This phenomenon has been referred to in numerous works as "time crunch," "time deficit," "time famine," "time poverty," "time pressure," "time scarcity," "time sickness," "time squeeze," and "time stress."[35] The "hyperefficient, nanosecond world distorts the organization of our social time and creates havoc with our orientation to the rhythms of the natural world."[36] Such mindsets lead people to believe that they are constantly in a time crunch and wasting time becomes a source of emotional distress.[37] The majority of Americans report becoming angry and impatient when faced with typical delays in daily life such as waiting for late people, standing in line, getting stuck in traffic, waiting in a doctor's office, or when restaurant service was slow.[38] Many lawyers, law students, and legal academics are profoundly aware of the passage of minutes and seconds, leading a "multiphrenic existence" according to psychologist Kenneth Gergen—a "saturated, over-filled late modern identity . . . arguably based on a perception of time as increasingly elastic and malleable and filled with activities capable of taking place at anytime during the week or day."[39]

In the network society, there is a constant pressure to remain connected and "always on."[40] Multitasking has become a facet of everyday life as the distinctions between work time and leisure time become

33. Robert Hassan, *Network Time* in 24/7: TIME AND TEMPORALITY IN THE NETWORK SOCIETY 37, 49 (Robert Hassan & Ronald E. Purser, eds., 2007).

34. Hartmut Rosa, *Social Acceleration: Ethical and Political Consequences of a Desynchronized High-Speed Society* in HIGH-SPEED SOCIETY: SOCIAL ACCELERATION, POWER, AND MODERNITY 77, 86 (Hartmut Rosa & William E. Scheuerman, eds., 2009).

35. Alex Szollos, *Toward a Psychology of Chronic Time Pressure*, 18 TIME & SOCIETY 332, 336 (2009) (internal citations omitted).

36. ZIMBARDO & BOYD, *supra* note 12, at 158.

37. *Id.*

38. *Id.*

39. Rebecca R. French, *Time in the Law*, 72 U. COLO. L. REV. 663, 719 (2001).

40. ROBERT HASSAN, THE INFORMATION SOCIETY 6 (2008).

increasingly blurred.[41] The need to process an increasing amount of information at an increasing amount of speed has created a sense of being constantly rushed through activities. The exponential acceleration of technological change combined with instant connectivity have a direct influence on human temporal perception, resulting in either conscious or subconscious acceleration of many processes along with an expectation that events should unfold rapidly.[42]

B. *The Effects of Globalization*

There are a number of different social influences that factor into the common perception of time as increasingly fleeting. Perhaps most important is globalization. We live in an inter-connected society for which speed is critical. Businesses seek to stay on the cutting edge to remain competitive. Governments demand a constant stream of information in "real time" to remain viable. For individuals, staying connected with broad social networks of friends, relatives, and acquaintances from all parts of the world is considered to be a necessity. Technological acceleration brings forth changes in social practices, communication structures, patterns of social interaction, and forms of social identities.[43] Increased awareness of these changes from places near and far leads to the notion that one must keep up with the rate of change in their social and technological worlds in order to avoid the loss of potentially valuable opportunities or connections.[44]

Capitalism plays an important role in increasing anxiety about time. Karl Marx was one of the more influential thinkers to link together the nature of capitalism and the idea of temporal compression during the middle of the nineteenth century when clock time had become the norm in western societies. Before the widespread implementation of clocks into the workplace, workers were generally remunerated for the value of the goods or services they provided.[45] Marx recognized that in order for workers to be compensated for their time, time was the only appropriate exchange value that could effectively translate work into money.[46] However, in order for time to be commodified, the notion of time would have to be decontextualized from traditional understandings and seen as little more than an abstract, standardized measurement that could be divided into exchangeable units.[47] As factories proliferated, the notion that time

41. *Id.* at 166.
42. Szollos, *supra* note 35, at 337.
43. Rosa, *supra* note 34, at 88.
44. *Id.*
45. ADAM, *supra* note 5, at 38.
46. *Id.*
47. *Id.* at 38–39.

is money became a fact of life.

Because time is money in a capitalist system, "speed becomes an absolute and unassailable imperative for business."[48] Increases in automation, efficiency, and information lead to decreases in transaction costs.[49] The drive to decrease these transaction costs is fueled by the threat of competition from everywhere at once due to globalization. Manufacturers may exacerbate the anxiety people feel about time in order to make people uncomfortable with the product they currently own. Advertisers seek to induce anxiety in order to increase demand. Similarly, it is in the best interests of media outlets to increase anxiety so that people will constantly seek updates regarding events going on in the world around them.[50] For workers, the anxiety is felt in the need to increase in speed and efficiency, lest they be replaced by someone or something that can produce more with lower transactional costs. As James Gleick explains,

> The modern economy lives and dies by precision in time's measurement and efficiency in its employment. If money is the visible currency of trade, time is its doppelgänger, a coin over which companies and consumers battle, consciously or unconsciously, with ever-greater urgency . . . . Pruning minutes and seconds and hundredths of seconds has become an obsession in all but a few segments of our society.[51]

C. *Technological Developments*

Futurists are fond of discussing Moore's law, named after Intel co-founder Gordon Moore.[52] In 1965, Moore predicted that chip density—the number of transistors on a microchip—would double approximately every two years.[53] This is the reason that the phone, laptop, or tablet one purchased in 2009 has already been replaced with a newer model on the assembly lines. Such technological advances drive more than simply the market for electronics. From the speed at which information is delivered to the depiction of life in television and cinema, the ways in which we experience time have evolved alongside the rapid changes in those delivery systems.

As the devices which we use to interact with the world increase in

48. *Id.* at 39.

49. DON TAPSCOTT & ANTHONY D. WILLIAMS, WIKINOMICS: HOW MASS COLLABORATION CHANGES EVERYTHING 56 (2008).

50. GREGG EASTERBROOK, SONIC BOOM: A GUIDE TO SURVIVING AND THRIVING IN THE NEW GLOBAL ECONOMY 68 (2010).

51. JAMES GLEICK, FASTER: THE ACCELERATION OF JUST ABOUT EVERYTHING 11–12 (2000).

52. *Moore's* Law, INTEL, http://www.intel.com/technology/mooreslaw/

53. *Id.*

speed, reliability, and practicality, the ways in which we are accustomed to doing things become disordered more rapidly.[54] Rapid change is not limited to the creation of concrete goods. As Dr. Shulamit Almog states,

> digital possibilities, because of their total and encompassing nature, create not only revolutionary technological options that affect culture at large, but also a new experience, state of being, and state of mind. Digital technology permeates our everyday lives and our ideas about epistemology in a manner that renders the digital condition inseparable from the construction of meaning and, thus, from the human condition.[55]

The acceleration of technological change cannot be divorced from the acceleration of social change. Increasing rates of technological change lead to accelerated rates of transformation in the workplace, which in turn lead to a sense of acceleration in the pace of everyday life.[56] This phenomenon is not unique to the modern era, and the link between technological and social acceleration can be seen occurring over the course of the last two centuries through the development of communication devices (from the telegraph to the telephone to the television) and transportation systems (from the steam engine to the automobile to the airplane).[57] Moore's Law even appears to have held true since long before the invention of either the transistor or the integrated circuit.[58]

There are, however, reasons to believe that there is an incomparable quality of temporal compression distinctive to the early twenty-first century. The ability to operate in "real time" with parties across the globe at any given moment has created a culture in which societies have become accustomed to immediacy. Exponential growth by definition begins slowly but picks up momentum over time. Thus, there is a marked difference between the speed and capability of computing devices in the first half of the twentieth century as compared to the latter half of the

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54. EASTERBROOK, *supra* note 50, at 18.

55. Shulamit Almog, *Creating Representations of Justice in the Third Millennium: Legal Poetics in Digital Times*, 32 RUTGERS COMPUTER & TECH. L.J. 183, 189 (2006).

56. WILLIAM E. SCHEUERMAN, LIBERAL DEMOCRACY AND THE SOCIAL ACCELERATION OF TIME 18 (2004).

57. *See* THOMAS HYLLAND ERIKSEN, TYRANNY OF THE MOMENT: FAST AND SLOW TIME IN THE INFORMATION AGE 51–58 (2001).

58. RAY KURZWEIL, THE AGE OF SPIRITUAL MACHINES: WHEN COMPUTERS EXCEED HUMAN INTELLIGENCE 22–25 (1999). Kurzweil tracks the development of the speed and density of computation from the mechanical card-based computing devices first used to calculate the 1890 census (1890–1928) through relay-based computers used to crack the Nazi Enigma code (1939–1941) through vacuum-tube computers such as Colossus and Univac I (1943–1955) through discrete transistor computers (1958–1966) up to the integrated circuit computers of the late twentieth century (1968–1998) and has noticed steady exponential growth in the power of computers over that time span. *Id.*

twentieth century up through the present.[59] "Time, regarded as a means to create distance and proximity, is gone."[60]

Increased digitalization has also led to an exponential growth in the number of images one is exposed to on a daily basis. To accommodate the overabundance of stimulation, the human brain is forced to change its organization and functioning.[61] For those who would write off the impact of modern technology as par for the historical course, it should be noted that the "technologically driven change in the brain is the biggest modification in the last 200,000 years (when the brain level of *Homo sapiens* reached the modern level)."[62] Because one is constantly bombarded with images, the brain must adapt in order to process information more rapidly, coming at the cost of devaluation of the depth and quality of our relationships.[63]

Although we are exposed to more information, the depth of understanding of that information is limited by the ability to concentrate on it before moving on to the next bit of data designed to grab the attention. If you have felt that you suffer from Attention Deficit Disorder (ADD) or Attention Deficit Hyperactivity Disorder (ADHD), you are not alone; Evan Schwartz, a cyberspace critic from *Wired*, characterized ADHD as "the official brain syndrome of the information age."[64] Indeed, the symptoms of ADD are eerily similar to patterns that emerge in a fast-paced culture: "restlessness, extreme segmentation of attention, an inability to concentrate or absorb anything more than bits or bytes."[65] A decrease in attention span is a natural consequence of attempts to condense an ever-increasing amount of information into a relatively constant amount of disposable time.[66] The deluge of information (referred to by author David Shenk as "data smog"[67]) eliminates quiet moments of reflection and interferes with the ability to deliberately contemplate important matters that require undivided attention.[68]

Even more troubling, the ever-increasing number of images "has acutely disrupted the epistemological value that we can ascribe them as

59. "If the automobile industry had made as much progress in the [latter half of the twentieth century], a car today would cost a hundredth of a cent and go faster than the speed of light." *Id.* at 25.

60. ERIKSEN, *supra* note 57, at 52.

61. RICHARD RESTAK, M.D., THE NEW BRAIN: HOW THE MODERN AGE IS REWIRING YOUR MIND 38 (2003).

62. *Id.*

63. *Id.* at 48.

64. *Id.* at 45.

65. Eva Hoffman, *Living? I Don't Have the Time*, THE TIMES (LONDON), Sept. 26, 2009, at Saturday Review 4.

66. ERIKSEN, *supra* note 57, at 69.

67. *See* DAVID SHENK, DATA SMOG (1997).

68. HASSAN, *supra* note 40, at 115.

a representation of reality."[69] As technologically sophisticated means for representing reality increase in quality, the ability to discern which images are real and which are simulated becomes nearly impossible.[70] The sheer amount of information and imagery individuals are exposed to on a daily basis increases the amount of contradictory information one is exposed to, creating "paralysis about what to take seriously."[71]

The ways in which we interact with these images also causes temporal distortion. The ability to inexpensively capture images or sequences that can be replayed at varying speeds has altered the perception of time as a purely linear concept. The symbiotic relationship we share with the devices we use to receive, process, and transmit information has affected the way we think about the past, the way we value the present, and the way we move toward the future. In order to deliver unparalleled amounts of information in consumable quantities at acceptable speeds, the information must be fragmented. When this occurs, it becomes increasingly difficult to create narratives, orders, and developmental sequences, distorting the understandings of cause and effect, organic growth, and maturation.[72]

Manuel Castells, a sociologist from Berkeley, described the effects of computer time on the perception of reality:

> [D]ominant values and interests are constructed without reference to either past or future in the timeless landscape of computer networks and electronic media where all expressions are either instantaneous or without predictable sequencing. All expressions from all times and from all spaces are mixed in the same hypertext, constantly rearranged and communicated at any time, anywhere, depending on the interests of senders and the moods of receivers. This virtuality is our reality because it is within the framework of these timeless, placeless, symbolic systems that we construct the categories and evoke the images that shape behavior, induce politics, nurture dreams and trigger nightmares.[73]

Electronic media is not organized according to natural rhythms, but rather is dissected, rearranged, and reordered to satisfy the demands of the consumer or the vision of the producer.[74] By delivering information

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69. SHULAMIT ALMOG, HOW DIGITAL TECHNOLOGIES ARE CHANGING THE PRACTICE OF LAW 138 (2007).

70. *Id.*

71. EASTERBROOK, *supra* note 50, at 57.

72. Thomas Hylland Eriksen, *Stacking and Continuity: On Temporal Regimes in Popular* Culture in 24/7: TIME AND TEMPORALITY IN THE NETWORK SOCIETY 141, 151 (Robert Hassan & Ronald E. Purser, eds., 2007).

73. French, *supra* note 39, at 726 (quoting MANUEL CASTELLS, END OF MILLENNIUM 350 (1998)).

74. MANUEL CASTELLS, THE RISE OF THE NETWORK SOCIETY 492 (2d ed. 2000).

non-sequentially, "the whole ordering of events loses its internal, chronological rhythm, and becomes arranged in time sequences depending on the social context of their utilization."[75]

The ability to "create and imagine virtual images, space-times, and persons . . . promotes futurizing, the capacity to think of possible futures, possible virtual worlds that could become real."[76] Regular use of technology causes people to become future-oriented, a psychological construct that induces individuals to concentrate more on the future than the present.[77] This effect alone may have significant consequences for the judicial branch of government, which is necessarily backward-looking by design.[78]

III. LEGAL TIME

A. *Justice Rushed is Justice Denied*

For many industries, speed is critical; change is good, and the faster every company can evolve, the better. The law does not neatly fit into this worldview, however. In order for society to trust in the rule of law and the legitimacy of the justice system, neither the laws nor the interpretation of those laws can remain in a state of constant flux. To be a bedrock foundation of principles which can be trusted, the law must be stable and predictable. Precedents should not be easily overturned and longstanding practices should not be disregarded without careful consideration.

Inevitably, the law must evolve to reflect transformations in a society's ideological convictions; those changes, however, occur gradually. Common law is a particularly slow-developing process, as principles of *stare decisis* bind judges to prior decisions; it can often take decades to articulate and refine holdings.[79] This gradual process is an essential feature of the legal system, as adherence to precedent "reduces the likelihood that the judiciary will indulge in radical and unexpected departures from existing law."[80] Because perpetual change can eventually lead to chaos, the legal system maintains the status quo by resisting or refusing to acknowledge change.[81] Courts need to be perceived as "repositories

75. *Id.*

76. French, *supra* note 39, at 725.

77. ZIMBARDO & BOYD, *supra* note 12, at 137–42.

78. *See infra*, Part IV.C.

79. Liaquat Ali Khan, *Temporality of Law*, 40 MCGEORGE L. REV. 55, 81 (2009).

80. LON L. FULLER, ANATOMY OF THE LAW 103 (1968).

81. Khan, *supra* note 79, at 80. Khan goes on to describe the concept of "temporal inertia," defined as "the law's interest to maintain its efficacy over a period of time . . . unless repealed, overruled, or put to nonuse." *Id.*

and guarantors of fundamental values."[82] As courts develop new methods of operating to meet the needs of a globalized society, those values must stay firmly in place.

Oliver Wendell Holmes was fond of depicting the life of the law as experience, not logic, claiming that "a page of history is worth a volume of logic."[83] In order to be effective, the law must rely on reflective contemplations of the past and attempt to produce standards that will remain appropriate well into the unknowable future. However, in order to remain legitimate in the eyes of individuals, the legal system must "make use of the strategies and signifiers drawn from the culture at large."[84] Because justice, like time, is intangible, the concept of justice, like the concept of time, is largely dependent on social constructions. Conceptions of justice rely heavily on "generally accepted conventions, images and ideas to derive their meaning."[85] Thus, the legal system must stay moored to the past while adapting to the pace of the digital era.

In law, the passage of time can be viewed from a multitude of different angles. Critical to the perception of fairness in the legal system is the idea of due process. All processes require time to develop, and the length of time indicated by "due process" in incalculable.

> [T]he lengthy duration of the legal process is pragmatic. It creates a representation of a balanced and reasonable proceeding. Every phase in a trial proceeds in due course, and the gradual, structured building-up of one phase on top of the preceding one validates the closure, which is the final judgment. Each step in the process, including the time it takes to complete it, is necessary to create the impression of justice. The interval between the steps in the process creates a "poetic pause," which allows the ripening of the completed stage. The pause allows time for the events to make their impression, and the players to fully grasp their meaning. The gradual, logically ordered and structured proceeding, including the adequate intermissions between the stages, is part of the representation of the law-making process and enhances this representation's verisimilitude.[86]

Lawyers require long periods of time to diligently research the facts and the law involved in their representation. Other aspects of the legal process can require a huge commitment of time; discovery, with vast amounts of information now available to sort through, is a prime example. Continuances and delays can be used as either weapons or tools to

82. Gordon Bermant, *Courting the Virtual: Federal Courts in an Age of Complete Inter-Connectedness*, 25 OHIO N.U. L. REV. 527, 537 (1999).

83. Joseph W. Dellapenna, *Law in A Shrinking World: The Interaction of Science and Technology with International Law*, 88 KY. L.J. 809, 810 (2000).

84. ALMOG, *supra* note 69, at 125.

85. *Id.*

86. Almog, *supra* note 55, at 239–40.

achieve desired outcomes. Statutes of limitation limit the time frames available to bring charges. Clients being charged by the hour understand that time is money and demand value for the time they are paying for.

The idea of justice in the criminal justice system is built around the importance of time. To punish criminals, we make them serve time, or perhaps even serve hard time. A significant part of the punishment inherent to imprisonment is the temporal disassociation the prisoner is forced to experience when removed from society. Time in prison is said to pass extremely slowly for the incarcerated individual.[87] The lack of social cues that most people take for granted disrupts how to properly gauge the passage of time. "Family birthdays, football matches, religious feast days, leaving parties for work colleagues—all the chronology of birth, life and death flows on the outside of the prison, and the prisoner remains bitterly aware of it while forcibly restrained from participation in it."[88]

For the prisoner who believes he is innocent, the legal system cannot work quickly enough. Similarly, anyone who feels they have been wronged expects the justice system to swiftly address their grievances. The individuals seeking justice have heightened expectations regarding the pace at which the legal system operates. Both the civil and criminal courts have procedural rules to address these concerns, but some processes cannot (or should not) be rushed. One of the risks associated with the ubiquitous use of modern technology is that certain types of decision-making and problem-solving have become predominantly impulsive.[89] The longer a decision will be applicable into the future, the more time is required to make such a decision rationally.[90] Deep contemplation, necessary for the proper application of justice, requires time, and few people seem to have much of it to spare.

B. *Fixed v. Relational Aspects of Time in the Judiciary*

In order to function efficiently, the legal system must incorporate both fixed and relational time frames into the adjudicative process. Fixed time frames are those periods of time that are predetermined and inflexible. For organizational purposes, these time frames are strictly defined. Appeals must be filed within a certain period of time.[91] Statutes of limitation regulate the amount of time the state may bring a charge or

87. NORGATE, *supra* note 11, at 84.
88. *Id.*
89. *Id.* at 145.
90. Rosa, *supra* note 34, at 105.
91. FED. R. APP. P. 4.

a party may bring a claim. In order to maintain order, deadlines must be established that limit the amount of time a party may delay the process.

Relational time frames, however, are determined based on context. Contextual temporal considerations factor into the legal process when objective conclusions as to the nature of time must be drawn. An interval of fifteen to twenty seconds between a police officer's announcement of a search warrant and a forced entry may be a reasonable amount of time due to the possibility of destruction of evidence.[92] A factfinder may be called upon to determine if there is a difference between what is considered a reasonable amount of time as compared to a seasonable amount of time.[93]

While fixed intervals do not change as a society progresses, objective definitions of certain temporal concepts adapt alongside the changes in temporal perception. An accused criminal is guaranteed the right to a "speedy" trial, even if the definition of what is "speedy" is radically different since the Sixth Amendment was established in 1791.[94] Similarly, one of the fundamental goals of the federal civil system is to "secure the just, *speedy*, and inexpensive determination of every action and proceeding."[95] As social acceleration continues to pick up momentum, processes that were once considered expeditious become tedious as people are continually able to accomplish more in less time.

In the network society, one of the scarcest resources is the attention of others.[96] Those who seek to harness the attention of others must compete with the ubiquitous distractions inherent in modern society, be it the cell phone that is never turned off or the social networking site that begs for participation in a universe of the individual's own design. The dilemma for legal actors is how to properly engage decision-makers and encourage them to appropriate a proper amount of time to resolving the legal issues in front of them. Judges feel temporal pressure to move swiftly through dockets, while jurors are more accustomed to the rapid-fire nature of television shows such as *Law and Order* than the slow and wearisome nature of the legal process in action. The desire to accelerate the process can be overwhelming.

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92. United States v. Banks, 540 U.S. 31, 38 (2003).

93. *Compare* U.C.C. § 1–204(2) (2004) ("What is a reasonable time for taking any action depends on the nature, purpose and circumstances of such action."), *with* U.C.C. § 1–204(3) (2004) ("An action is taken 'seasonably' when it is taken at or within the time agreed or if no time is agreed at or within a reasonable time.").

94. U.S. CONST. amend. VI.

95. FED. R. CIV. P. 1 (emphasis added).

96. ERIKSEN, *supra* note 57, at 21.

C. *The Implications of Expedited Justice*—Bush v. Gore

Bush v. Gore[97] is prime example of the problems faced in the justice system when controversies are rushed through the courts. In a case that involved enormous stakes for the nation as a whole, the initial trial lasted just two days, completed just one week after the Florida Secretary of State Katherine Harris certified George W. Bush as the winner of Florida's electoral votes.[98] The next day, December 5, 2000, the Florida Supreme Court agreed to hear a direct appeal with briefs due by noon the following day and oral argument set for December 7.[99] The Florida Supreme Court decided the case on December 8, mandating a recount.[100] On Saturday, December 9, the Supreme Court granted certiorari, demanding briefs be turned in by 4:00 p.m. on December 10 with oral argument to take place December 11.[101] On Tuesday, December 12, a little before 10:00 p.m., just 34 hours after oral arguments were heard, the Court handed down a per curiam decision.[102]

The case set new records for speed as far as the briefing schedule, the overall litigation, and the time the Court took to make its decision.[103] The thought of preparing a brief for the Supreme Court with a day's notice should send shivers down even the most experienced lawyer's spine. Georges Gurvitch, a French sociologist, once described the legal profession as working under the rubric of "retarded time," a form of social time that purposefully slowed down development.[104] For lawyers, this allows time to investigate, develop, and refine the issues.[105] For judges, retarded time allows for reflection, study, and debate regarding difficult legal questions.[106]

The time lag between events and Supreme Court review of those events is important for a number of reasons. "Their insulation and the marvelous mystery of time give courts the capacity to appeal to men's better natures, to call forth their aspirations, which may be forgotten in the moment's hue and cry."[107] Justice Harlan Stone called this an opportunity for "the sober second thought."[108] In *Brown v. Board of Educa-*

97. 531 U.S. 98 (2000).

98. Michael Herz, *The Supreme Court in Real Time: Haste, Waste, and Bush v. Gore*, 35 AKRON L. REV. 185, 187 (2002).

99. *Id.* at 187–88.

100. *Id.* at 188.

101. *Id.*

102. *Id.*

103. *Id.* at 189.

104. FRENCH, *supra* note 39, at 717.

105. Herz, *supra* note 98, at 191.

106. *Id.* at 190.

107. *Id.* at 203.

108. *Id.*

tion,[109] the "deliberate speed" in which the Court proceeded (original arguments took place in December 1952, reargument took place in December 1953, and the unanimous decision was handed down in May 1954) was "an essential element of the real and perceived correctness and legitimacy of the decision."[110] The separate-but-equal doctrine had accumulated a significant amount of legitimacy of its own in the fifty-eight years since it had been established by *Plessy v. Ferguson*.[111]

Contrary to the careful deliberation in *Brown*, much of the controversy that surrounded the Supreme Court's decision in *Bush v. Gore* centered on the impossibility to properly delve into all of the issues given the expedited time frame. The justices were essentially "shooting from the hip" on difficult issues with profound importance.[112] Participating in events as they happen rather than examining them after the fact increases the risks of actual and perceived politicization and makes it more likely that decisions will reflect intuition, prejudice, and preference.[113] As such, the decision was "overwhelmingly attacked as partisan," adding to the impression that the Supreme Court is a partisan institution.[114] The perceived legitimacy of the Court as an impartial arbiter of legal disputes was severely affected in no small part due to the hurried and harried nature of the proceedings.

IV. TEMPORAL FRICTION

The case of *Bush v. Gore* is an extreme example of the justice system attempting to operate within a highly compressed time frame. While this case is an exception rather than a rule, it illustrates the dangers of hastening the work of lawyers and judges. But the pace at which individuals approach their day-to-day activities invariably affects the pace of the justice system. Legal materials are transformed into digital representations "before they have the time to reach closure and be loaded with the meaning they are intended to represent."[115] Furthermore, if one views the law primarily as the collective work of judges, clerks, officers, and lawyers,[116] the digital condition cannot be examined separately from the functioning of the legal system.

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109. 347 U.S. 483 (1954).

110. Herz, *supra* note 98, at 195.

111. 163 U.S. 537 (1896). The two cases were decided almost exactly fifty-eight years apart: *Plessy* on May 18, 1896 and *Brown* on May 17, 1954.

112. Herz., *supra* note 98, at 190.

113. *Id.* at 186–191.

114. *Id.* at 193.

115. Almog, supra note 55, at 221.

116. *See* KARL LLEWELLYN, THE BRAMBLE BUSH: ON OUR LAW AND ITS STUDY 3 (1960) ("What these officials do about disputes is, to my mind, the law itself.").

> The original legal performances put on in the courtroom by the legal system cannot compete with television channels that offer ceaseless screenings of legal deliberations and simulated legal deliberations or with innumerable law-related images appearing on various other screens that surround us all. Consequently, our commonly shared perceptions of justice and adjudication are constructed more and more from cultural representations of the adjudicative process rather than from the visual representations of that process performed by the legal system itself.[117]

The phrenetic pace at which lawyers, judges, and laymen experience time will most likely lead to three outcomes: 1) decreased time allotments for certain activities; 2) increased incorporation of technology in courtrooms and other legal settings; and 3) movement away from the legal realm to resolve controversies. The first is a consequence of a drive for efficiency coupled with the feeling of a lack of time. The second is a matter of the legal system reflecting the larger cultural norms that steer society. The third is a product of resignation at the inability of the traditional legal system to satisfy the contemporary desire for speed.

A. *Decreased Time Allotments in Legal Processes*

Ironically, the proliferation of technologies designed to increase efficiency have left people feeling as though they have less time, not more.[118] Despite the fact that time is saved in communication, production, and transportation, these savings are either not felt or are consumed by further obligations; they have been "swallowed up by the process of social acceleration."[119] A completed project does not result in leisure time because there are always backlogged emails or other communications to attend to. The situation "might be viewed as a balloon; press in at one point and at some other location the balloon will bulge out."[120] Philosopher Albert Borgmann has described Western society as being caught up in a "device paradigm" whereby people pursue devices to perform tasks they may have been happier performing themselves, without having to frantically work so hard to be able to afford those devices.[121] Furthermore, as technological acceleration increases, the ability to keep

117. ALMOG, supra note 69, at 142.

118. Carmen Leccardi, *New Temporal Perspectives in the "High-Speed Society"* in 24/7: TIME AND TEMPORALITY IN THE NETWORK SOCIETY 25, 27 (Robert Hassan & Ronald E. Purser, eds., 2007).

119. *Id.*

120. Frederic I. Lederer, *The Road to the Virtual Courtroom? A Consideration of Today's – and Tomorrow's – High Technology Courtrooms*, 50 S.C. L. REV. 799, 834 (1999).

121. GREGG EASTERBROOK, THE PROGRESS PARADOX: HOW LIFE GETS BETTER WHILE PEOPLE FEEL WORSE 208–09 (2003) (quoting ALBERT BORGMANN, TECHNOLOGY AND THE CHARACTER OF CONTEMPORARY LIFE (1984)).

pace lags behind; it takes time to program and learn how to properly operate each new breakthrough product, especially for older generations unaccustomed to rapid change.

While this phenomenon occurs in the background, economic forces compel us to always find more ways to be productive and efficient. This mindset, exacerbated by constant global competition, fetishizes speed and valorizes short-term outcomes.[122] Taking one's time could result in missing a sale, a client, a contact, or an opportunity.[123] High unemployment rates prompt those with jobs to consistently strive for more production (whether beneficial to society or not) in fear of joining the unemployment rolls. As the desire for quick turnarounds increases, the time and attention devoted to any single task is lessened. For those who engage in repetitive tasks, this represents efficiency. For legal actors, each case or controversy involves a unique set of facts or legal issues. Some aspects of organizing the information can be streamlined, but careful attention to detail is one of the most critical aspects of the legal profession.

Nevertheless, lawyers and judges are not immune to the effects of this time crunch. As the potential for high efficiency increases, the pressure to put efficiency first increases as well.[124] Lawyers working on an hourly basis have numerous cases pending at any time and must concern themselves with marketing their services as efficient craftsmen.[125] Lawyers working on a contingency basis desire the fastest resolution of the case possible that is compatible with victory.[126] Pro bono and government attorneys are perpetually short on time and are constantly reminded of the desire for increased efficiency.[127] In order to remain competitive, lawyers must provide legal services to their clients in time frames that correspond to consumer expectations. Inevitably, this requires quick response times regardless of the amount of time actually necessary to fully contemplate the intricacies of the work.

Judges are pressured to submit their decisions as fast as possible.[128] "Allowing time for the judicial creation to evolve is no longer considered as important as before."[129] Perhaps allowing time for the judicial

122. Hassan, *supra* note 33, at 55.

123. *Id.*

124. Almog, *supra* note 55, at 239–40.

125. Fredric I. Lederer, *Technology-Augmented Courtrooms: Progress Amid A Few Complications, or the Problematic Interrelationship Between Court and Counsel*, 60 N.Y.U. ANN. SURV. AM. L. 675, 681 (2005).

126. *Id.*

127. *Id.*

128. Almog, *supra* note 55, at 239–40.

129. *Id.*

creation to evolve is not even possible. Judge Donald E. Shelton described the sacrifices in the name of efficiency in the courtroom:

> The visual nature and speed of legal proceedings using modern technology challenges us to take the time necessary to allow our brains—and our hearts—to reflect on the question of what constitutes a truly fair decision. The fact is that we have now built machines that think faster than we can. But the machine is, at best, an *artificial* intelligence. Our human "hard drive" may seem to have limited megabytes of space and fewer megahertz of processor speed, but that is only because we devote so much of it to such inefficient "programs" as reasonableness, compassion, and justice.[130]

B. *Increased Incorporation of Technology*

As lawyers and judges attempt to increase efficiency, they will rely more and more heavily on technologies designed for that purpose. Technology has gradually made its way into the courtroom in the form of laptops, digital recording equipment, and the various handheld devices of any given number of individuals in the arena. The difficulty lies in determining how best to incorporate technological advancements to advance the distribution of justice.

One concern is cost. Once a court decides to begin incorporating new systems into its processes, should the new systems be uniform throughout the courthouse or vary from courtroom to courtroom depending on a judge's preference? Once systems are installed they will soon be out-of-date courtesy of Moore's Law, so system maintenance and routine upgrades are necessary.[131] Eventually, the whole system will need to be replaced (most likely sooner rather than later). Compatibility with the systems of other judges, lawyers, or litigators could also cause confusion, delay, and down time.[132]

A further consideration is whether increased efficiency through technological means indeed improves the administration of justice.[133] Most civil and criminal cases are settled outside of the courtroom.[134] Decreasing the cost and delay inherent in adjudication may cause an increase in the number of cases that go to trial.[135] Current delays in the system also allow parties to have some time for reflection and detachment from the initial emotions involved, allowing for more realistic

130. Donald E. Shelton, *Technology and the Judiciary: The Promise and the Challenge*, 39(1) JUDGES' J., 6, 7 (2000).

131. Lederer, *supra* note 120, at 806.

132. *Id.*

133. *Id.* at 830.

134. *Id.*

135. *Id.*

expectations of fairness.[136]

As technology further permeates the legal realm, representations of reality must be transformed to correspond with the expectations associated with the medium. Lawyers who create digital presentations to influence factfinders must be fully cognizant of the nature of digital media. Linear depictions of events may not comport with the ways jurors take in information; data may have to be fragmented, rearranged, and sped up to more closely resemble depictions of judicial proceedings in television and movies. Otherwise, not only do lawyers risk losing the attention of those already prone to distraction, but they risk failure to present information in a manner the digital brain considers appropriate.

C. *Departure from Traditional Legal Approaches*

If remedies through the court system become too desynchronized from the pace that individuals are accustomed to, individuals will seek alternate avenues to efficiently resolve their conflicts. A shift to institutions that operate in short, flexible time horizons, however, increases the risk of inconsistency and irregularity in the application of the law.[137]

One way to circumvent the slow-moving pace of the court system is to resort to forms of alternate dispute resolution. As might be expected, the rate of arbitration has been on the rise in recent years. Arbitration presents an opportunity for parties to avoid time-consuming legal formalities and develop sets of rules more consistent with the flexibility and pace representative of modern life. Such an approach might also be considered a rejection of the fixed nature of binding legal precedents in favor of ad hoc approaches that can more easily adapt to the frequent change experienced in modern business.[138] Because economic transactions require immediate responses and substantial flexibility, traditional forms of stable and rigid law may impede economic actors far too much to be considered reliable.

Another possible outcome is a transition of power to the executive branch. Each branch of government is grounded its own temporal orientation: the legislative branch is prospective, the judiciary is retrospective, and the executive is contemporaneous.[139] The legislative branch,

136. *Id.*

137. Wayne Hope, *Conflicting Temporalities: State, Nation, Economy and Democracy Under Global Capitalism*, 18 TIME & SOCIETY 62, 79 (2009).

138. William Scheuerman, *Economic Globalization and the Rule of Law*, 6 CONSTELLATIONS 3, 8 (1999).

139. WILLIAM SCHEUERMAN, LIBERAL DEMOCRACY AND THE SOCIAL ACCELERATION OF TIME 51 (2004).

incapable of passing ex post facto laws,[140] is future-oriented; accordingly, members of Congress or respective state legislatures must spend a significant amount of time deliberating the potential consequences of the laws they enact.[141] The judiciary, by contrast, only deals with events that have already taken place. While courts are by no means blind to the future application of rulings, the focus of the judicial branch primarily rests on applying tradition and precedent to past occurrences.[142] This feature of the judiciary severely limits courts' abilities to react swiftly to changes in social circumstances.

On the other hand, the executive branch is specifically designed to have the flexibility to address issues as they arise. Because the judiciary and legislature are both institutions grounded in procedural delays, the executive branch is more suited to rapid reaction to problems.

> To the extent that social and economic acceleration implies both incessant reinterpretations and frequent alterations to the constitutional system, substantial doses of executive-driven constitutional change might seem to represent a perfectly sensible institutional adaptation, notwithstanding its potential normative and political ills. Just as the distinction between interpretation and fundamental alteration so often becomes unclear in legal practice, so too the difficulty of distinguishing between the executive's reinterpretation of the constitutional "rules of the game" and its fundamental modification or alteration of those rules is likely to grow.[143]

Because the fast-paced and constantly changing economy requires fast, constantly changing forms of state intervention, executive and administrative bodies are better suited to the needs of the system than courts or legislatures.[144]

V. OUR SHARED FUTURE

A little more than half a century ago, H.L.A. Hart delivered a cryptic warning about the law:

> The world in which we live, and we who live in it, may one day change in many different ways; and if this change were radical enough not only would certain statements of fact now true be false and vice versa, but whole ways of thinking and talking which constitute our present conceptual apparatus, through which we see the

140. U.S. CONST. art. I, § 9, cl. 3 ("No Bill of Attainder or ex post facto Law shall be passed."); U.S. CONST. art. I, § 10, cl. 1 ("No State shall . . . pass any ex post facto Law . . .").

141. ROBERT HASSAN, EMPIRES OF SPEED: TIME AND THE ACCELERATION OF POLITICS AND SOCIETY 164 (2009).

142. *Id.*

143. William Scheuerman, *Constitutionalism in an Age of Speed*, 19 CONST. COMMENT. 353, 385 (2003).

144. SCHEUERMAN, *supra* note 139, at 124.

> world and each other, would lapse. We have only to consider how the whole of our social, moral, and legal life, as we understand it now, depends on the contingent fact that though our bodies do change in shape, size, and other physical properties they do not do this so drastically nor with such quicksilver rapidity and irregularity that we cannot identify each other as the same persistent individual over considerable spans of time. Though this is but a contingent fact which may one day be different, on it at present rest huge structures of our thought and principles of action and social life.[145]

As we move forward further into the digital era (as we must, for time is irreversible), we are constantly tearing down and rebuilding structures, institutions, and networks. Our brains are changing, our bodies are changing, the ways we interact with the world and the people in it are changing. And they are changing *fast.*

Efforts to preserve time and slow down the pace of modern life have appeared in response to the phrenetic nature of the digital era. The slow food movement[146] has gained enough popularity to spawn Cittaslow (Slow Cities) committed to designing structures to allow people to escape the stress of fast-paced modern cities.[147] The Slow movement does not indiscriminately demand slowness in every activity, but rather seeks balance: "Be fast when it makes sense to be fast, and be slow when slowness is called for."[148] This call for balance focuses intently on the work-life divide. The separation between work time and leisure time has been swallowed by technology that makes workers continuously available; the potential for personal time to be interrupted by work is nearly limitless.[149]

How the legal system will adapt to reflect society's routinely changing temporal dynamics is yet unknown. It is most likely that the courts will continue to evolve slowly, a factor that may be bigger than the law itself. Hartmut Rosa and William E. Scheuerman propose that

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145. H. L. A. Hart, *Positivism and the Separation of Law and Morals*, 71 HARV. L. REV. 593, 622 (1958).

146. *See* SLOW FOOD INTERNATIONAL, http://www.slowfood.com/. The slow food movement began as a response to the rushed nature of fast food.

147. *See* CITTASLOW INTERNATIONAL, http://www.cittaslow.net/ ("Municipalities which join the association are motivated by curios [sic] people of a recovered time, where man is still protagonist of the slow and healthy succession of seasons, respectful of citizens' health, the authenticity of products and good food, rich of fascinating craft traditions of valuable works of art, squares, theaters, shops, cafés, restaurants, places of the spirit and unspoiled landscapes, characterized by spontaneity of religious rites, respect of traditions through the joy of a slow and quiet living.").

148. CARL HONORE, IN PRAISE OF SLOWNESS: HOW A WORLDWIDE MOVEMENT IS CHALLENGING THE CULT OF SPEED 15 (2004).

149. Wendy Parkins, *Out of Time: Fast Subjects and Slow Living* 13 TIME & SOCIETY 363, 366 (2004).

the legal system may serve as one of the only speed limits that stem otherwise unconstrained societal acceleration:

> The erosion of institutions—which, by definition, necessarily embody elements of permanence and stability—-might inadvertently unravel the fabric of high-speed society, since many processes of acceleration necessarily depend on stable institutional frameworks. This is perhaps most evident in the realm of law. . . . The process of lawmaking cannot be sped up infinitely . . . . Legitimate democratic decision-making and interest mediation are necessarily deliberate and thus time-consuming. Indeed, they tend to be even more slow-going in dynamic, constantly changing societies since political commitments there tend also to become short-lived. As a result, the identification, formulation, and representation of collective interests become increasingly arduous and thus time-consuming as well.[150]

As mankind transitions away from temporal experiences guided by the minute hand of the clock to experiences guided by the interminable network, it is unclear precisely what effects lay in store for traditional legal institutions. A good deal of this uncertainty stems from the rate of change inherent in modern society; it is exceptionally difficult to determine future events in times of continuous transformation. It is clear that technological change will continue to accelerate and this change will continue to alter man's relationship with time. In order to avoid the pervasive effects of the need for speed, legal actors must become aware of the detrimental nature of temporal compression as it relates to the goals of the legal process. It may be necessary for individuals who feel the continuous pressure of time-based stress to seek balance by occasionally unplugging from the network and turning off those electronic devices that permit non-linear representations of time. Once disconnected, it may be possible to think more clearly about the best way to maintain institutions and ideals left to us by previous generations whose relationships with time were significantly distant from our own.

150. ROSA & SCHEUERMAN, *supra* note 34, at 12–13.